

***TASTELEMENTE und ZUBEHÖR***  
***STYLI and ACCESSORIES***



**NÜSSLER**

## ***Dimensionelle Messtechnik für:***

- ***Koordinatenmessgeräte KMG***
- ***Sondermessgerätebau***
- ***Werkzeugmaschinen***
- ***Gewindemessung***
- ***Höhenmessgeräte***
- ***Messuhren***

## ***Dimensional measurement technology:***

- ***Coordinate measuring machines CMM***
- ***Special measuring devices***
- ***CNC machine tools***
- ***Thread measuring***
- ***Height gauges***
- ***Dial gauges***

<b>ADAPTER / ADAPTORS</b>	3
<b>MIKRO-TASTELEMENTE / MICRO-STYLI</b>	5
<b>TASTELEMENTE OHNE GEWINDE / STYLI WITHOUT THREAD</b>	7
<b>M2 (Ø 3mm)</b>	11
<b>M3 (Ø 4mm)</b>	31
<b>M3 (Ø 5mm)</b>	41
<b>M4 (Ø 5mm)</b>	45
<b>M4 (Ø 7mm)</b>	53
<b>M5 (Ø 11mm)</b>	59
<b>M5 (Ø 12mm)</b>	77
<b>REFERENZKUGELN / REFERENCE SPHERES</b>	81
<b>GEWINDE-EINSÄTZE / THREAD INSERTS</b>	91
<b>T-TASTER für GEWINDEMESSUNG / T-STYLI for THREAD MEASURING</b>	95
<b>M1.4 für MESSUHR / M1.4 for TEST INDICATORS</b>	97
<b>M2.5 für MESSUHR / M2.5 for DIAL GAUGES</b>	99
<b>Für HÖHENMESSGERÄT / For HEIGHT GAUGES</b>	103
Technische Daten / <i>Technical data</i> Formular Anfrage Sondertaster / <i>Inquiry form special styli</i>	109



# ***ADAPTER / ADAPTORS***

**Adapter für Messtaster und Tastelemente**  
*Adaptors for probe and styli*

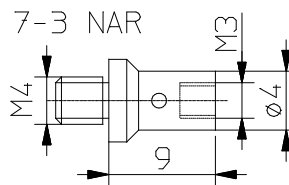
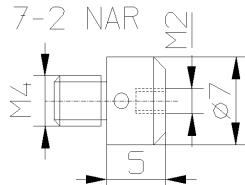
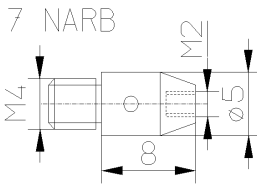
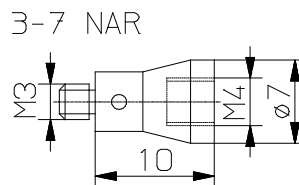
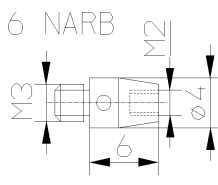
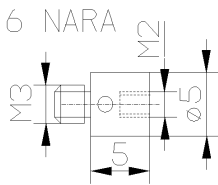
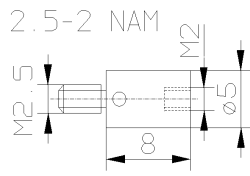
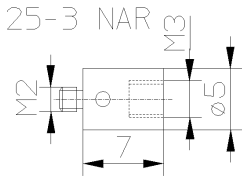
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4

# ADAPTER / ADAPTORS

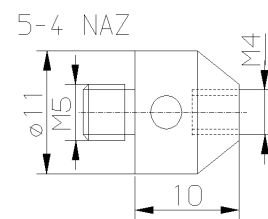
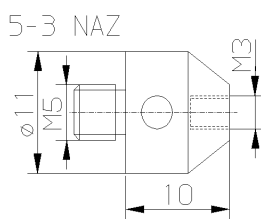
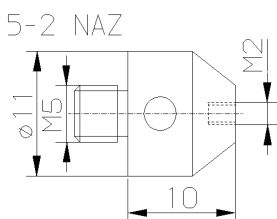
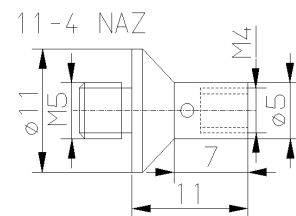
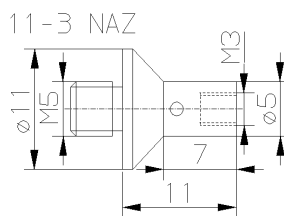
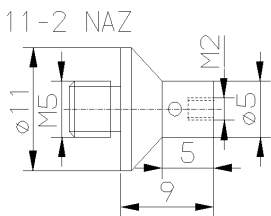
Adapter für Messtaster und Tastelemente <i>Adaptors for probe and styli</i>	Bestell-Nr. <i>Order No.</i>	Bezeichnung <i>Description</i>	Material <i>Material</i>	Gewicht <i>Weight</i>
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Adapter M2, M2.5, M3, M4 <i>Adaptors M2, M2.5, M3, M4</i>	25-3 NAR	M2 / M3	Stahl / <i>Steel</i>	0.8g
	2.5-2 NAM	M2.5 / M2	Stahl / <i>Steel</i>	1.2g
	6 NARA	M3 / M2	Stahl / <i>Steel</i>	0.8g
	6 NARB	M3 / M2	Stahl / <i>Steel</i>	0.5g
	3-7 NAR	M3 / M4	Stahl / <i>Steel</i>	1.6g
	7 NARB	M4 / M2	Stahl / <i>Steel</i>	1.2g
	7-2 NAR	M4 / M2	Stahl / <i>Steel</i>	1.5g
	7-3 NAR	M4 / M3	Stahl / <i>Steel</i>	1.1g



Bestell-Nr. <i>Order No.</i>	Bezeichnung <i>Description</i>	Material <i>Material</i>	Gewicht <i>Weight</i>
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Adapter M5 / <i>Adaptors M5</i>	11-2 NAZ	M5 / M2	Stahl / <i>Steel</i>	3.0g
	11-3 NAZ	M5 / M3	Stahl / <i>Steel</i>	3.1g
	11-4 NAZ	M5 / M4	Stahl / <i>Steel</i>	2.9g
	5-2 NAZ	M5 / M2	Stahl / <i>Steel</i>	5.8g
	5-3 NAZ	M5 / M3	Stahl / <i>Steel</i>	5.7g
	5-4 NAZ	M5 / M4	Stahl / <i>Steel</i>	5.8g



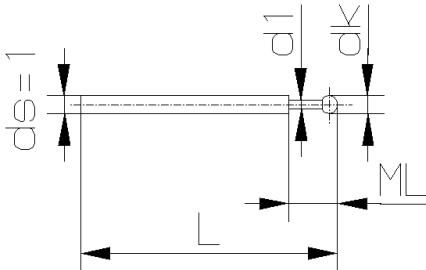
# **MIKRO-TASTELEMENTE**

## **MICRO-STYLI**

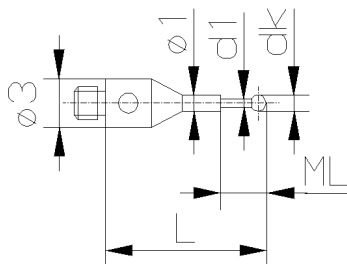
# MIKRO-TASTELEMENTE

## MICRO-STYLI

Ohne Anschluss-Gewinde / Without thread	Bestell-Nr. Order No.	Gewicht Weight	dk mm	d1 mm	L mm	ML mm
<b>Mikro-Taststifte (Typ FM) / Micro-Styli (Type FM)</b> Kugel: HM / Ball: TC Schaft: HM / Shaft: TC	0.05-17.5-1 NTFM	0.2g	0.05	0.035	17.5	0.7
	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



Anschluss-Gewinde M2 / M2 thread styli	Bestell-Nr. Order No.	Gewicht Weight	dk mm	d1 mm	L mm	ML mm
<b>Mikro-Taststifte (Typ AM) / Micro-Styli (Type AM)</b> Kugel: HM / Ball: TC Schaft: HM / Shaft: TC	0.05-20-2 NTAM	0.5g	0.05	0.035	20.0	0.7
	0.07-20-2 NTAM	0.5g	0.07	0.05	20.0	0.7
	0.09-20-2 NTAM	0.5g	0.09	0.06	20.0	1.0
	0.11-20-2 NTAM	0.5g	0.11	0.08	20.0	1.2
	0.13-20-2 NTAM	0.5g	0.13	0.09	20.0	1.5
	0.15-20-2 NTAM	0.5g	0.15	0.10	20.0	1.5
	0.18-20-2 NTAM	0.5g	0.18	0.13	20.0	1.5





# ***TASTELEMENTE OHNE GEWINDE*** ***STYLI WITHOUT THREAD***

**Tastelemente / *Styli***

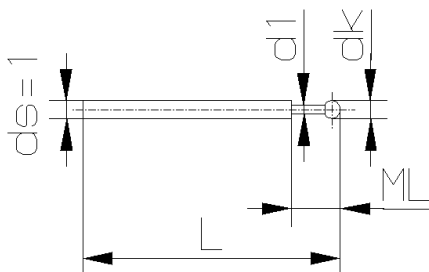
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8-9

# TASTELEMENTE OHNE GEWINDE

## STYLI WITHOUT THREAD

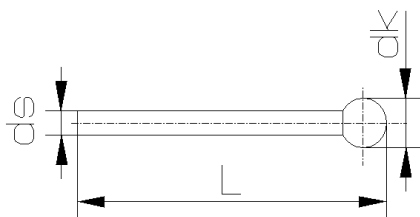
Ohne Anschluss-Gewinde / Without thread	Bestell-Nr. Order No.	Gewicht Weight	dk mm	d1 mm	L mm	ML mm
<b>Taststifte (Typ F) / Styli (Type F)</b> Kugel: Rubin / Ball: Ruby Schaft: HM / Shaft: TC	0.2-15.2-1 NTF	0.2g	0.2	0.15	15.2	1.5
	0.25-15.3-1 NTF	0.2g	0.25	0.2	15.3	2.5
	0.3-15.3-1 NTF	0.2g	0.3	0.2	15.3	2.5
	0.4-15.4-1 NTF	0.2g	0.4	0.3	15.4	2.5
	0.5-15.5-1 NTF	0.2g	0.5	0.3	15.5	2.5
	0.6-15.6-1 NTF	0.2g	0.6	0.4	15.6	4.5
	0.7-15.7-1 NTF	0.2g	0.7	0.4	15.7	4.5
	0.8-15.8-1 NTF	0.2g	0.8	0.6	15.8	4.5
	0.9-15.9-1 NTF	0.2g	0.9	0.6	15.9	4.5
	1.0-16-1 NTF	0.2g	1.0	0.8	16.0	4.5



Bestell-Nr. Order No.	Gewicht Weight	dk mm	ds mm	L mm
1.35-26.4-1 NTN	0.3g	1.35	1.0	26.4
1.5-26.5-1 NTN	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	0.7g	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	1.2g	2.0	1.0	101.0
2.5-27.5-1.5 NTN	0.7g	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	1.7g	3.0	2.0	38.0
3.0-45-1.5 NTN	1.1g	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	2.1g	3.0	1.5	81.5
3.0-101.5-1.5 NTN	2.6g	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	3.8g	4.0	2.0	82.0
4.0-102-2 NTN	4.7g	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	2.1g	5.0	2.0	45.0
5.0-45-3 NTN	4.5g	5.0	3.0	45.0
5.0-62.5-2 NTN	3.0g	5.0	2.0	62.5
5.0-82.5-2 NTN	3.9g	5.0	2.0	82.5
5.0-102.5-2 NTN	4.8g	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	3.1g	6.0	2.0	63.0
6.0-73-3 NTN	7.5g	6.0	3.0	73.0
6.0-83-2 NTN	4.0g	6.0	2.0	83.0
6.0-103-2 NTN	4.9g	6.0	2.0	103.0
6.0-103-3 NTN	10.5g	6.0	3.0	103.0
8.0-29-2 NTN	2.1g	8.0	2.0	29.0
8.0-44-3 NTN	4.9g	8.0	3.0	44.0
8.0-64-2 NTN	3.7g	8.0	2.0	64.0
8.0-73-3 NTN	7.9g	8.0	3.0	73.0
8.0-84-2 NTN	4.6g	8.0	2.0	84.0
8.0-103-3 NTN	10.9g	8.0	3.0	103.0

### Taststifte (Typ N) / Styli (Type N)

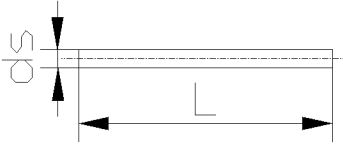
Kugel: Rubin / Ball: Ruby  
Schaft: HM / Shaft: TC



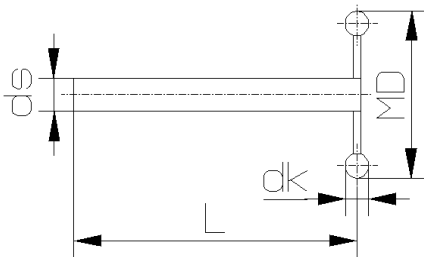
# TASTELEMENTE OHNE GEWINDE

## STYLI WITHOUT THREAD

Ohne Anschluss-Gewinde / Without thread	Bestell-Nr. Order No.	Gewicht Weight	ds mm	L mm
<b>Taststifte / Styli</b> Schaft: HM / Shaft: TC	1.0-30.0 NTH	0.3g	1.0	30.0
	1.0-75.0 NTH	0.8g	1.0	75.0
	1.5-30.0 NTH	0.8g	1.5	30.0
	1.5-75.0 NTH	1.9g	1.5	75.0
	2.0-30.0 NTH	1.4g	2.0	30.0
	2.0-75.0 NTH	3.4g	2.0	75.0
	3.0-30.0 NTH	3.1g	3.0	30.0
	3.0-75.0 NTH	7.6g	3.0	75.0

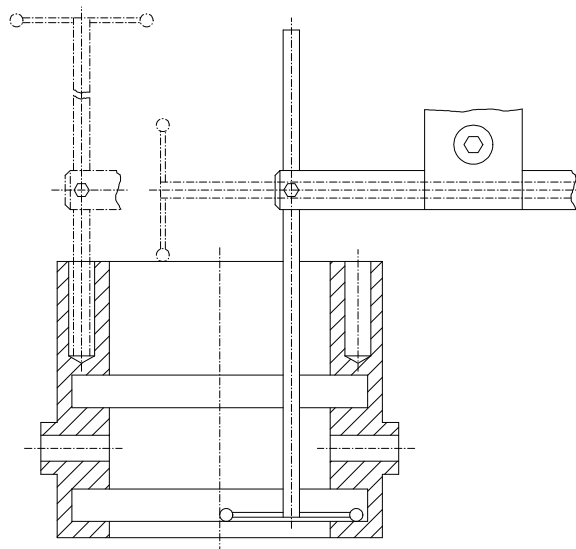


Bestell-Nr. Order No.	Gewicht Weight	dk mm	ds mm	MD mm	L mm	
<b>T-Taster (Typ H) / T-Styli (Type H)</b> Kugel: Rubin / Ball: Ruby Schaft: HM / Shaft: TC	1.0-50-2 NTTH	2.3g	1.0	2.0	10.0	50.0
	1.0-100-2 NTTH	4.6g	1.0	2.0	10.0	100.0
	2.0-50-2 NTTH	2.5g	2.0	2.0	20.0	50.0
	2.0-100-2 NTTH	4.7g	2.0	2.0	20.0	100.0
	1.0-50-3 NTTH	5.2g	1.0	3.0	10.0	50.0
	1.0-100-3 NTTH	10.3g	1.0	3.0	10.0	100.0
	2.0-50-3 NTTH	5.4g	2.0	3.0	20.0	50.0
	2.0-100-3 NTTH	10.5g	2.0	3.0	20.0	100.0



Die neuartige Konstruktion des **T-Tasters**, hergestellt aus den hochwertigen Materialien Hartmetall und Rubin, erlaubt ein sicheres und präzises Messen in vertikaler sowie in horizontaler Lage von Nuten, Einstichen, Absätzen, Querbohrungen usw.

*The new T-Styli design permits precise and efficient measuring of grooves, recesses, shoulders, cross holes, etc.*



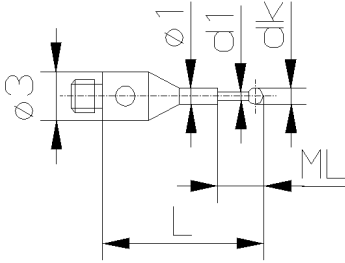
# ***NOTIZEN / NOTES***

# **M2 (Ø 3mm)**

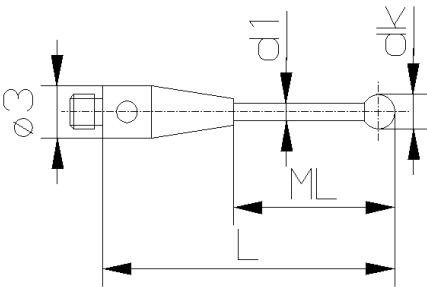
<b>Tastelemente / <i>Styli</i></b>	12-20
<b>Verlängerungen / <i>Extensions</i></b>	21
<b>Halter / <i> HOLDERS for styli</i></b>	22-23
<b>Gelenke / <i>Knuckle joints</i></b>	24
<b>Drehstücke / <i>Rotating adaptors</i></b>	24
<b>Werkzeuge / <i>Tools</i></b>	25
<b>Tastelemente Set / <i>Styli sets</i></b>	26-29

# M2 (Ø 3mm)

Anschluss-Gewinde M2 (Ø 3mm) M2 (Ø 3mm) thread	Bestell-Nr. Order No.	Gewicht Weight	dk mm	d1 mm	L mm	ML mm
<b>Taststifte (Typ A) / Styli (Type A)</b> Kugel: Rubin / Ball: Ruby Schaft: HM / Shaft: TC	0.2-10-2 NTA	0.3g	0.2	0.15	10.0	1.5
	0.25-10-2 NTA	0.3g	0.25	0.2	10.0	2.5
	0.3-10-2 NTA	0.3g	0.3	0.2	10.0	2.5
	0.4-10-2 NTA	0.3g	0.4	0.3	10.0	2.5
	0.5-10-2 NTA	0.3g	0.5	0.3	10.0	2.5
	0.6-10-2 NTA	0.3g	0.6	0.4	10.0	2.5
	0.6-12-2 NTA	0.3g	0.6	0.4	12.0	4.5
	0.7-10-2 NTA	0.3g	0.7	0.4	10.0	2.5
	0.7-12-2 NTA	0.3g	0.7	0.4	12.0	4.5
	0.8-10-2 NTA	0.3g	0.8	0.6	10.0	2.5
	0.8-12-2 NTA	0.3g	0.8	0.6	12.0	4.5
	0.9-10-2 NTA	0.3g	0.9	0.6	10.0	2.5
	0.9-12-2 NTA	0.3g	0.9	0.6	12.0	4.5
	1.0-10-2 NTA	0.3g	1.0	0.7	10.0	2.5
1.0-12-2 NTA	0.3g	1.0	0.7	12.0	4.5	



Bestell-Nr. Order No.	Gewicht Weight	dk mm	d1 mm	L mm	ML mm
<b>Taststifte (Typ B) / Styli (Type B)</b> Kugel: Rubin / Ball: Ruby Schaft: HM / Shaft: TC					
0.7-20-2 NTB	0.3g	0.7	0.5	20.0	12.0
1.0-10.5-2 NTB	0.3g	1.0	0.7	10.5	5.5
1.0-15.5-2 NTB	0.3g	1.0	0.7	15.5	10.5
1.0-20.5-2 NTB	0.3g	1.0	0.7	20.5	15.5
1.0-27.5-2 NTB	0.4g	1.0	0.7	27.5	20.5
1.0-30.5-2 NTB	0.4g	1.0	0.7	30.5	23.5
1.5-11-2 NTB	0.3g	1.5	0.7	11.0	6.0
1.5-16-2 NTB	0.3g	1.5	0.7	16.0	11.0
1.5-21-2 NTB	0.3g	1.5	0.7	21.0	16.0
1.5-31-2 NTB	0.4g	1.5	0.7	31.0	24.0
2.0-11-2 NTB	0.3g	2.0	1.0	11.0	6.0
2.0-16-2 NTB	0.4g	2.0	1.0	16.0	9.0
2.0-21-2 NTB	0.5g	2.0	1.0	21.0	14.0
2.0-26-2 NTB	0.5g	2.0	1.0	26.0	19.0
2.0-31-2 NTB	0.6g	2.0	1.0	31.0	24.0
2.0-36-2 NTB	0.6g	2.0	1.0	36.0	29.0
2.0-41-2 NTB	0.7g	2.0	1.0	41.0	34.0
2.5-11-2 NTB	0.4g	2.5	1.0	11.0	4.0
2.5-16-2 NTB	0.4g	2.5	1.0	16.0	9.0
2.5-21-2 NTB	0.5g	2.5	1.0	21.0	14.0
2.5-31-2 NTB	1.0g	2.5	1.5	31.0	24.0
2.5-41-2 NTB	1.2g	2.5	1.5	41.0	34.0
3.0-11.5-2 NTB	0.4g	3.0	1.5	11.5	6.5
3.0-21.5-2 NTB	0.8g	3.0	1.5	21.5	14.5
3.0-31.5-2 NTB	1.0g	3.0	1.5	31.5	24.5
3.0-36.5-2 NTB	1.1g	3.0	1.5	36.5	29.5
3.0-41.5-2 NTB	1.3g	3.0	1.5	41.5	31.5
3.0-46.5-2 NTB	1.4g	3.0	1.5	46.5	36.5
3.0-51.5-2 NTB	1.5g	3.0	1.5	51.5	41.5
4.0-22-2 NTB	1.1g	4.0	2.0	22.0	12.0
4.0-32-2 NTB	1.5g	4.0	2.0	32.0	22.0
4.0-37-2 NTB	1.8g	4.0	2.0	37.0	27.0
4.0-42-2 NTB	2.0g	4.0	2.0	42.0	32.0
4.0-47-2 NTB	2.2g	4.0	2.0	47.0	37.0
4.0-52-2 NTB	2.5g	4.0	2.0	52.0	42.0



Fortsetzung (Typ B) auf Seite 13 / continued (Type B) on page 13

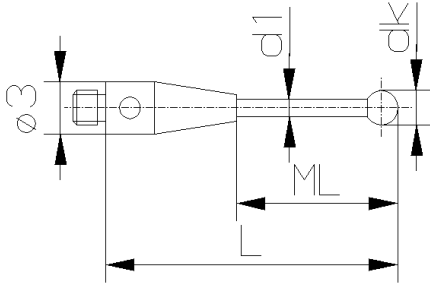
# M2 (Ø 3mm)

<b>Anschluss-Gewinde M2 (Ø 3mm)</b> <i>M2 (Ø 3mm) thread</i>	<b>Bestell-Nr.</b> <i>Order No.</i>	<b>Gewicht</b> <i>Weight</i>	<b>dk</b> mm	<b>d1</b> mm	<b>L</b> mm	<b>ML</b> mm
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## Taststifte (Typ B) / Styli (Type B)

Kugel: Rubin / *Ball: Ruby*

Schaft: HM / *Shaft: TC*



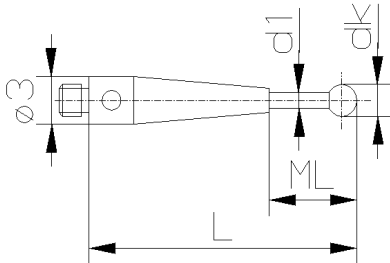
5.0-22.5-2 NTB	1.2g	5.0	2.0	22.5	12.5
5.0-32.5-2 NTB	1.7g	5.0	2.0	32.5	22.5
5.0-37.5-2 NTB	1.9g	5.0	2.0	37.5	27.5
5.0-42.5-2 NTB	2.1g	5.0	2.0	42.5	32.5
5.0-47.5-2 NTB	2.4g	5.0	2.0	47.5	37.5
5.0-52.5-2 NTB	2.5g	5.0	2.0	52.5	42.5
6.0-33-2 NTB	1.8g	6.0	2.0	33.0	23.0
6.0-38-2 NTB	2.0g	6.0	2.0	38.0	28.0
6.0-43-2 NTB	2.3g	6.0	2.0	43.0	33.0
6.0-48-2 NTB	2.5g	6.0	2.0	48.0	38.0
6.0-53-2 NTB	2.7g	6.0	2.0	53.0	43.0

<b>Bestell-Nr.</b> <i>Order No.</i>	<b>Gewicht</b> <i>Weight</i>	<b>dk</b> mm	<b>d1</b> mm	<b>L</b> mm	<b>ML</b> mm
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## Taststifte (Typ BS) / Styli (Type BS)

Kugel: Rubin / *Ball: Ruby*

Schaft: HM / *Shaft: TC*



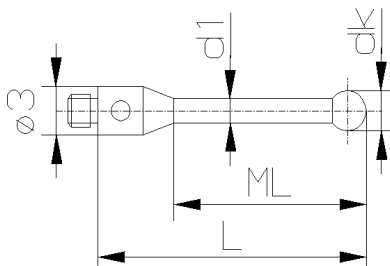
0.5-20-2 NTBS	0.4g	0.5	0.3	20.0	7.0
0.5-21-2 NTBS	0.6g	0.5	0.3	21.0	2.5
1.0-20.5-2 NTBS	0.5g	1.0	0.7	20.5	6.5
1.5-21-2 NTBS	0.5g	1.5	0.7	21.0	7.0
2.0-21-2 NTBS	0.6g	2.0	1.0	21.0	7.0

<b>Bestell-Nr.</b> <i>Order No.</i>	<b>Gewicht</b> <i>Weight</i>	<b>dk</b> mm	<b>d1</b> mm	<b>L</b> mm	<b>ML</b> mm
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## Taststifte (Typ C) / Styli (Type C)

Kugel: Rubin / *Ball: Ruby*

Schaft: Stahl / *Shaft: Steel*



1.0-10.5-2 NTC	0.3g	1.0	0.7	10.5	5.0
1.5-11-2 NTC	0.3g	1.5	1.0	11.0	6.0
2.0-11-2 NTC	0.3g	2.0	1.2	11.0	7.0
2.0-16-2 NTC	0.3g	2.0	1.2	16.0	12.0
2.0-21-2 NTC	0.4g	2.0	1.4	21.0	15.0
2.5-11-2 NTC	0.3g	2.5	1.5	11.0	7.0
2.5-21-2 NTC	0.4g	2.5	1.5	21.0	17.0
3.0-11.5-2 NTC	0.4g	3.0	2.0	11.5	8.0
3.0-21.5-2 NTC	0.6g	3.0	2.0	21.5	18.0
4.0-12-2 NTC	0.5g	4.0	2.4	12.0	9.0
4.0-22-2 NTC	0.9g	4.0	2.4	22.0	19.0

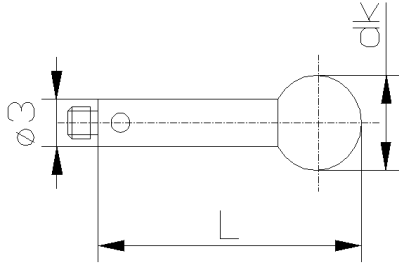
# M2 (Ø 3mm)

<b>Anschluss-Gewinde M2 (Ø 3mm) / M2 (Ø 3mm) thread</b>	<b>Bestell-Nr. Order No.</b>	<b>Gewicht Weight</b>	<b>dk mm</b>	<b>L mm</b>
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## Taststifte (Typ D) / Styli (Type D)

Kugel: Rubin / Ball: Ruby  
Schaft: Stahl / Shaft: Steel

5.0-12.5-2 NTD	0.7g	5.0	12.5
5.0-27.5-2 NTD	1.5g	5.0	27.5
6.0-13-2 NTD	0.9g	6.0	13.0
6.0-28-2 NTD	1.7g	6.0	28.0
8.0-14-2 NTD	1.4g	8.0	14.0
8.0-29-2 NTD	2.3g	8.0	29.0



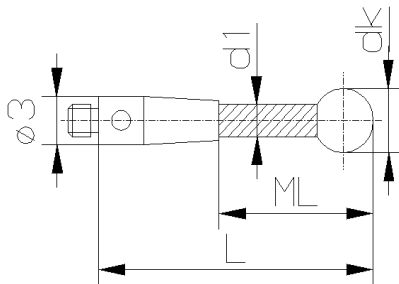
Bestell-Nr. Order No.	Gewicht Weight	dk mm	d1 mm	L mm	ML mm
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## Taststifte (Typ K) Keramik

### Styli (Type K) Ceramic

Kugel: Rubin / Ball: Ruby  
Schaft: Keramik / Shaft: Ceramic

3.0-31.5-2 NTKE	0.6g	3.0	2.0	31.5	21.5
3.0-51.5-2 NTKE	0.9g	3.0	2.0	51.5	41.5
4.0-32-2 NTKE	0.7g	4.0	2.0	32.0	22.0
4.0-42-2 NTKE	0.8g	4.0	2.0	42.0	32.0
4.0-52-2 NTKE	1.0g	4.0	2.0	52.0	42.0
5.0-32.5-2 NTKE	0.8g	5.0	2.0	32.5	22.5
5.0-42.5-2 NTKE	1.0g	5.0	2.0	42.5	32.5
5.0-52.5-2 NTKE	1.1g	5.0	2.0	52.5	42.5
6.0-13-2 NTKE	0.9g	6.0	2.0	13.0	7.0
6.0-33-2 NTKE	1.0g	6.0	2.0	33.0	23.0
6.0-43-2 NTKE	1.1g	6.0	2.0	43.0	33.0
6.0-53-2 NTKE	1.2g	6.0	2.0	53.0	43.0



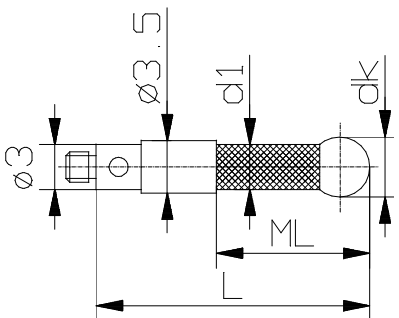
Bestell-Nr. Order No.	Gewicht Weight	dk mm	d1 mm	L mm	ML mm
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## Taststifte (Typ CA) Kohlefaser

### Styli (Type CA) Carbon Fiber

Kugel: Rubin / Ball: Ruby  
Schaft: CFK / Shaft: Carbon

3.0-31.5-2 NTCA	0.5g	3.0	2.0	31.5	21.5
3.0-51.5-2 NTCA	0.6g	3.0	2.0	51.5	41.5
4.0-32-2 NTCA	0.8g	4.0	3.0	32.0	21.0
4.0-42-2 NTCA	0.9g	4.0	3.0	42.0	31.0
4.0-52-2 NTCA	1.0g	4.0	3.0	52.0	41.0
4.0-77-2 NTCA	1.3g	4.0	3.0	77.0	66.0
4.0-102-2 NTCA	1.5g	4.0	3.0	102.0	91.0
5.0-32.5-2 NTCA	0.9g	5.0	3.0	32.5	21.5
5.0-42.5-2 NTCA	0.8g	5.0	3.0	42.5	31.5
5.0-52.5-2 NTCA	1.1g	5.0	3.0	52.5	41.5
5.0-77.5-2 NTCA	1.2g	5.0	3.0	77.5	66.5
5.0-102.5-2 NTCA	1.6g	5.0	3.0	102.5	91.5
6.0-33-2 NTCA	0.9g	6.0	3.0	33.0	22.0
6.0-43-2 NTCA	1.0g	6.0	3.0	43.0	32.0
6.0-53-2 NTCA	1.3g	6.0	3.0	53.0	42.0
6.0-78-2 NTCA	1.6g	6.0	3.0	78.0	67.0
6.0-103-2 NTCA	1.8g	6.0	3.0	103.0	92.0

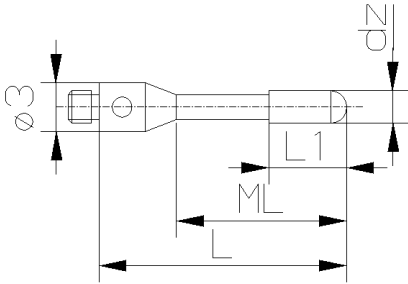




# M2 (Ø 3mm)

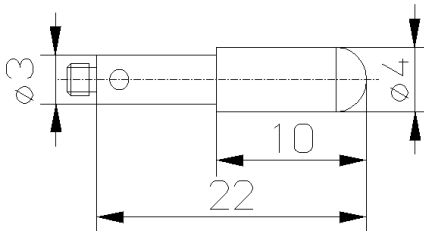
<b>Anschluss-Gewinde M2 (Ø 3mm)</b> <i>M2 (Ø 3mm) thread</i>	<b>Bestell-Nr.</b> <i>Order No.</i>	<b>Gewicht</b> <i>Weight</i>	<b>dz</b> mm	<b>L1</b> mm	<b>L</b> mm	<b>ML</b> mm
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<b>Zylindertaststifte (Typ A) / Cylinder styli (Type A)</b> Zylinder: Rubin / <i>Cylinder: Ruby</i> Schaft: Stahl / <i>Shaft: Steel</i>	2.0-16-2 NZRA	0.4g	2.0	5.0	16.0	12.0
	2.0-21-2 NZRA	0.4g	2.0	5.0	21.0	17.0
	3.0-22-2 NZRA	0.8g	3.0	10.0	22.0	18.0



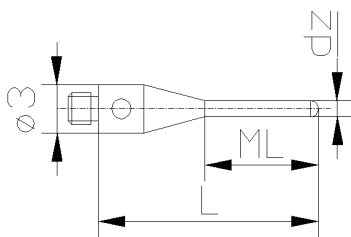
<b>Bestell-Nr.</b> <i>Order No.</i>	<b>Schaft</b> <i>Shaft</i>	<b>Zylinder</b> <i>Cylinder</i>	<b>Gewicht</b> <i>Weight</i>
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<b>Zylindertaststifte (Typ B) / Cylinder styli (Type B)</b>	4.0-22-2 NZRB	Stahl / <i>Steel</i>	Rubin / <i>Ruby</i>	1.2g
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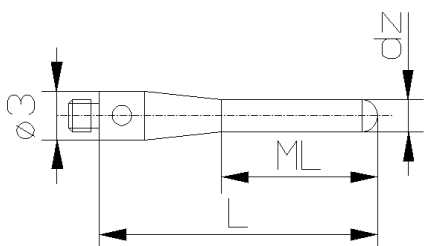
<b>Bestell-Nr.</b> <i>Order No.</i>	<b>Zylinder</b> <i>Cylinder</i>	<b>Gewicht</b> <i>Weight</i>	<b>dz</b> mm	<b>L</b> mm	<b>ML</b> mm
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<b>Zylindertaststifte (Typ C) / Cylinder styli (Type C)</b>	1.0-15-2 NZRC	Rubin / <i>Ruby</i>	0.3g	1.0	15.0	8.0
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<b>Bestell-Nr.</b> <i>Order No.</i>	<b>Zylinder</b> <i>Cylinder</i>	<b>Gewicht</b> <i>Weight</i>	<b>dz</b> mm	<b>L</b> mm	<b>ML</b> mm
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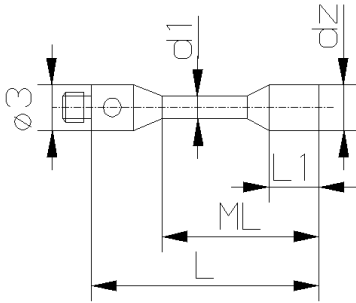
<b>Zylindertaststifte (Typ D)</b> <i>Cylinder styli (Type D)</i>	0.3-10-2 NZHD	HM / <i>TC</i>	0.3g	0.3	10.0	3.0
	0.5-15-2 NZHD	HM / <i>TC</i>	0.3g	0.5	15.0	8.0
	1.0-20-2 NZHD	HM / <i>TC</i>	0.5g	1.0	20.0	13.0
	1.0-35.5-2 NZHD	HM / <i>TC</i>	0.6g	1.0	35.5	28.5
	1.0-40-2 NZHD	HM / <i>TC</i>	0.7g	1.0	40.0	33.0
	1.5-15.8-2 NZHD	HM / <i>TC</i>	0.6g	1.5	15.8	8.8
	1.5-20-2 NZHD	HM / <i>TC</i>	0.7g	1.5	20.0	10.0
	1.5-40-2 NZHD	HM / <i>TC</i>	1.2g	1.5	40.0	30.0
	2.0-16-2 NZHD	HM / <i>TC</i>	0.8g	2.0	16.0	9.0
	2.0-20-2 NZHD	HM / <i>TC</i>	1.0g	2.0	20.0	10.0
	2.0-40-2 NZHD	HM / <i>TC</i>	1.9g	2.0	40.0	30.0
	3.0-22.5-2 NZHD	HM / <i>TC</i>	2.0g	3.0	22.5	15.5



# M2 (Ø 3mm)

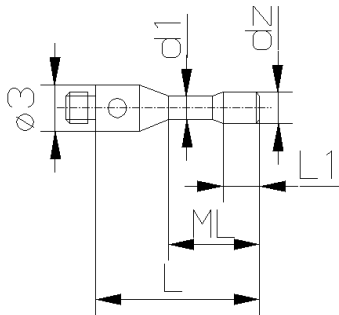
Anschluss-Gewinde M2 (Ø 3mm) M2 (Ø 3mm) thread	Bestell-Nr. Order No.	Gewicht Weight	dz mm	d1 mm	L mm	ML mm	L1 mm
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Zylindertaststifte (Typ H) / Cylinder styli (Type H) Zylinder: HM / Cylinder: TC	1.5-14-2 NZTH	0.4g	1.5	1.0	14.0	7.0	2.5
	2.0-16-2 NZTH	0.8g	2.0	2.0	16.0	9.0	9.0
	3.0-16-2 NZTH	0.9g	3.0	1.5	16.0	9.0	3.5



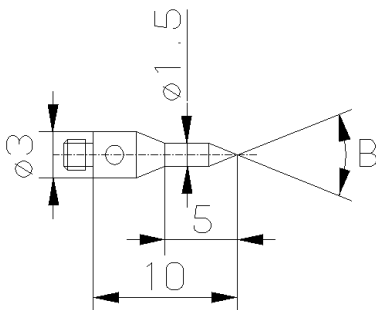
Bestell-Nr. Order No.	Gewicht Weight	dz mm	d1 mm	L mm	ML mm	L1 mm
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Zylindertaststifte (Typ S) / Cylinder styli (Type S) Zylinder: Stahl / Cylinder: Steel	1.5-11-2 NZTS	0.3g	1.5	1.0	11.0	4.0	1.5
	2.0-11-2 NZTS	0.4g	2.0	1.5	11.0	4.0	2.0
	2.5-13-2 NZTS	0.5g	2.5	1.7	13.0	5.5	2.5
	3.0-13-2 NZTS	0.6g	3.0	2.0	13.0	5.5	4.0



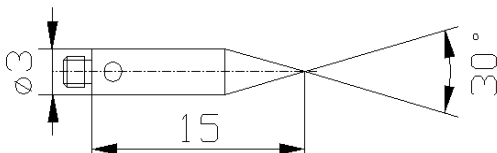
Bestell-Nr. Order No.	Spitze Point	Gewicht Weight	β	R mm
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Tastspitzen / Pointed styli	30-10-2 NTS	HM / TC	0.4g	30°	-
	0.2-10-2 NTS	HM / TC	0.4g	30°	0.10
	0.3-10-2 NTS	HM / TC	0.4g	30°	0.15
	0.5-10-2 NTS	HM / TC	0.4g	30°	0.25
	0.8-10-2 NTS	HM / TC	0.4g	30°	0.40



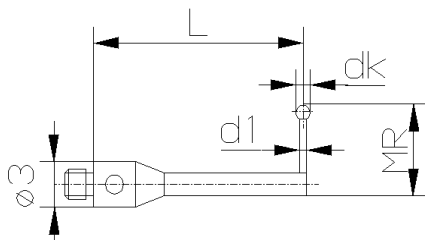
Bestell-Nr. Order No.	Spitze Point	Gewicht Weight
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Tastspitzen / Pointed styli	30-15-2 NTS	Stahl / Steel	0.6g
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Bestell-Nr. Order No.	Gewicht Weight	dk mm	d1 mm	MR mm	L mm
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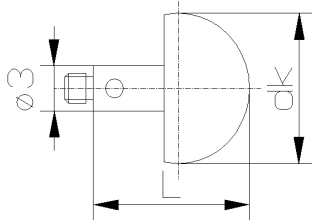
L-Taster / L-Styli Kugel: Rubin / Ball: Ruby Schaft: HM / Shaft: TC	1.0-6-2 NLT	0.4g	1.0	0.6	6.0	15.0
	2.0-12-2 NLT	1.0g	2.0	1.0	12.0	20.0



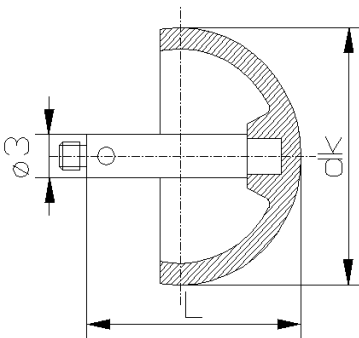
# M2 (Ø 3mm)

<b>Anschluss-Gewinde M2 (Ø 3mm) / M2 (Ø 3mm) thread</b>	<b>Bestell-Nr. Order No.</b>	<b>Gewicht Weight</b>	<b>dk mm</b>	<b>L mm</b>
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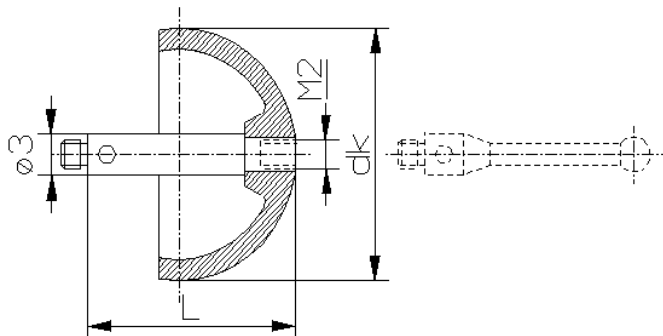
<b>Keramikkugel-Taster / Ceramic ball styli</b> Kugel: Keramik / Ball: Ceramic Schaft: Stahl / Shaft: Steel	8.0-10-2 NKK	1.0g	8.0	10.0
	10.0-11-2 NKK	1.7g	10.0	11.0



<b>Hohle Keramikkugel-Taster (Typ E)</b> <b>Hollow ceramic ball styli (Type E)</b> Kugel: Keramik / Ball: Ceramic Schaft: Stahl / Shaft: Steel	<b>Bestell-Nr. Order No.</b>	<b>Gewicht Weight</b>	<b>dk mm</b>	<b>L mm</b>
	18.0-16-2 NHKE	4.8g	18.0	16.0
	24.0-19-2 NHKE	8.3g	24.0	19.0
	30.0-22-2 NHKE	13.2g	30.0	22.0



<b>Hohle Keramikkugel-Taster (Typ Z)</b> <b>Hollow ceramic ball styli (Type Z)</b> Kugel: Keramik / Ball: Ceramic Schaft: Stahl / Shaft: Steel	<b>Bestell-Nr. Order No.</b>	<b>Gewicht Weight</b>	<b>dk mm</b>	<b>L mm</b>
	18.0-7-2 NHKZ	4.8g	18.0	16.0
	30.0-7-2 NHKZ	12.3g	30.0	22.0



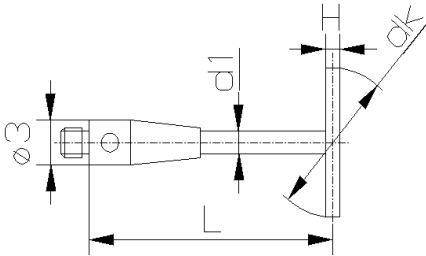
Aufnahme der Taststifte mit Gewinde M2 möglich.

*M2 thread styli may be used.*

# M2 (Ø 3mm)

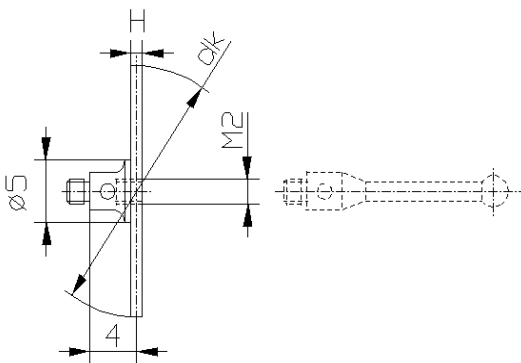
<b>Anschluss-Gewinde M2 (Ø 3mm)</b> <i>M2 (Ø 3mm) thread</i>	<b>Bestell-Nr.</b> <i>Order No.</i>	<b>Gewicht</b> <i>Weight</i>	<b>dk</b> mm	<b>d1</b> mm	<b>L</b> mm	<b>H</b> mm
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<b>Kugelscheiben-Taststifte / Ball disc styli</b> Scheibe: Keramik / <i>Disc: Ceramic</i> Schaft: HM / <i>Shaft: TC</i>	5.0-20-2 NKS	0.7g	5.0	1.5	20.0	0.5
	10.0-25-2 NKS	1.5g	10.0	2.0	25.0	0.8
	14.0-25-2 NKS	1.8g	14.0	2.0	25.0	1.0



<b>Bestell-Nr.</b> <i>Order No.</i>	<b>Gewicht</b> <i>Weight</i>	<b>dk</b> mm	<b>H</b> mm
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<b>Kugelscheiben / Ball disc styli</b> Scheibe: Keramik / <i>Disc: Ceramic</i> Schaft: Stahl / <i>Shaft: Steel</i>	15.0-4-2 NKSE	0.9g	15.0	1.0
	20.0-4-2 NKSE	1.5g	20.0	1.0

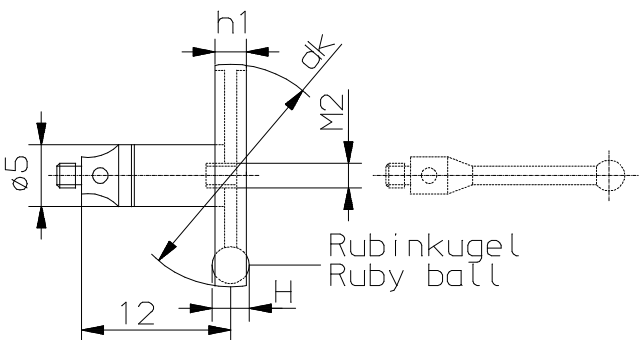


Aufnahme der **Taststifte mit Gewinde M2** möglich.

*M2 thread styli may be used.*

<b>Bestell-Nr.</b> <i>Order No.</i>	<b>Gewicht</b> <i>Weight</i>	<b>dk</b> mm	<b>H</b> mm	<b>h1</b> mm
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<b>Kugelscheiben drehbar / Ball disc styli rotary</b> Scheibe: Stahl / <i>Disc: Steel</i> Schaft: Stahl / <i>Shaft: Steel</i>	18.0-12-2 NKSD	3.1g	18.0	3.5	2.5
	25.0-12-2 NKSD	4.2g	25.0	3.5	2.5
	40.0-12-2 NKSD	10.8g	40.0	6.0	4.0



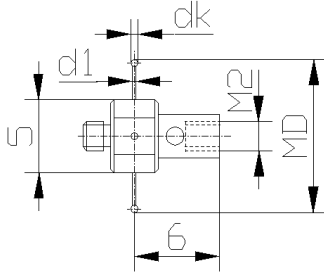
Aufnahme der **Taststifte mit Gewinde M2** möglich.  
Mit Hilfe des integrierten Drehstücks können die angebauten Tastelemente ausgerichtet werden.

*M2 thread styli may be used.*

*A built-in rotating adaptor allows styli positioning.*

# M2 (Ø 3mm)

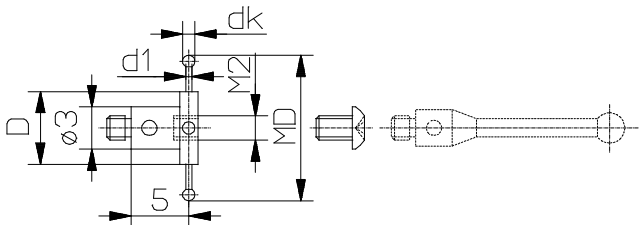
Anschluss-Gewinde M2 (Ø 3mm) / M2 (Ø 3mm) thread	Bestell-Nr. Order No.	Gewicht Weight	dk mm	d1 mm	MD mm
<b>Sternstaster drehbar (Typ F) / Star styli rotary (Type F)</b> Kugel: Rubin / Ball: Ruby Schaft: HM / Shaft: TC	0.5-10.5-2 NSTF	0.8g	0.5	0.3	10.5
	0.5-20.5-2 NSTF	0.8g	0.5	0.3	20.5
	1.0-11-2 NSTF	0.8g	1.0	0.7	11.0
	1.0-21-2 NSTF	0.9g	1.0	0.7	21.0



Aufnahme der **Taststifte mit Gewinde M2** möglich.  
Mit Hilfe des integrierten Drehstücks können die angebaute Tastelemente ausgerichtet werden.

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

	Bestell-Nr. Order No.	Gewicht Weight	dk mm	d1 mm	MD mm	D mm
<b>Sternstaster drehbar (Typ K) / Star styli rotary (Type K)</b> Kugel: Rubin / Ball: Ruby Schaft: HM / Shaft: TC	1.0-12-2 NSTK	0.7g	1.0	0.6	12.0	6.0
	1.0-16-2 NSTK	0.7g	1.0	0.6	16.0	6.0
	2.0-20-2 NSTK	1.2g	2.0	1.0	20.0	8.0
	2.0-30-2 NSTK	1.4g	2.0	1.0	30.0	8.0



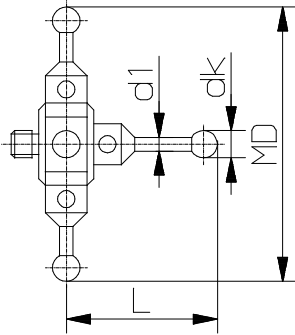
Aufnahme der **Taststifte mit Gewinde M2** möglich.  
Mit Hilfe des integrierten Drehstücks können die angebaute Tastelemente ausgerichtet werden.

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

# M2 (Ø 3mm)

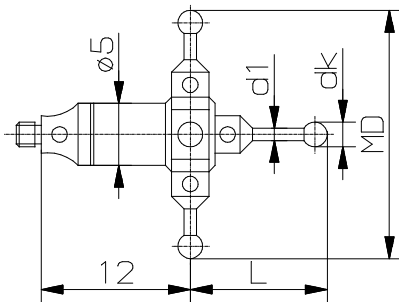
<b>Anschluss-Gewinde M2 (Ø 3mm)</b> <i>M2 (Ø 3mm) thread</i>	<b>Bestell-Nr.</b> <i>Order No.</i>	<b>Gewicht</b> <i>Weight</i>	<b>dk</b> mm	<b>d1</b> mm	<b>MD</b> mm	<b>L</b> mm
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<b>Sterntaster (Typ A), (Typ C)</b> <i>Star styli (Type A), (Type C)</i> Kugel: Rubin / Ball: Ruby Schaft: Stahl / Shaft: Steel	2.0-28-2 NSTA	2.2g	2.0	1.2	28.0	11.0
	2.0-28-2 NSTC	2.6g	2.0	1.2	28.0	18.0
	2.0-38-2 NSTA	2.6g	2.0	1.2	38.0	11.0
	2.0-38-2 NSTC	2.8g	2.0	1.2	38.0	23.0



<b>Bestell-Nr.</b> <i>Order No.</i>	<b>Gewicht</b> <i>Weight</i>	<b>dk</b> mm	<b>d1</b> mm	<b>MD</b> mm	<b>L</b> mm
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<b>Sterntaster drehbar (Typ B), (Typ D)</b> <i>Star styli rotary (Type B), (Type D)</i> Kugel: Rubin / Ball: Ruby Schaft: Stahl / Shaft: Steel	2.0-28-2 NSTB	3.5g	2.0	1.2	28.0	11.0
	2.0-28-2 NSTD	3.3g	2.0	1.2	28.0	18.0
	2.0-38-2 NSTB	3.4g	2.0	1.2	38.0	11.0
	2.0-38-2 NSTD	3.8g	2.0	1.2	38.0	23.0



Mit Hilfe des integrierten Drehstücks können die angebauten Tastelemente ausgerichtet werden.

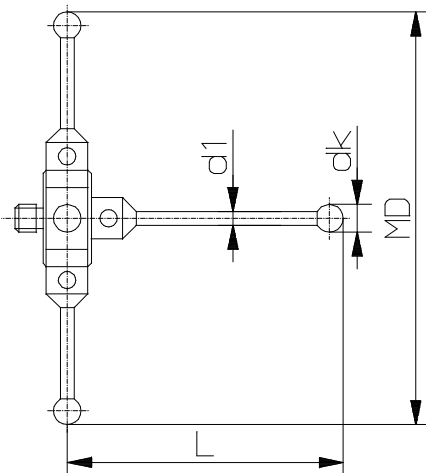
*A built-in rotating adaptor allows styli positioning.*

<b>Bestell-Nr.</b> <i>Order No.</i>	<b>Gewicht</b> <i>Weight</i>	<b>dk</b> mm	<b>d1</b> mm	<b>MD</b> mm	<b>L</b> mm
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<b>Sterntaster drehbar (Typ E)</b> <i>Star styli rotary (Type E)</i> Kugel: Rubin / Ball: Ruby Schaft: Stahl / Shaft: Steel	2.0-22-2 NSTE	2.3g	2.0	1.4	22.0	21.0
	2.0-32-2 NSTE	2.5g	2.0	1.4	32.0	21.0

Mit Hilfe des integrierten Drehstücks können die angebauten Tastelemente ausgerichtet werden.

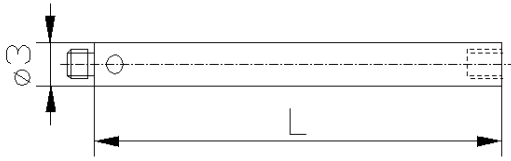
*A built-in rotating adaptor allows styli positioning.*



# M2 (Ø 3mm)

Anschluss-Gewinde M2 (Ø 3mm) / M2 (Ø 3mm) thread	Bestell-Nr. Order No.	Material Material	Gewicht Weight	L mm
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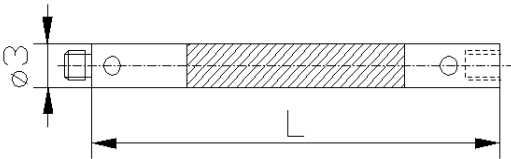
## Verlängerungen Stahl / Extensions Steel



5-2 NV	Stahl / Steel	0.2g	5.0
10-2 NV	Stahl / Steel	0.4g	10.0
20-2 NV	Stahl / Steel	1.0g	20.0
30-2 NV	Stahl / Steel	1.5g	30.0
40-2 NV	Stahl / Steel	2.1g	40.0
50-2 NV	Stahl / Steel	2.6g	50.0
60-2 NV	Stahl / Steel	3.2g	60.0
70-2 NV	Stahl / Steel	3.8g	70.0
80-2 NV	Stahl / Steel	4.3g	80.0
90-2 NV	Stahl / Steel	4.8g	90.0
100-2 NV	Stahl / Steel	5.4g	100.0

Bestell-Nr. Order No.	Material Material	Gewicht Weight	L mm
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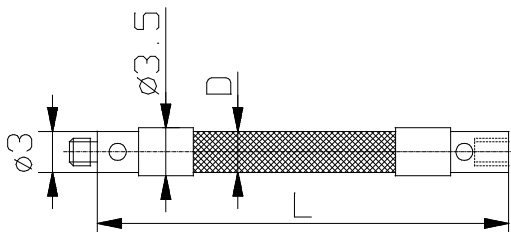
## Verlängerungen Keramik / Extensions Ceramic



30-2 NVK	Keramik / Ceramic	1.0g	30.0
40-2 NVK	Keramik / Ceramic	1.2g	40.0
50-2 NVK	Keramik / Ceramic	1.5g	50.0
60-2 NVK	Keramik / Ceramic	1.8g	60.0
70-2 NVK	Keramik / Ceramic	2.1g	70.0
80-2 NVK	Keramik / Ceramic	2.3g	80.0
90-2 NVK	Keramik / Ceramic	2.6g	90.0
100-2 NVK	Keramik / Ceramic	2.9g	100.0

Bestell-Nr. Order No.	Material Material	Gewicht Weight	L mm	D mm
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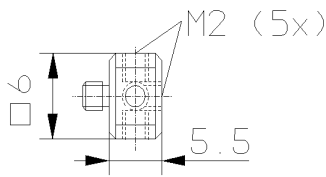
## Verlängerungen Kohlefaser / Extensions Carbon Fiber



30-2 NVCA	CFK / Carbon	0.9g	30.0	3.0
40-2 NVCA	CFK / Carbon	1.0g	40.0	3.0
50-2 NVCA	CFK / Carbon	1.1g	50.0	3.0
60-2 NVCA	CFK / Carbon	1.2g	60.0	3.0
70-2 NVCA	CFK / Carbon	1.3g	70.0	3.0
80-2 NVCA	CFK / Carbon	2.0g	80.0	4.0
90-2 NVCA	CFK / Carbon	2.2g	90.0	4.0
100-2 NVCA	CFK / Carbon	2.4g	100.0	4.0

# M2 (Ø 3mm)

Anschluss-Gewinde M2 (Ø 3mm) / M2 (Ø 3mm) thread	Bestell-Nr. Order No.	Material Material	Gewicht Weight
Taststift-Halter (Typ D) 5-Wege / Holders for styli (Type D) 5-Way	6.0-5.5-2 NTHD	Stahl / Steel	1.0g

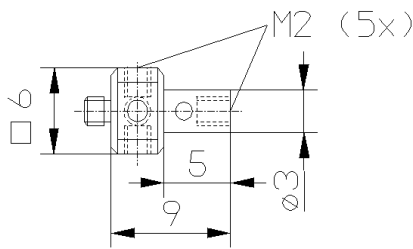


Zur Aufnahme der **Taststifte mit Gewinde M2**.

*For use with M2 thread styli.*

Bestell-Nr. Order No.	Material Material	Gewicht Weight
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Taststift-Halter (Typ A) 5-Wege / Holders for styli (Type A) 5-Way	6.0-9-2 NTHA	Stahl / Steel	1.0g
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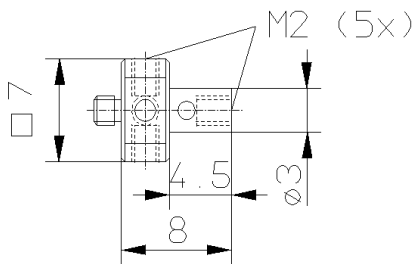


Zur Aufnahme der **Taststifte mit Gewinde M2**.

*For use with M2 thread styli.*

Bestell-Nr. Order No.	Material Material	Gewicht Weight
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Taststift-Halter drehbar (Typ F) 5-Wege Holders for styli rotary (Type F) 5-Way	7.0-8-2 NTHF	Stahl / Steel	1.1g
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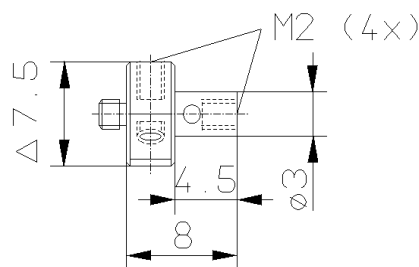
Zur Aufnahme der **Taststifte mit Gewinde M2**.  
Mit Hilfe des integrierten Drehstücks können die angebauten Tastelemente ausgerichtet werden.

*For use with M2 thread styli.*

*A built-in rotating adaptor allows styli positioning.*

Bestell-Nr. Order No.	Material Material	Gewicht Weight
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Taststift-Halter drehbar (Typ G) 4-Wege Holders for styli rotary (Type G) 4-Way	7.5-8-2 NTHG	Stahl / Steel	1.2g
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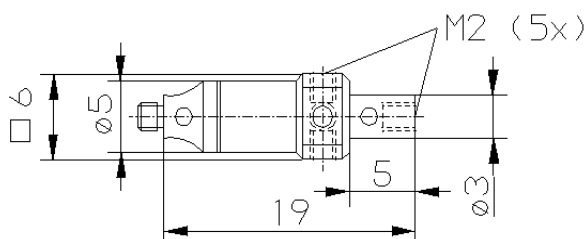
Zur Aufnahme der **Taststifte mit Gewinde M2**.  
Mit Hilfe des integrierten Drehstücks können die angebauten Tastelemente ausgerichtet werden.

*For use with M2 thread styli.*

*A built-in rotating adaptor allows styli positioning.*

Bestell-Nr. Order No.	Material Material	Gewicht Weight
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Taststift-Halter drehbar (Typ B) 5-Wege Holders for styli rotary (Type B) 5-Way	6.0-19-2 NTHB	Stahl / Steel	2.0g
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Zur Aufnahme der **Taststifte mit Gewinde M2**.  
Mit Hilfe des integrierten Drehstücks können die angebauten Tastelemente ausgerichtet werden.

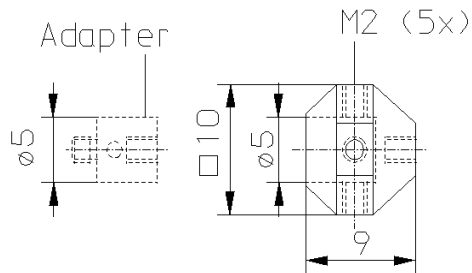
*For use with M2 thread styli.*

*A built-in rotating adaptor allows styli positioning.*



# M2 (Ø 3mm)

Anschluss-Gewinde M2 (Ø 3mm) / M2 (Ø 3mm) thread	Bestell-Nr. Order No.	Material Material	Gewicht Weight
Taststift-Halter drehbar (Typ C) 5-Wege Holders for styli rotary (Type C) 5-Way	10.0-9-2 NTHC	Stahl / Steel	4.2g

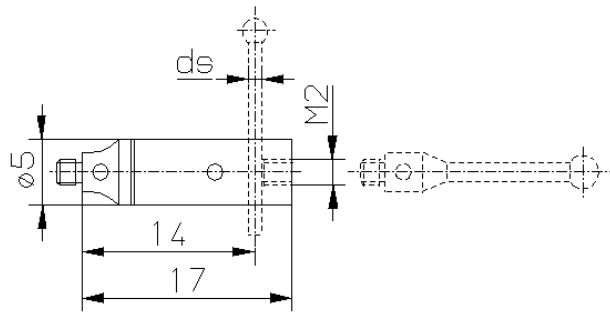


Zur Aufnahme der **Taststifte mit Gewinde M2**.  
Mit Hilfe des Adapters können die angebaute Tastelemente ausgerichtet werden.

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

Bestell-Nr. Order No.	Material Material	Gewicht Weight	ds mm
1.0-2 NHED	Stahl / Steel	2.0g	1.0
1.5-2 NHED	Stahl / Steel	2.0g	1.5
2.0-2 NHED	Stahl / Steel	1.9g	2.0

**Taststift-Halter drehbar (Typ E)**  
Holders for styli rotary (Type E)



Zur Aufnahme der **Taststifte (Typ F), (Typ N)**  
und **T-Taster (Typ H)** (Seite 8+9) und **Taststifte mit Gewinde M2**.

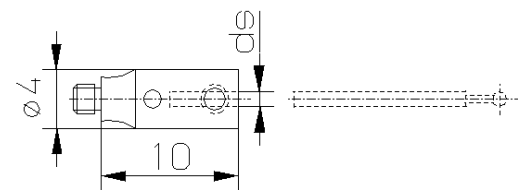
Mit Hilfe des integrierten Drehstücks können die angebaute Tastelemente ausgerichtet werden.

*For use with Styli (Type F), (Type N) and T-Styli (Type H) (Page 8+9) and M2 thread styli.*

*A built-in rotating adaptor allows styli positioning.*

Bestell-Nr. Order No.	Material Material	Gewicht Weight	ds mm
1.0-2 NHZK	Stahl / Steel	0.9g	1.0

**Taststift-Halter (Typ ZK) / Holders for styli (Type ZK)**

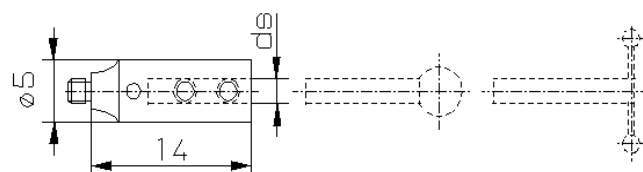


Zur Aufnahme der **Taststifte (Typ FM), (Typ F), (Typ N)** (Seite 6+8).

*For use with Styli (Type FM), (Type F), (Type N) (Page 6+8).*

Bestell-Nr. Order No.	Material Material	Gewicht Weight	ds mm
1.0-2 NHZ	Stahl / Steel	1.9g	1.0
1.5-2 NHZ	Stahl / Steel	1.8g	1.5
2.0-2 NHZ	Stahl / Steel	1.7g	2.0

**Taststift-Halter (Typ Z) / Holders for styli (Type Z)**

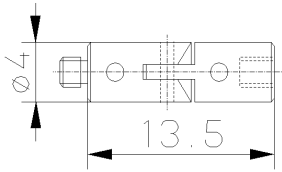


Zur Aufnahme der **Taststifte (Typ FM), (Typ F), (Typ N)** und **T-Taster (Typ H)** (Seite 6+8+9).

*For use with Styli (Type FM), (Type F), (Type N) and T-Styli (Type H) (Page 6+8+9).*

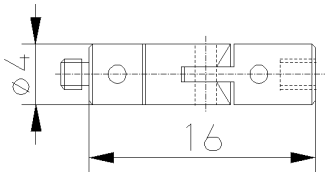
# M2 (Ø 3mm)

<b>Anschluss-Gewinde M2 (Ø 3mm) / M2 (Ø 3mm) thread</b>	<b>Bestell-Nr. Order No.</b>	<b>Material Material</b>	<b>Gewicht Weight</b>
<b>Gelenk (Typ A) / Knuckle joints (Type A)</b>	4.0-13.5-2 NGA	Stahl / Steel	1.1g



<b>Bestell-Nr. Order No.</b>	<b>Material Material</b>	<b>Gewicht Weight</b>
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<b>Gelenk drehbar (Typ B) / Knuckle joints rotary (Type B)</b>	4.0-16-2 NGBD	Stahl / Steel	1.4g
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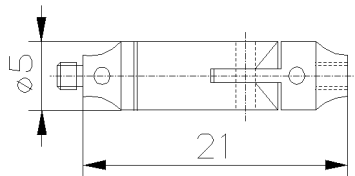


Mit Hilfe des integrierten Drehstücks können die angebauten Tastelemente ausgerichtet werden.

*A built-in rotating adaptor allows styli positioning.*

<b>Bestell-Nr. Order No.</b>	<b>Material Material</b>	<b>Gewicht Weight</b>
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<b>Gelenk drehbar (Typ C) / Knuckle joints rotary (Type C)</b>	5.0-21-2 NGCD	Stahl / Steel	2.2g
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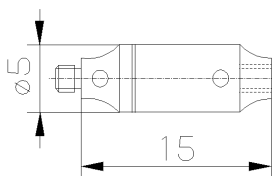


Mit Hilfe des integrierten Drehstücks können die angebauten Tastelemente ausgerichtet werden.

*A built-in rotating adaptor allows styli positioning.*

<b>Bestell-Nr. Order No.</b>	<b>Material Material</b>	<b>Gewicht Weight</b>
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<b>Drehstück / Rotating adaptor</b>	5.0-15-2 NDS	Stahl / Steel	1.4g
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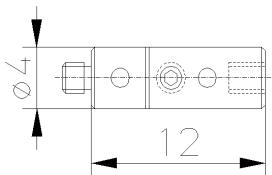


Mit Hilfe des Drehstücks können die angebauten Tastelemente ausgerichtet werden.

*Rotating adaptor allows styli positioning.*

<b>Bestell-Nr. Order No.</b>	<b>Material Material</b>	<b>Gewicht Weight</b>
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<b>Drehstück / Rotating adaptor</b>	4.0-12-2 NDS	Stahl / Steel	1.0g
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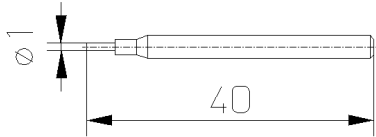
Mit Hilfe des Drehstücks können die angebauten Tastelemente ausgerichtet werden.

*Rotating adaptor allows styli positioning.*

# M2 (Ø 3mm)

Werkzeuge für Komponenten mit Anschluss-Gewinde M2 (Ø 3mm) / Tools for M2 (Ø 3mm) thread components	Bestell-Nr. Order No.	Bezeichnung Description
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Stiftschlüssel / Pin key	1.0 NWST	Ø 1.0mm für Komponenten mit Gewinde M2 Ø 1.0mm for M2 thread components
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Bestell-Nr. Order No.	Bezeichnung Description
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Sechskantschlüssel / Hexagon key	0.9 NWSK	SW 0.9mm für Gewindestifte M2 0.9mm for set screw M2
	1.3 NWSK	SW 1.3mm für Linsen- und Senkschrauben M2 1.3mm for oval head- and flat headed screw M2



Bestell-Nr. Order No.	Inhalt Contents
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Schraubensortiment (Ersatzschrauben) Screws assortment (Replacement screws)	12-2 NSS	12 Teile / 12 parts
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Schraubensortiment bestehend aus:	
4 Stk.	Linsenschrauben M2x3
2 Stk.	Senkschrauben M2x4
4 Stk.	Gewindestifte M2x2
2 Stk.	Gewindestifte M2x3

Screws assortment:	
4 pcs	Oval head screw M2x3
2 pcs	Flat headed screw M2x4
4 pcs	Set screw M2x2
2 pcs	Set screw M2x3

# M2 (Ø 3mm)

<b>Anschluss-Gewinde M2 (Ø 3mm) / M2 (Ø 3mm) thread</b>	<b>Bestell-Nr. Order No.</b>	<b>Inhalt Contents</b>
<b>Taststifte Set (Typ A) / Styli sets (Type A)</b>	20-2 NTBA	20 Teile / 20 parts

Tastelemente und diverses Zubehör sind in diesem Taststifte Set zusammengestellt. Dieses kleinste Set ist mit den gebräuchlichsten Taststiften bestückt, um einfachere Messungen erfolgreich zu bewältigen. Durch die freien Steckplätze haben Sie die Möglichkeit, Ihren Bausatz jederzeit mit benötigten Komponenten zu erweitern, um auch anspruchsvollere Messaufgaben lösen zu können. Im grosszügig dimensionierten Holzetui sind Ihre Tastelemente sicher vor Staub und Beschädigung geschützt.

*Styli and accessories are available in this styli set. 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.*

<b>Im Set enthaltene Komponenten:</b> <i>Supplied equipment:</i>		<b>Skizze:</b> <i>Drawing:</i>
1 Stk. / pc	1.0-10.5-2 NTB	Seite / Page 12
1 Stk. / pc	1.0-15.5-2 NTB	Seite / Page 12
1 Stk. / pc	2.0-11-2 NTC	Seite / Page 13
1 Stk. / pc	2.0-16-2 NTC	Seite / Page 13
1 Stk. / pc	4.0-12-2 NTC	Seite / Page 13
1 Stk. / pc	4.0-22-2 NTC	Seite / Page 13
1 Stk. / pc	6.0-13-2 NTD	Seite / Page 14
1 Stk. / pc	6.0-28-2 NTD	Seite / Page 14
1 Stk. / pc	5-2 NV	Seite / Page 21
1 Stk. / pc	10-2 NV	Seite / Page 21
1 Stk. / pc	20-2 NV	Seite / Page 21
1 Stk. / pc	40-2 NV	Seite / Page 21
1 Stk. / pc	60-2 NV	Seite / Page 21
1 Stk. / pc	30-10-2 NTS	Seite / Page 16
1 Stk. / pc	4.0-16-2 NGBD	Seite / Page 24
1 Stk. / pc	7.0-8-2 NTHF	Seite / Page 22
1 Stk. / pc	1.3 NWSK	Seite / Page 25
2 Stk. / pcs	1.0 NWST	Seite / Page 25

# M2 (Ø 3mm)

<b>Anschluss-Gewinde M2 (Ø 3mm) / M2 (Ø 3mm) thread</b>	<b>Bestell-Nr. Order No.</b>	<b>Inhalt Contents</b>
<b>Taststifte Set (Typ B) / Styli sets (Type B)</b>	40-2 NTBB	40 Teile / 40 parts

Tastelemente und diverses Zubehör sind in diesem Taststifte Set zusammengestellt. Dieses mittlere Set ist mit den gebräuchlichsten Taststiften bestückt, um einfachere und kompliziertere Messungen erfolgreich zu bewältigen. Durch die freien Steckplätze haben Sie die Möglichkeit, Ihren Bausatz jederzeit mit benötigten Komponenten zu erweitern, um auch anspruchsvollsten Messaufgaben zu genügen. Im grosszügig dimensionierten Holzetui sind Ihre Tastelemente sicher vor Staub und Beschädigung geschützt.

*Styli and accessories are available in this styli set. 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.*

<b>Im Set enthaltene Komponenten: Supplied equipment:</b>	<b>Skizze: Drawing:</b>
3 Stk. / pcs 1.0-10.5-2 NTB	Seite / Page 12
3 Stk. / pcs 1.0-15.5-2 NTB	Seite / Page 12
3 Stk. / pcs 2.0-11-2 NTC	Seite / Page 13
3 Stk. / pcs 2.0-16-2 NTC	Seite / Page 13
3 Stk. / pcs 4.0-12-2 NTC	Seite / Page 13
3 Stk. / pcs 4.0-22-2 NTC	Seite / Page 13
3 Stk. / pcs 6.0-13-2 NTD	Seite / Page 14
3 Stk. / pcs 6.0-28-2 NTD	Seite / Page 14
3 Stk. / pcs 10-2 NV	Seite / Page 21
3 Stk. / pcs 20-2 NV	Seite / Page 21
1 Stk. / pc 40-2 NV	Seite / Page 21
1 Stk. / pc 60-2 NV	Seite / Page 21
1 Stk. / pc 80-2 NV	Seite / Page 21
1 Stk. / pc 30-10-2 NTS	Seite / Page 16
1 Stk. / pc 4.0-16-2 NGBD	Seite / Page 24
1 Stk. / pc 7.0-8-2 NTHF	Seite / Page 22
1 Stk. / pc 1.3 NWSK	Seite / Page 25
2 Stk. / pcs 1.0 NWST	Seite / Page 25

# M2 (Ø 3mm)

<b>Anschluss-Gewinde M2 (Ø 3mm) / M2 (Ø 3mm) thread</b>	<b>Bestell-Nr. Order No.</b>	<b>Inhalt Contents</b>
<b>Taststifte Set (Typ C) / Styli sets (Type C)</b>	63-2 NTBC	63 Teile / 63 parts

Tastelemente und diverses Zubehör sind in diesem Taststifte Set zusammengestellt. Dieses grösste Set ist mit einer grossen Auswahl von Taststiften bestückt, um auch komplizierteste Messungen erfolgreich zu bewältigen. Durch die freien Steckplätze haben Sie die Möglichkeit, Ihren Bausatz jederzeit mit benötigten Komponenten zu erweitern, um auch sehr speziellen Messaufgaben zu genügen. Im grosszügig dimensionierten Holzetui sind Ihre Tastelemente sicher vor Staub und Beschädigung geschützt.

*Styli and accessories are available in this styli set. This large set contains a wide range of styli and related accessories which can be used to successfully carry out even the most complicated measurements. The threaded plate contains several extra spaces, allowing you to expand your set by including additional components. The sturdy wooden case protects your styli from dust or damage.*

<b>Im Set enthaltene Komponenten: Supplied equipment:</b>	<b>Skizze: Drawing:</b>
1 Stk. / pc 0.5-10-2 NTA	Seite / Page 12
4 Stk. / pcs 1.0-10.5-2 NTB	Seite / Page 12
4 Stk. / pcs 1.0-15.5-2 NTB	Seite / Page 12
1 Stk. / pc 1.5-16-2 NTB	Seite / Page 12
1 Stk. / pc 2.5-21-2 NTB	Seite / Page 12
4 Stk. / pcs 2.0-11-2 NTC	Seite / Page 13
4 Stk. / pcs 2.0-16-2 NTC	Seite / Page 13
1 Stk. / pc 3.0-21.5-2 NTC	Seite / Page 13
4 Stk. / pcs 4.0-12-2 NTC	Seite / Page 13
4 Stk. / pcs 4.0-22-2 NTC	Seite / Page 13
1 Stk. / pc 5.0-27.5-2 NTD	Seite / Page 14
4 Stk. / pcs 6.0-13-2 NTD	Seite / Page 14
4 Stk. / pcs 6.0-28-2 NTD	Seite / Page 14
1 Stk. / pc 4.0-22-2 NZRB	Seite / Page 15
1 Stk. / pc 1.5-14-2 NZTH	Seite / Page 16
1 Stk. / pc 10.0-25-2 NKSK	Seite / Page 18
1 Stk. / pc 25.0-12-2 NKSD	Seite / Page 18
1 Stk. / pc 1.0-12-2 NSTK	Seite / Page 19
1 Stk. / pc 2.0-22-2 NSTE	Seite / Page 20
4 Stk. / pcs 10-2 NV	Seite / Page 21
4 Stk. / pcs 20-2 NV	Seite / Page 21
1 Stk. / pc 30-2 NV	Seite / Page 21
1 Stk. / pc 40-2 NV	Seite / Page 21
1 Stk. / pc 60-2 NV	Seite / Page 21
1 Stk. / pc 80-2 NV	Seite / Page 21
1 Stk. / pc 100-2 NV	Seite / Page 21
1 Stk. / pc 30-10-2 NTS	Seite / Page 16
1 Stk. / pc 4.0-12-2 NDS	Seite / Page 24
1 Stk. / pc 4.0-16-2 NGBD	Seite / Page 24
1 Stk. / pc 7.0-8-2 NTHF	Seite / Page 22
1 Stk. / pc 1.3 NWSK	Seite / Page 25
2 Stk. / pcs 1.0 NWST	Seite / Page 25

# M2 (Ø 3mm)

Anschluss-Gewinde M2 (Ø 3mm) <i>M2 (Ø 3mm) thread</i>	Bestell-Nr. <i>Order No.</i>	Bezeichnung <i>Description</i>
Leere Holzetuis / <i>Empty wooden cases</i>	38-2 NHSA	Holzetui mit Steckplatte für maximum 38 Teile (Tastelemente mit Gewinde M2) <i>Wooden case with threaded plate for max. 38 parts (Styli with M2 thread)</i>
	93-2 NHSD	Holzetui mit Steckplatte für maximum 93 Teile (Tastelemente mit Gewinde M2) <i>Wooden case with threaded plate for max. 93 parts (Styli with M2 thread)</i>



Holzetui max. 38 Teile  
*Wooden case max. 38 parts*



Holzetui max. 93 Teile  
*Wooden case max. 93 parts*

# ***NOTIZEN / NOTES***



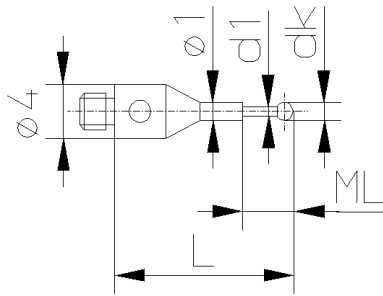
<b>Tastelemente / <i>Styli</i></b>	32-36
<b>Verlängerungen / <i>Extensions</i></b>	37
<b>Halter / <i>Holders for styli</i></b>	38
<b>Gelenke / <i>Knuckle joints</i></b>	38
<b>Drehstücke / <i>Rotating adaptors</i></b>	38
<b>Werkzeuge / <i>Tools</i></b>	39
<b>Tastelemente Set / <i>Styli sets</i></b>	40

# M3 (Ø 4mm)

Anschluss-Gewinde M3 (Ø 4mm) / M3 (Ø 4mm) thread	Bestell-Nr. Order No.	Gewicht Weight	dk mm	d1 mm	L mm	ML mm
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## Taststifte (Typ A) / Styli (Type A)

Kugel: Rubin / Ball: Ruby  
Schaft: HM / Shaft: TC

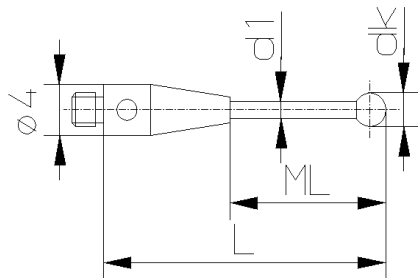


0.2-11-3 NTA	0.6g	0.2	0.15	11.0	1.5
0.25-11-3 NTA	0.6g	0.25	0.2	11.0	2.5
0.3-11-3 NTA	0.6g	0.3	0.2	11.0	2.5
0.4-11-3 NTA	0.6g	0.4	0.3	11.0	2.5
0.5-11-3 NTA	0.6g	0.5	0.3	11.0	2.5
0.6-11-3 NTA	0.6g	0.6	0.4	11.0	2.5
0.6-13-3 NTA	0.6g	0.6	0.4	13.0	4.5
0.7-11-3 NTA	0.6g	0.7	0.4	11.0	2.5
0.7-13-3 NTA	0.6g	0.7	0.4	13.0	4.5
0.8-11-3 NTA	0.6g	0.8	0.6	11.0	2.5
0.8-13-3 NTA	0.6g	0.8	0.6	13.0	4.5
0.9-11-3 NTA	0.6g	0.9	0.6	11.0	2.5
0.9-13-3 NTA	0.6g	0.9	0.6	13.0	4.5
1.0-11-3 NTA	0.6g	1.0	0.7	11.0	2.5
1.0-13-3 NTA	0.6g	1.0	0.7	13.0	4.5

Bestell-Nr. Order No.	Gewicht Weight	dk mm	d1 mm	L mm	ML mm
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## Taststifte (Typ B) / Styli (Type B)

Kugel: Rubin / Ball: Ruby  
Schaft: HM / Shaft: TC



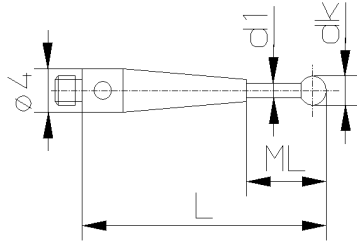
1.0-10.5-3 NTB	0.6g	1.0	0.7	10.5	4.5
1.0-15.5-3 NTB	0.7g	1.0	0.7	15.5	7.5
1.0-20.5-3 NTB	0.7g	1.0	0.7	20.5	12.5
1.0-30.5-3 NTB	0.8g	1.0	0.7	30.5	22.5
1.5-16-3 NTB	0.7g	1.5	0.7	16.0	8.0
1.5-21-3 NTB	0.7g	1.5	0.7	21.0	13.0
1.5-31-3 NTB	0.9g	1.5	1.0	31.0	23.0
2.0-16-3 NTB	0.8g	2.0	1.0	16.0	8.0
2.0-21-3 NTB	0.8g	2.0	1.0	21.0	13.0
2.0-26-3 NTB	0.9g	2.0	1.0	26.0	18.0
2.0-31-3 NTB	0.9g	2.0	1.0	31.0	23.0
2.0-36-3 NTB	1.0g	2.0	1.0	36.0	28.0
2.0-41-3 NTB	1.1g	2.0	1.0	41.0	33.0
2.5-16-3 NTB	0.8g	2.5	1.0	16.0	8.0
2.5-21-3 NTB	0.8g	2.5	1.0	21.0	13.0
2.5-31-3 NTB	1.3g	2.5	1.5	31.0	23.0
2.5-41-3 NTB	1.5g	2.5	1.5	41.0	33.0
3.0-21.5-3 NTB	1.1g	3.0	1.5	21.5	13.5
3.0-31.5-3 NTB	1.3g	3.0	1.5	31.5	23.5
3.0-36.5-3 NTB	1.4g	3.0	1.5	36.5	28.5
3.0-41.5-3 NTB	1.6g	3.0	1.5	41.5	33.5
3.0-46.5-3 NTB	1.7g	3.0	1.5	46.5	38.5
3.0-51.5-3 NTB	1.9g	3.0	1.5	51.5	43.5
4.0-22-3 NTB	1.4g	4.0	2.0	22.0	12.0
4.0-32-3 NTB	2.0g	4.0	2.0	32.0	22.0
4.0-37-3 NTB	2.1g	4.0	2.0	37.0	27.0
4.0-42-3 NTB	2.4g	4.0	2.0	42.0	32.0
4.0-47-3 NTB	2.6g	4.0	2.0	47.0	37.0
4.0-52-3 NTB	2.9g	4.0	2.0	52.0	42.0
5.0-22.5-3 NTB	1.7g	5.0	2.0	22.5	12.5
5.0-32.5-3 NTB	2.0g	5.0	2.0	32.5	22.5
5.0-37.5-3 NTB	2.3g	5.0	2.0	37.5	27.5
5.0-42.5-3 NTB	2.5g	5.0	2.0	42.5	32.5
5.0-47.5-3 NTB	2.7g	5.0	2.0	47.5	37.5
5.0-52.5-3 NTB	3.0g	5.0	2.0	52.5	42.5
6.0-23-3 NTB	1.8g	6.0	2.0	23.0	13.0
6.0-33-3 NTB	2.2g	6.0	2.0	33.0	23.0
6.0-38-3 NTB	2.4g	6.0	2.0	38.0	28.0
6.0-43-3 NTB	2.6g	6.0	2.0	43.0	33.0
6.0-48-3 NTB	2.9g	6.0	2.0	48.0	38.0
6.0-53-3 NTB	3.2g	6.0	2.0	53.0	43.0

# M3 (Ø 4mm)

Anschluss-Gewinde M3 (Ø 4mm) M3 (Ø 4mm) thread	Bestell-Nr. Order No.	Gewicht Weight	dk mm	d1 mm	L mm	ML mm
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<b>Taststifte (Typ BS) / Styli (Type BS)</b>	0.5-21-3 NTBS	1.0g	0.5	0.3	21.0	2.5
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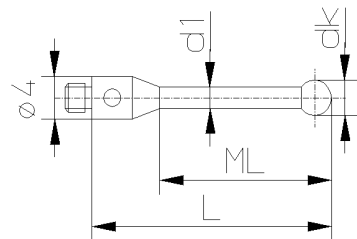
Kugel: Rubin / Ball: Ruby  
Schaft: HM / Shaft: TC



Bestell-Nr. Order No.	Gewicht Weight	dk mm	d1 mm	L mm	ML mm
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<b>Taststifte (Typ C) / Styli (Type C)</b>	1.0-21.5-3 NTC	0.9g	1.0	0.7	21.5	5.0
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Kugel: Rubin / Ball: Ruby  
Schaft: Stahl / Shaft: Steel

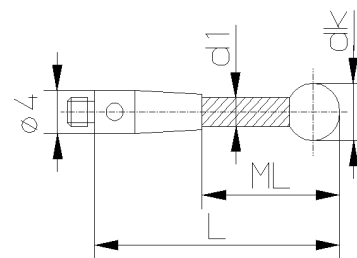


2.0-11-3 NTC	0.6g	2.0	1.2	11.0	5.0
2.0-16-3 NTC	0.6g	2.0	1.2	16.0	10.0
2.0-22-3 NTC	1.0g	2.0	1.4	22.0	8.0
2.5-21-3 NTC	0.8g	2.5	1.5	21.0	15.0
3.0-11.5-3 NTC	0.7g	3.0	2.0	11.5	5.5
3.0-21.5-3 NTC	0.9g	3.0	2.0	21.5	15.5
3.0-22.5-3 NTC	0.9g	3.0	2.0	22.5	16.5
4.0-12-3 NTC	0.8g	4.0	2.4	12.0	6.0
4.0-22-3 NTC	1.1g	4.0	2.4	22.0	16.0
4.0-23-3 NTC	1.2g	4.0	2.4	23.0	17.0
4.0-33-3 NTC	1.5g	4.0	2.4	33.0	27.0
5.0-23.5-3 NTC	1.6g	5.0	3.0	23.5	17.5
5.0-33.5-3 NTC	2.6g	5.0	3.0	33.5	29.5
6.0-13-3 NTC	1.1g	6.0	2.8	13.0	7.0
6.0-28-3 NTC	1.9g	6.0	3.0	28.0	22.0

Bestell-Nr. Order No.	Gewicht Weight	dk mm	d1 mm	L mm	ML mm
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<b>Taststifte (Typ K) Keramik Styli (Type K) Ceramic</b>	3.0-51.5-3 NTKE	1.3g	3.0	2.0	51.5	41.5
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Kugel: Rubin / Ball: Ruby  
Schaft: Keramik / Shaft: Ceramic

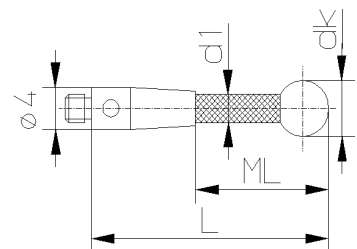


4.0-32-3 NTKE	1.1g	4.0	2.0	32.0	22.0
4.0-42-3 NTKE	1.2g	4.0	2.0	42.0	32.0
4.0-52-3 NTKE	1.3g	4.0	2.0	52.0	42.0
5.0-42.5-3 NTKE	1.8g	5.0	3.0	42.5	32.5
5.0-52.5-3 NTKE	2.0g	5.0	3.0	52.5	42.5
5.0-62.5-3 NTKE	2.3g	5.0	3.0	62.5	52.5
6.0-43-3 NTKE	1.9g	6.0	3.0	43.0	33.0
6.0-53-3 NTKE	2.7g	6.0	3.0	53.0	43.0
6.0-63-3 NTKE	2.5g	6.0	3.0	63.0	53.0

Bestell-Nr. Order No.	Gewicht Weight	dk mm	d1 mm	L mm	ML mm
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<b>Taststifte (Typ CA) Kohlefaser Styli (Type CA) Carbon Fiber</b>	4.0-32-3 NTCA	1.0g	4.0	3.0	32.0	22.0
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Kugel: Rubin / Ball: Ruby  
Schaft: CFK / Shaft: Carbon

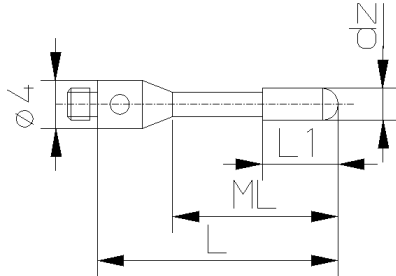


4.0-42-3 NTCA	1.1g	4.0	3.0	42.0	32.0
4.0-52-3 NTCA	1.2g	4.0	3.0	52.0	42.0
5.0-42.5-3 NTCA	1.2g	5.0	3.0	42.5	32.5
5.0-52.5-3 NTCA	1.3g	5.0	3.0	52.5	42.5
5.0-62.5-3 NTCA	1.4g	5.0	3.0	62.5	52.5
6.0-43-3 NTCA	1.4g	6.0	3.0	43.0	33.0
6.0-53-3 NTCA	1.5g	6.0	3.0	53.0	43.0
6.0-63-3 NTCA	1.6g	6.0	3.0	63.0	53.0
6.0-78-3 NTCA	2.3g	6.0	4.0	78.0	67.0
6.0-103-3 NTCA	2.8g	6.0	4.0	103.0	92.0
8.0-79-3 NTCA	3.0g	8.0	4.0	79.0	68.0
8.0-104-3 NTCA	3.5g	8.0	4.0	104.0	93.0

# M3 (Ø 4mm)

<b>Anschluss-Gewinde M3 (Ø 4mm) / M3 (Ø 4mm) thread</b>	<b>Bestell-Nr. Order No.</b>	<b>Gewicht Weight</b>	<b>dz</b> mm	<b>L1</b> mm	<b>L</b> mm	<b>ML</b> mm
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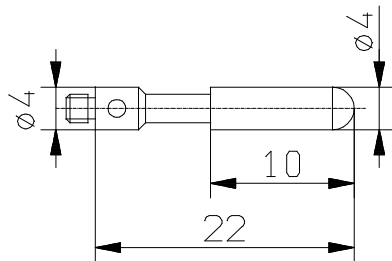
<b>Zylindertaststifte (Typ A) / Cylinder styli (Type A)</b> Zylinder: Rubin / Cylinder: Ruby Schaft: Stahl / Shaft: Steel	2.0-16-3 NZRA	0.7g	2.0	5.0	16.0	11.0
	3.0-22-3 NZRA	1.1g	3.0	10.0	22.0	17.0



<b>Bestell-Nr. Order No.</b>	<b>Gewicht Weight</b>
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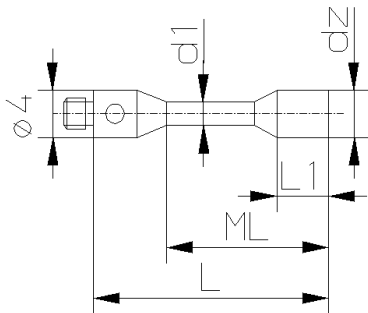
<b>Zylindertaststifte (Typ B) / Cylinder styli (Type B)</b>	4.0-22-3 NZRB	1.4g
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Zylinder: Rubin / Cylinder: Ruby  
Schaft: Stahl / Shaft: Steel



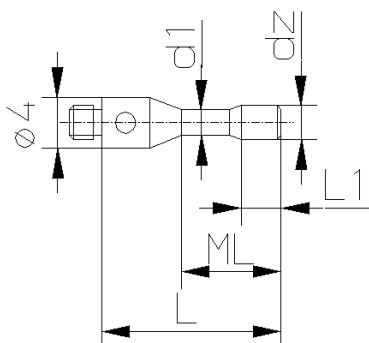
<b>Bestell-Nr. Order No.</b>	<b>Gewicht Weight</b>	<b>dz</b> mm	<b>d1</b> mm	<b>L1</b> mm	<b>L</b> mm	<b>ML</b> mm
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<b>Zylindertaststifte (Typ H) / Cylinder styli (Type H)</b> Zylinder: HM / Cylinder: TC	1.5-14-3 NZTH	0.8g	1.5	1.0	2.5	14.0	6.0
	3.0-16-3 NZTH	1.2g	3.0	1.5	3.5	16.0	8.0



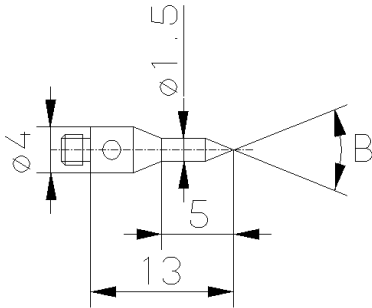
<b>Bestell-Nr. Order No.</b>	<b>Gewicht Weight</b>	<b>dz</b> mm	<b>d1</b> mm	<b>L1</b> mm	<b>L</b> mm	<b>ML</b> mm
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<b>Zylindertaststifte (Typ S) / Cylinder styli (Type S)</b> Zylinder: Stahl / Cylinder: Steel	1.5-13-3 NZTS	0.7g	1.5	1.0	1.5	13.0	4.0
	2.0-13-3 NZTS	0.8g	2.0	1.5	2.0	13.0	4.0
	2.5-15-3 NZTS	0.9g	2.5	1.7	2.5	15.0	5.5
	3.0-15-3 NZTS	1.0g	3.0	2.0	4.0	15.0	5.5



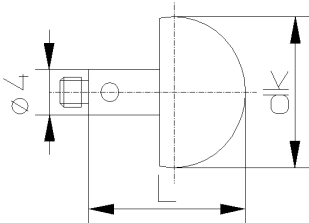
# M3 (Ø 4mm)

<b>Anschluss-Gewinde M3 (Ø 4mm) / M3 (Ø 4mm) thread</b>	<b>Bestell-Nr.</b> <i>Order No.</i>	<b>Spitze</b> <i>Point</i>	<b>Gewicht</b> <i>Weight</i>	<b>β</b>	<b>R</b> mm
<b>Tastspitzen / Pointed styli</b>	30-13-3 NTS	HM / TC	0.7g	30°	-



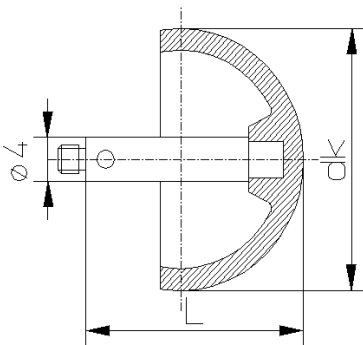
<b>Bestell-Nr.</b> <i>Order No.</i>	<b>Gewicht</b> <i>Weight</i>	<b>dk</b> mm	<b>L</b> mm
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<b>Keramikkugel-Taster / Ceramic ball styli</b>	8.0-10-3 NKK	1.3g	8.0	10.0
Kugel: Keramik / <i>Ball: Ceramic</i> Schaft: Stahl / <i>Shaft: Steel</i>	10.0-11-3 NKK	2.0g	10.0	11.0



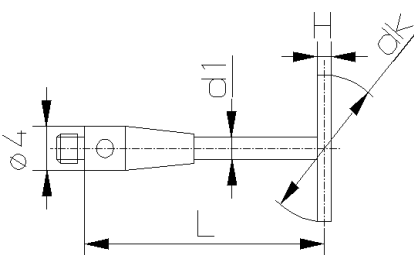
<b>Bestell-Nr.</b> <i>Order No.</i>	<b>Gewicht</b> <i>Weight</i>	<b>dk</b> mm	<b>L</b> mm
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<b>Hohle Keramikkugel-Taster (Typ E)</b> <i>Hollow ceramic ball styli (Type E)</i>	18.0-16-3 NHKE	5.6g	18.0	16.0
Kugel: Keramik / <i>Ball: Ceramic</i> Schaft: Stahl / <i>Shaft: Steel</i>	24.0-19-3 NHKE	9.0g	24.0	19.0
	30.0-22-3 NHKE	14.6g	30.0	22.0



<b>Bestell-Nr.</b> <i>Order No.</i>	<b>Gewicht</b> <i>Weight</i>	<b>dk</b> mm	<b>d1</b> mm	<b>L</b> mm	<b>H</b> mm
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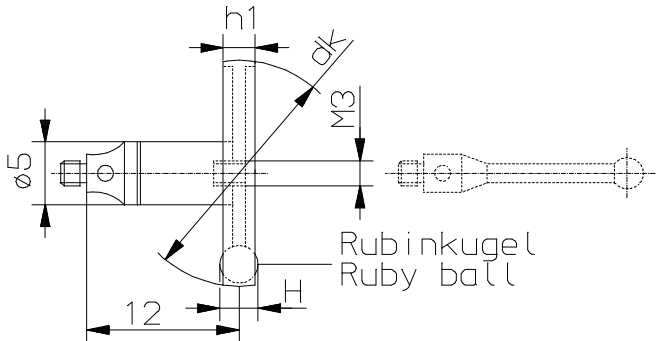
<b>Kugelscheiben-Taststifte / Ball disc styli</b>	5.0-20-3 NKSK	1.1g	5.0	1.5	20.0	0.5
Scheibe: Keramik / <i>Disc: Ceramic</i> Schaft: HM / <i>Shaft: TC</i>	10.0-25-3 NKSK	1.8g	10.0	2.0	25.0	0.8
	14.0-25-3 NKSK	2.2g	14.0	2.0	25.0	1.0



# M3 (Ø 4mm)

<b>Anschluss-Gewinde M3 (Ø 4mm) / M3 (Ø 4mm) thread</b>	<b>Bestell-Nr. Order No.</b>	<b>Gewicht Weight</b>	<b>dk</b> mm	<b>H</b> mm	<b>h1</b> mm
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<b>Kugelscheiben drehbar / Ball disc styli rotary</b> Scheibe: Stahl / Disc: Steel Schaft: Stahl / Shaft: Steel	18.0-12-3 NKSD	3.1g	18.0	3.5	2.5
	25.0-12-3 NKSD	4.3g	25.0	3.5	2.5
	40.0-12-3 NKSD	10.5g	40.0	6.0	4.0

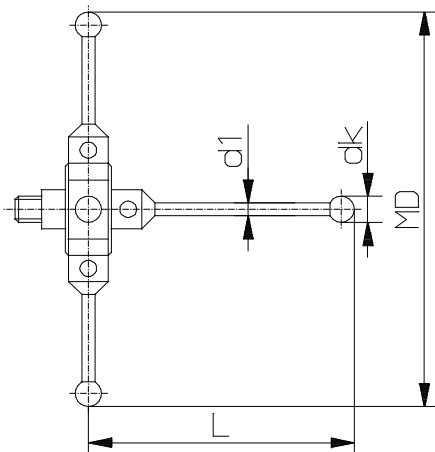


Aufnahme der **Taststifte mit Gewinde M3** möglich.  
Mit Hilfe des integrierten Drehstücks können die angebauten Tastelemente ausgerichtet werden.

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

<b>Bestell-Nr. Order No.</b>	<b>Gewicht Weight</b>	<b>dk</b> mm	<b>d1</b> mm	<b>MD</b> mm	<b>L</b> mm
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<b>Sterntaster drehbar (Typ E) / Star styli rotary (Type E)</b> Kugel: Rubin / Ball: Ruby Schaft: Stahl / Shaft: Steel	2.0-32-3 NSTE	6.2g	2.0	1.4	32.0	21.0
	2.0-52-3 NSTE	8.4g	2.0	1.4	52.0	31.0



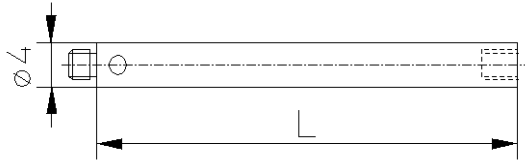
Mit Hilfe des integrierten Drehstücks können die angebauten Tastelemente ausgerichtet werden.

*A built-in rotating adaptor allows styli positioning.*

# M3 (Ø 4mm)

Anschluss-Gewinde M3 (Ø 4mm) / M3 (Ø 4mm) thread	Bestell-Nr. Order No.	Material Material	Gewicht Weight	L mm
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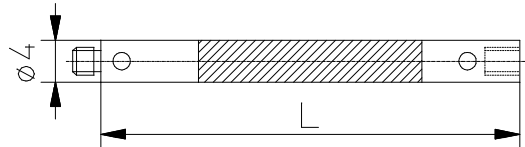
## Verlängerungen Stahl / Extensions Steel



10-3 NV	Stahl / Steel	0.7g	10.0
20-3 NV	Stahl / Steel	1.7g	20.0
30-3 NV	Stahl / Steel	2.6g	30.0
35-3 NV	Stahl / Steel	3.2g	35.0
40-3 NV	Stahl / Steel	3.6g	40.0
50-3 NV	Stahl / Steel	4.6g	50.0

Bestell-Nr. Order No.	Material Material	Gewicht Weight	L mm
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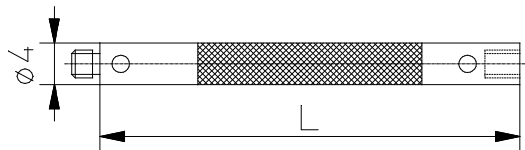
## Verlängerungen Keramik / Extensions Ceramic



40-3 NVK	Keramik / Ceramic	2.1g	40.0
50-3 NVK	Keramik / Ceramic	2.4g	50.0
60-3 NVK	Keramik / Ceramic	2.8g	60.0
70-3 NVK	Keramik / Ceramic	3.2g	70.0
80-3 NVK	Keramik / Ceramic	3.6g	80.0
90-3 NVK	Keramik / Ceramic	3.9g	90.0
100-3 NVK	Keramik / Ceramic	4.3g	100.0

Bestell-Nr. Order No.	Material Material	Gewicht Weight	L mm
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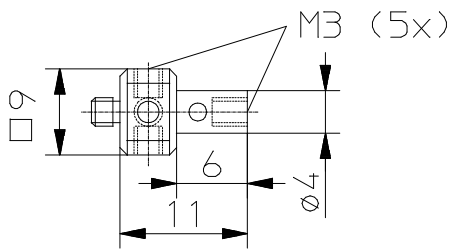
## Verlängerungen Kohlefaser / Extensions Carbon Fiber



40-3 NVCA	CFK / Carbon	1.4g	40.0
50-3 NVCA	CFK / Carbon	1.6g	50.0
60-3 NVCA	CFK / Carbon	1.8g	60.0
70-3 NVCA	CFK / Carbon	2.0g	70.0
75-3 NVCA	CFK / Carbon	2.1g	75.0
80-3 NVCA	CFK / Carbon	2.2g	80.0
90-3 NVCA	CFK / Carbon	2.2g	90.0
100-3 NVCA	CFK / Carbon	2.6g	100.0

# M3 (Ø 4mm)

Anschluss-Gewinde M3 (Ø 4mm) / M3 (Ø 4mm) thread	Bestell-Nr. Order No.	Material Material	Gewicht Weight
Taststift-Halter (Typ A) / Holders for styli (Type A) 5-Way	9.0-11-3 NTHA	Stahl / Steel	2.4g

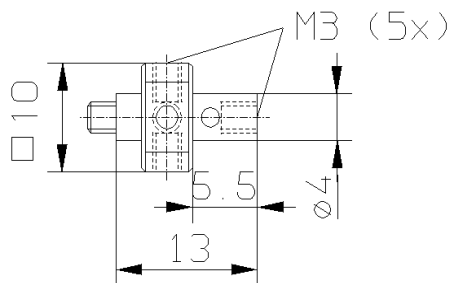


Zur Aufnahme der **Taststifte mit Gewinde M3**.

*For use with M3 thread styli.*

Bestell-Nr. Order No.	Material Material	Gewicht Weight
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Taststift-Halter drehbar (Typ F) 5-Wege Holders for styli rotary (Type F) 5-Way	10.0-13-3 NTHF	Stahl / Steel	3.3g
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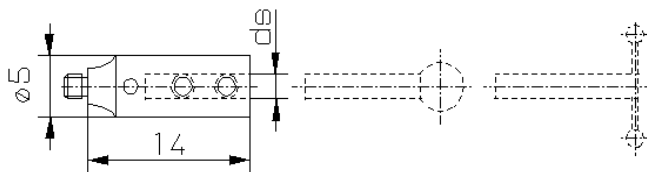
Zur Aufnahme der **Taststifte mit Gewinde M3**.  
Mit Hilfe des integrierten Drehstücks können die  
angebauten Tastelemente ausgerichtet werden.

*For use with M3 thread styli.*

*A built-in rotating adaptor allows styli positioning.*

Bestell-Nr. Order No.	Material Material	Gewicht Weight	ds mm
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Taststift-Halter (Typ Z) / Holders for styli (Type Z)	1.0-3 NHZ	Stahl / Steel	2.1g	1.0
	1.5-3 NHZ	Stahl / Steel	2.0g	1.5
	2.0-3 NHZ	Stahl / Steel	1.8g	2.0

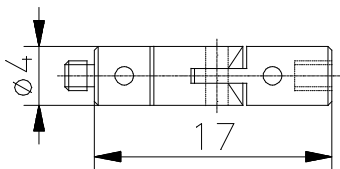


Zur Aufnahme der **Taststifte (Typ FM), (Typ F), (Typ N)** und **T-Taster (Typ H)** (Seite 6+8+9).

*For use with Styli (Type FM), (Type F), (Type N) and T-Styli (Type H) (Page 6+8+9).*

Bestell-Nr. Order No.	Material Material	Gewicht Weight
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Gelenk drehbar (Typ B) / Knuckle joints rotary (Type B)	4.0-17-3 NGBD	Stahl / Steel	1.4g
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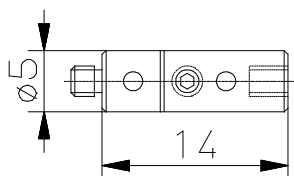


Mit Hilfe des integrierten Drehstücks können die  
angebauten Tastelemente ausgerichtet werden.

*A built-in rotating adaptor allows styli positioning.*

Bestell-Nr. Order No.	Material Material	Gewicht Weight
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Drehstück / Rotating adaptor	5.0-14-3 NDS	Stahl / Steel	1.8g
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Mit Hilfe des Drehstücks können die angebauten  
Tastelemente ausgerichtet werden.

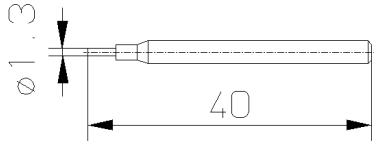
*Rotating adaptor allows styli positioning.*



# M3 (Ø 4mm)

Werkzeuge für Komponenten mit Anschluss-Gewinde M3 (Ø 4mm) / Tools for M3 (Ø 4mm) thread components	Bestell-Nr. / Order No.	Bezeichnung / Description
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Stiftschlüssel / Pin key	1.3 NWST	Ø 1.3mm für Komponenten mit Gewinde M3 Ø 1.3mm for M3 thread components
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Bestell-Nr. / Order No.	Bezeichnung / Description
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Sechskantschlüssel / Hexagon key	0.9 NWSK	SW 0.9mm für Gewindestifte M2 0.9mm for set screw M2
	1.3 NWSK	SW 1.3mm für Linsen- und Senkschrauben M2 1.3mm for oval head- and flat headed screw M2



Bestell-Nr. / Order No.	Inhalt / Contents
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Schraubensortiment (Ersatzschrauben) / Screws assortment (Replacement screws)	6-3 NSS	6 Teile / 6 parts
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Schraubensortiment bestehend aus:	
2 Stk.	Linsenschrauben M2x3
2 Stk.	Senkschrauben M2x4
2 Stk.	Gewindestifte M2x2

Screws assortment:	
2 pcs	Oval head screw M2x3
2 pcs	Flat headed screw M2x4
2 pcs	Set screw M2x2

# M3 (Ø 4mm)

<b>Anschluss-Gewinde M3 (Ø 4mm) / M3 (Ø 4mm) thread</b>	<b>Bestell-Nr. Order No.</b>	<b>Inhalt Contents</b>
<b>Taststifte Set (Typ A) / Styli sets (Type A)</b>	20-3 NTBA	20 Teile / 20 parts

Tastelemente und diverses Zubehör sind in diesem Taststifte Set zusammengestellt. Dieses Set ist mit den gebräuchlichsten Taststiften bestückt, um einfachere Messungen erfolgreich zu bewältigen. Durch die freien Steckplätze haben Sie die Möglichkeit, Ihren Bausatz jederzeit mit benötigten Komponenten zu erweitern, um auch anspruchsvollere Messaufgaben lösen zu können. Im grosszügig dimensionierten Holzetui sind Ihre Tastelemente sicher vor Staub und Beschädigung geschützt.

*Styli and accessories are available in this styli set. 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.*

<b>Im Set enthaltene Komponenten: Supplied equipment:</b>	<b>Skizze: Drawing:</b>
1 Stk. / pc 1.0-10.5-3 NTB	Seite / Page 32
1 Stk. / pc 1.0-20.5-3 NTB	Seite / Page 32
1 Stk. / pc 2.0-16-3 NTB	Seite / Page 32
1 Stk. / pc 2.0-36-3 NTB	Seite / Page 32
1 Stk. / pc 3.0-31.5-3 NTB	Seite / Page 32
1 Stk. / pc 3.0-41.5-3 NTB	Seite / Page 32
1 Stk. / pc 4.0-32-3 NTB	Seite / Page 32
1 Stk. / pc 4.0-42-3 NTB	Seite / Page 32
1 Stk. / pc 4.0-52-3 NTCA	Seite / Page 33
1 Stk. / pc 5.0-52.5-3 NTKE	Seite / Page 33
1 Stk. / pc 6.0-63-3 NTCA	Seite / Page 33
1 Stk. / pc 10-3 NV	Seite / Page 37
1 Stk. / pc 20-3 NV	Seite / Page 37
1 Stk. / pc 30-3 NV	Seite / Page 37
1 Stk. / pc 4.0-17-3 NGBD	Seite / Page 38
1 Stk. / pc 10.0-13-3 NTHF	Seite / Page 38
1 Stk. / pc 1.3 NWSK	Seite / Page 39
2 Stk. / pcs 1.3 NWST	Seite / Page 39

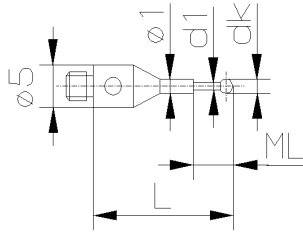
	<b>Bestell-Nr. Order No.</b>	<b>Bezeichnung Description</b>
<b>Leere Holzetuis / Empty wooden cases</b>	24-3 NHSB	Holzetui mit Einlegeplatte für maximum 24 Teile (Tastelemente mit Gewinde M3 (Ø 4mm)) <i>Wooden case with plate for max. 24 parts (Styli with M3 (Ø 4mm) thread)</i>

# **M3 (Ø 5mm)**

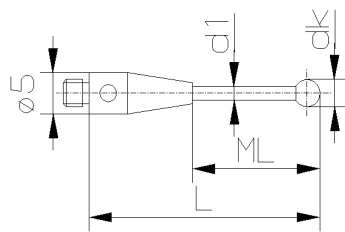
<b>Tastelemente / <i>Styli</i></b>	42-43
<b>Verlängerungen / <i>Extensions</i></b>	43
<b>Tastelemente Set / <i>Styli sets</i></b>	44

# M3 (Ø 5mm)

Anschluss-Gewinde M3 (Ø 5mm) / M3 (Ø 5mm) thread	Bestell-Nr. Order No.	Gewicht Weight	dk mm	d1 mm	L mm	ML mm
<b>Taststifte (Typ A) / Styli (Type A)</b> Kugel: Rubin / Ball: Ruby Schaft: HM / Shaft: TC	0.25-11-5 NTA	0.8g	0.25	0.2	11.0	2.5
	0.25-25-5 NTA	1.0g	0.25	0.2	25.0	4.0
	0.3-13-5 NTA	1.0g	0.3	0.2	13.0	2.5
	0.3-15-5 NTA	1.0g	0.3	0.2	15.0	2.5
	0.3-18-5 NTA	1.0g	0.3	0.2	18.0	2.5
	0.3-20-5 NTA	1.1g	0.3	0.2	20.0	2.5
	0.4-13-5 NTA	1.0g	0.4	0.3	13.0	2.5
	0.4-15-5 NTA	1.0g	0.4	0.3	15.0	2.5
	0.4-20-5 NTA	1.1g	0.4	0.3	20.0	2.5
	0.5-13-5 NTA	1.0g	0.5	0.3	13.0	2.5
	0.5-15-5 NTA	1.0g	0.5	0.3	15.0	2.5
	0.5-18-5 NTA	1.0g	0.5	0.3	18.0	2.5
	0.5-20-5 NTA	1.0g	0.5	0.3	20.0	2.5
	0.5-24-5 NTA	1.1g	0.5	0.3	24.0	2.5
	0.6-14-5 NTA	1.0g	0.6	0.4	14.0	4.5
	0.6-17-5 NTA	1.0g	0.6	0.4	17.0	4.5
	0.6-20-5 NTA	1.0g	0.6	0.4	20.0	4.5
	0.6-24-5 NTA	1.1g	0.6	0.4	24.0	4.5
	0.8-17-5 NTA	1.0g	0.8	0.6	17.0	5.0
	0.8-20-5 NTA	1.0g	0.8	0.6	20.0	5.0
	0.8-25-5 NTA	1.1g	0.8	0.6	25.0	5.0
	0.8-34-5 NTA	1.1g	0.8	0.6	34.0	4.0
	0.8-35-5 NTA	1.1g	0.8	0.6	35.0	5.0
	1.0-20-5 NTA	1.1g	1.0	0.8	20.0	5.0
	1.0-25-5 NTA	1.1g	1.0	0.8	25.0	5.0
	1.0-30-5 NTA	1.1g	1.0	0.8	30.0	5.0
	1.0-35-5 NTA	1.1g	1.0	0.8	35.0	5.0
1.0-40-5 NTA	1.3g	1.0	0.8	40.0	5.0	

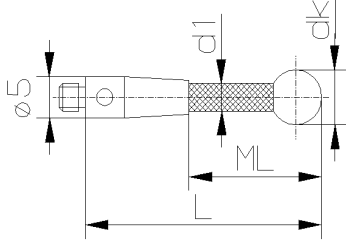


Bestell-Nr. Order No.	Gewicht Weight	dk mm	d1 mm	L mm	ML mm
0.8-14-5 NTB	1.0g	0.8	0.6	14.0	5.0
1.0-14-5 NTB	1.0g	1.0	0.8	14.0	5.0
1.0-17-5 NTB	1.0g	1.0	0.8	17.0	8.0
1.0-20-5 NTB	1.0g	1.0	0.8	20.0	11.0
1.35-24-5 NTB	1.1g	1.35	1.0	24.0	15.0
1.5-14-5 NTB	1.0g	1.5	1.0	14.0	5.0
1.5-17-5 NTB	1.0g	1.5	1.0	17.0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

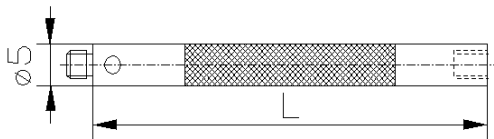


# M3 (Ø 5mm)

Anschluss-Gewinde M3 (Ø 5mm) M3 (Ø 5mm) thread	Bestell-Nr. Order No.	Gewicht Weight	dk mm	d1 mm	L mm	ML mm
<b>Taststifte (Typ CA) Kohlefaser</b> <b>Styli (Type CA) Carbon Fiber</b> Kugel: Rubin / Ball: Ruby Schaft: CFK / Shaft: Carbon	3.0-25-5 NTCA	1.1g	3.0	2.0	25.0	16.0
	3.0-33-5 NTCA	1.1g	3.0	2.0	33.0	24.0
	3.0-40-5 NTCA	1.1g	3.0	2.0	40.0	31.0
	3.0-42-5 NTCA	1.1g	3.0	2.0	42.0	33.0
	3.0-50-5 NTCA	1.2g	3.0	2.0	50.0	41.0
	3.0-58-5 NTCA	1.2g	3.0	2.0	58.0	49.0
	3.0-59-5 NTCA	1.2g	3.0	2.0	59.0	50.0
	3.0-65-5 NTCA	1.3g	3.0	2.0	65.0	56.0
	3.0-75-5 NTCA	1.3g	3.0	2.0	75.0	66.0
	3.0-84-5 NTCA	1.3g	3.0	2.0	84.0	75.0
	3.0-100-5 NTCA	1.4g	3.0	2.0	100.0	91.0
	3.0-125-5 NTCA	1.5g	3.0	2.0	125.0	116.0
	4.0-50-5 NTCA	1.2g	4.0	2.0	50.0	41.0
	5.0-30-5 NTCA	1.3g	5.0	3.0	30.0	21.0
	5.0-40-5 NTCA	1.4g	5.0	3.0	40.0	31.0
	5.0-50-5 NTCA	1.6g	5.0	3.0	50.0	41.0
	5.0-60-5 NTCA	1.6g	5.0	3.0	60.0	51.0
	5.0-75-5 NTCA	1.8g	5.0	3.0	75.0	66.0
	6.0-50-5 NTCA	1.7g	6.0	3.0	50.0	41.0
	6.0-70-5 NTCA	1.9g	6.0	3.0	70.0	61.0
	6.0-100-5 NTCA	2.3g	6.0	3.0	100.0	91.0
	8.0-30-5 NTCA	2.3g	8.0	5.0	30.0	30.0
	8.0-50-5 NTCA	2.9g	8.0	5.0	50.0	50.0
	8.0-70-5 NTCA	3.5g	8.0	5.0	70.0	70.0
	8.0-100-5 NTCA	4.4g	8.0	5.0	100.0	100.0
	8.0-125-5 NTCA	5.0g	8.0	5.0	125.0	125.0



	Bestell-Nr. Order No.	Material Material	Gewicht Weight	L mm
<b>Verlängerungen Kohlefaser / Extensions Carbon Fiber</b>	20-5 NVCA	CFK / Carbon	1.7g	20.0
	25-5 NVCA	CFK / Carbon	1.8g	25.0
	30-5 NVCA	CFK / Carbon	2.0g	30.0
	40-5 NVCA	CFK / Carbon	2.1g	40.0
	50-5 NVCA	CFK / Carbon	2.3g	50.0
	60-5 NVCA	CFK / Carbon	2.6g	60.0
	65-5 NVCA	CFK / Carbon	2.6g	65.0
	75-5 NVCA	CFK / Carbon	2.6g	75.0
	80-5 NVCA	CFK / Carbon	2.7g	80.0
	100-5 NVCA	CFK / Carbon	3.3g	100.0
	130-5 NVCA	CFK / Carbon	3.5g	130.0
	150-5 NVCA	CFK / Carbon	4.2g	150.0



# M3 (Ø 5mm)

Anschluss-Gewinde M3 (Ø 5mm) / M3 (Ø 5mm) thread	Bestell-Nr. Order No.	Inhalt Contents
Taststifte Set (Typ A) / Styli sets (Type A)	17-5 NTBA	17 Teile / 17 parts

Tastelemente und diverses Zubehör sind in diesem Taststifte Set zusammengestellt. Dieses Set ist mit den gebräuchlichsten Taststiften bestückt, um einfachere Messungen erfolgreich zu bewältigen. Im grosszügig dimensionierten Holzetui sind Ihre Tastelemente sicher vor Staub und Beschädigung geschützt.

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

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

Im Set enthaltene Komponenten: <i>Supplied equipment:</i>		Skizze: <i>Drawing:</i>
2 Stk. / pcs	1.0-20-5 NTB	Seite / Page 42
2 Stk. / pcs	2.0-25-5 NTB	Seite / Page 42
2 Stk. / pcs	3.0-33-5 NTCA	Seite / Page 43
2 Stk. / pcs	3.0-50-5 NTCA	Seite / Page 43
2 Stk. / pcs	5.0-30-5 NTCA	Seite / Page 43
1 Stk. / pc	5.0-75-5 NTCASN	
1 Stk. / pc	30-5 NVCA	Seite / Page 43
1 Stk. / pc	50-5 NVCA	Seite / Page 43
1 Stk. / pc	100-5 NVCA	Seite / Page 43
1 Stk. / pc	10.0-13-3 NTHF	Seite / Page 38
2 Stk. / pcs	1.3 NWST	Seite / Page 39

	Bestell-Nr. Order No.	Bezeichnung Description
Leere Holzetuis / Empty wooden cases	17-5 NHSA	Holzetui mit Einlegeplatte für maximum 17 Teile (Tastelemente mit Gewinde M3 (Ø 5mm)) <i>Wooden case with plate for max. 17 parts (Styli with M3 (Ø 5mm) thread)</i>



# **M4 (Ø 5mm)**

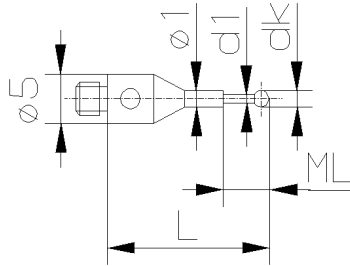
<b>Tastelemente / <i>Styli</i></b>	46-48
<b>Verlängerungen / <i>Extensions</i></b>	49-50
<b>Halter / <i>Holders for styli</i></b>	50
<b>Drehstücke / <i>Rotating adaptors</i></b>	51
<b>Werkzeuge / <i>Tools</i></b>	51
<b>Tastelemente Set / <i>Styli sets</i></b>	51

# M4 (Ø 5mm)

Anschluss-Gewinde M4 (Ø 5mm) M4 (Ø 5mm) thread	Bestell-Nr. Order No.	Gewicht Weight	dk mm	d1 mm	L mm	ML mm
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## Taststifte (Typ A) / Styli (Type A)

Kugel: Rubin / Ball: Ruby  
Schaft: HM / Shaft: TC

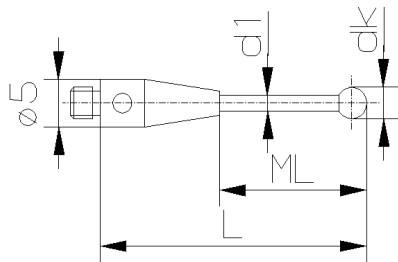


0.2-13-4 NTA	1.1g	0.2	0.15	13.0	1.5
0.25-13-4 NTA	1.1g	0.25	0.2	13.0	2.5
0.3-13-4 NTA	1.1g	0.3	0.2	13.0	2.5
0.4-13-4 NTA	1.1g	0.4	0.3	13.0	2.5
0.5-13-4 NTA	1.1g	0.5	0.3	13.0	2.5
0.6-13-4 NTA	1.1g	0.6	0.4	13.0	2.5
0.6-15-4 NTA	1.1g	0.6	0.4	15.0	4.5
0.7-13-4 NTA	1.1g	0.7	0.4	13.0	2.5
0.7-15-4 NTA	1.1g	0.7	0.4	15.0	4.5
0.8-13-4 NTA	1.1g	0.8	0.6	13.0	2.5
0.8-15-4 NTA	1.1g	0.8	0.6	15.0	4.5
0.9-13-4 NTA	1.1g	0.9	0.6	13.0	2.5
0.9-15-4 NTA	1.1g	0.9	0.6	15.0	4.5
1.0-13-4 NTA	1.1g	1.0	0.7	13.0	2.5
1.0-15-4 NTA	1.1g	1.0	0.7	15.0	4.5

Bestell-Nr. Order No.	Gewicht Weight	dk mm	d1 mm	L mm	ML mm
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## Taststifte (Typ B) / Styli (Type B)

Kugel: Rubin / Ball: Ruby  
Schaft: HM / Shaft: TC

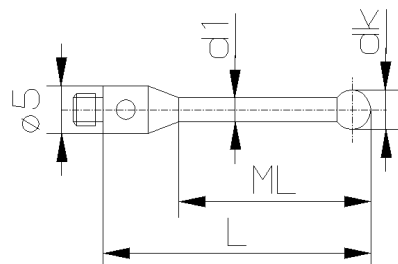


1.0-15.5-4 NTB	1.1g	1.0	0.7	15.5	7.5
1.0-20.5-4 NTB	1.1g	1.0	0.7	20.5	12.5
2.0-16-4 NTB	1.2g	2.0	1.2	16.0	8.0
2.0-26-4 NTB	1.4g	2.0	1.2	26.0	18.0
2.0-36-4 NTB	1.5g	2.0	1.2	36.0	28.0
2.0-41-4 NTB	1.6g	2.0	1.2	41.0	33.0
3.0-31.5-4 NTB	2.3g	3.0	2.0	31.5	21.5
3.0-41.5-4 NTB	2.8g	3.0	2.0	41.5	31.5
3.0-51.5-4 NTB	3.2g	3.0	2.0	51.5	41.5
4.0-32-4 NTB	3.0g	4.0	2.5	32.0	22.0
4.0-42-4 NTB	3.7g	4.0	2.5	42.0	32.0
4.0-52-4 NTB	4.5g	4.0	2.5	52.0	42.0
5.0-32.5-4 NTB	3.0g	5.0	2.5	32.5	22.5
5.0-42.5-4 NTB	3.8g	5.0	2.5	42.5	32.5
5.0-52.5-4 NTB	4.5g	5.0	2.5	52.5	42.5
6.0-33-4 NTB	4.1g	6.0	3.0	33.0	23.0
6.0-43-4 NTB	5.1g	6.0	3.0	43.0	33.0
6.0-53-4 NTB	6.1g	6.0	3.0	53.0	43.0

Bestell-Nr. Order No.	Gewicht Weight	dk mm	d1 mm	L mm	ML mm
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## Taststifte (Typ C) / Styli (Type C)

Kugel: Rubin / Ball: Ruby  
Schaft: Stahl / Shaft: Steel



2.0-16-4 NTC	1.1g	2.0	1.3	16.0	10.0
2.5-21-4 NTC	1.2g	2.5	1.5	21.0	15.0
3.0-21.5-4 NTC	1.3g	3.0	2.0	21.5	15.5
4.0-22-4 NTC	1.6g	4.0	2.4	22.0	16.0
6.0-28-4 NTC	2.4g	6.0	3.0	28.0	22.0



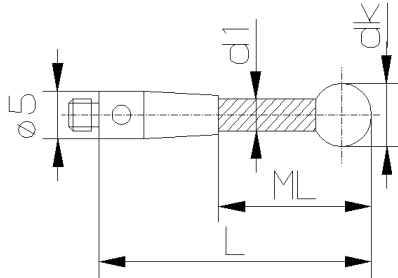
# M4 (Ø 5mm)

Anschluss-Gewinde M4 (Ø 5mm) M4 (Ø 5mm) thread	Bestell-Nr. Order No.	Gewicht Weight	dk mm	d1 mm	L mm	ML mm
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## Taststifte (Typ K) Keramik / Styli (Type K) Ceramic

Kugel: Rubin / Ball: Ruby

Schaft: Keramik / Shaft: Ceramic



4.0-32-4 NTKE	1.6g	4.0	2.0	32.0	22.0
4.0-42-4 NTKE	1.7g	4.0	2.0	42.0	32.0
4.0-52-4 NTKE	1.8g	4.0	2.0	52.0	42.0
5.0-42.5-4 NTKE	2.2g	5.0	3.0	42.5	32.5
5.0-52.5-4 NTKE	2.5g	5.0	3.0	52.5	42.5
5.0-62.5-4 NTKE	2.8g	5.0	3.0	62.5	52.5
6.0-43-4 NTKE	2.4g	6.0	3.0	43.0	33.0
6.0-53-4 NTKE	2.7g	6.0	3.0	53.0	43.0
6.0-63-4 NTKE	3.0g	6.0	3.0	63.0	53.0

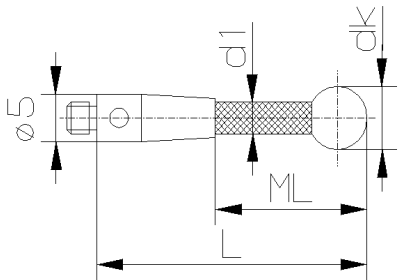
Bestell-Nr. Order No.	Gewicht Weight	dk mm	d1 mm	L mm	ML mm
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## Taststifte (Typ CA) Kohlefaser

Styli (Type CA) Carbon Fiber

Kugel: Rubin / Ball: Ruby

Schaft: CFK / Shaft: Carbon



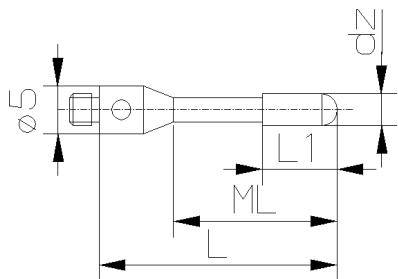
4.0-32-4 NTCA	1.5g	4.0	3.0	32.0	22.0
4.0-42-4 NTCA	1.6g	4.0	3.0	42.0	32.0
4.0-52-4 NTCA	1.7g	4.0	3.0	52.0	42.0
5.0-42.5-4 NTCA	1.6g	5.0	3.0	42.5	32.5
5.0-52.5-4 NTCA	1.8g	5.0	3.0	52.5	42.5
5.0-62.5-4 NTCA	1.9g	5.0	3.0	62.5	52.5
6.0-43-4 NTCA	1.9g	6.0	3.0	43.0	33.0
6.0-53-4 NTCA	2.0g	6.0	3.0	53.0	43.0
6.0-63-4 NTCA	2.1g	6.0	3.0	63.0	53.0

Bestell-Nr. Order No.	Gewicht Weight	dz mm	L1 mm	L mm	ML mm
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## Zylindertaststifte (Typ A) / Cylinder styli (Type A)

Zylinder: Rubin / Cylinder: Ruby

Schaft: Stahl / Shaft: Steel

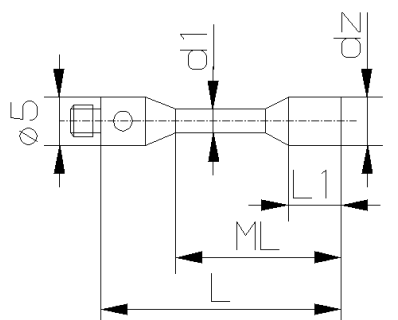


2.0-16-4 NZRA	1.1g	2.0	5.0	16.0	8.0
3.0-22-4 NZRA	1.5g	3.0	10.0	22.0	14.0
4.0-22-4 NZRA	1.8g	4.0	10.0	22.0	14.0

Bestell-Nr. Order No.	Gewicht Weight	dz mm	d1 mm	L1 mm	L mm	ML mm
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## Zylindertaststifte (Typ H) / Cylinder styli (Type H)

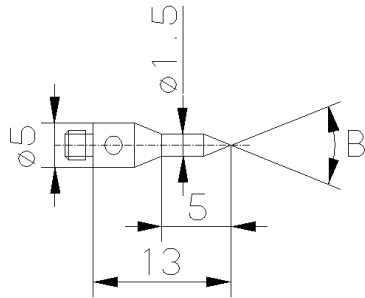
Zylinder: HM / Cylinder: TC



1.5-14-4 NZTH	1.2g	1.5	1.0	2.5	14.0	6.0
3.0-16-4 NZTH	1.6g	3.0	1.5	3.5	16.0	8.0

# M4 (Ø 5mm)

<b>Anschluss-Gewinde M4 (Ø 5mm) / M4 (Ø 5mm) thread</b>	<b>Bestell-Nr.</b> <i>Order No.</i>	<b>Spitze</b> <i>Point</i>	<b>Gewicht</b> <i>Weight</i>	<b>β</b>	<b>R</b> mm
<b>Tastspitzen / Pointed styli</b>	30-13-4 NTS	HM / TC	1.2g	30°	-

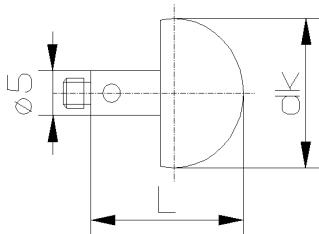


<b>Bestell-Nr.</b> <i>Order No.</i>	<b>Gewicht</b> <i>Weight</i>	<b>dk</b> mm	<b>L</b> mm
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## **Keramikkugel-Taster / Ceramic ball styli**

Kugel: Keramik / *Ball: Ceramic*  
Schaft: Stahl / *Shaft: Steel*

8.0-10-4 NKK	1.7g	8.0	10.0
10.0-11-4 NKK	2.3g	10.0	11.0

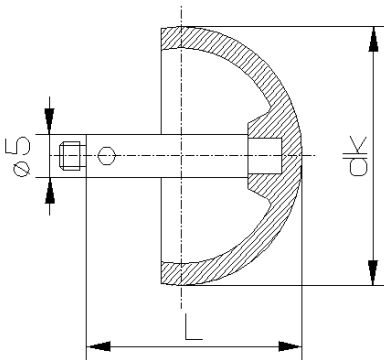


<b>Bestell-Nr.</b> <i>Order No.</i>	<b>Gewicht</b> <i>Weight</i>	<b>dk</b> mm	<b>L</b> mm
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## **Hohle Keramikkugel-Taster (Typ E) / Hollow ceramic ball styli (Type E)**

Kugel: Keramik / *Ball: Ceramic*  
Schaft: Stahl / *Shaft: Steel*

18.0-16-4 NHKE	6.1g	18.0	16.0
24.0-19-4 NHKE	9.9g	24.0	19.0
30.0-22-4 NHKE	14.0g	30.0	22.0

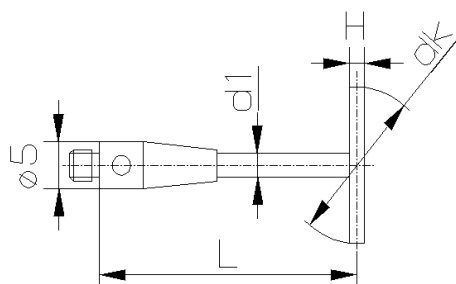


<b>Bestell-Nr.</b> <i>Order No.</i>	<b>Gewicht</b> <i>Weight</i>	<b>dk</b> mm	<b>d1</b> mm	<b>L</b> mm	<b>H</b> mm
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## **Kugelscheiben-Taststifte / Ball disc styli**

Scheibe: Keramik / *Disc: Ceramic*  
Schaft: HM / *Shaft: TC*

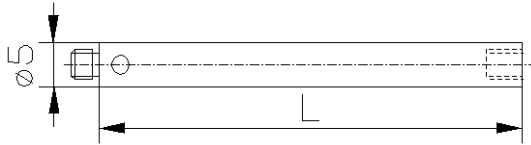
5.0-20-4 NKSK	1.5g	5.0	1.5	20.0	0.5
10.0-25-4 NKSK	2.3g	10.0	2.0	25.0	0.8
14.0-25-4 NKSK	2.7g	14.0	2.0	25.0	1.0



# M4 (Ø 5mm)

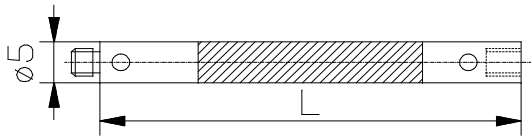
Anschluss-Gewinde M4 (Ø 5mm) / M4 (Ø 5mm) thread	Bestell-Nr. Order No.	Material Material	Gewicht Weight	L mm
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Verlängerungen Stahl / Extensions Steel	Bestell-Nr. Order No.	Material Material	Gewicht Weight	L mm
	10-4 NV	Stahl / Steel	1.1g	10.0
	20-4 NV	Stahl / Steel	2.6g	20.0
	35-4 NV	Stahl / Steel	4.9g	35.0



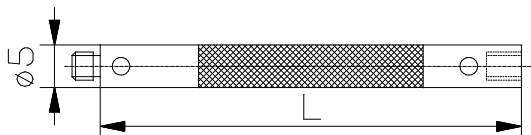
Bestell-Nr. Order No.	Material Material	Gewicht Weight	L mm
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Verlängerungen Keramik / Extensions Ceramic	Bestell-Nr. Order No.	Material Material	Gewicht Weight	L mm
	50-4 NVK	Keramik / Ceramic	3.9g	50.0
	60-4 NVK	Keramik / Ceramic	4.6g	60.0
	70-4 NVK	Keramik / Ceramic	5.3g	70.0
	80-4 NVK	Keramik / Ceramic	5.8g	80.0
	90-4 NVK	Keramik / Ceramic	6.4g	90.0
	100-4 NVK	Keramik / Ceramic	7.0g	100.0



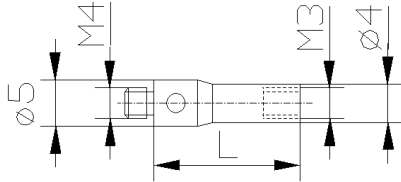
Bestell-Nr. Order No.	Material Material	Gewicht Weight	L mm
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Verlängerungen Kohlefaser / Extensions Carbon Fiber	Bestell-Nr. Order No.	Material Material	Gewicht Weight	L mm
	50-4 NVCA	CFK / Carbon	2.5g	50.0
	60-4 NVCA	CFK / Carbon	2.9g	60.0
	70-4 NVCA	CFK / Carbon	3.2g	70.0
	80-4 NVCA	CFK / Carbon	3.5g	80.0
	90-4 NVCA	CFK / Carbon	3.8g	90.0
	100-4 NVCA	CFK / Carbon	3.9g	100.0



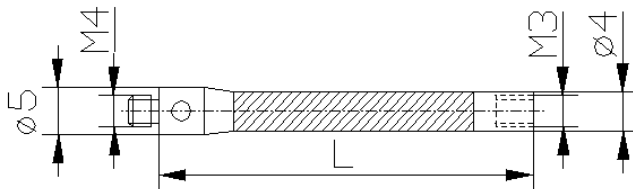
# M4 (Ø 5mm)

<b>Anschluss-Gewinde M4 (Ø 5mm) / M4 (Ø 5mm) thread</b>	<b>Bestell-Nr.</b> <i>Order No.</i>	<b>Material</b> <i>Material</i>	<b>Gewicht</b> <i>Weight</i>	<b>L</b> mm
<b>Verlängerungen Stahl (Adapter M4 - M3)</b> <i>Extensions Steel (Adaptor M4 - M3)</i>	20-4-3 NV	Stahl / Steel	2.0g	20.0



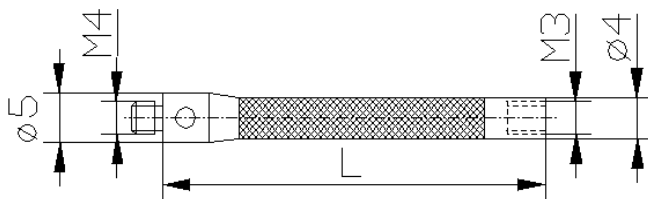
<b>Bestell-Nr.</b> <i>Order No.</i>	<b>Material</b> <i>Material</i>	<b>Gewicht</b> <i>Weight</i>	<b>L</b> mm
50-4-3 NVK	Keramik / Ceramic	3.6g	50.0
75-4-3 NVK	Keramik / Ceramic	5.7g	75.0
100-4-3 NVK	Keramik / Ceramic	6.8g	100.0

**Verlängerungen Keramik (Adapter M4 - M3)**  
*Extensions Ceramic (Adaptor M4 - M3)*



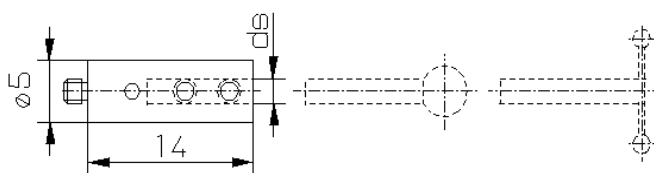
<b>Bestell-Nr.</b> <i>Order No.</i>	<b>Material</b> <i>Material</i>	<b>Gewicht</b> <i>Weight</i>	<b>L</b> mm
50-4-3 NVCA	CFK / Carbon	2.3g	50.0
75-4-3 NVCA	CFK / Carbon	3.0g	75.0
100-4-3 NVCA	CFK / Carbon	3.7g	100.0

**Verlängerungen Kohlefaser (Adapter M4 - M3)**  
*Extensions Carbon Fiber (Adaptor M4 - M3)*



<b>Bestell-Nr.</b> <i>Order No.</i>	<b>Material</b> <i>Material</i>	<b>Gewicht</b> <i>Weight</i>	<b>ds</b> mm
1.0-4 NHZ	Stahl / Steel	2.2g	1.0
1.5-4 NHZ	Stahl / Steel	2.1g	1.5
2.0-4 NHZ	Stahl / Steel	2.0g	2.0

**Taststift-Halter (Typ Z) / Holders for styli (Type Z)**

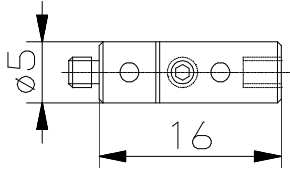


Zur Aufnahme der **Taststifte (Typ FM), (Typ F), (Typ N)** und **T-Taster (Typ H)** (Seite 6+8+9).

For use with **Styli (Type FM), (Type F), (Type N)** and **T-Styli (Type H)** (Page 6+8+9).

# M4 (Ø 5mm)

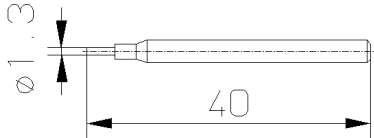
<b>Anschluss-Gewinde M4 (Ø 5mm) / M4 (Ø 5mm) thread</b>	<b>Bestell-Nr. Order No.</b>	<b>Material Material</b>	<b>Gewicht Weight</b>
<b>Drehstück / Rotating adaptor</b>	5.0-16-4 NDS	Stahl / Steel	1.9g



Mit Hilfe des Drehstücks können die angebauten Tastelemente ausgerichtet werden.

*Rotating adaptor allows styli positioning.*

<b>Werkzeuge für Komponenten mit Anschluss-Gewinde M4 (Ø 5mm) / Tools for M4 (Ø 5mm) thread components</b>	<b>Bestell-Nr. Order No.</b>	<b>Bezeichnung Description</b>
<b>Stiftschlüssel / Pin key</b>	1.3 NWST	Ø 1.3mm für Komponenten mit Gewinde M4 Ø 1.3mm for M4 thread components



<b>Sechskantschlüssel / Hexagon key</b>	<b>Bestell-Nr. Order No.</b>	<b>Bezeichnung Description</b>
	0.9 NWSK	SW 0.9mm für Gewindestifte M2 0.9mm for set screw M2
	1.3 NWSK	SW 1.3mm für Gewindestifte M2.5 1.3mm for set screw M2.5



<b>Schraubensortiment (Ersatzschrauben) Screws assortment (Replacement screws)</b>	<b>Bestell-Nr. Order No.</b>	<b>Inhalt Contents</b>
	4-4 NSS	4 Teile / 4 parts

<b>Schraubensortiment bestehend aus:</b>
2 Stk. Gewindestifte M2x2
2 Stk. Gewindestifte M2.5x3

<b>Screws assortment:</b>
2 pcs Set screw M2x2
2 pcs Set screw M2.5x3

<b>Leere Holzetuis / Empty wooden cases</b>	<b>Bestell-Nr. Order No.</b>	<b>Bezeichnung Description</b>
	24-4 NHSC	Holzetui mit Einlegeplatte für maximum 24 Teile (Tastelemente mit Gewinde M4 (Ø 5mm)) Wooden case with plate for max. 24 parts (Styli with M4 (Ø 5mm) thread)

# ***NOTIZEN / NOTES***

# **M4 (Ø 7mm)**

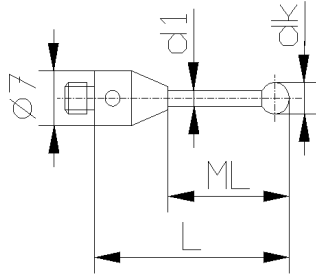
<b>Tastelemente / <i>Styli</i></b>	54-55
<b>Verlängerungen / <i>Extensions</i></b>	56
<b>Halter / <i>Holders for styli</i></b>	56
<b>Werkzeuge / <i>Tools</i></b>	57
<b>Tastelemente Set / <i>Styli sets</i></b>	57

# M4 (Ø 7mm)

Anschluss-Gewinde M4 (Ø 7mm) M4 (Ø 7mm) thread	Bestell-Nr. Order No.	Gewicht Weight	dk mm	d1 mm	L mm	ML mm
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## Taststifte (Typ B) / Styli (Type B)

Kugel: Rubin / Ball: Ruby  
Schaft: HM / Shaft: TC

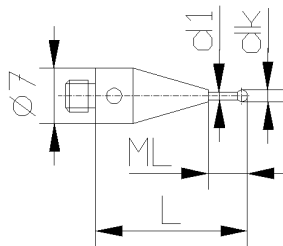


1.0-20.5-7 NTB	2.2g	1.0	0.7	20.5	10.5
2.0-21-7 NTB	2.5g	2.0	1.5	21.0	11.0
2.0-51-7 NTB	3.3g	2.0	1.5	51.0	41.0
3.0-21.5-7 NTB	2.6g	3.0	1.5	21.5	11.5
3.0-51.5-7 NTB	4.4g	3.0	2.0	51.5	39.5
4.0-22-7 NTB	3.1g	4.0	2.0	22.0	10.0
4.0-52-7 NTB	4.5g	4.0	2.0	52.0	40.0
5.0-22.5-7 NTB	3.7g	5.0	2.5	22.5	8.5
5.0-52.5-7 NTB	5.8g	5.0	2.5	52.5	38.5
6.0-23-7 NTB	3.8g	6.0	2.5	23.0	9.0
6.0-53-7 NTB	5.9g	6.0	2.5	53.0	39.0

Bestell-Nr. Order No.	Gewicht Weight	dk mm	d1 mm	L mm	ML mm
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## Taststifte (Typ BS) / Styli (Type BS)

Kugel: Rubin / Ball: Ruby  
Schaft: HM / Shaft: TC

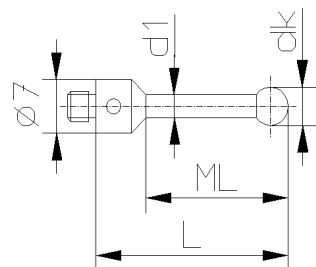


0.5-20-7 NTBS	2.8g	0.5	0.3	20.0	2.5
1.0-20-7 NTBS	2.9g	1.0	0.8	20.0	5.0

Bestell-Nr. Order No.	Gewicht Weight	dk mm	d1 mm	L mm	ML mm
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## Taststifte (Typ C) / Styli (Type C)

Kugel: Rubin / Ball: Ruby  
Schaft: Stahl / Shaft: Steel



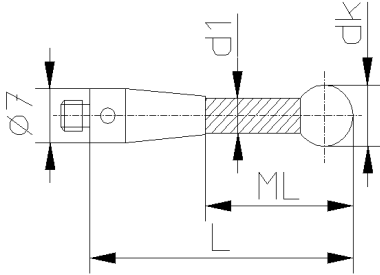
2.0-20-7 NTC	2.2g	2.0	1.5	20.0	9.0
3.0-20-7 NTC	2.0g	3.0	2-3	20.0	15.0
4.0-20-7 NTC	2.2g	4.0	3.0	20.0	15.0
5.0-12.5-7 NTC	1.9g	5.0	3.0	12.5	7.5
5.0-20-7 NTC	2.5g	5.0	3.5	20.0	15.0
5.0-22.5-7 NTC	2.5g	5.0	3.0	22.5	17.5
5.0-32.5-7 NTC	3.0g	5.0	3.0	32.5	27.5
5.0-52.5-7 NTC	7.1g	5.0	4.0	52.5	36.5
5.0-102.5-7 NTC	12.1g	5.0	4.0	102.5	86.5
5.0-152.5-7 NTC	17.0g	5.0	4.0	152.5	136.5
6.0-20-7 NTC	3.1g	6.0	4.5	20.0	15.5
6.0-28-7 NTC	2.9g	6.0	3.0	28.0	23.0
8.0-20-7 NTC	4.1g	8.0	5.5	20.0	15.5



# M4 (Ø 7mm)

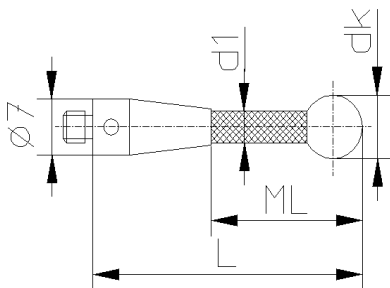
Anschluss-Gewinde M4 (Ø 7mm) M4 (Ø 7mm) thread	Bestell-Nr. Order No.	Gewicht Weight	dk mm	d1 mm	L mm	ML mm
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<b>Taststifte (Typ K) Keramik</b> <b>Styli (Type K) Ceramic</b> Kugel: Rubin / Ball: Ruby Schaft: Keramik / Shaft: Ceramic	4.0-52-7 NTKE	4.2g	4.0	3.0	52.0	36.0
	4.0-77-7 NTKE	4.9g	4.0	3.0	77.0	61.0
	4.0-102-7 NTKE	5.6g	4.0	3.0	102.0	86.0
	5.0-52.5-7 NTKE	4.6g	5.0	3.5	52.5	36.5
	5.0-77.5-7 NTKE	5.5g	5.0	3.5	77.5	61.5
	5.0-102.5-7 NTKE	6.5g	5.0	3.5	102.5	86.5
	6.0-50-7 NTKE	4.6g	6.0	4.5	50.0	34.0
	6.0-53-7 NTKE	4.9g	6.0	4.5	53.0	37.0
	6.0-78-7 NTKE	5.7g	6.0	4.5	78.0	62.0
	6.0-100-7 NTKE	6.2g	6.0	4.5	100.0	84.0
	6.0-103-7 NTKE	6.3g	6.0	4.5	103.0	87.0
	6.0-153-7 NTKE	8.0g	6.0	4.5	153.0	137.0
	8.0-54-7 NTKE	6.2g	8.0	4.5	54.0	38.0
	8.0-79-7 NTKE	7.7g	8.0	4.5	79.0	63.0
	8.0-104-7 NTKE	7.0g	8.0	4.5	104.0	88.0
	8.0-154-7 NTKE	8.6g	8.0	4.5	154.0	138.0
8.0-204-7 NTKE	10.2g	8.0	4.5	204.0	188.0	



Bestell-Nr. Order No.	Gewicht Weight	dk mm	d1 mm	L mm	ML mm
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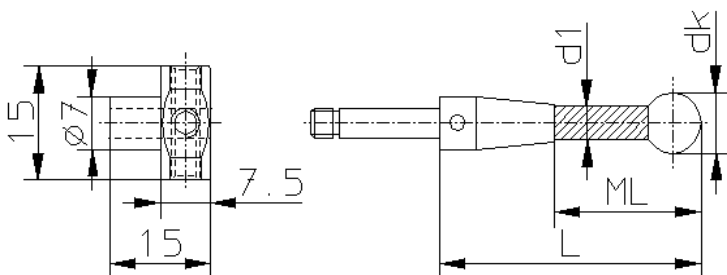
<b>Taststifte (Typ CA) Kohlefaser</b> <b>Styli (Type CA) Carbon Fiber</b> Kugel: Rubin / Ball: Ruby Schaft: CFK / Shaft: Carbon	4.0-52-7 NTCA	3.4g	4.0	3.0	52.0	36.0
	6.0-53-7 NTCA	3.9g	6.0	4.0	53.0	37.0
	6.0-103-7 NTCA	5.0g	6.0	4.0	103.0	87.0
	6.0-153-7 NTCA	5.9g	6.0	4.0	153.0	137.0
	6.0-203-7 NTCA	6.9g	6.0	4.0	203.0	187.0
	6.0-303-7 NTCA	8.8g	6.0	4.0	303.0	287.0
	8.0-304-7 NTCA	8.9g	8.0	4.0	304.0	288.0



Bestell-Nr. Order No.	Gewicht Weight	dk mm	d1 mm	L mm	ML mm
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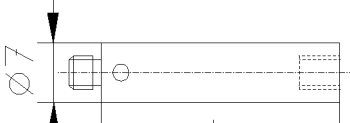
<b>Taststift-Halter drehbar / Holders for styli rotary</b>	15.0-15-7 NTHL	12.3g				
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<b>Taststifte (Typ KL) Keramik</b> <b>Styli (Type KL) Ceramic</b> Kugel: Rubin / Ball: Ruby Schaft: Keramik / Shaft: Ceramic	6.0-53-7 NTKL	6.2g	6.0	4.5	53.0	37.0
	6.0-103-7 NTKL	7.7g	6.0	4.5	103.0	87.0

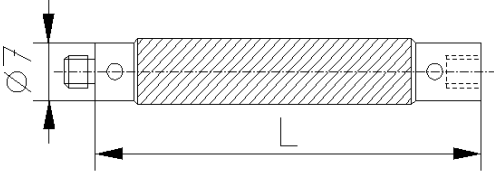


# M4 (Ø 7mm)

Anschluss-Gewinde M4 (Ø 7mm) / M4 (Ø 7mm) thread	Bestell-Nr. Order No.	Material Material	Gewicht Weight	L mm
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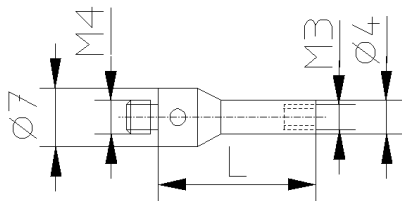
Verlängerungen Stahl / Extensions Steel	Bestell-Nr. Order No.	Material Material	Gewicht Weight	L mm
	10-7 NV	Stahl / Steel	2.5g	10.0
	15-7 NV	Stahl / Steel	3.9g	15.0
	20-7 NV	Stahl / Steel	5.4g	20.0
	30-7 NV	Stahl / Steel	8.4g	30.0
	35-7 NV	Stahl / Steel	9.9g	35.0
	50-7 NV	Stahl / Steel	14.4g	50.0

Bestell-Nr. Order No.	Material Material	Gewicht Weight	L mm
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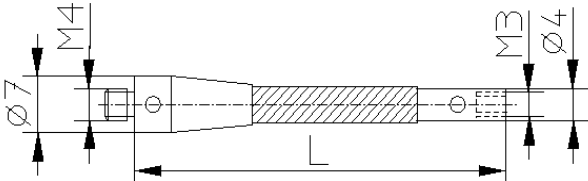
Verlängerungen Keramik / Extensions Ceramic	Bestell-Nr. Order No.	Material Material	Gewicht Weight	L mm
	30-7 NVK	Keramik / Ceramic	6.3g	30.0
	50-7 NVK	Keramik / Ceramic	8.9g	50.0
	100-7 NVK	Keramik / Ceramic	14.0g	100.0

Bestell-Nr. Order No.	Material Material	Gewicht Weight	L mm
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Verlängerungen Stahl (Adapter M4 - M3) Extensions Steel (Adaptor M4 - M3)	Bestell-Nr. Order No.	Material Material	Gewicht Weight	L mm
	20-7-3 NV	Stahl / Steel	2.8g	20.0

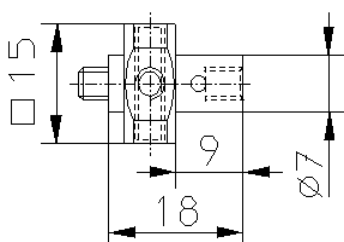


Bestell-Nr. Order No.	Material Material	Gewicht Weight	L mm
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Verlängerungen Keramik (Adapter M4 - M3) Extensions Ceramic (Adaptor M4 - M3)	Bestell-Nr. Order No.	Material Material	Gewicht Weight	L mm
	50-7-3 NVK	Keramik / Ceramic	5.2g	50.0
	75-7-3 NVK	Keramik / Ceramic	6.8g	75.0
	100-7-3 NVK	Keramik / Ceramic	8.4g	100.0

Bestell-Nr. Order No.	Material Material	Gewicht Weight
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Taststift-Halter drehbar 5-Wege (Typ F) Holders for styli rotary 5-Way (Type F)	Bestell-Nr. Order No.	Material Material	Gewicht Weight
	15.0-18-7 NTHF	Stahl / Steel	11.8g



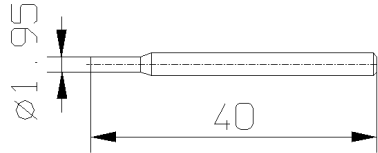
Zur Aufnahme der **Taststifte mit Gewinde M4**.  
Mit Hilfe des integrierten Drehstücks können die  
angebauten Tastelemente ausgerichtet werden.

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

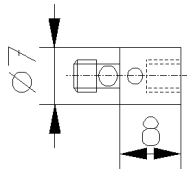
# M4 (Ø 7mm)

<b>Werkzeuge für Komponenten mit Anschluss-Gewinde M4 (Ø 7mm) / Tools for M4 (Ø 7mm) thread components</b>	<b>Bestell-Nr. Order No.</b>	<b>Bezeichnung Description</b>
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<b>Stiftschlüssel / Pin key</b>	1.95 NWST	Ø 1.95mm für Komponenten mit Gewinde M4 Ø 1.95mm for M4 thread components
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	<b>Bestell-Nr. Order No.</b>	<b>Material Material</b>	<b>Gewicht Weight</b>
<b>Sollbruchstücke Stahl / Crash protection adaptors Steel</b>	8-7 NSR	Stahl / Steel	1.9g



	<b>Bestell-Nr. Order No.</b>	<b>Bezeichnung Description</b>
<b>Leere Holzetuis / Empty wooden cases</b>	18-7 NHSH	Holzetui mit Einlegeplatte für maximum 18 Teile (Tastelemente mit Gewinde M4 (Ø 7mm)) <i>Wooden case with plate for max. 18 parts (Styli with M4 (Ø 7mm) thread)</i>
	43-7 NHSG	Holzetui mit Einlegeplatte für maximum 43 Teile (Tastelemente mit Gewinde M4 (Ø 7mm)) <i>Wooden case with plate for max. 43 parts (Styli with M4 (Ø 7mm) thread)</i>

# ***NOTIZEN / NOTES***

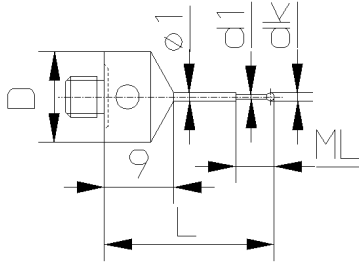
# **M5 (Ø 11mm)**

<b>Tastelemente / <i>Styli</i></b>	60-66
<b>Halter / <i> HOLDERS for styli</i></b>	67-68
<b>Verlängerungen / <i>Extensions</i></b>	69-70
<b>Würfel / <i>Cubes</i></b>	71-72
<b>Gelenke / <i>Knuckle joints</i></b>	73
<b>Drehstücke / <i>Rotating adaptors</i></b>	73
<b>Schrauben für Würfel / <i>Screws for cubes</i></b>	74
<b>Werkzeuge / <i>Tools</i></b>	75
<b>Tastelemente Set / <i>Styli sets</i></b>	76

# M5 (Ø 11mm)

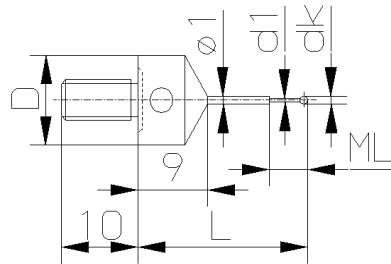
Anschluss-Gewinde M5 (Ø 11mm) M5 (Ø 11mm) thread	Bestell-Nr. Order No.	Gewicht Weight	D mm	dk mm	d1 mm	L mm	ML mm
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Taststifte (Typ S) / Styli (Type S) Kugel: Rubin / Ball: Ruby Schaft: HM / Shaft: TC	0.2-21.8-11 NTS	5.3g	11	0.2	0.15	21.8	1.5
	0.25-21.8-11 NTS	5.3g	11	0.25	0.2	21.8	2.5
	0.3-21.8-11 NTS	5.3g	11	0.3	0.2	21.8	2.5
	0.4-21.9-11 NTS	5.3g	11	0.4	0.3	21.9	2.5
	0.5-22.0-11 NTS	5.3g	11	0.5	0.3	22.0	2.5
	0.6-22.1-11 NTS	5.3g	11	0.6	0.4	22.1	4.5
	0.7-22.2-11 NTS	5.3g	11	0.7	0.4	22.2	4.5
	0.8-22.3-11 NTS	5.3g	11	0.8	0.6	22.3	4.5
	0.9-22.4-11 NTS	5.3g	11	0.9	0.6	22.4	4.5
	1.0-22.5-11 NTS	5.3g	11	1.0	0.8	22.5	4.5



Bestell-Nr. Order No.	Gewicht Weight	D mm	dk mm	d1 mm	L mm	ML mm
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Taststifte langes Gewinde (Typ SL) Styli with extended thread (Type SL) Kugel: Rubin / Ball: Ruby Schaft: HM / Shaft: TC	0.2-21.8-11 NTSL	5.9g	11	0.2	0.15	21.8	1.5
	0.25-21.8-11 NTSL	5.9g	11	0.25	0.2	21.8	2.5
	0.3-21.8-11 NTSL	6.0g	11	0.3	0.2	21.8	2.5
	0.4-21.9-11 NTSL	6.0g	11	0.4	0.3	21.9	2.5
	0.5-22.0-11 NTSL	6.0g	11	0.5	0.3	22.0	2.5
	0.6-22.1-11 NTSL	6.0g	11	0.6	0.4	22.1	4.5
	0.7-22.2-11 NTSL	6.0g	11	0.7	0.4	22.2	4.5
	0.8-22.3-11 NTSL	6.0g	11	0.8	0.6	22.3	4.5
	0.9-22.4-11 NTSL	6.0g	11	0.9	0.6	22.4	4.5
	1.0-22.5-11 NTSL	6.0g	11	1.0	0.8	22.5	4.5

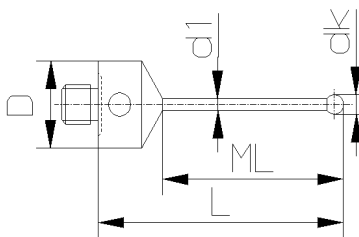


Zur Aufnahme der Tastscheibe mit Gewinde M5 (Seite 65).

For use with Disc styli with M5 thread (Page 65).

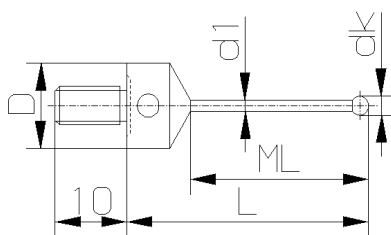
Bestell-Nr. Order No.	Gewicht Weight	D mm	dk mm	d1 mm	L mm	ML mm
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Taststifte (Typ S) / Styli (Type S) Kugel: Rubin / Ball: Ruby Schaft: HM / Shaft: TC	1.35-32.9-11 NTS	5.4g	11	1.35	1.0	32.9	23.9
	1.5-33-11 NTS	5.4g	11	1.5	1.0	33.0	24.0
	2.0-33.5-11 NTS	5.8g	11	2.0	1.5	33.5	24.5
	2.5-34-11 NTS	5.9g	11	2.5	1.5	34.0	25.0
	3.0-34.5-18 NTS	20.9g	18	3.0	2.0	34.5	16.5
	5.0-43.5-18 NTS	24.5g	18	5.0	3.5	43.5	25.5



Bestell-Nr. Order No.	Gewicht Weight	D mm	dk mm	d1 mm	L mm	ML mm
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Taststifte langes Gewinde (Typ SL) Styli with extended thread (Type SL) Kugel: Rubin / Ball: Ruby Schaft: HM / Shaft: TC	1.35-32.9-11 NTSL	6.1g	11	1.35	1.0	32.9	23.9
	1.5-33-11 NTSL	6.1g	11	1.5	1.0	33.0	24.0
	2.0-33.5-11 NTSL	6.4g	11	2.0	1.5	33.5	24.5
	2.5-34-11 NTSL	6.4g	11	2.5	1.5	34.0	25.0
	3.0-34.5-18 NTSL	21.4g	18	3.0	2.0	34.5	16.5
	5.0-43.5-18 NTSL	25.1g	18	5.0	3.5	43.5	25.5

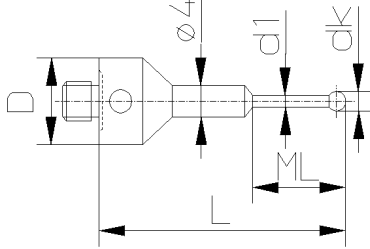


Zur Aufnahme der Tastscheibe mit Gewinde M5 (Seite 65).

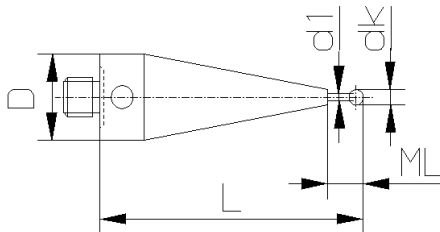
For use with Disc styli with M5 thread (Page 65).

# M5 (Ø 11mm)

Anschluss-Gewinde M5 (Ø 11mm) M5 (Ø 11mm) thread	Bestell-Nr. Order No.	Gewicht Weight	D mm	dk mm	d1 mm	L mm	ML mm
<b>Taststifte / Styli</b> Kugel: Rubin / Ball: Ruby Schaft: HM / Shaft: TC	0.2-32-11 NTB	7.0g	11	0.2	0.15	32.0	1.5
	0.25-32-11 NTB	7.0g	11	0.25	0.2	32.0	2.5
	0.3-32-11 NTB	7.0g	11	0.3	0.2	32.0	2.5
	0.4-32-11 NTB	7.0g	11	0.4	0.3	32.0	2.5
	0.5-32-11 NTB	7.0g	11	0.5	0.3	32.0	2.5
	0.6-32-11 NTB	7.0g	11	0.6	0.4	32.0	4.5
	0.7-32-11 NTB	7.0g	11	0.7	0.4	32.0	4.5
	0.8-32-11 NTB	6.5g	11	0.8	0.6	32.0	12.0
	0.9-32-11 NTB	6.5g	11	0.9	0.6	32.0	12.0
	1.0-32-11 NTB	6.6g	11	1.0	0.8	32.0	12.0
	1.35-32-11 NTB	6.6g	11	1.35	1.0	32.0	12.0
	1.35-44-11 NTB	7.3g	11	1.35	1.0	44.0	19.0
	1.5-32-11 NTB	6.6g	11	1.5	1.0	32.0	12.0
	1.5-44-11 NTB	7.2g	11	1.5	1.0	44.0	19.0
	2.0-32-11 NTB	6.9g	11	2.0	1.5	32.0	12.0
	2.0-44-11 NTB	7.5g	11	2.0	1.5	44.0	19.0
	2.0-58-11 NTB	7.8g	11	2.0	1.5	58.0	33.0
	2.5-32-11 NTB	6.9g	11	2.5	1.5	32.0	12.0
	2.5-44-11 NTB	7.6g	11	2.5	1.5	44.0	19.0
	2.5-58-11 NTB	7.9g	11	2.5	1.5	58.0	33.0

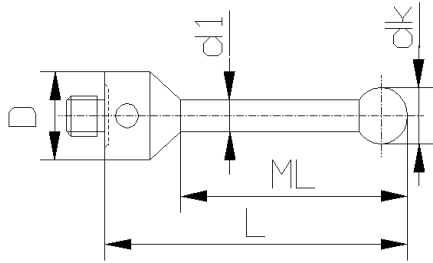


Bestell-Nr. Order No.	Gewicht Weight	D mm	dk mm	d1 mm	L mm	ML mm	
<b>Taststifte / Styli</b> Kugel: Rubin / Ball: Ruby Schaft: HM / Shaft: TC	1.0-55-11 NTF	17.8g	11	1.0	0.8	55.0	4.0
	1.5-55-11 NTF	18.0g	11	1.5	1.0	55.0	5.0
	2.0-55-11 NTF	19.1g	11	2.0	1.5	55.0	5.0
	2.5-55-11 NTF	18.9g	11	2.5	1.5	55.0	5.0
	3.5-55-11 NTF	18.1g	11	3.5	2.0	55.0	10.0



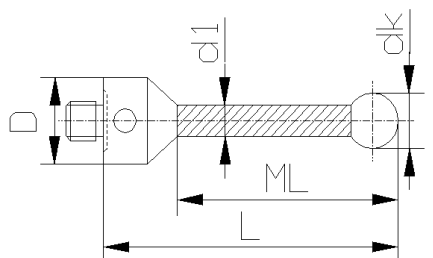
# M5 (Ø 11mm)

Anschluss-Gewinde M5 (Ø 11mm) M5 (Ø 11mm) thread	Bestell-Nr. Order No.	Gewicht Weight	D mm	dk mm	d1 mm	L mm	ML mm
<b>Taststifte (Typ B) / Styli (Type B)</b> Kugel: Rubin / Ball: Ruby Schaft: HM / Shaft: TC	2.0-20-11 NTB	5.7g	11	2.0	1.5	20.0	10.0
	2.0-40-11 NTB	6.3g	11	2.0	1.5	40.0	30.0
	2.5-20-11 NTB	5.7g	11	2.5	1.5	20.0	10.0
	3.0-25-11 NTB	6.2g	11	3.0	2.0	25.0	15.0
	3.0-33.5-11 NTB	6.6g	11	3.0	2.0	33.5	23.5
	3.0-40-11 NTB	7.0g	11	3.0	2.0	40.0	30.0
	3.0-50-11 NTB	7.4g	11	3.0	2.0	50.0	40.0
	3.0-58-11 NTB	7.7g	11	3.0	2.0	58.0	48.0
	4.0-33.5-11 NTB	6.7g	11	4.0	2.0	33.5	23.5
	4.0-40-11 NTB	7.0g	11	4.0	2.0	40.0	30.0
	4.0-50-11 NTB	7.5g	11	4.0	2.0	50.0	40.0
	4.0-64-11 NTB	8.1g	11	4.0	2.0	64.0	54.0
	5.0-40-11 NTB	10.0g	11	5.0	3.5	40.0	30.0
	5.0-50-11 NTB	11.4g	11	5.0	3.5	50.0	40.0
	5.0-53-11 NTB	11.6g	11	5.0	3.5	53.0	43.0
	5.0-75-11 NTB	14.9g	11	5.0	3.5	75.0	65.0
	5.0-80-11 NTB	15.5g	11	5.0	3.5	80.0	70.0
	5.0-100-11 NTB	18.3g	11	5.0	3.5	100.0	90.0
	6.0-54-11 NTB	11.9g	11	6.0	3.5	54.0	44.0
	6.0-68-11 NTB	14.0g	11	6.0	3.5	68.0	58.0
	7.0-55-11 NTB	12.1g	11	7.0	3.5	55.0	45.0
	8.0-63.5-11 NTB	28.2g	11	8.0	6.0	63.5	50.5
	8.0-74-11 NTB	32.0g	11	8.0	6.0	74.0	61.0
	8.0-75-11 NTB	32.6g	11	8.0	6.0	75.0	62.0
	8.0-100-11 NTB	42.8g	11	8.0	6.0	100.0	87.0
	8.0-114.5-11 NTB	48.8g	11	8.0	6.0	114.5	101.5
	8.0-150-11 NTB	64.5g	11	8.0	6.0	150.0	130.0
	8.0-200-11 NTB	85.0g	11	8.0	6.0	200.0	180.0
	9.0-64.5-11 NTB	28.4g	11	9.0	6.0	64.5	51.5
	10.0-65.5-11 NTB	28.9g	11	10.0	6.0	65.5	52.5
	10.0-118-11 NTB	50.4g	11	10.0	6.0	118.0	105.0
	8.0-63.5-18 NTB	43.0g	18	8.0	6.0	63.5	41.5
8.0-114.5-18 NTB	63.9g	18	8.0	6.0	114.5	92.5	
9.0-64.5-18 NTB	42.0g	18	9.0	6.0	64.5	42.5	
10.0-65.5-18 NTB	44.0g	18	10.0	6.0	65.5	43.5	



Bestell-Nr. Order No.	Gewicht Weight	D mm	dk mm	d1 mm	L mm	ML mm
5.0-53-11 NTKE	7.3g	11	5.0	3.5	53.0	43.0
6.0-54-11 NTKE	7.4g	11	6.0	3.5	54.0	44.0
7.0-55-11 NTKE	7.7g	11	7.0	3.5	55.0	45.0
8.0-63.5-11 NTKE	12.9g	11	8.0	6.0	63.5	43.5
8.0-114.5-11 NTKE	18.7g	11	8.0	6.0	114.5	94.5
9.0-64.5-11 NTKE	15.7g	11	9.0	6.0	64.5	44.5
10.0-65.5-11 NTKE	15.7g	11	10.0	6.0	65.5	45.5
8.0-63.5-18 NTKE	30.4g	18	8.0	6.0	63.5	41.5
8.0-114.5-18 NTKE	38.0g	18	8.0	6.0	114.5	92.5
9.0-64.5-18 NTKE	32.0g	18	9.0	6.0	64.5	42.5
10.0-65.5-18 NTKE	33.0g	18	10.0	6.0	65.5	43.5

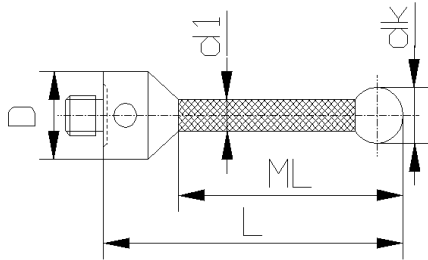
**Taststifte (Typ K) Keramik**  
**Styli (Type K) Ceramic**  
 Kugel: Rubin / Ball: Ruby  
 Schaft: Keramik / Shaft: Ceramic



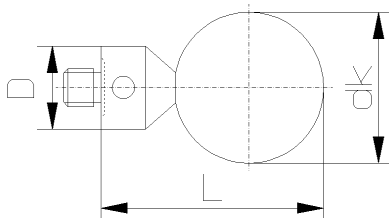


# M5 (Ø 11mm)

Anschluss-Gewinde M5 (Ø 11mm) M5 (Ø 11mm) thread	Bestell-Nr. Order No.	Gewicht Weight	D mm	dk mm	d1 mm	L mm	ML mm
<b>Taststifte (Typ CA) Kohlefaser</b> <b>Styli (Type CA) Carbon Fiber</b> Kugel: Rubin / Ball: Ruby Schaft: CFK / Shaft: Carbon	3.0-25-11 NTCA	5.6g	11	3.0	2.0	25.0	15.0
	3.0-33.5-11 NTCA	5.6g	11	3.0	2.0	33.5	23.5
	3.0-50-11 NTCA	5.7g	11	3.0	2.0	50.0	40.0
	3.0-58-11 NTCA	5.8g	11	3.0	2.0	58.0	48.0
	4.0-33.5-11 NTCA	5.8g	11	4.0	2.0	33.5	23.5
	4.0-64-11 NTCA	5.8g	11	4.0	2.0	64.0	54.0
	5.0-50-11 NTCA	6.5g	11	5.0	4.0	50.0	37.0
	5.0-53-11 NTCA	6.5g	11	5.0	4.0	53.0	40.0
	5.0-75-11 NTCA	6.9g	11	5.0	4.0	75.0	62.0
	5.0-100-11 NTCA	7.4g	11	5.0	4.0	100.0	87.0
	6.0-54-11 NTCA	6.7g	11	6.0	4.0	54.0	41.0
	7.0-55-11 NTCA	7.0g	11	7.0	4.0	55.0	42.0
	8.0-63.5-11 NTCA	8.0g	11	8.0	6.0	63.5	43.5
	8.0-75-11 NTCA	9.7g	11	8.0	6.0	75.0	55.0
	8.0-100-11 NTCA	10.0g	11	8.0	6.0	100.0	80.0
	8.0-114.5-11 NTCA	11.5g	11	8.0	6.0	114.5	94.5
	8.0-150-11 NTCA	12.9g	11	8.0	6.0	150.0	130.0
	8.0-200-11 NTCA	13.0g	11	8.0	6.0	200.0	180.0
	9.0-64.5-11 NTCA	9.7g	11	9.0	6.0	64.5	44.5
	10.0-65.5-11 NTCA	9.7g	11	10.0	6.0	65.5	45.5
	10.0-118-11 NTCA	11.0g	11	10.0	6.0	118.0	98.0
	10.0-150-11 NTCA	12.0g	11	10.0	6.0	150.0	130.0
	10.0-200-11 NTCA	13.0g	11	10.0	6.0	200.0	180.0
	10.0-350-11 NTCA	27.0g	11	10.0	6.0	350.0	325.0
	10.0-500-11 NTCA	34.0g	11	10.0	6.0	500.0	475.0
	8.0-63.5-18 NTCA	27.2g	18	8.0	6.0	63.5	41.5
	8.0-114.5-18 NTCA	29.5g	18	8.0	6.0	114.5	92.5
	9.0-64.5-18 NTCA	29.5g	18	9.0	6.0	64.5	42.5
10.0-65.5-18 NTCA	29.0g	18	10.0	6.0	65.5	43.5	

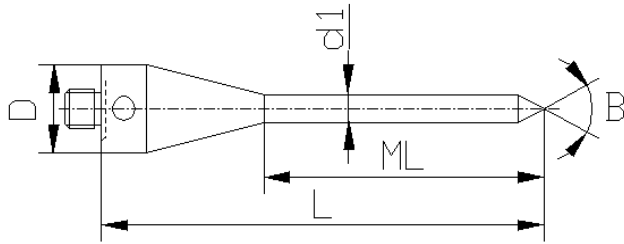


	Bestell-Nr. Order No.	Gewicht Weight	D mm	dk mm	L mm
<b>Keramikkugel-Taster / Ceramic ball styli</b> Kugel: Keramik / Ball: Ceramic Körper: Stahl / Body: Steel	12.0-28-11 NKE	13.0g	11	12.0	28.0
	14.0-28-11 NKE	13.7g	11	14.0	28.0
	15.0-28-11 NKE	15.5g	11	15.0	28.0
	16.0-28-11 NKE	16.2g	11	16.0	28.0
	18.0-28-11 NKE	18.5g	11	18.0	28.0
	20.0-33-11 NKE	24.4g	11	20.0	33.0
	24.0-37-11 NKE	37.2g	11	24.0	37.0
	30.0-43-11 NKE	64.5g	11	30.0	43.0



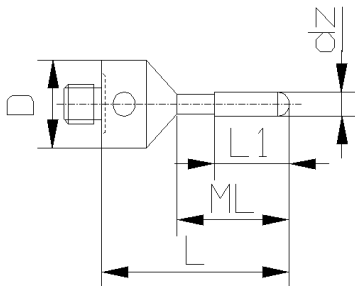
# M5 (Ø 11mm)

<b>Anschluss-Gewinde M5 (Ø 11mm)</b> <i>M5 (Ø 11mm) thread</i>	<b>Bestell-Nr.</b> <i>Order No.</i>	<b>Gewicht</b> <i>Weight</i>	<b>D</b> mm	<b>d1</b> mm	<b>L</b> mm	<b>ML</b> mm	<b>β</b>
<b>Tastspitze / Pointed styli</b> Spitze: HM / Point: TC	30-61-11 NTS	15.6g	11	3.5	61.0	39.0	30°



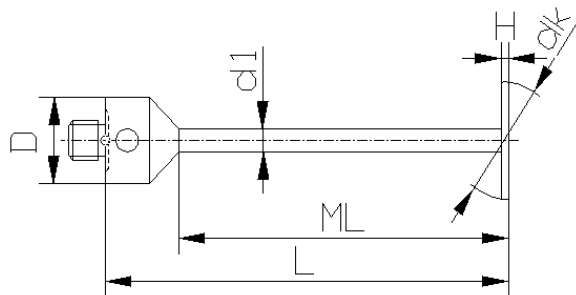
<b>Bestell-Nr.</b> <i>Order No.</i>	<b>Gewicht</b> <i>Weight</i>	<b>D</b> mm	<b>dz</b> mm	<b>L</b> mm	<b>ML</b> mm	<b>L1</b> mm
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<b>Zylindertaststifte (Typ A) / Cylinder styli (Type A)</b> Zylinder: Rubin / Cylinder: Ruby	2.0-25-11 NZRA	6.0g	11	2.0	25.0	14.0	5.0
	3.0-25-11 NZRA	6.0g	11	3.0	25.0	14.0	10.0
	4.0-30-11 NZRA	7.0g	11	4.0	30.0	21.0	10.0



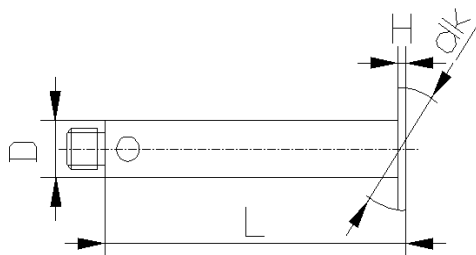
<b>Bestell-Nr.</b> <i>Order No.</i>	<b>Gewicht</b> <i>Weight</i>	<b>D</b> mm	<b>dk</b> mm	<b>d1</b> mm	<b>L</b> mm	<b>ML</b> mm	<b>H</b> mm
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<b>Kugelscheiben-Taststifte / Ball disc styli</b> Scheibe: Keramik / Disc: Ceramic Schaft: HM / Shaft: TC	5.0-45-11 NKSK	7.0g	11	5.0	2.0	45.0	35.0	0.5
	10.0-55-11 NKSK	11.0g	11	10.0	3.0	55.0	45.0	0.8
	14.0-55-11 NKSK	11.0g	11	14.0	3.0	55.0	45.0	1.0



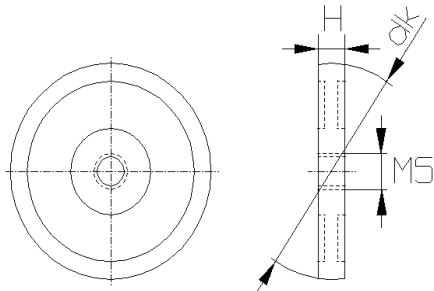
<b>Bestell-Nr.</b> <i>Order No.</i>	<b>Gewicht</b> <i>Weight</i>	<b>D</b> mm	<b>dk</b> mm	<b>L</b> mm	<b>H</b> mm
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<b>Kugelscheiben-Taststifte / Ball disc styli</b> Scheibe: Keramik / Disc: Ceramic Schaft: Alu 7075 / Shaft: Alu 7075	15-40 NKSK	5.0g	7	15.0	40.0	1.0
	20-60 NKSK	8.0g	7	20.0	60.0	1.0



# M5 (Ø 11mm)

Anschluss-Gewinde M5 (Ø 11mm) / M5 (Ø 11mm) thread	Bestell-Nr. Order No.	Gewicht Weight	dk mm	H mm
<b>Tastscheibe mit Gewinde M5 / Disc styli with M5 thread</b> Scheibe: Stahl gehärtet / Disc: Steel hardened	10-4 NTSG	2.0g	10.0	4.0
	15-4 NTSG	5.0g	15.0	4.0
	20-4 NTSG	10.0g	20.0	4.0
	30-4 NTSG	22.0g	30.0	4.0
	40-4 NTSG	34.0g	40.0	4.0
	50-5 NTSG	67.0g	50.0	5.0
	60-6 NTSG	115.0g	60.0	6.0

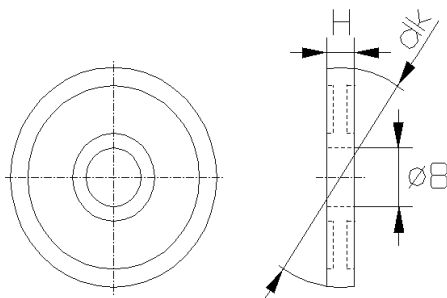


Mit **Taststifte mit langem Gewinde** (Seite 60) oder **Linsenschraube** (Seite 74) zu verwenden.

For use with **Styli with extended thread** (Page 60), or **Oval head screw** (Page 74).

Bestell-Nr. Order No.	Gewicht Weight	dk mm	H mm
15-4 NTSA	4.0g	15.0	4.0
20-2 NTSA	4.5g	20.0	2.0
20-4 NTSA	8.5g	20.0	4.0
30-4 NTSA	21.0g	30.0	4.0
40-4 NTSA	33.0g	40.0	4.0
50-5 NTSA	65.5g	50.0	5.0
60-6 NTSA	113.5g	60.0	6.0

**Tastscheibe mit Aufnahme Ø 8mm / Disc styli with hole Ø 8mm**  
Scheibe: Stahl gehärtet / Disc: Steel hardened

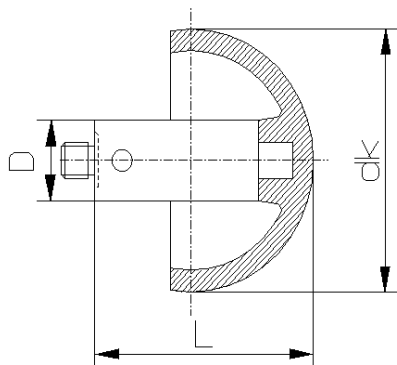


Mit **Schraube für Tastscheibe** (Seite 74) zu verwenden.

For use with **Screw for disc styli** (Page 74).

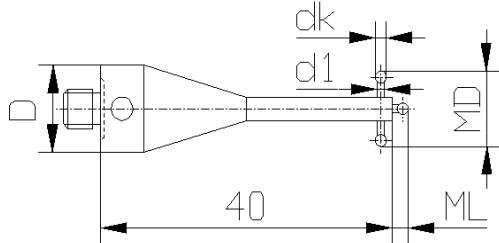
Bestell-Nr. Order No.	Gewicht Weight	D mm	dk mm	L mm
18.0-16-11 NHKE	8.6g	11	18.0	22.0
24.0-19-11 NHKE	13.2g	11	24.0	27.0
30.0-22-11 NHKE	17.5g	11	30.0	29.0

**Hohle Keramik-Kugel-Taster / Hollow ceramic ball styli**  
Kugel: Keramik / Ball: Ceramic  
Schaft: Alu 7075 / Shaft: Alu 7075



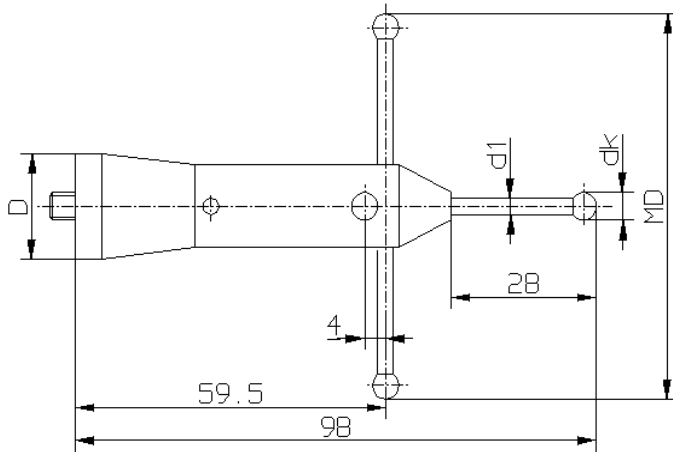
# M5 (Ø 11mm)

Anschluss-Gewinde M5 (Ø 11mm) M5 (Ø 11mm) thread	Bestell-Nr. Order No.	Gewicht Weight	D mm	dk mm	d1 mm	MD mm	ML mm
<b>Taster für Gewindemessung</b> <i>Styli for thread measuring</i> Kugel: Rubin / Ball: Ruby Schaft: HM / Shaft: TC	0.5-40-11 NSTG	7.0g	11	0.5	0.4	3.5	1.9
	0.8-40-11 NSTG	7.0g	11	0.8	0.6	5.0	1.9
	1.35-40-11 NSTG	12.0g	11	1.35	1.0	9.0	2.0
	1.8-40-11 NSTG	12.0g	11	1.8	1.5	10.0	2.0
	2.3-40-11 NSTG	13.0g	11	2.3	1.8	12.0	2.5



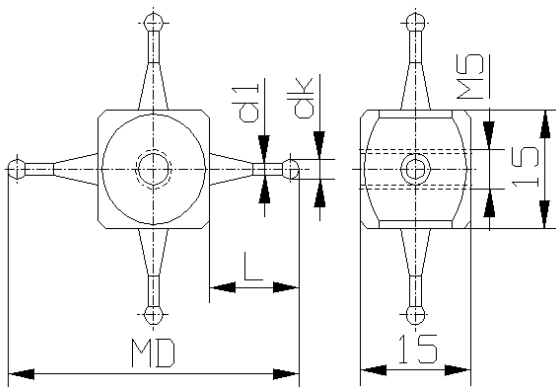
Bestell-Nr. Order No.	Gewicht Weight	D mm	dk mm	d1 mm	MD mm
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Sterntaster / Star styli	Bestell-Nr. Order No.	Gewicht Weight	D mm	dk mm	d1 mm	MD mm
Kugel: Rubin / Ball: Ruby Schaft: HM / Shaft: TC Körper: Alu 7075 / Body: Alu 7075	5.0-80-19 NST	65.0g	19	5.0	3.5	80.0



Bestell-Nr. Order No.	Gewicht Weight	dk mm	d1 mm	MD mm	L mm
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Würfelstern / Cube stars	Bestell-Nr. Order No.	Gewicht Weight	dk mm	d1 mm	MD mm	L mm
Kugel: Rubin / Ball: Ruby Würfel: Alu 7075 / Cube: Alu 7075	1.0-45 NWST	10.4g	1.0	0.7	45.0	15.0
	1.5-45 NWST	10.4g	1.5	1.1	45.0	15.0
	2.0-45 NWST	11.0g	2.0	1.5	45.0	15.0
	2.5-45 NWST	11.0g	2.5	1.8	45.0	15.0
	3.5-45 NWST	11.5g	3.5	2.2	45.0	15.0



Die Taststifte mit Gewinde M3 können bei Bruch oder Beschädigung ausgewechselt werden.

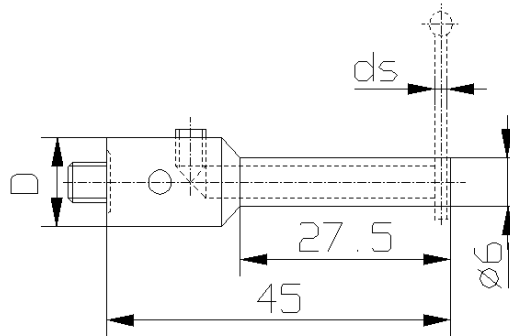
*M3 thread styli can be replaced in case of damage.*

**Ersatz-Taststifte M3 / Replacement M3 thread styli:**

1.0-15-3 NTC	0.6g	1.0	0.7		15.0
1.5-15-3 NTC	0.6g	1.5	1.1		15.0
2.0-15-3 NTC	0.7g	2.0	1.5		15.0
2.5-15-3 NTC	0.7g	2.5	1.8		15.0
3.5-15-3 NTC	0.9g	3.5	2.2		15.0

# M5 (Ø 11mm)

Anschluss-Gewinde M5 (Ø 11mm) / M5 (Ø 11mm) thread	Bestell-Nr. Order No.	Gewicht Weight	D mm	ds mm
Taststift-Halter / Holders for styli	1.0-45-11 NHT	16.4g	11	1-1.5

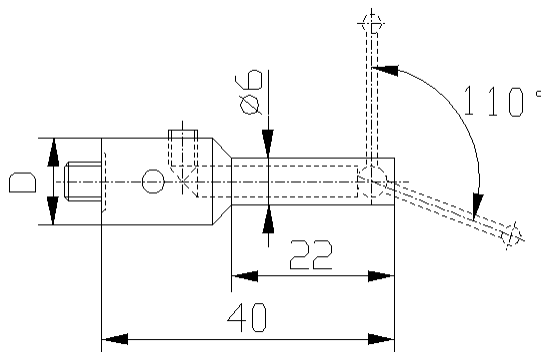


Zur Aufnahme der **Taststifte (Typ F), (Typ N)** mit  $ds = 1-1.5\text{mm}$  (Seite 8).

For use with **Styli (Type F), (Type N)** with  $ds = 1-1.5\text{mm}$  (Page 8).

Bestell-Nr. Order No.	Gewicht Weight	D mm

Taststift-Halter schwenkbar / Holders for styli swiveling	1.0-40-11 NHTS	15.0g	11
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Nur mit **Taststifte (Typ S)** zu verwenden.

Use only with **Styli (Type S)**.

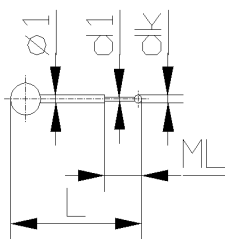
Bestell-Nr. Order No.	Gewicht Weight	dk mm	d1 mm	L mm	ML mm

Taststifte (Typ S) / Styli (Type S)	1.0-17.5 NTES	0.6g	1.0	0.8	17.5	4.5
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Kugel: Rubin / Ball: Ruby  
Schaft: HM / Shaft: TC

Nur mit **Taststift-Halter schwenkbar** zu verwenden.

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



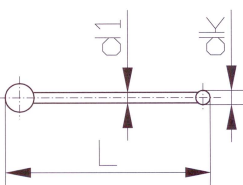
Bestell-Nr. Order No.	Gewicht Weight	dk mm	d1 mm	L mm

Taststifte (Typ S) / Styli (Type S)	2.0-28.5 NTES	0.9g	2.0	1.5	28.5
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Kugel: Rubin / Ball: Ruby  
Schaft: HM / Shaft: TC

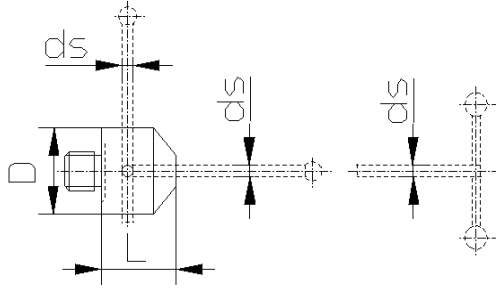
Nur mit **Taststift-Halter schwenkbar** zu verwenden.

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



# M5 (Ø 11mm)

Anschluss-Gewinde M5 (Ø 11mm) / M5 (Ø 11mm) thread	Bestell-Nr. Order No.	Gewicht Weight	D mm	ds mm	L mm
Taststift-Halter (für max. 5 Taststifte) <i>Holder for styli (for max. 5 styli)</i>	1.0-10-11 NHT	5.8g	11	1.0	10.0
	1.5-10-11 NHT	5.6g	11	1.5	10.0
	2.0-10-11 NHT	5.4g	11	2.0	10.0

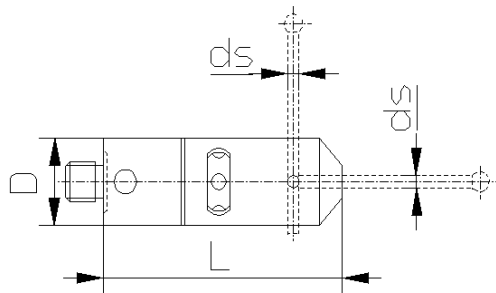


Zur Aufnahme der **Taststifte (Typ FM), (Typ F), (Typ N)** und **T-Taster (Typ H)** (Seite 6+8+9).

*For use with Styli (Type FM), (Type F), (Type N) and T-Styli (Type H) (Page 6+8+9).*

Bestell-Nr. Order No.	Gewicht Weight	D mm	ds mm	L mm
1.0-32-11 NHTD	15.5g	11	1.0	32.0
1.5-32-11 NHTD	15.5g	11	1.5	32.0
2.0-32-11 NHTD	15.5g	11	2.0	32.0

**Taststift-Halter drehbar (für max. 5 Taststifte)**  
*Holder for styli rotary (for max. 5 styli)*



Zur Aufnahme der **Taststifte (Typ FM), (Typ F), (Typ N)** und **T-Taster (Typ H)** (Seite 6+8+9).

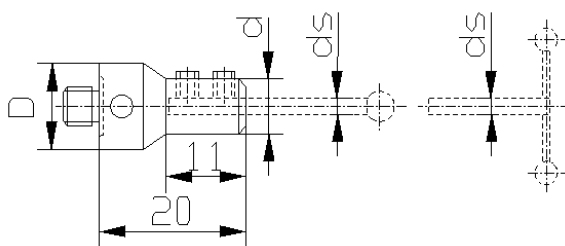
Mit Hilfe des integrierten Drehstücks können die angebaute Tastelemente ausgerichtet werden.

*For use with Styli (Type FM), (Type F), (Type N) and T-Styli (Type H) (Page 6+8+9).*

*A built-in rotating adaptor allows styli positioning.*

Bestell-Nr. Order No.	Gewicht Weight	D mm	ds mm	d mm
1.0-20-11 NHT	9.0g	11	1.0	6.0
1.5-20-11 NHT	9.0g	11	1.5	7.0
2.0-20-11 NHT	9.0g	11	2.0	7.0
3.0-20-11 NHT	10.0g	11	3.0	8.0

**Taststift-Halter / Holders for styli**



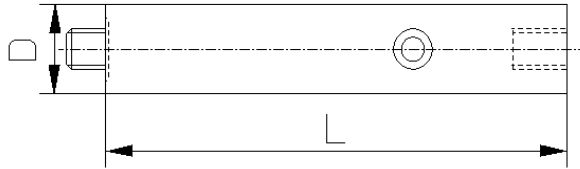
Zur Aufnahme der **Taststifte (Typ FM), (Typ F), (Typ N)** und **T-Taster (Typ H)** (Seite 6+8+9).

*For use with Styli (Type FM), (Type F), (Type N) and T-Styli (Type H) (Page 6+8+9).*

# M5 (Ø 11mm)

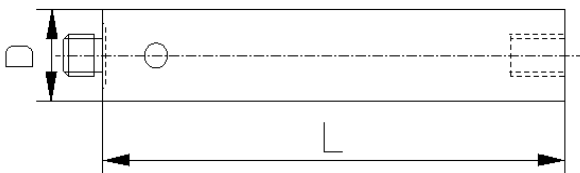
<b>Anschluss-Gewinde M5 (Ø 11mm) / M5 (Ø 11mm) thread</b>	<b>Bestell-Nr.</b> <i>Order No.</i>	<b>Gewicht</b> <i>Weight</i>	<b>D</b> mm	<b>L</b> mm
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<b>Verlängerungen Aluminium / Extensions Aluminium</b> Voll-Material (Gewinde aus Stahl) / <i>Solid material (Steel thread)</i>	25-11 NVAL	6.9g	11	25.0
	40-11 NVAL	10.5g	11	40.0
	50-11 NVAL	12.8g	11	50.0
	60-11 NVAL	15.6g	11	60.0
	80-11 NVAL	20.4g	11	80.0
	100-11 NVAL	25.7g	11	100.0
	120-11 NVAL	30.8g	11	120.0



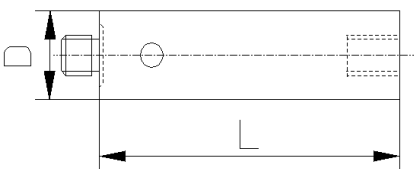
<b>Bestell-Nr.</b> <i>Order No.</i>	<b>Gewicht</b> <i>Weight</i>	<b>D</b> mm	<b>L</b> mm
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<b>Verlängerungen Stahl / Extensions Steel</b> Voll-Material / <i>Solid material</i>	10-11 NVST	6.4g	11	10.0
	15-11 NVST	9.8g	11	15.0
	20-11 NVST	13.2g	11	20.0
	25-11 NVST	17.0g	11	25.0
	40-11 NVST	28.2g	11	40.0
	60-11 NVST	42.8g	11	60.0
	80-11 NVST	57.7g	11	80.0
	100-11 NVST	72.4g	11	100.0



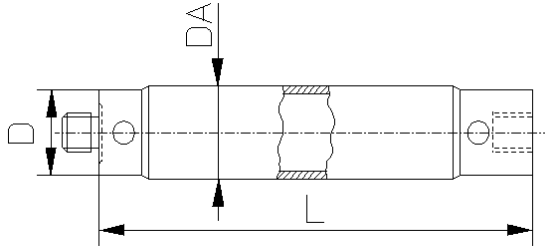
<b>Bestell-Nr.</b> <i>Order No.</i>	<b>Gewicht</b> <i>Weight</i>	<b>D</b> mm	<b>L</b> mm
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<b>Verlängerungen Alu 7075 / Extensions Alu 7075</b> Voll-Material / <i>Solid material</i>	10-11 NVPE	2.3g	11	10.0
	15-11 NVPE	3.5g	11	15.0
	20-11 NVPE	4.8g	11	20.0
	25-11 NVPE	6.0g	11	25.0
	40-11 NVPE	10.0g	11	40.0
	50-11 NVPE	12.6g	11	50.0
	15-18 NVPE	10.0g	18	15.0
	25-18 NVPE	17.0g	18	25.0
	40-18 NVPE	27.7g	18	40.0
	50-18 NVPE	34.8g	18	50.0

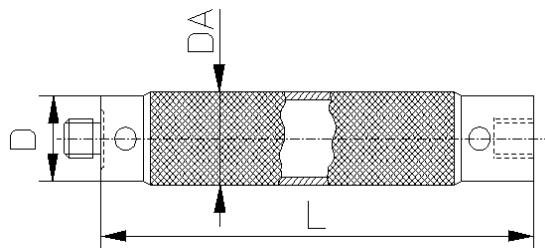


# M5 (Ø 11mm)

Anschluss-Gewinde M5 (Ø 11mm) / M5 (Ø 11mm) thread	Bestell-Nr. Order No.	Gewicht Weight	D mm	DA mm	L mm
<b>Verlängerungen Alu 7075 / Extensions Alu 7075</b> Rohr-Material / Tube material	60-11 NVPE	10.7g	11	12.0	60.0
	75-11 NVPE	12.1g	11	12.0	75.0
	80-11 NVPE	12.0g	11	12.0	80.0
	90-11 NVPE	13.6g	11	12.0	90.0
	100-11 NVPE	14.4g	11	12.0	100.0
	120-11 NVPE	16.1g	11	12.0	120.0
	150-11 NVPE	19.0g	11	12.0	150.0
	200-11 NVPE	22.5g	11	12.0	200.0
	60-18 NVPE	28.5g	18	20.0	60.0
	75-18 NVPE	34.9g	18	20.0	75.0
	80-18 NVPE	34.4g	18	20.0	80.0
	90-18 NVPE	37.4g	18	20.0	90.0
	100-18 NVPE	39.7g	18	20.0	100.0
	120-18 NVPE	44.9g	18	20.0	120.0
	150-18 NVPE	53.5g	18	20.0	150.0
	200-18 NVPE	66.5g	18	20.0	200.0
	250-18 NVPE	81.6g	18	20.0	250.0
	300-18 NVPE	93.0g	18	20.0	300.0



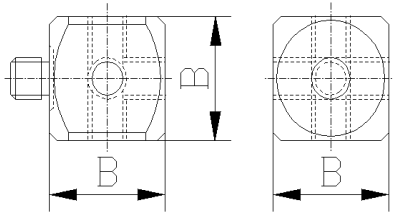
Bestell-Nr. Order No.	Gewicht Weight	D mm	DA mm	L mm
<b>Verlängerungen Kohlefaser (CFK)</b> <i>Extensions Carbon Fiber</i> Rohr-Material / Tube material				
40-11 NVCA	6.9g	11	12.0	40.0
50-11 NVCA	8.2g	11	12.0	50.0
60-11 NVCA	8.8g	11	12.0	60.0
75-11 NVCA	9.6g	11	12.0	75.0
80-11 NVCA	10.0g	11	12.0	80.0
90-11 NVCA	10.3g	11	12.0	90.0
100-11 NVCA	11.2g	11	12.0	100.0
120-11 NVCA	12.0g	11	12.0	120.0
150-11 NVCA	14.4g	11	12.0	150.0
160-11 NVCA	14.0g	11	12.0	160.0
200-11 NVCA	16.2g	11	12.0	200.0
210-11 NVCA	16.6g	11	12.0	210.0
250-11 NVCA	19.0g	11	12.0	250.0
300-11 NVCA	21.2g	11	12.0	300.0
400-11 NVCA	28.0g	11	12.0	400.0
50-18 NVCA	21.6g	18	20.0	50.0
60-18 NVCA	25.4g	18	20.0	60.0
80-18 NVCA	27.8g	18	20.0	80.0
100-18 NVCA	30.0g	18	20.0	100.0
120-18 NVCA	32.3g	18	20.0	120.0
150-18 NVCA	36.8g	18	20.0	150.0
200-18 NVCA	43.0g	18	20.0	200.0
250-18 NVCA	48.8g	18	20.0	250.0
300-18 NVCA	55.2g	18	20.0	300.0
400-18 NVCA	68.8g	18	20.0	400.0
500-18 NVCA	80.4g	18	20.0	500.0
600-18 NVCA	94.7g	18	20.0	600.0





# M5 (Ø 11mm)

<b>Anschluss-Gewinde M5 (Ø 11mm) / M5 (Ø 11mm) thread</b>	<b>Bestell-Nr.</b> <i>Order No.</i>	<b>Gewicht</b> <i>Weight</i>	<b>B</b> mm
<b>Würfel M5 / Cubes M5</b> Material: Alu 7075 / Material: Alu 7075	15-15 NWA	8.2g	<b>15</b>
	20-20 NWA	20.3g	<b>20</b>

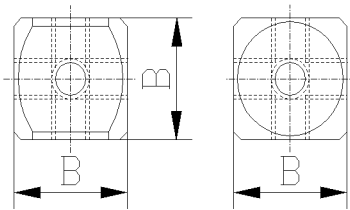


Zur Aufnahme von **Komponenten mit Gewinde M5**.  
Mit **Schraube für Würfel** zu verwenden (Seite 74).

*For use with M5 thread components.*  
*For use with Screw for cube (Page 74).*

<b>Bestell-Nr.</b> <i>Order No.</i>	<b>Gewicht</b> <i>Weight</i>	<b>B</b> mm
15-15 NWB	7.2g	<b>15</b>
20-20 NWB	19.1g	<b>20</b>

<b>Würfel M5 / Cubes M5</b> Material: Alu 7075 / Material: Alu 7075	<b>Bestell-Nr.</b> <i>Order No.</i>	<b>Gewicht</b> <i>Weight</i>	<b>B</b> mm
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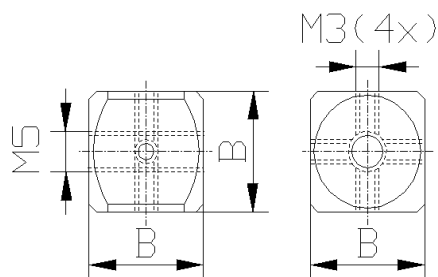


Zur Aufnahme von **Komponenten mit Gewinde M5**.  
Mit **Schraube für Würfel** zu verwenden (Seite 74).

*For use with M5 thread components.*  
*For use with Screw for cube (Page 74).*

<b>Bestell-Nr.</b> <i>Order No.</i>	<b>Gewicht</b> <i>Weight</i>	<b>B</b> mm
15-15 NWST	7.9g	<b>15</b>
20-20 NWST	20.3g	<b>20</b>

<b>Würfel M5 - M3 / Cubes M5 - M3</b> Material: Alu 7075 / Material: Alu 7075	<b>Bestell-Nr.</b> <i>Order No.</i>	<b>Gewicht</b> <i>Weight</i>	<b>B</b> mm
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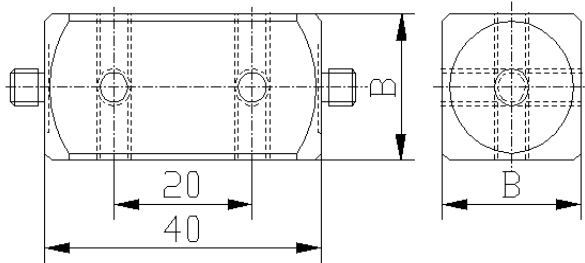
Zur Aufnahme von **Komponenten mit Gewinde M3**.  
Mit **Schraube für Würfel** zu verwenden (Seite 74).

*For use with M3 thread components.*  
*For use with Screw for cube (Page 74).*

# M5 (Ø 11mm)

Anschluss-Gewinde M5 (Ø 11mm) / M5 (Ø 11mm) thread	Bestell-Nr. Order No.	Gewicht Weight	B mm
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<b>Doppelwürfel M5 / Double cubes M5</b> Material: Alu 7075 / Material: Alu 7075	20-20 NDW	40.8g	20
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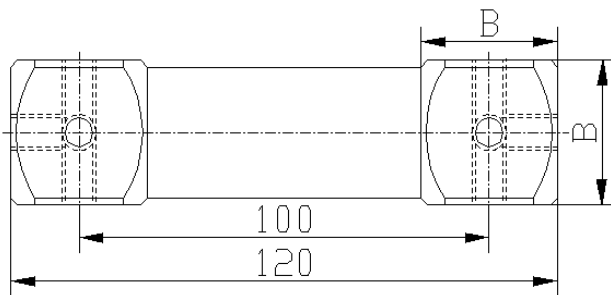


Zur Aufnahme von **Komponenten mit Gewinde M5**.  
Mit **Schraube für Würfel** zu verwenden (Seite 74).

*For use with M5 thread components.*  
*For use with Screw for cube (Page 74).*

Bestell-Nr. Order No.	Gewicht Weight	B mm
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<b>Würfelverlängerung M5 / Cube extensions M5</b> Material: Alu 7075 / Material: Alu 7075	20-20 NWV	62.4g	20
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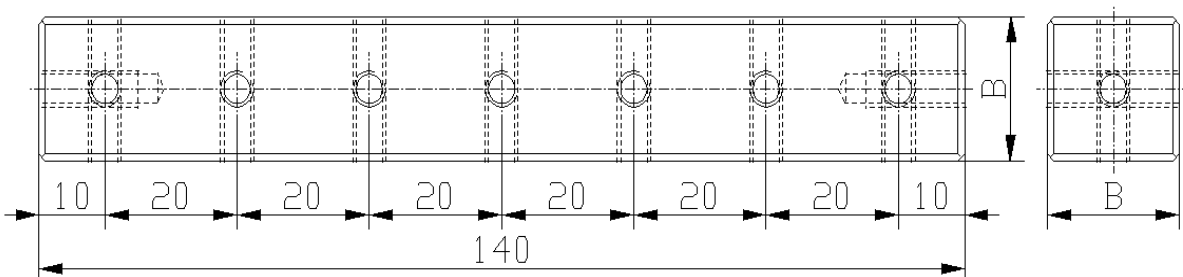


Zur Aufnahme von **Komponenten mit Gewinde M5**.  
Mit **Schraube für Würfel** zu verwenden (Seite 74).

*For use with M5 thread components.*  
*For use with Screw for cube (Page 74).*

Bestell-Nr. Order No.	Gewicht Weight	B mm
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<b>Mehrfachwürfel M5 / Multi cubes M5</b> Material: Alu 7075 / Material: Alu 7075	20-20 NMW	144.0g	20
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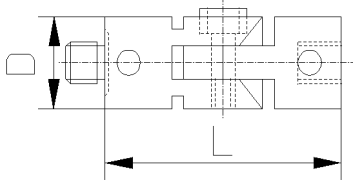


Zur Aufnahme von **Komponenten mit Gewinde M5**.  
Mit **Schraube für Würfel** zu verwenden (Seite 74).

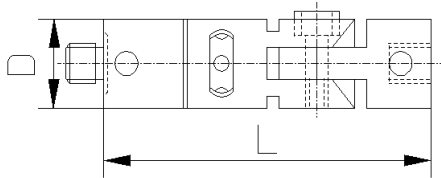
*For use with M5 thread components.*  
*For use with Screw for cube (Page 74).*

# M5 (Ø 11mm)

Anschluss-Gewinde M5 (Ø 11mm) / M5 (Ø 11mm) thread	Bestell-Nr. Order No.	Gewicht Weight	D mm	L mm
<b>Gelenk / Knuckle joints</b>	30-11 NGA	7.0g	<b>11</b>	30.0
Material: Alu 7075 / Material: Alu 7075	36-18 NGA	24.0g	<b>18</b>	36.0



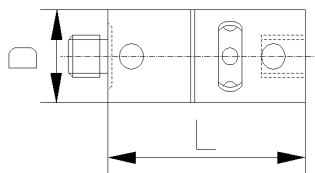
Bestell-Nr. Order No.	Gewicht Weight	D mm	L mm	
<b>Gelenk drehbar / Knuckle joints rotary</b>	43-11 NGD	13.0g	<b>11</b>	43.0
Material: Alu 7075 / Material: Alu 7075	55-18 NGD	38.0g	<b>18</b>	55.0



Mit Hilfe des integrierten Drehstücks können die angebauten Tastelemente ausgerichtet werden.

*A built-in rotating adaptor allows styli positioning.*

Bestell-Nr. Order No.	Gewicht Weight	D mm	L mm	
<b>Drehstück / Rotating adaptors</b>	25-11 NDSP	9.0g	<b>11</b>	25.0
Material: Alu 7075 / Material: Alu 7075	25-18 NDSP	21.0g	<b>18</b>	25.0

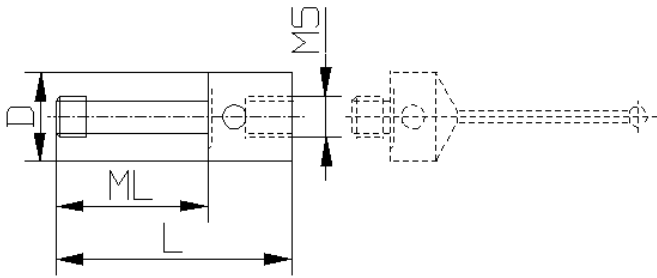


Mit Hilfe des Drehstücks können die angebauten Tastelemente ausgerichtet werden.

*Rotating adaptor allows styli positioning.*

# M5 (Ø 11mm)

Anschluss-Gewinde M5 (Ø 11mm) / M5 (Ø 11mm) thread	Bestell-Nr. Order No.	Gewicht Weight	D mm	L mm	ML mm
Schraube für Würfel / Screws for cube Material: Alu 7075 / Material: Alu 7075	5-20 NSWA	3.0g	11	31.0	20.0
	5-25 NSWA	3.3g	11	36.0	25.0



Zur Aufnahme der **Würfel M5** (Seite 71+72) und **Taststifte mit Gewinde M5**.

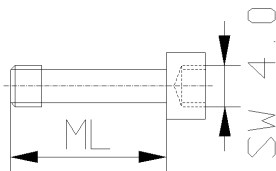
Länge **ML=20mm** passt zu Würfel M5 mit **B=15mm**  
Länge **ML=25mm** passt zu Würfel M5 mit **B=20mm**

For use with **Cubes M5** (Page 71+72) and **M5 thread styli**.

**ML=20mm** fits to **Cube M5** with **B=15mm**  
**ML=25mm** fits to **Cube M5** with **B=20mm**

Bestell-Nr. Order No.	Gewicht Weight	ML mm
5-20 NSWB	3.3g	20.0
5-25 NSWB	3.8g	25.0

Schraube für Würfel / Screws for cube Material: Stahl / Material: Steel	Bestell-Nr. Order No.	Gewicht Weight	ML mm
Material: Stahl / Material: Steel	5-20 NSWB	3.3g	20.0
	5-25 NSWB	3.8g	25.0



Zur Aufnahme der **Würfel M5** (Seite 71+72).

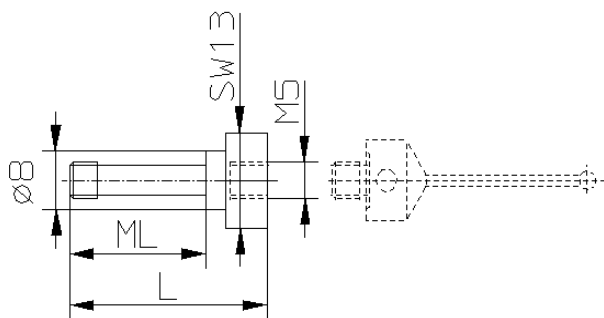
Länge **ML=20mm** passt zu Würfel M5 mit **B=15mm**  
Länge **ML=25mm** passt zu Würfel M5 mit **B=20mm**

For use with **Cubes M5** (Page 71+72).

**ML=20mm** fits to **Cube M5** with **B=15mm**  
**ML=25mm** fits to **Cube M5** with **B=20mm**

Bestell-Nr. Order No.	Gewicht Weight	L mm	ML mm
5-15.5 NST	7.3g	15.5	8.0
5-30 NST	8.7g	30.0	21.0
5-35 NST	9.1g	35.0	26.0

Schraube für Tastscheibe / Screws for disc styli Material: Stahl / Material: Steel	Bestell-Nr. Order No.	Gewicht Weight	L mm	ML mm
Material: Stahl / Material: Steel	5-15.5 NST	7.3g	15.5	8.0
	5-30 NST	8.7g	30.0	21.0
	5-35 NST	9.1g	35.0	26.0



Zur Aufnahme der **Tastscheibe mit Aufnahme Ø 8mm** (Seite 65) zusammen mit **Würfel M5** (Seite 71+72).

Länge **ML=8mm** zum direkten Einschrauben (z.B. an Verlängerung)

Länge **ML=21mm** passt zu Würfel M5 mit **B=15mm**  
Länge **ML=26mm** passt zu Würfel M5 mit **B=20mm**

For use with **Disc styli with hole Ø 8mm**

(Page 65) together with **Cube M5** (Page 71+72).

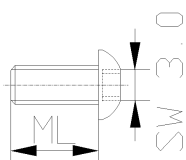
**ML=8mm** fits to **Extension M5**

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

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

Bestell-Nr. Order No.	Gewicht Weight	ML mm
5-10 NSL	2.3g	10.0
5-12 NSL	2.6g	12.0

Linsenschraube / Oval head screws Material: Stahl / Material: Steel	Bestell-Nr. Order No.	Gewicht Weight	ML mm
Material: Stahl / Material: Steel	5-10 NSL	2.3g	10.0
	5-12 NSL	2.6g	12.0



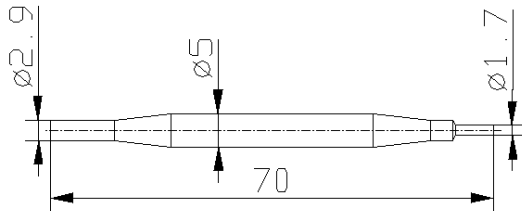
Zur Aufnahme der **Tastscheibe mit Gewinde M5** (Seite 65).

For use with **Disc styli with M5 thread** (Page 65).

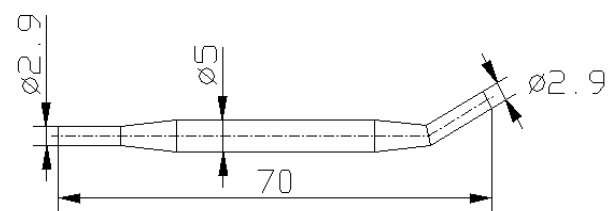
# M5 (Ø 11mm)

Werkzeuge für Komponenten mit Anschluss-Gewinde M5 (Ø 11mm) / Tools for M5 (Ø 11mm) thread components	Bestell-Nr. Order No.	Bezeichnung Description
Stiftschlüssel / Pin key	1.7 NWST	Ø 1.7mm für Drehstück D=11mm Ø 1.7mm for rotating holders D=11mm
	2.9 NWST	Ø 2.9mm für Komponenten mit M5 Ø 2.9mm for M5 thread components
	1.7-2.9 NWST	Stiftschlüssel-Set Ø 1.7 / 2.9mm Pin key set Ø 1.7 / 2.9mm

1.7 NWST



2.9 NWST



## Sechskantschlüssel / Hexagon key



Bestell-Nr. Order No.	Bezeichnung Description
0.9 NWSK	SW 0.9mm für Gewindestifte M2 0.9mm for set screw M2
1.5 NWSK	SW 1.5mm für Gewindestifte M3 1.5mm for set screw M3
2.0 NWSK	SW 2.0mm für Gewindestifte M4 2.0mm for set screw M4
2.5 NWSK	SW 2.5mm für Zylinderschrauben M3 2.5mm for cylinder screw M3
3.0 NWSK	SW 3.0mm für Linsenschrauben M5 3.0mm for oval head screw M5
4.0 NWSK	SW 4.0mm für Zylinderschrauben M5 4.0mm for cylinder screw M5

Bestell-Nr. Order No.	Inhalt Contents
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## Schraubensortiment (Ersatzschrauben) Screws assortment (Replacement screws)

12-11 NSS	12 Teile / 12 parts
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Schraubensortiment bestehend aus:	
1 Stk.	Zylinderschrauben M3x8
1 Stk.	Zylinderschrauben M5x12
4 Stk.	Gewindestifte M2x4
3 Stk.	Gewindestifte M3x3
1 Stk.	Gewindestifte M4x5
2 Stk.	Gewindestifte M5x6

Screws assortment:	
1 pc	Cylinder screw M3x8
1 pc	Cylinder screw M5x12
4 pcs	Set screw M2x4
3 pcs	Set screw M3x3
1 pc	Set screw M4x5
2 pcs	Set screw M5x6

# M5 (Ø 11mm)

<b>Anschluss-Gewinde M5 (Ø 11mm) / M5 (Ø 11mm) thread</b>	<b>Bestell-Nr. Order No.</b>	<b>Inhalt Contents</b>
<b>Taststifte Set / Styli sets</b>	30-11 NTBST	30 Teile / 30 parts

Tastelemente und diverses Zubehör sind in diesem Taststifte Set zusammengestellt. Dieses Set ist mit den gebräuchlichsten Taststiften bestückt, um einfachere Messungen erfolgreich zu bewältigen. Durch die freien Steckplätze haben Sie die Möglichkeit, Ihren Bausatz jederzeit mit benötigten Komponenten zu erweitern, um auch anspruchsvollere Messaufgaben lösen zu können. Im grosszügig dimensionierten Schaumstoffetui sind Ihre Tastelemente sicher vor Staub und Beschädigung geschützt.

*Styli and accessories are available in this styli set. 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 styli set is protected from dust or damage in a generously sized foam case with a cover.*

<b>Im Set enthaltene Komponenten: Supplied equipment:</b>	<b>Skizze: Drawing:</b>
4 Stk. / pcs 3.0-33.5-11 NTB	Seite / Page 62
2 Stk. / pcs 3.0-58-11 NTB	Seite / Page 62
1 Stk. / pc 5.0-53-11 NTB	Seite / Page 62
1 Stk. / pc 8.0-63.5-11 NTB	Seite / Page 62
1 Stk. / pc 8.0-114.5-11 NTKE	Seite / Page 62
1 Stk. / pc 2.0-55-11 NTF	Seite / Page 61
1 Stk. / pc 1.5-26.5-1 NTN	Seite / Page 8
1 Stk. / pc 1.0-10-11 NHT	Seite / Page 68
1 Stk. / pc 25-11 NDSP	Seite / Page 73
2 Stk. / pcs 15-15 NWA	Seite / Page 71
2 Stk. / pcs 15-15 NWB	Seite / Page 71
1 Stk. / pc 30-11 NGA	Seite / Page 73
2 Stk. / pcs 5-20 NSWA	Seite / Page 74
2 Stk. / pcs 5-20 NSWB	Seite / Page 74
2 Stk. / pcs 40-11 NVPE	Seite / Page 69
2 Stk. / pcs 60-11 NVPE	Seite / Page 70
1 Stk. / pc 100-11 NVPE	Seite / Page 70
2 Stk. / pcs 120-11 NVPE	Seite / Page 70
1 Stk. / pc 1.7-2.9 NWST	Seite / Page 75

	<b>Bestell-Nr. Order No.</b>	<b>Bezeichnung Description</b>
<b>Leere Schaumstoffetuis / Empty foam cases</b>	11-18 NSEST	Schaumstoffetui mit Steckplätzen für alle gebräuchlichen Komponenten <i>Foam case with a cover for the most commonly used styli and accessories</i>

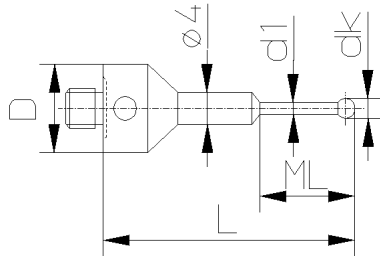
# **M5 (Ø 12mm)**

<b>Tastelemente / <i>Styli</i></b>	78-79
<b>Werkzeuge / <i>Tools</i></b>	79

# M5 (Ø 12mm)

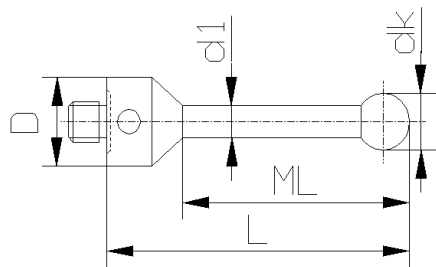
Anschluss-Gewinde M5 (Ø 12mm) M5 (Ø 12mm) thread	Bestell-Nr. Order No.	Gewicht Weight	D mm	dk mm	d1 mm	L mm	ML mm
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Taststifte (Typ BA) / Styli (Type BA) Kugel: Rubin / Ball: Ruby Schaft: HM / Shaft: TC	2.0-41-12 NTBA	7.3g	12	2.0	1.5	41.0	16.0
	2.0-67-12 NTBA	11.5g	12	2.0	1.5	67.0	16.0



Bestell-Nr. Order No.	Gewicht Weight	D mm	dk mm	d1 mm	L mm	ML mm
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Taststifte (Typ B) / Styli (Type B) Kugel: Rubin / Ball: Ruby Schaft: HM / Shaft: TC	1.5-28.7-12 NTB	9.9g	12	1.5	1.0	28.7	7.7
	1.5-40.7-12 NTB	10.0g	12	1.5	1.0	40.7	19.7
	2.0-31-12 NTB	7.3g	12	2.0	1.5	31.0	20.0
	2.0-36-12 NTB	7.5g	12	2.0	1.5	36.0	25.0
	2.0-42-12 NTB	7.6g	12	2.0	1.5	42.0	31.0
	2.0-61-12 NTB	11.3g	12	2.0	1.5	61.0	41.0
	3.0-36.5-12 NTB	8.0g	12	3.0	2.0	36.5	25.5
	3.0-51.5-12 NTB	8.8g	12	3.0	2.0	51.5	40.5
	3.5-92.7-12 NTB	15.4g	12	3.5	3.0	92.7	81.7
	4.0-57-12 NTB	11.7g	12	4.0	3.0	57.0	46.0
	4.0-82-12 NTB	12.0g	12	4.0	2.5	82.0	71.0
	5.0-62.5-12 NTB	14.3g	12	5.0	3.5	62.5	51.5
	5.0-82.5-12 NTB	17.1g	12	5.0	3.5	82.5	71.5



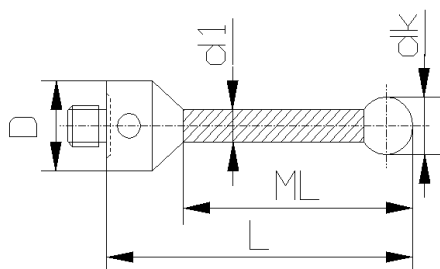
8.0-94-12 NTKE	21.0g	12	8.0	6.0	94.0	78.0
8.0-129-12 NTKE	25.0g	12	8.0	6.0	129.0	113.0
15.0-97.5-12 NTKE	26.0g	12	15.0	6.0	97.5	81.5

Taststifte (Typ K) Keramik Styli (Type K) Ceramic	8.0-94-12 NTKE	21.0g	12	8.0	6.0	94.0	78.0
	8.0-129-12 NTKE	25.0g	12	8.0	6.0	129.0	113.0
	15.0-97.5-12 NTKE	26.0g	12	15.0	6.0	97.5	81.5

Kugel: Rubin / Ball: Ruby  
Schaft: Keramik / Shaft: Ceramic

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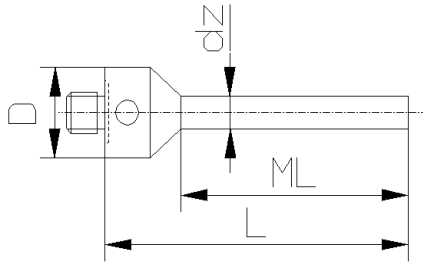
\*\*\* Kugel: Keramik / Ball: Ceramic



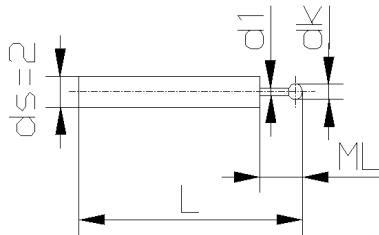


# M5 (Ø 12mm)

Anschluss-Gewinde M5 (Ø 12mm) M5 (Ø 12mm) thread	Bestell-Nr. Order No.	Gewicht Weight	D mm	dz mm	L mm	ML mm
Zylindertaststifte / Cylinder styli Zylinder: HM / Cylinder: TC	3.0-50-12 NZTH	11.3g	12	3.0	50.0	39.0
	5.0-50-12 NZTH	18.6g	12	5.0	50.0	39.0



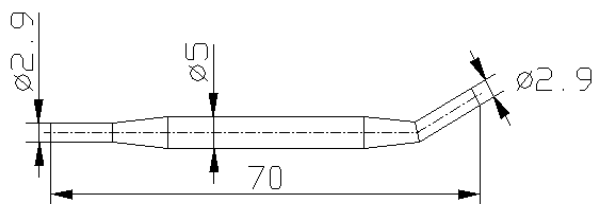
	Bestell-Nr. Order No.	Gewicht Weight	dk mm	d1 mm	L mm	ML mm
Taststifte (Typ F) / Styli (Type F) Kugel: Rubin / Ball: Ruby Schaft: HM / Shaft: TC	0.3-15.3-2 NTF	0.3g	0.3	0.2	15.3	2.5
	0.5-15.5-2 NTF	0.6g	0.5	0.3	15.5	2.5
	0.5-22.3-2 NTF	0.8g	0.5	0.3	22.3	4.3
	0.6-15.6-2 NTF	0.5g	0.6	0.4	15.6	4.5
	0.8-15.8-2 NTF	0.5g	0.8	0.6	15.8	4.5
	0.8-22.4-2 NTF	0.8g	0.8	0.6	22.4	4.4
	1.0-16-2 NTF	0.5g	1.0	0.8	16.0	4.5
	1.0-22.5-2 NTF	0.8g	1.0	0.8	22.5	4.5
	*** 1.0-34.2-2 NTF	0.6g	1.0	0.8	34.2	14.2
	1.0-34.5-2 NTF	0.6g	1.0	0.8	34.5	14.5
	1.5-22.7-2 NTF	0.7g	1.5	1.2	22.7	10.3
	1.8-46.9-2 NTF	1.2g	1.8	1.5	46.9	40.9
	*** 2.0-23-2 NTF	0.8g	2.0	1.5	23.0	10.6
	*** 4.0-34.5-2 NTF	1.8g	4.0	2.0	34.5	34.5



\*\*\* Kugel ist abgeflacht (HM-Kugel) / Ball: TC flattened

Werkzeuge für Komponenten mit Anschluss-Gewinde M5 (Ø 12mm) / Tools for M5 (Ø 12mm) thread components	Bestell-Nr. Order No.	Bezeichnung Description
Stiftschlüssel / Pin key	2.9 NWST	Ø 2.9mm für Komponenten mit M5 Ø 2.9mm for M5 thread components

2.9 NWST



# ***NOTIZEN / NOTES***

# **REFERENZKUGELN**

## **REFERENCE SPHERES**

<b>Referenzkugeln / <i>Reference spheres</i></b>	<b>82-88</b>
<b>Verlängerungen / <i>Extensions</i></b>	<b>89</b>
<b>Grundsockel / <i>Base plate</i></b>	<b>89</b>
<b>Befestigungsbolzen / <i>Fixing bolts</i></b>	<b>89</b>

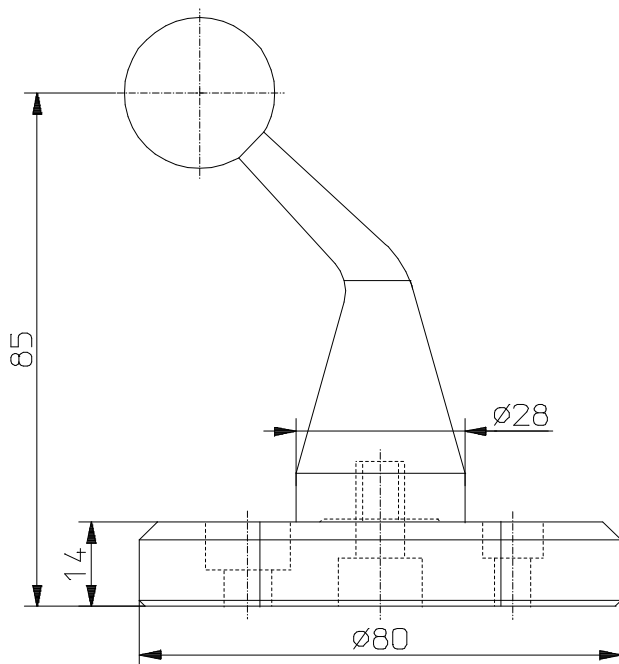
# REFERENZKUGELN

## REFERENCE SPHERES

Referenzkugeln / Reference spheres	Bestell-Nr. Order No.	Kugel Material Ball material	Kugel-Ø Ball-Ø
<b>Referenzkugel mit Grundsockel (Typ A)</b> <i>Reference spheres with base plate (Type A)</i>	15 NRKA	Keramik / Ceramic	15mm
	20 NRKA	Keramik / Ceramic	20mm
	25 NRKA	Keramik / Ceramic	25mm
	30 NRKA	Keramik / Ceramic	30mm
	25 NRSA	Stahl / Steel	25mm

Antasten aus allen 6 Halbachsen

*Probing from all 6 semi-axes*



### Lieferumfang:

- Kugelhalter gebogen 45° mit Referenzkugel L=85mm
- Grundsockel (Seite 89)
- Verlängerung L=70mm (Seite 89)
- Befestigungs-Schrauben: je 1 Stück M6, M8, M10
- Werkzertifikat der Referenzkugel

### Supplied equipment:

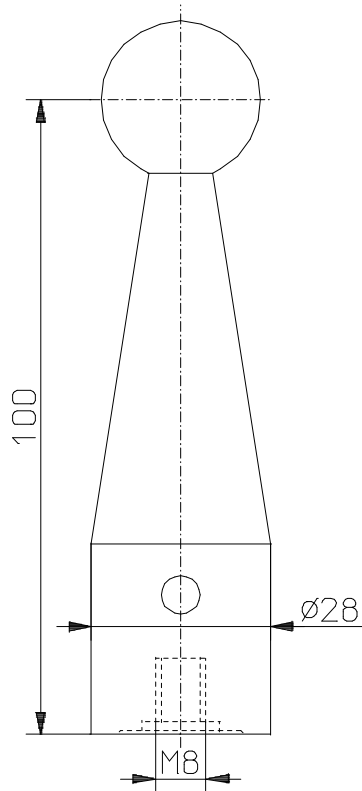
- Ball holder bent 45° with reference sphere L=85mm
- Base plate (Page 89)
- Extension L=70mm (Page 89)
- Fixing screws 1x M6, 1x M8, 1x M10
- Test certificate

Material Material	Formabweichung Form deviation
Keramik Al <sub>2</sub> O <sub>3</sub> Ceramic Al <sub>2</sub> O <sub>3</sub>	< 0.2µm
Stahl AISI 440C Steel AISI 440C	< 0.2µm

# REFERENZKUGELN

## REFERENCE SPHERES

Referenzkugeln / Reference spheres	Bestell-Nr. Order No.	Kugel Material Ball material	Kugel-Ø Ball-Ø
Referenzkugel (Typ B) / Reference spheres (Type B)	15 NRKB	Keramik / Ceramic	15mm
	20 NRKB	Keramik / Ceramic	20mm
	25 NRKB	Keramik / Ceramic	25mm
	30 NRKB	Keramik / Ceramic	30mm
	25 NRSB	Stahl / Steel	25mm



### Lieferumfang:

- Kugelhalter mit Referenzkugel L=100mm
- Werkzertifikat der Referenzkugel

Den zu Ihrer Messmaschine passenden **Befestigungsbolzen** bitte bestellen (Seite 89).

Verlängerungen auf Seite 89.

### Supplied equipment:

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

Please order the appropriate size **Fixing bolt** to your CMM (Page 89).

Extensions see Page 89.

Material Material	Formabweichung Form deviation
Keramik Al <sub>2</sub> O <sub>3</sub> Ceramic Al <sub>2</sub> O <sub>3</sub>	< 0.2µm
Stahl AISI 440C Steel AISI 440C	< 0.2µm

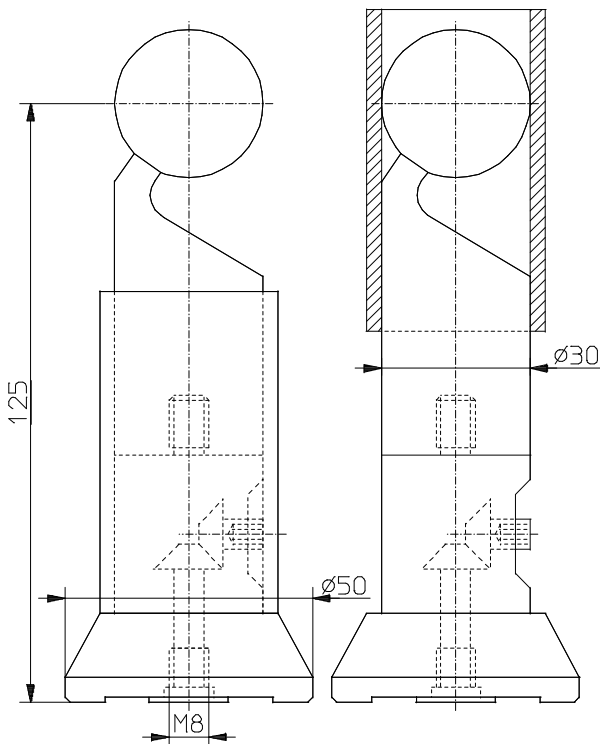
# REFERENZKUGELN

## REFERENCE SPHERES

Referenzkugeln / Reference spheres	Bestell-Nr. Order No.	Kugel Material Ball material	Kugel-Ø Ball-Ø
Referenzkugel mit Winkelgetriebe (Typ C) Reference spheres (Type C)	15 NRKC	Keramik / Ceramic	15mm
	20 NRKC	Keramik / Ceramic	20mm
	25 NRKC	Keramik / Ceramic	25mm
	30 NRKC	Keramik / Ceramic	30mm
	25 NRSC	Stahl / Steel	25mm

Antasten aus allen 6 Halbachsen.  
Befestigung auf der Messplatte mittels Winkelgetriebe.

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



### Lieferumfang:

- 1) Kugelhalter gebogen 30° mit Referenzkugel L=125mm
- 2) Grundsockel mit Winkelgetriebe
- 3) Schiebehülse zum Schutz der Referenzkugel
- 4) Verlängerung L=50mm (Seite 89)
- 5) Sechskantschlüssel SW 3.0mm
- 6) Stiftschlüssel Ø 2.9mm (Seite 75)
- 7) Befestigungsbolzen: je 1 Stück M6, M8, M10 (Seite 89)

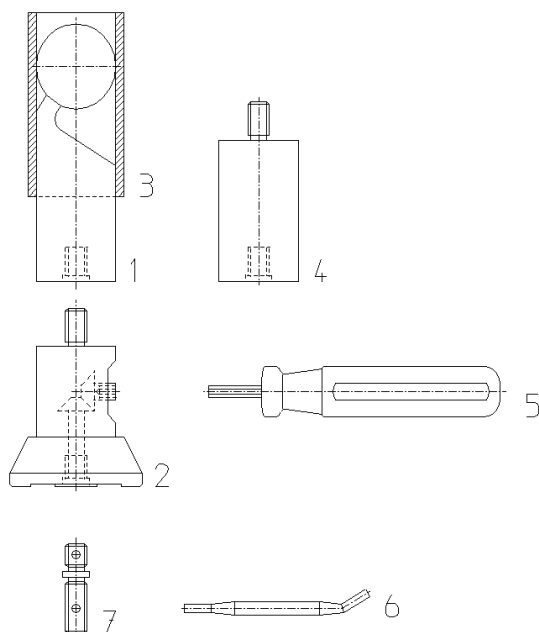
- Werkzertifikat der Referenzkugel

### Supplied equipment:

- 1) Ball holder bent 30° with reference sphere L=125mm
- 2) Base plate with angle gear
- 3) Sliding sleeve to protect the reference sphere
- 4) Extension L=50mm (Page 89)
- 5) Hexagon key 3.0mm
- 6) Pin key Ø 2.9mm (Page 75)
- 7) Fixing bolts 1x M6, 1x M8, 1x M10 (Page 89)

- Test certificate

Material Material	Formabweichung Form deviation
Keramik Al <sub>2</sub> O <sub>3</sub> Ceramic Al <sub>2</sub> O <sub>3</sub>	< 0.2µm
Stahl AISI 440C Steel AISI 440C	< 0.2µm



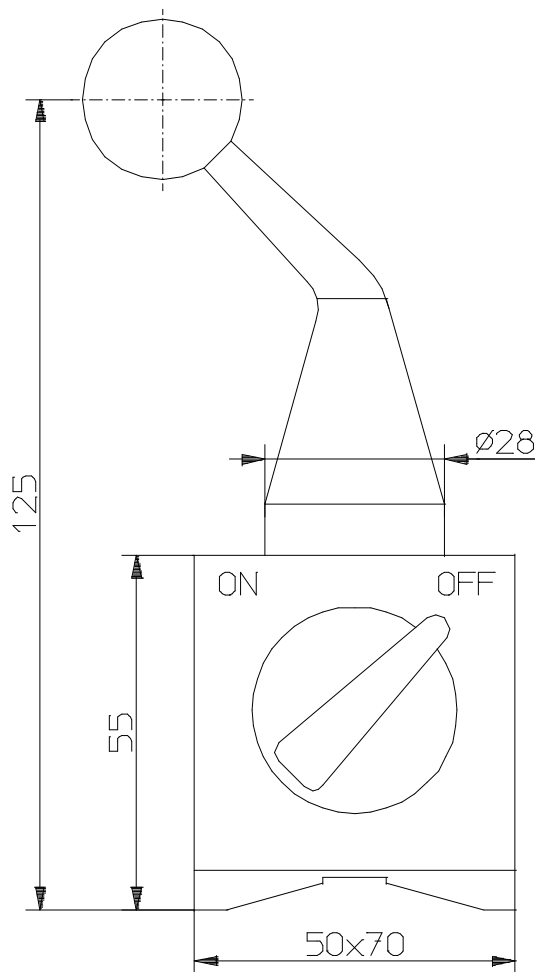
# REFERENZKUGELN

## REFERENCE SPHERES

Referenzkugeln / Reference spheres	Bestell-Nr. Order No.	Kugel Material Ball material	Kugel-Ø Ball-Ø
Referenzkugel mit Magnetsockel (Typ D) <i>Reference spheres with magnetic base (Type D)</i>	15 NRKD	Keramik / Ceramic	15mm
	20 NRKD	Keramik / Ceramic	20mm
	25 NRKD	Keramik / Ceramic	25mm
	30 NRKD	Keramik / Ceramic	30mm
	25 NRSD	Stahl / Steel	25mm

Antasten aus allen 6 Halbachsen

*Probing from all 6 semi-axes*



### Lieferumfang:

- Kugelhalter gebogen 45° mit Referenzkugel L=125mm
- Magnetsockel (Ein/Aus)
- Verlängerung L=70mm (Seite 89)
- Werkzertifikat der Referenzkugel
- Lieferung im Holzetui

### Supplied equipment:

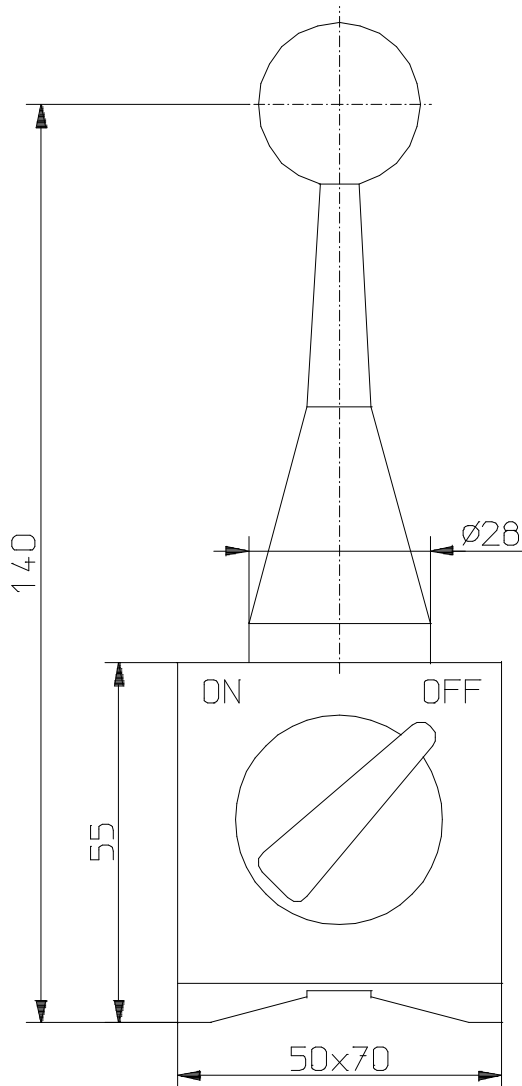
- Ball holder bent 45° with reference sphere L=125mm
- Magnetic base (on/off)
- Extension L=70mm (Page 89)
- Test certificate
- Delivery in a wooden case

Material Material	Formabweichung Form deviation
Keramik Al <sub>2</sub> O <sub>3</sub> Ceramic Al <sub>2</sub> O <sub>3</sub>	< 0.2µm
Stahl AISI 440C Steel AISI 440C	< 0.2µm

# REFERENZKUGELN

## REFERENCE SPHERES

Referenzkugeln / Reference spheres	Bestell-Nr. Order No.	Kugel Material Ball material	Kugel-Ø Ball-Ø
Referenzkugel mit Magnetsockel (Typ E) Reference spheres with magnetic base (Type E)	15 NRKE	Keramik / Ceramic	15mm
	20 NRKE	Keramik / Ceramic	20mm
	25 NRKE	Keramik / Ceramic	25mm
	30 NRKE	Keramik / Ceramic	30mm
	25 NRSE	Stahl / Steel	25mm



### Lieferumfang:

- Kugelhalter mit Referenzkugel L=140mm
- Magnetsockel (Ein/Aus)
- Verlängerung L=70mm (Seite 89)
- Werkzertifikat der Referenzkugel
- Lieferung im Holzetui

### Supplied equipment:

- Ball holder with reference sphere L=140mm
- Magnetic base (on/off)
- Extension L=70mm (Page 89)
- Test certificate
- Delivery in a wooden case

Material Material	Formabweichung Form deviation
Keramik Al <sub>2</sub> O <sub>3</sub> Ceramic Al <sub>2</sub> O <sub>3</sub>	< 0.2µm
Stahl AISI 440C Steel AISI 440C	< 0.2µm



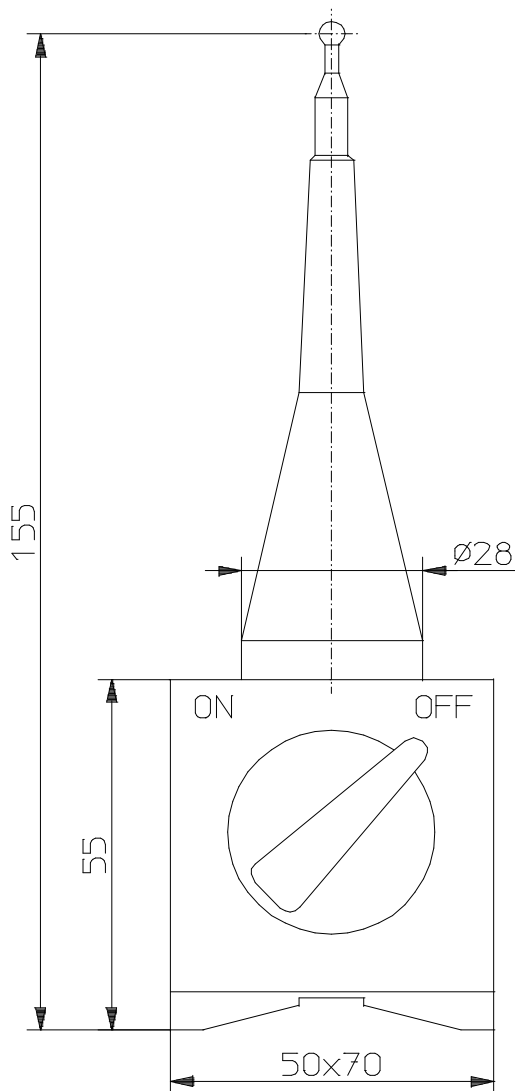
# REFERENZKUGELN

## REFERENCE SPHERES

Referenzkugeln / Reference spheres	Bestell-Nr. Order No.	Kugel Material Ball material	Kugel-Ø Ball-Ø
Referenzkugel für Erodiermaschinen (Typ F) Reference spheres for Electrical Discharge Machine EDM (Type F)	245 NRKF	Hartmetall / TC	2mm 4mm 5mm

Elektrisch leitende Referenzkugeln

*Electrically conductive reference spheres*



### Lieferumfang:

- Kugelhalter mit Referenzkugeln L=155mm
- 3 Stück Referenzkugeln M4: Ø2mm, Ø4mm, Ø5mm (auswechselbar)
- Magnetsockel (Ein/Aus)
- Verlängerung L=70mm (Seite 89)
- Lieferung im Holzetui

### Technische Daten der Referenzkugeln:

Durchmesser Toleranz:  $\pm 1\mu\text{m}$   
Formabweichung:  $< 0.25\mu\text{m}$

### Supplied equipment:

- Ball holder with reference sphere L=155mm
- 3 pcs reference spheres M4: Ø2mm, Ø4mm, Ø5mm (exchangeable)
- Magnetic base (on/off)
- Extension L=70mm (Page 89)
- Delivery in a wooden case

### Technical data of reference spheres:

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

### Ersatz-Referenzkugeln M4

*Replacement reference sphere M4*

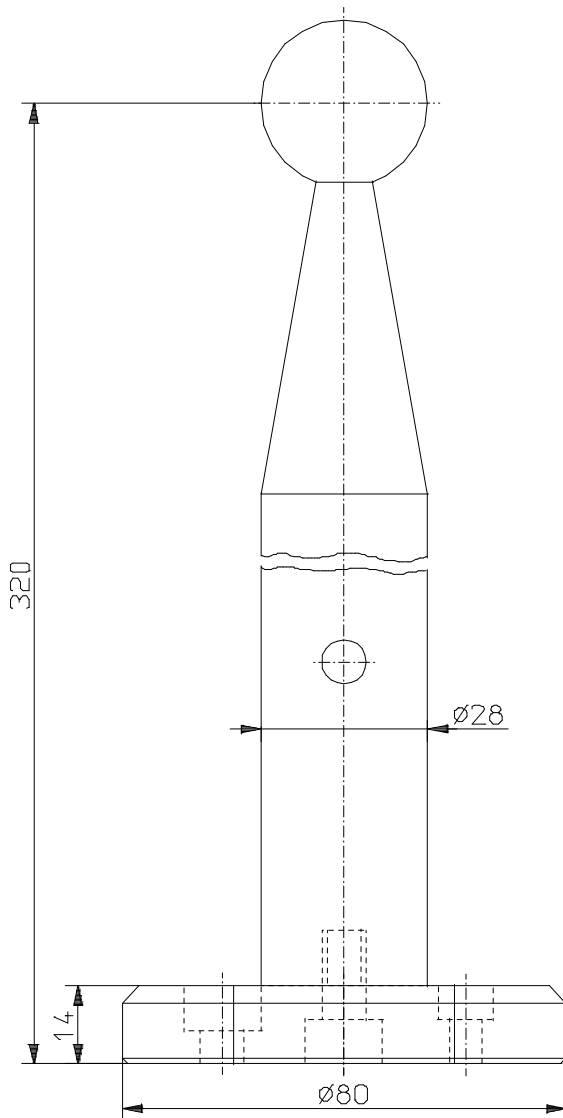
Bestell-Nr. Order No.	Kugel Material Ball material	Kugel-Ø Ball-Ø
2.0-15-4 NTBH	Hartmetall / TC	2mm
4.0-16-4 NTCH	Hartmetall / TC	4mm
5.0-16.5-4 NTCH	Hartmetall / TC	5mm

# REFERENZKUGELN

## REFERENCE SPHERES

Referenzkugeln / Reference spheres	Bestell-Nr. Order No.	Kugel Material Ball material	Kugel-Ø Ball-Ø
Referenzkugel mit Grundsockel (Typ G) Reference spheres with base plate (Type G)	20 NRKG	Keramik / Ceramic	20mm
	25 NRKG	Keramik / Ceramic	25mm
	30 NRKG	Keramik / Ceramic	30mm
	50 NRKG	Keramik / Ceramic	50mm
	25 NRSG	Stahl / Steel	25mm

Grosse Ausführung / Large design



### Lieferumfang:

- Kugelhalter mit Referenzkugel L=320mm
- Grundsockel (Seite 89)
- Verlängerung L=200mm (Seite 89)
- Befestigungs-Schrauben: je 1 Stück M6, M8, M10
- Werkzertifikat der Referenzkugel

### Supplied equipment:

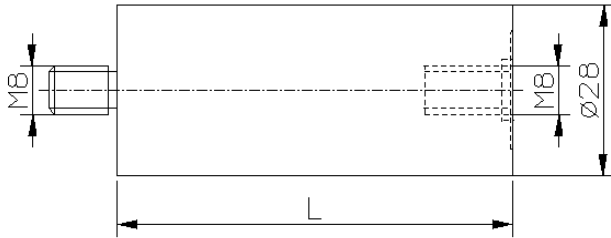
- Ball holder with reference sphere L=320mm
- Base plate (Page 89)
- Extension L=200mm (Page 89)
- Fixing screws 1x M6, 1x M8, 1x M10
- Test certificate

Material Material	Formabweichung Form deviation
Keramik Al <sub>2</sub> O <sub>3</sub> Ceramic Al <sub>2</sub> O <sub>3</sub>	< 0.2µm
Stahl AISI 440C Steel AISI 440C	< 0.2µm

# REFERENZKUGELN

## REFERENCE SPHERES

Zubehör / Accessories	Bestell-Nr. Order No.	Material Material	L mm
Verlängerung / Extensions	70 NVRA	Stahl / Steel	70.0
	100 NVRA	Stahl / Steel	100.0
	200 NVRA	Stahl / Steel	200.0

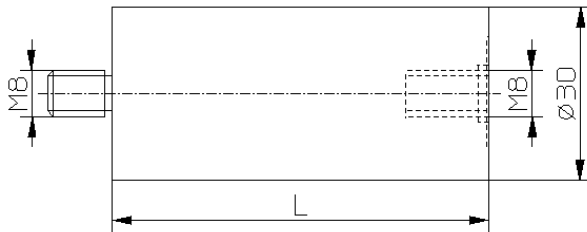


Verlängerung passend zu **Referenzkugel (Typ A, B, D, E, F, G)**.

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

Bestell-Nr. Order No.	Material Material	L mm
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Verlängerung / Extensions	50 NVRC	Aluminium eloxiert <i>Aluminium anodized</i>	50.0
	100 NVRC	Aluminium eloxiert <i>Aluminium anodized</i>	100.0

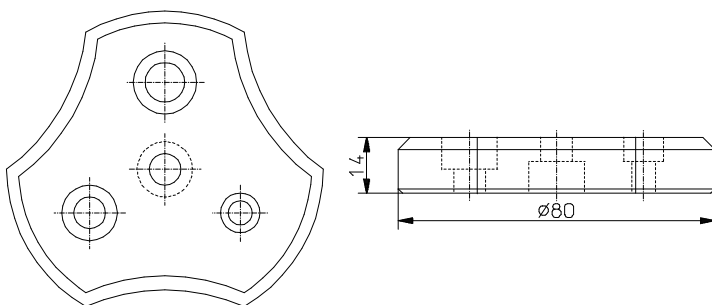


Verlängerung passend zu **Referenzkugel (Typ C)**.

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

Bestell-Nr. Order No.	Material Material
--------------------------	----------------------

Grundsockel / Base plate	80 NGRA	Aluminium eloxiert <i>Aluminium anodized</i>
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Grundsockel passend zu **Referenzkugel (Typ A, B, G)**.

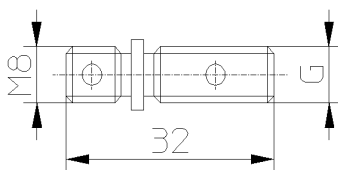
Lieferung mit Befestigungsschrauben M6, M8, M10.

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

Delivery with fixing screws M6, M8, M10.

Bestell-Nr. Order No.	Gewinde G Thread G
--------------------------	-----------------------

Befestigungsbolzen / Fixing bolts	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



Befestigungsbolzen passend zu **Referenzkugel (Typ B, C)**.

Andere Gewindegrößen sind auf Anfrage erhältlich.

For use with *Reference spheres (Type B, C)*. Other thread sizes are available.

# ***NOTIZEN / NOTES***

# **GEWINDE-EINSÄTZE**

## **THREAD INSERTS**

**Gewinde-Positionseinsätze / *Thread inserts*** 92

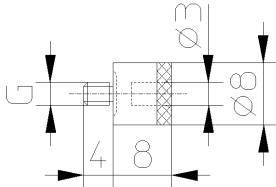
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**Gewinde-Positionseinsätze Set / *Thread insert sets*** 93

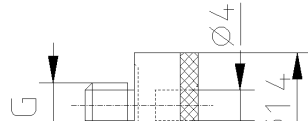
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# GEWINDE-EINSÄTZE

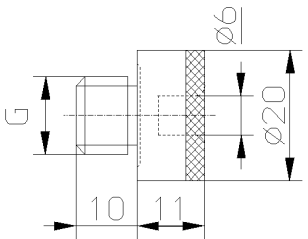
## THREAD INSERTS

Gewinde-Positionseinsätze <i>Thread positioning inserts</i>	Bestell-Nr. <i>Order No.</i>	Gewinde G <i>Thread G</i>	Steigung <i>Pitch</i> mm	Material <i>Material</i>
<b>Typ A / Type A</b> 	2.0-0.4 NGP	M2	0.4	Stahl / <i>Steel</i>
	2.5-0.45 NGP	M2.5	0.45	Stahl / <i>Steel</i>
	3.0-0.5 NGP	M3	0.5	Stahl / <i>Steel</i>
	4.0-0.7 NGP	M4	0.7	Stahl / <i>Steel</i>

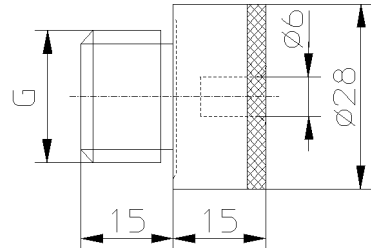
Bestell-Nr. <i>Order No.</i>	Gewinde G <i>Thread G</i>	Steigung <i>Pitch</i> mm	Material <i>Material</i>
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Typ B / Type B	Bestell-Nr. <i>Order No.</i>	Gewinde G <i>Thread G</i>	Steigung <i>Pitch</i> mm	Material <i>Material</i>
	5.0-0.8 NGP	M5	0.8	Stahl / <i>Steel</i>
	6.0-1.0 NGP	M6	1.0	Stahl / <i>Steel</i>
	7.0-1.0 NGP	M7	1.0	Stahl / <i>Steel</i>
	8.0-1.25 NGP	M8	1.25	Stahl / <i>Steel</i>
	9.0-1.25 NGP	M9	1.25	Stahl / <i>Steel</i>
	10.0-1.5 NGP	M10	1.5	Stahl / <i>Steel</i>

Bestell-Nr. <i>Order No.</i>	Gewinde G <i>Thread G</i>	Steigung <i>Pitch</i> mm	Material <i>Material</i>
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Typ C / Type C	Bestell-Nr. <i>Order No.</i>	Gewinde G <i>Thread G</i>	Steigung <i>Pitch</i> mm	Material <i>Material</i>
	11.0-1.5 NGP	M11	1.5	Stahl / <i>Steel</i>
	12.0-1.75 NGP	M12	1.75	Stahl / <i>Steel</i>
	14.0-2.0 NGP	M14	2.0	Stahl / <i>Steel</i>
	16.0-2.0 NGP	M16	2.0	Stahl / <i>Steel</i>

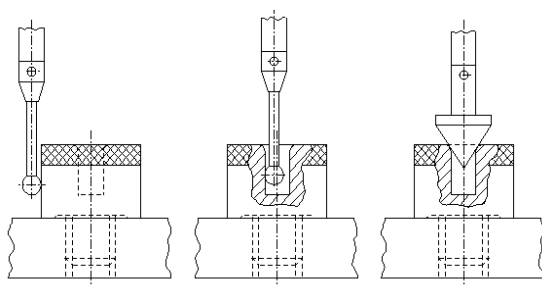
Bestell-Nr. <i>Order No.</i>	Gewinde G <i>Thread G</i>	Steigung <i>Pitch</i> mm	Material <i>Material</i>
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Typ D / Type D	Bestell-Nr. <i>Order No.</i>	Gewinde G <i>Thread G</i>	Steigung <i>Pitch</i> mm	Material <i>Material</i>
	18.0-2.5 NGP	M18	2.5	Stahl / <i>Steel</i>
	20.0-2.5 NGP	M20	2.5	Stahl / <i>Steel</i>
	24.0-3.0 NGP	M24	3.0	Stahl / <i>Steel</i>

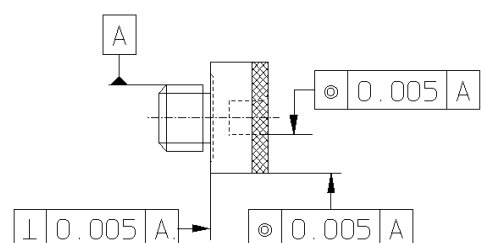
Weitere Gewinde-Positionseinsätze sind lieferbar  
(auch für Helicoil): **M, MF, G, UNC, UNF**

*The following thread types are also available:  
M, MF, G, UNC, UNF, Helicoil*

### Anwendung der Gewinde-Positionseinsätze *Thread positioning inserts applications*



### Lagetoleranzen *Tolerances*



# GEWINDE-EINSÄTZE SETS

## THREAD INSERT SETS

Gewinde-Positionseinsätze <i>Thread positioning inserts</i>	Bestell-Nr. <i>Order No.</i>	Typ <i>Type</i>	Inhalt <i>Contents</i>
Gewinde-Positionseinsätze Set <i>Thread positioning insert sets</i>	2-10 NGSA	A	Gewinde-Positionseinsätze M2-M10 <i>Thread positioning inserts M2-M10</i>
	12-24 NGSB	B	Gewinde-Positionseinsätze M12-M24 <i>Thread positioning inserts M12-M24</i>

Lieferung im Holzetui. / *Delivery in a wooden case.*

Gewinde-Positionseinsätze sind ein nützliches Hilfsmittel für die genaue Positionsbestimmung von Innengewinden. Durch den umfangreichen Inhalt der Sets sind Sie in der Lage, die Position der gebräuchlichsten Gewindegrößen schnell und präzise zu kontrollieren.

Sonder-Sets mit nahezu allen Gewindearten können auch speziell auf Ihre Bedürfnisse geliefert werden.

*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.*



Typ A



Typ B

Im Set (Typ A) enthaltene Komp.: <i>Set (Type A) contains:</i>			Skizze: <i>Drawing:</i>
3 Stk. / pcs	M2	2.0-0.4 NGP	Seite / Page 92
3 Stk. / pcs	M2.5	2.5-0.45 NGP	Seite / Page 92
3 Stk. / pcs	M3	3.0-0.5 NGP	Seite / Page 92
3 Stk. / pcs	M4	4.0-0.7 NGP	Seite / Page 92
3 Stk. / pcs	M5	5.0-0.8 NGP	Seite / Page 92
3 Stk. / pcs	M6	6.0-1.0 NGP	Seite / Page 92
3 Stk. / pcs	M8	8.0-1.25 NGP	Seite / Page 92
3 Stk. / pcs	M10	10.0-1.5 NGP	Seite / Page 92

Im Set (Typ B) enthaltene Komp.: <i>Set (Type B) contains:</i>			Skizze: <i>Drawing:</i>
3 Stk. / pcs	M12	12.0-1.75 NGP	Seite / Page 92
3 Stk. / pcs	M16	16.0-2.0 NGP	Seite / Page 92
3 Stk. / pcs	M20	20.0-2.5 NGP	Seite / Page 92
3 Stk. / pcs	M24	24.0-3.0 NGP	Seite / Page 92

	Bestell-Nr. <i>Order No.</i>	Typ <i>Type</i>	Bezeichnung <i>Description</i>
Leere Holzetuis / <i>Empty wooden cases</i>	2-10 NHSA	A	Holzetui mit Steckplatte für M2-M10 <i>Wooden case with insert plate for M2-M10</i>
	12-24 NHSB	B	Holzetui mit Steckplatte für M12-M24 <i>Wooden case with insert plate for M12-M24</i>

Im grosszügig dimensionierten Holzetui sind Ihre Positionseinsätze sicher vor Staub und Beschädigung geschützt.  
*Your thread positioning inserts are protected from dust and damage in a generously sized wooden case.*

# ***NOTIZEN / NOTES***



# ***T-TASTER FÜR GEWINDEMESSUNG*** ***T-STYLI FOR THREAD MEASURING***

***Tastelemente / Styli*** 96

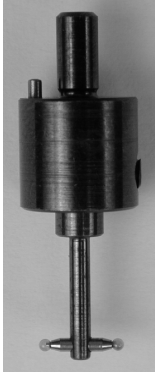
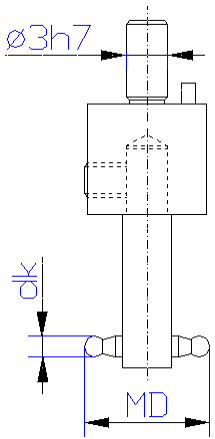
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***Tastelemente Set / Styli sets*** 96

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# T-TASTER FÜR GEWINDEMESSUNG

## T-STYLI FOR THREAD MEASURING

Spannschaft $\varnothing$ 3h7mm / Holding shaft $\varnothing$ 3h7mm	Bestell-Nr. Order No.	Grösse Size	Kugeln Balls	dk mm	MD mm
 	0.200 NTTG	0-200	HM / TC	0.200	1.0
	0.250 NTTG	0-250	HM / TC	0.250	1.8
	0.280 NTTG	0-280	HM / TC	0.280	1.8
	0.290 NTTG	0-290	HM / TC	0.290	1.8
	0.300 NTTG	0-300	HM / TC	0.300	1.8
	0.335-0 NTTG	0	HM / TC	0.335	2.0
	0.455-1 NTTG	1	Rubin / Ruby	0.455	2.5
	0.530-2 NTTG	2	Rubin / Ruby	0.530	3.3
	0.620-3 NTTG	3	Rubin / Ruby	0.620	4.0
	0.725-4 NTTG	4	Rubin / Ruby	0.725	5.0
	0.895-5 NTTG	5	Rubin / Ruby	0.895	6.0
	1.100-6 NTTG	6	Rubin / Ruby	1.100	8.0
	1.350-7 NTTG	7	Rubin / Ruby	1.350	9.0
1.650-8 NTTG	8	Rubin / Ruby	1.650	12.0	
2.050-9 NTTG	9	Rubin / Ruby	2.050	13.0	
2.550-10 NTTG	10	Rubin / Ruby	2.550	16.0	
3.200-11 NTTG	11	Rubin / Ruby	3.200	20.0	
4.000-12 NTTG	12	Rubin / Ruby	4.000	25.0	

T-Taster für das Messen von Flanken-Durchmessern von Innengewinden. Die **Standardausrichtung** des Verdrehsicherungsstiftes ist **parallel zu den Messkugeln**. Auf Wunsch kann die Ausrichtung des Verdrehsicherungsstiftes auch 90° sein.

*T-Styli for measure the flank diameter of female thread. Note: The **standard orientation** of the locking pin is **parallel to the measuring balls**. If desired, the orientation of the locking pin can also be 90°.*

	Bestell-Nr. Order No.	Inhalt Contents	Grösse Size
<b>T-Taster Set (komplette Sätze)</b> <i>T-Styli sets (complete sets)</i>	12 NTBG	12 Teile / 12 parts	1 bis 12 / 1 to 12
	13 NTBG	13 Teile / 13 parts	0 bis 12 / 0 to 12
	14 NTBG	14 Teile / 14 parts	0-300 bis 12 0-300 to 12



Im grosszügig dimensionierten Holzetui sind Ihre T-Taster sicher vor Staub und Beschädigung geschützt. Die **Standardausrichtung** des Verdrehsicherungsstiftes ist **parallel zu den Messkugeln**. Auf Wunsch kann die Ausrichtung des Verdrehsicherungsstiftes auch 90° sein.

*The sturdy wooden case protects your T-Styli from dust or damage. The **standard orientation** of the locking pin is **parallel to the measuring balls**. If desired, the orientation of the locking pin can also be 90°.*

	Bestell-Nr. Order No.	Bezeichnung Description
<b>Leere Holzetuis / Empty wooden cases</b>	15-3 NHTG	Holzetui mit Steckplatte für maximum 15 T-Taster <i>Wooden case with insert plate for max. 15 T-Styli</i>

Im grosszügig dimensionierten Holzetui sind Ihre T-Taster sicher vor Staub und Beschädigung geschützt.  
*The sturdy wooden case protects your T-Styli from dust or damage.*

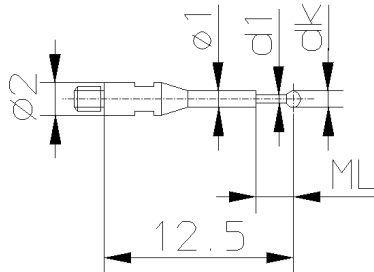
# ***M1.4 FÜR MESSUHR***

## ***M1.4 FOR TEST INDICATORS***

# M1.4 FÜR MESSUHR

## M1.4 FOR TEST INDICATORS

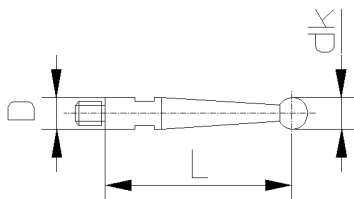
Anschluss-Gewinde M1.4 / M1.4 thread	Bestell-Nr. Order No.	Gewicht Weight	dk mm	d1 mm	ML mm
<b>Taststifte (Typ A) / Styli (Type A)</b> Kugel: Rubin / Ball: Ruby Schaft: HM / Shaft: TC	0.2-12.5-1.4 NTA	0.2g	0.2	0.15	1.5
	0.25-12.5-1.4 NTA	0.2g	0.25	0.2	2.5
	0.3-12.5-1.4 NTA	0.2g	0.3	0.2	2.5
	0.4-12.5-1.4 NTA	0.2g	0.4	0.3	2.5
	0.5-12.5-1.4 NTA	0.2g	0.5	0.3	2.5
	0.6-12.5-1.4 NTA	0.2g	0.6	0.4	4.5
	0.7-12.5-1.4 NTA	0.2g	0.7	0.4	4.5
	0.8-12.5-1.4 NTA	0.2g	0.8	0.6	4.5
	0.9-12.5-1.4 NTA	0.2g	0.9	0.6	4.5
	1.0-12.5-1.4 NTA	0.2g	1.0	0.8	4.5



Bestell-Nr. Order No.	Gewicht Weight	D mm	dk mm	L mm
1.0-12.5-1.4 NTC	0.2g	2.0	1.0	12.5
2.0-12.5-1.4 NTC	0.3g	2.0	2.0	12.5
3.0-12.5-1.4 NTC	0.4g	2.0	3.0	12.5
1.0-36.5-1.4 NTC	1.4g	3.0	1.0	36.5
2.0-36.5-1.4 NTC	1.4g	3.0	2.0	36.5
3.0-36.5-1.4 NTC	1.6g	3.0	3.0	36.5

### Taststifte (Typ C) / Styli (Type C)

Kugel: Rubin / Ball: Ruby  
Schaft: Stahl / Shaft: Steel



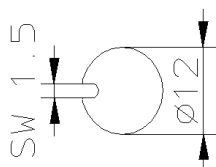
Da die Fühlhebelmessuhr auch zur Messung von Rundlaufgenauigkeit und Achsversatz eingesetzt werden kann, ist es zuweilen erforderlich, auf rotierenden Flächen zu prüfen.

Um der erhöhten Abnutzung, welche dabei entsteht, entgegenzuwirken, sind unsere Taststifte mit Rubinkugeln ausgerüstet. Diese Rubinkugeln erreichen ein vielfaches an Standzeit gegenüber herkömmlichen Tastern.

*This new ruby tipped styli for indicators will outlive a traditional styli many times over.*

Bestell-Nr. Order No.	Bezeichnung Description
1.5 NWGA	SW 1.5mm für Taststifte mit Gewinde M1.4 1.5mm for M1.4 thread styli

### Schlüssel / Spanner



# ***M2.5 FÜR MESSUHR***

## ***M2.5 FOR DIAL GAUGES***

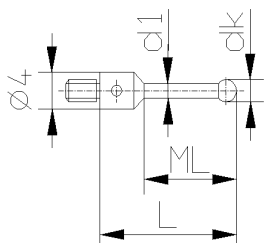
<b><i>Tastelemente / Styli</i></b>	100
<b><i>Verlängerungen / Extensions</i></b>	100
<b><i>Tastelemente Set / Styli sets</i></b>	101

# M2.5 FÜR MESSUHR

## M2.5 FOR DIAL GAUGES

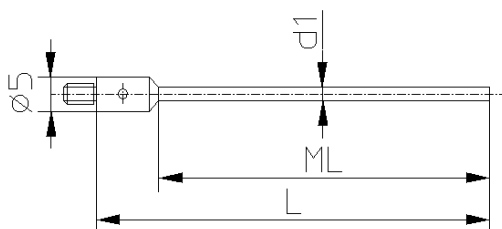
<b>Anschluss-Gewinde M2.5 / M2.5 thread</b>	<b>Bestell-Nr. Order No.</b>	<b>Gewicht Weight</b>	<b>dk mm</b>	<b>d1 mm</b>	<b>L mm</b>	<b>ML mm</b>
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<b>Taststifte (Typ C) / Styli (Type C)</b> Kugel: Rubin / Ball: Ruby Schaft: Stahl / Shaft: Steel	2.0-12-2.5 NTC	0.7g	2.0	1.5	12.0	-
	2.5-16-2.5 NTC	0.8g	2.5	2.0	16.0	10.0
	5.0-17.5-2.5 NTC	1.3g	5.0	3.0	17.5	12.0



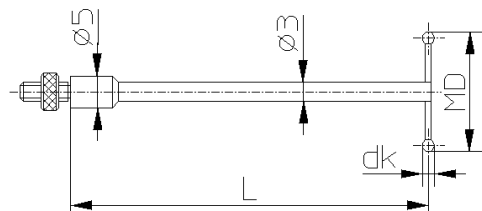
<b>Bestell-Nr. Order No.</b>	<b>Gewicht Weight</b>	<b>d1 mm</b>	<b>L mm</b>	<b>ML mm</b>
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<b>Taststifte (Typ M) / Styli (Type M)</b> Schaft: HM / Shaft: TC	1.0-75-2.5 NTM	2.0g	1.0	75.0	67.0
	2.0-75-2.5 NTM	4.4g	2.0	75.0	67.0



<b>Bestell-Nr. Order No.</b>	<b>Gewicht Weight</b>	<b>dk mm</b>	<b>MD mm</b>	<b>L mm</b>
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<b>T-Taster (Typ M) / T-Styli (Type M)</b> Kugel: Rubin / Ball: Ruby Schaft: HM / Shaft: TC	1.0-75-2.5 NTTM	9.0g	1.0	10.0	75.0
	2.0-75-2.5 NTTM	9.3g	2.0	20.0	75.0

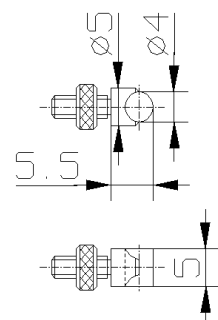


Die neuartige Konstruktion des **T-Tasters** erlaubt ein sicheres und präzises Messen von Nuten, Einstichen, Absätzen, Querbohrungen usw.

*The new T-Styli design permits precise and efficient measuring of grooves, recesses, shoulders, cross holes, etc.*

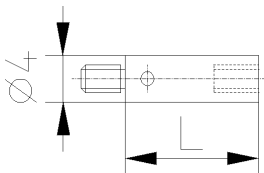
<b>Bestell-Nr. Order No.</b>	<b>Zylinder Cylinder</b>	<b>Gewicht Weight</b>
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<b>Zylinder-Taster mit Linienkontakt Cylinder styli with line contact</b>	4.0-5.5-2.5 NZLM	HM / TC	2.0g
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<b>Bestell-Nr. Order No.</b>	<b>Material Material</b>	<b>Gewicht Weight</b>	<b>L mm</b>
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<b>Verlängerungen / Extensions</b>	7.5-2.5 NV	Stahl / Steel	0.6g	7.5
	15-2.5 NV	Stahl / Steel	1.3g	15.0



# M2.5 FÜR MESSUHR

## M2.5 FOR DIAL GAUGES

<b>Anschluss-Gewinde M2.5 / M2.5 thread</b>	<b>Bestell-Nr. Order No.</b>	<b>T-Taster (Typ M) T-Styli (Type M)</b>
<b>T-Taster Set für Messuhr / T-Styli sets for dial gauges</b>	3.0-2.5 NMS	1.0-75-2.5 NTTM
	4.0-2.5 NMS	2.0-75-2.5 NTTM

Lieferung in stabiler Kunststoff-Box.  
Delivery in a sturdy plastic box.

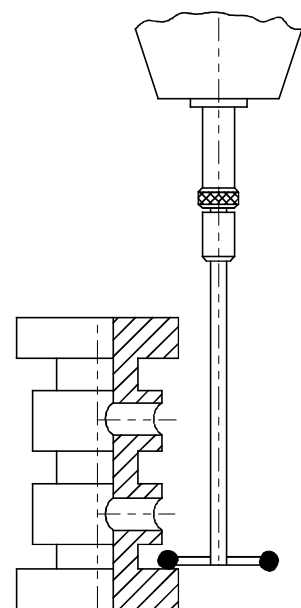
Die neuartige Konstruktion des **T-Tasters**, hergestellt aus den hochwertigen Materialien Hartmetall und Rubin, erlaubt ein sicheres und präzises Messen von Nuten, Einstichen, Absätzen, Querbohrungen usw.

Die auswechselbaren Taststifte aus Hartmetall eignen sich ideal zur Messung von Bohrungstiefen.

*The new T-Styli design permits precise and efficient measuring of grooves, recesses, shoulders, cross holes, etc.*

<b>Im Set enthaltene Komponenten:</b>	<b>Skizze:</b>
1 Stk. T-Taster (Typ M) nach Ihrer Wahl	Seite 100
1 Stk. Taststift (Typ M) 1.0-75-2.5 NTM	Seite 100
1 Stk. Taststift (Typ M) 2.0-75-2.5 NTM	Seite 100
1 Stk. Stiftschlüssel 1.0 NWST	Seite 25

<b>Supplied equipment:</b>	<b>Draw.:</b>
1 pc T-Styli (Type M) of your choice	Page 100
1 pc Styli (Type M) 1.0-75-2.5 NTM	Page 100
1 pc Styli (Type M) 2.0-75-2.5 NTM	Page 100
1 pc Pin key 1.0 NWST	Page 25



# ***NOTIZEN / NOTES***



# ***FÜR HÖHENMESSGERÄT*** ***FOR HEIGHT GAUGES***

**Halter / *Holders***

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104-105

**Tastelemente Set / *Styli sets***

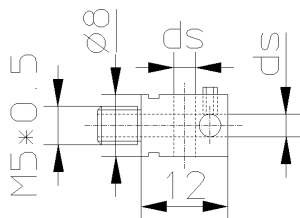
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106-107

# FÜR HÖHENMESSGERÄT FOR HEIGHT GAUGES

<b>Taststift-Halter für Höhenmessgeräte</b> <i>Holders for height gauges</i>	<b>Bestell-Nr.</b> <i>Order No.</i>	<b>Material</b> <i>Material</i>	<b>Gewicht</b> <i>Weight</i>	<b>ds</b> <i>mm</i>
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<b>Taststift-Halter (Typ H) / Holders for styli (Type H)</b>	1.0 NHH	Stahl / Steel	4.4g	1.0
	2.0 NHH	Stahl / Steel	4.0g	2.0
	3.0 NHH	Stahl / Steel	3.5g	3.0



Zur Aufnahme der **Taststifte (Typ F), (Typ N)** und **T-Taster (Typ H)** (Seite 8+9).

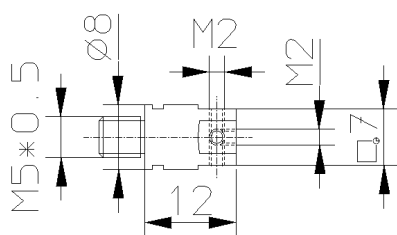
Nur mit **Schaft (Typ A)** oder **(Typ B)** zu verwenden.

*For use with Styli (Type F), (Type N) and T-Styli (Type H) (Page 8+9).*

*Use only with Shaft (Type A) or Shaft (Type B).*

<b>Bestell-Nr.</b> <i>Order No.</i>	<b>Material</b> <i>Material</i>	<b>Gewicht</b> <i>Weight</i>
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<b>Taststift-Halter (Typ S) / Holder for styli (Type S)</b>	7.0 NHS	Stahl / Steel	4.8g
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Zur Aufnahme der **Taststifte mit Gewinde M2**.

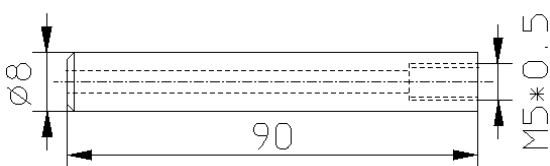
Nur mit **Schaft (Typ A)** oder **(Typ B)** zu verwenden.

*For use with M2 thread styli.*

*Use only with Shaft (Type A) or Shaft (Type B).*

<b>Bestell-Nr.</b> <i>Order No.</i>	<b>Material</b> <i>Material</i>	<b>Gewicht</b> <i>Weight</i>	<b>Schaft-Aufnahme Höhenmessgerät</b> <i>Shaft holder height gauge</i>
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<b>Schaft (Typ A) / Shaft (Type A)</b>	8.0-90 NSA	Stahl / Steel	23.4g	Ø 8mm
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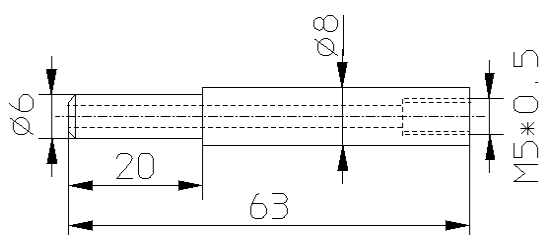


Nur mit **Taststift-Halter (Typ H)** oder **(Typ S)** zu verwenden.

*Use only with Holders for styli (Type H) or (Type S)*

<b>Bestell-Nr.</b> <i>Order No.</i>	<b>Material</b> <i>Material</i>	<b>Gewicht</b> <i>Weight</i>	<b>Schaft-Aufnahme Höhenmessgerät</b> <i>Shaft holder height gauge</i>
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<b>Schaft (Typ B) / Shaft (Type B)</b>	6.0-63 NSB	Stahl / Steel	15.0g	Ø 6mm
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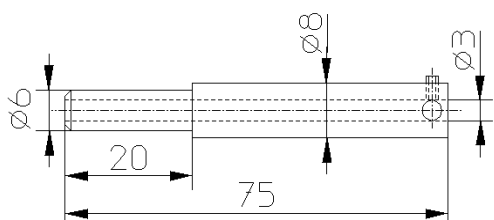
Nur mit **Taststift-Halter (Typ H)** oder **(Typ S)** zu verwenden.

*Use only with Holders for styli (Type H) or (Type S)*

# FÜR HÖHENMESSGERÄT FOR HEIGHT GAUGES

<b>Taststift-Halter für Höhenmessgeräte</b> <i>Holder for height gauges</i>	<b>Bestell-Nr.</b> <i>Order No.</i>	<b>Material</b> <i>Material</i>	<b>Gewicht</b> <i>Weight</i>	<b>Schaft-Aufnahme</b> <b>Höhenmessgerät</b> <i>Shaft holder</i> <i>height gauge</i>
--	--	------------------------------------	---------------------------------	---

<b>Taststift-Halter (Typ C)</b> <i>Holder for styli (Type C)</i>	6.0-75 NHC	Stahl / <i>Steel</i>	20.7g	Ø 6mm
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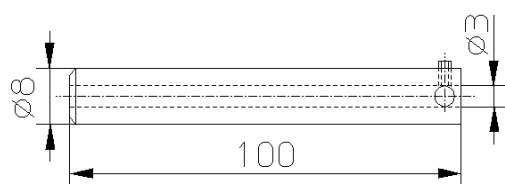


Zur Aufnahme der **Taststifte (Typ N)** und **T-Taster (Typ H)** mit  $ds = 3\text{mm}$  (Seite 8+9).

For use with **Styli (Type N)**, **T-Styli (Type H)** with  $ds = 3\text{mm}$  (Page 8+9).

<b>Bestell-Nr.</b> <i>Order No.</i>	<b>Material</b> <i>Material</i>	<b>Gewicht</b> <i>Weight</i>	<b>Schaft-Aufnahme</b> <b>Höhenmessgerät</b> <i>Shaft holder</i> <i>height gauge</i>
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<b>Taststift-Halter (Typ D)</b> <i>Holder for styli (Type D)</i>	8.0-100 NHD	Stahl / <i>Steel</i>	29.7g	Ø 8mm
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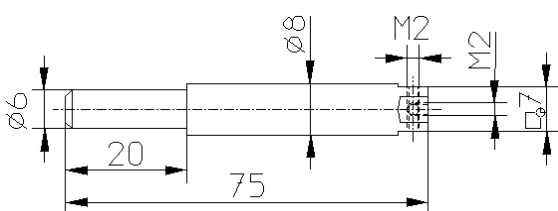


Zur Aufnahme der **Taststifte (Typ N)** und **T-Taster (Typ H)** mit  $ds = 3\text{mm}$  (Seite 8+9).

For use with **Styli (Type N)**, **T-Styli (Type H)** with  $ds = 3\text{mm}$  (Page 8+9).

<b>Bestell-Nr.</b> <i>Order No.</i>	<b>Material</b> <i>Material</i>	<b>Gewicht</b> <i>Weight</i>	<b>Schaft-Aufnahme</b> <b>Höhenmessgerät</b> <i>Shaft holder</i> <i>height gauge</i>
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<b>Taststift-Halter (Typ E)</b> <i>Holder for styli (Type E)</i>	6.0-75 NHE	Stahl / <i>Steel</i>	25.5g	Ø 6mm
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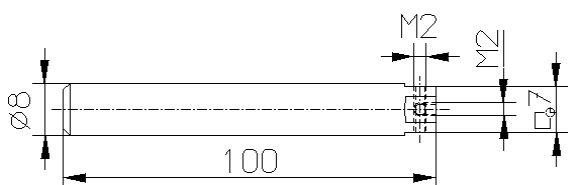


Zur Aufnahme der **Taststifte mit Gewinde M2**.

For use with **M2 thread styli**.

<b>Bestell-Nr.</b> <i>Order No.</i>	<b>Material</b> <i>Material</i>	<b>Gewicht</b> <i>Weight</i>	<b>Schaft-Aufnahme</b> <b>Höhenmessgerät</b> <i>Shaft holder</i> <i>height gauge</i>
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<b>Taststift-Halter (Typ F)</b> <i>Holder for styli (Type F)</i>	8.0-100 NHF	Stahl / <i>Steel</i>	38.7g	Ø 8mm
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Zur Aufnahme der **Taststifte mit Gewinde M2**.

For use with **M2 thread styli**.

# FÜR HÖHENMESSGERÄT FOR HEIGHT GAUGES

Taster Set für Höhenmessgeräte <i>Styli sets for height gauges</i>	Bestell-Nr. <i>Order No.</i>	Schaft-Aufnahme Höhenmessgerät <i>Shaft holder height gauge</i>	T-Taster (Typ H) <i>T-Styli (Type H)</i>
<b>T-Taster Set für Höhenmessgeräte</b> <i>T-Styli sets for height gauges</i>	6.0 NHSC	∅ 6mm	1.0-100-3 NTTH
	6.0 NHSD	∅ 6mm	2.0-100-3 NTTH
	8.0 NHSE	∅ 8mm	1.0-100-3 NTTH
	8.0 NHSF	∅ 8mm	2.0-100-3 NTTH

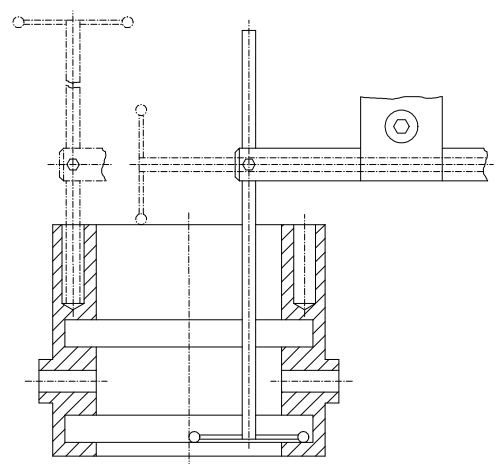
Lieferung in stabiler Kunststoff-Box.  
*Delivery in a sturdy plastic box.*

Die neuartige Konstruktion des **T-Tasters**, hergestellt aus den hochwertigen Materialien Hartmetall und Rubin, erlaubt ein sicheres und präzises Messen in vertikaler sowie in horizontaler Lage von Nuten, Einstichen, Absätzen, Querbohrungen usw.

*The new T-Styli design permits precise and efficient measuring in vertical and horizontal positions of grooves, recesses, shoulders, cross holes, etc.*

Im Set enthaltene Komponenten:	Skizze:
1 Stk. T-Taster (Typ H) nach Ihrer Wahl	Seite 9
1 Stk. Taststift-Halter (Typ C) oder (Typ D)	Seite 105
1 Stk. Sechskantschlüssel 1.5 NWSK	Seite 75

Supplied equipment:	Draw.:
1 pc T-Styli (Type H) of your choice	Page 9
1 pc Holder for styli (Type C) or (Type D)	Page 105
1 pc Hexagon key 1.5 NWSK	Page 75



# FÜR HÖHENMESSGERÄT FOR HEIGHT GAUGES

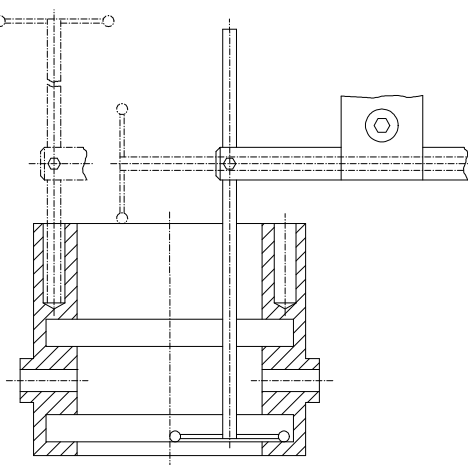
<b>Taster Set für Höhenmessgeräte / Styli sets for height gauges</b>	<b>Bestell-Nr. Order No.</b>	<b>Schaft-Aufnahme Höhenmessgerät Shaft holder height gauge</b>
<b>T-Taster Set für Höhenmessgeräte / T-Styli sets for height gauges</b>	8.0 NHSA	Ø 8mm
	6.0 NHSB	Ø 6mm

Lieferung im Holzetui.  
Delivery in a wooden case.

Die neuartige Konstruktion des **T-Tasters**, hergestellt aus den hochwertigen Materialien Hartmetall und Rubin, erlaubt ein sicheres und präzises Messen in vertikaler sowie in horizontaler Lage von Nuten, Einstichen, Absätzen, Querbohrungen usw.

*The new T-Styli design permits precise and efficient measuring in vertical and horizontal positions of grooves, recesses, shoulders, cross holes, etc.*

<b>Im Set enthaltene Komponenten: Supplied equipment:</b>		<b>Skizze: Drawing:</b>
1 Stk. / pc	1.0-100-3 NTTH	Seite / Page 9
1 Stk. / pc	2.0-100-3 NTTH	Seite / Page 9
1 Stk. / pc	2.0-81-1 NTN	Seite / Page 8
1 Stk. / pc	4.0-82-2 NTN	Seite / Page 8
1 Stk. / pc	6.0-103-3 NTN	Seite / Page 8
1 Stk. / pc	1.0 NHH	Seite / Page 104
1 Stk. / pc	2.0 NHH	Seite / Page 104
1 Stk. / pc	3.0 NHH	Seite / Page 104
1 Stk. / pc	7.0 NHS	Seite / Page 104
1 Stk. / pc	Schaft (Typ A) Ø 8mm oder Schaft (Typ B) Ø 6mm Shaft (Type A) Ø 8mm or Shaft (Type B) Ø 6mm	Seite / Page 104
1 Stk. / pc	1.5 NWSK	Seite / Page 75
1 Stk. / pc	6.5 NWGA Gabelschlüssel SW6.5mm für Halter (Typ H, S) Spanner 6.5mm for Holders (Type H, S)	



# ***NOTIZEN / NOTES***

Technische Daten / *Technical data* 110-111

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Formular Anfrage Sondertaster  
*Inquiry form special styli* 112-113

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# TECHNISCHE DATEN

	Material	Form-abweichung	Durchmesser Toleranz	Härte Vickers	Dichte g/cm <sup>3</sup>	Oberfläche Ra
Kugel Rubin	Synthetischer Rubin	< 0.2µm	± 0.2µm	1800	3.9	0.01µm
Kugel Keramik	Aluminiumoxid	< 0.2µm	± 0.2µm	1650	3.9	0.1µm
Zylinder Rubin	Synthetischer Rubin	< 1µm	± 1µm	1800	3.9	0.05µm
Zylinder Hartmetall	WC+Co	< 1µm	± 1µm	1550	15.0	0.2µm
Zylinder Stahl	Rostfreier Stahl	< 2µm	± 2µm	250	7.9	0.4µm
Kugelscheibe Keramik	Aluminiumoxid	< 0.2µm	± 0.2µm	1650	3.9	0.1µm
Kugelscheibe Stahl	Rostfreier Stahl	< 3µm	± 3µm	250	7.9	0.4µm
Tastscheibe Stahl geh.	Gehärteter Stahl	< 2µm	± 2µm	720	7.9	0.2µm
Tasterschaft, Verlängerung Stahl	Rostfreier Stahl	—	—	—	7.9	—
Tasterschaft, Verlängerung Keramik	Aluminiumoxid	—	—	—	3.9	—
Tasterschaft, Verlängerung CFK	Kohlefaser	—	—	—	1.5	—
Tasterschaft Hartmetall	WC+Co	—	—	—	15.0	—
Verlängerung Alu 7075	Spezial Aluminium	Hartanodisiert mit PTFE-Einlage			2.8	—

## Materialwahl von Tastelementen und Zubehör

Material	Vorteile	Nachteile
Rostfreier Stahl	<ul style="list-style-type: none"> <li>• Standard für viele Anwendungen</li> <li>• Körper und Schaft aus einem Stück</li> <li>• Kostengünstig</li> </ul>	<ul style="list-style-type: none"> <li>• Bei sehr kleinem Schaft-Ø geringe Biegesteifigkeit</li> </ul>
Hartmetall (HM)	<ul style="list-style-type: none"> <li>• Hohe Biegesteifigkeit auch bei sehr kleinem Schaft-Ø</li> <li>• Gutes Verhältnis zwischen Schaft-Ø und Kugel-Ø möglich</li> </ul>	<ul style="list-style-type: none"> <li>• Hohes Gewicht bei grösseren Tastelementen</li> </ul>
Keramik	<ul style="list-style-type: none"> <li>• Hohe Biegesteifigkeit bei geringem Gewicht</li> <li>• Geeignet für lange Tastelemente</li> </ul>	<ul style="list-style-type: none"> <li>• Bruchgefahr bei kleinem Schaft-Ø</li> </ul>
Kohlefaser (CFK)	<ul style="list-style-type: none"> <li>• Extrem geringes Gewicht</li> <li>• Hohe Biegesteifigkeit bei langen Komponenten mit grossem Querschnitt</li> </ul>	<ul style="list-style-type: none"> <li>• Bei kleinem Querschnitt geringe Biegesteifigkeit</li> </ul>
Alu 7075	<ul style="list-style-type: none"> <li>• Geringes Gewicht bei sehr hoher Festigkeit</li> <li>• Abriebfeste Oberfläche durch Hartanodisierung mit PTFE-Einlage</li> </ul>	<ul style="list-style-type: none"> <li>• Bruchgefahr bei sehr kleinem Querschnitt</li> </ul>



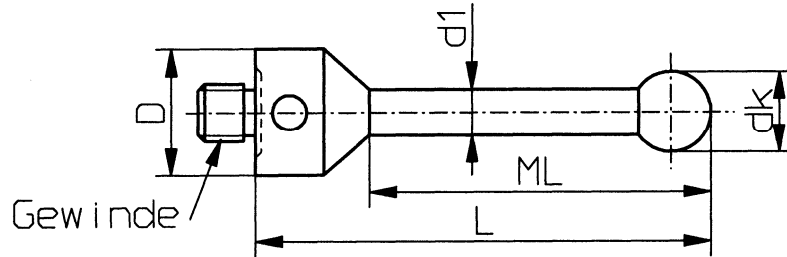
# TECHNICAL DATA

	<b>Material</b>	<b>Form deviation</b>	<b>Diameter tolerance</b>	<b>Hardness Vickers</b>	<b>Density g/cm<sup>3</sup></b>	<b>Surface finish Ra</b>
<b>Ball ruby</b>	Synthetic ruby	< 0.2µm	± 0.2µm	1800	3.9	0.01µm
<b>Ball ceramic</b>	Alumina oxide	< 0.2µm	± 0.2µm	1650	3.9	0.1µm
<b>Cylinder ruby</b>	Synthetic ruby	< 1µm	± 1µm	1800	3.9	0.05µm
<b>Cylinder TC</b>	WC+Co	< 1µm	± 1µm	1550	15.0	0.2µm
<b>Cylinder steel</b>	Stainless steel	< 2µm	± 2µm	250	7.9	0.4µm
<b>Ball disc ceramic</b>	Alumina oxide	< 0.2µm	± 0.2µm	1650	3.9	0.1µm
<b>Ball disc steel</b>	Stainless steel	< 3µm	± 3µm	250	7.9	0.4µm
<b>Disc styli hardened</b>	Hardened steel	< 2µm	± 2µm	720	7.9	0.2µm
<b>Styli shaft, Extension steel</b>	Stainless steel	—	—	—	7.9	—
<b>Styli shaft, Extension ceramic</b>	Alumina oxide	—	—	—	3.9	—
<b>Styli shaft, Extension carbon</b>	Carbon fiber	—	—	—	1.5	—
<b>Styli shaft TC</b>	WC+Co	—	—	—	15.0	—
<b>Extension Alu 7075</b>	Special aluminium	Hard-coat anodized with PTFE			2.8	—

## Used material for styli and accessories

<b>Material</b>	<b>Advantage</b>	<b>Disadvantage</b>
Stainless steel	<ul style="list-style-type: none"> <li>• Standard material for most applications</li> <li>• Body and shaft in one piece</li> <li>• Cost-efficient</li> </ul>	<ul style="list-style-type: none"> <li>• Small bending strength for very small shaft diameter</li> </ul>
Tungsten carbide (TC)	<ul style="list-style-type: none"> <li>• High bending strength even for very small shaft diameter</li> <li>• Optimal proportions between shaft and ball diameter</li> </ul>	<ul style="list-style-type: none"> <li>• Higher weight for large styli</li> </ul>
Ceramic	<ul style="list-style-type: none"> <li>• High bending strength at very low weight</li> <li>• Can be used for long styli</li> </ul>	<ul style="list-style-type: none"> <li>• Danger of breakage for small shaft diameter</li> </ul>
Carbon fiber	<ul style="list-style-type: none"> <li>• Extremely low weight</li> <li>• High bending strength for long components with large cross-section</li> </ul>	<ul style="list-style-type: none"> <li>• Small bending strength for small cross-section</li> </ul>
Alu 7075	<ul style="list-style-type: none"> <li>• Low weight with very high strength</li> <li>• Wear-protected surface due to hard-coated anodizing with PTFE</li> </ul>	<ul style="list-style-type: none"> <li>• Danger of breakage for very small cross-section.</li> </ul>

## Anfrage Sondertaster



dk mm	d1 mm	L mm	ML mm	D mm	Gewinde			Anzahl

### Kugel-Material

- Rubin
- Hartmetall (HM)
- Keramik
- Siliziumnitrid
- Zirkonoxid
- .....

### Schaft-Material

- Stahl
- Hartmetall (HM)
- Keramik
- Kohlefaser (CFK)
- .....
- .....

### Gewinde

- M2
- M2.5
- M3
- M4
- M5
- .....

### Messtaster Typ

- .....
- .....
- .....
- .....
- .....
- .....

Firma:

.....

Adresse:

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Abteilung:

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Bemerkungen:

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Kontaktperson:

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Telefon:

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Fax:

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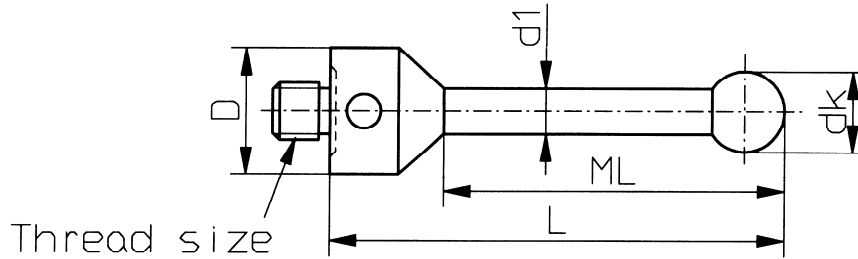
E-mail:

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Datum:

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## Inquiry special styli



dk mm	d1 mm	L mm	ML mm	D mm	Thread size			Quantity

### Ball material

- Ruby
- Tungsten Carbide
- Ceramic
- Silicon Nitride
- Zircon Oxide
- .....

### Shaft material

- Steel
- Tungsten Carbide
- Ceramic
- Carbon Fiber
- .....
- .....

### Thread size

- M2
- M2.5
- M3
- M4
- M5
- .....

### Probe type

- .....
- .....
- .....
- .....
- .....
- .....

Company:

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Address:

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Department:

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Comments:

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Contact Person:

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Phone:

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Fax:

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E-mail:

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Date:

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