

m&h STYLI AND ACCESSORIES

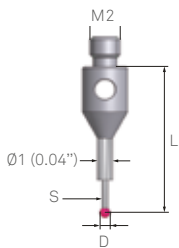
FOR WORKPIECE AND TOOL MEASUREMENT



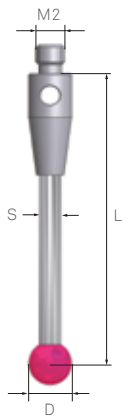
m&h STYLI AND ACCESSORIES

m&h Inprocess Messtechnik GmbH is one of the leading companies in technologically advanced touch probe manufacture for machine tools. Touch probe systems made by m&h are renowned for their high quality standards and continuous innovation. m&h touch probes are being successfully used in many noted companies worldwide. For a variety of measuring tasks on the machine tool m&h offers a substantial range of high-grade styli and accessories. They are made of high-grade materials and distinguish themselves by easy handling.

M2 - STYLI WITH TUNGSTEN CARBIDE SHAFT AND RUBY BALL

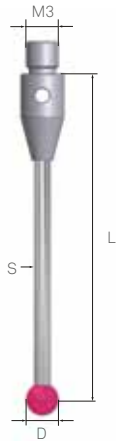


Length (L)	Ball (D)	Shaft (S)	Weight	Part No.
10 (0.39'')	0,2 (0.008'')	0,2 (0.008'')	0,3 g	91.00-T10/0,2-HM-M2
10 (0.39'')	0,3 (0.012'')	0,2 (0.008'')	0,3 g	91.00-T10/0,3-HM-M2
10 (0.39'')	0,5 (0.020'')	0,3 (0.012'')	0,3 g	91.00-T10/0,5-HM-M2
10 (0.39'')	0,7 (0.028'')	0,4 (0.016'')	0,3 g	91.00-T10/0,7-HM-M2



Length (L)	Ball (D)	Shaft (S)	Weight	Part No.
11,5 (0.45'')	3 (0.12'')	1,5 (0.06'')	0,7 g	91.00-T11,5/3-HM-M2
15,5 (0.61'')	1 (0.04'')	0,7 (0.028'')	0,3 g	91.00-T15,5/1-HM-M2
16,0 (0.63'')	2 (0.08'')	0,7 (0.028'')	0,4 g	91.00-T16/2-HM-M2
21,5 (0.85'')	3 (0.12'')	1,5 (0.06'')	0,9 g	91.00-T21,5/3-HM-M2
30,5 (1.20'')	1 (0.04'')	0,7 (0.028'')	0,4 g	91.00-T30,5/1-HM-M2
31,5 (1.24'')	3 (0.12'')	1,5 (0.06'')	1,0 g	91.00-T31,5/3-HM-M2
41,5 (1.63'')	3 (0.12'')	1,5 (0.06'')	1,3 g	91.00-T41,5/3-HM-M2
51,5 (2.03'')	3 (0.12'')	1,5 (0.06'')	1,6 g	91.00-T51,5/3-HM-M2

M3 - STYLI WITH TUNGSTEN CARBIDE SHAFT AND RUBY BALL



Length (L)	Ball (D)	Shaft (S)	Weight	Part No.
10,5 (0.41")	1 (0.04")	0,7 (0.03")	0,7 g	91.00-T10,5/1-HM-M3
16,0 (0.63")	2 (0.08")	1,0 (0.04")	0,8 g	91.00-T16/2-HM-M3
20,0 (0.79")	1 (0.04")	0,7 (0.03")	0,7 g	21.00-T20/1-HM-M3
20,0 (0.79")	2 (0.08")	1,0 (0.04")	0,7 g	21.00-T20/2-HM-M3
20,0 (0.79")	3 (0.12")	1,5 (0.06")	1,1 g	21.00-T20/3-HM-M3
20,0 (0.79")	4 (0.16")	2,0 (0.08")	1,6 g	21.00-T20/4-HM-M3
20,0 (0.79")	5 (0.2")	2,0 (0.08")	1,7 g	21.00-T20/5-HM-M3
20,0 (0.79")	6 (0.24")	2,0 (0.08")	1,9 g	21.00-T20/6-HM-M3
30,0 (1.18")	2 (0.08")	1,0 (0.04")	0,9 g	21.00-T30/2-HM-M3
30,0 (1.18")	3 (0.12")	1,5 (0.06")	1,4 g	21.00-T30/3-HM-M3
30,0 (1.18")	4 (0.16")	2,0 (0.08")	1,9 g	21.00-T30/4-HM-M3
30,0 (1.18")	5 (0.2")	2,0 (0.08")	2,0 g	21.00-T30/5-HM-M3
30,0 (1.18")	6 (0.24")	2,0 (0.08")	2,2 g	21.00-T30/6-HM-M3
40,0 (1.57")	2 (0.08")	1,0 (0.04")	1,0 g	21.00-T40/2-HM-M3
40,0 (1.57")	3 (0.12")	1,5 (0.06")	1,6 g	21.00-T40/3-HM-M3
50,0 (1.97")	3 (0.12")	1,5 (0.06")	1,9 g	21.00-T50/3-HM-M3

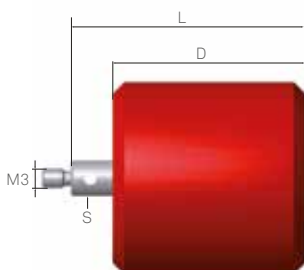
M3 - STYLI WITH CERAMIC SHAFT AND RUBY BALL



Length (L)	Ball (D)	Shaft (S)	Weight	Part No.
30 (1.18")	4 (0.16")	3,0 (0.12")	1,0 g	21.00-T30/4-KE-M3
40 (1.57")	4 (0.16")	3,0 (0.12")	1,1 g	21.00-T40/4-KE-M3
40 (1.57")	5 (0.2")	3,0 (0.12")	1,1 g	21.00-T40/5-KE-M3
50 (1.97")	5 (0.2")	3,0 (0.12")	1,3 g	21.00-T50/5-KE-M3
60 (2.36")	5 (0.2")	3,0 (0.12")	1,4 g	21.00-T60/5-KE-M3

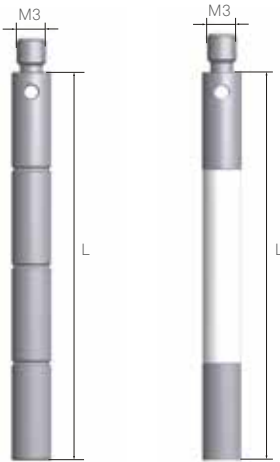
M3 - CYLINDRICAL STYLI

Material: Anodised aluminium



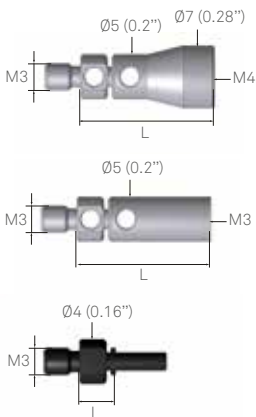
Length (L)	Cylinder (D)	Shaft (S)	Weight	Part No.
36,5 (1.44")	30 (1.18")	5,5 (0.22")	35 g	21.00-T36,5/30-M3
36,5 (1.44")	40 (1.57")	5,5 (0.22")	45 g	21.00-T36,5/40-M3

M3 - STYLUS EXTENSIONS



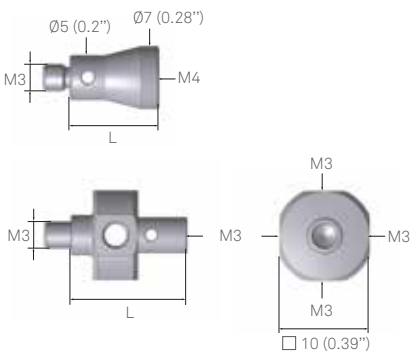
Length (L)	Material	Weight	Part No.
10 (0.39")	Stainless steel	0,8 g	21.00-TV10-ST-M3
20 (0.79")	Stainless steel	1,5 g	21.00-TV20-ST-M3
30 (1.18")	Stainless steel	2,0 g	21.00-TV30-ST-M3
40 (1.57")	Stainless steel	2,4 g	21.00-TV40-ST-M3
40 (1.57")	Ceramic	1,4 g	21.00-TV40-KE-M3
60 (2.36")	Ceramic	1,8 g	21.00-TV60-KE-M3
100 (3.94")	Ceramic	2,5 g	21.00-TV100-KE-M3

M3 - STYLUS ADAPTERS WITH BREAK SHAFT



Length (L)	Thread	Weight	Part. No.
15 (0.59")	M3/M4	1,5 g	91.00-S-M3/M4
15 (0.59")	M3/M3	1,4 g	21.00-S-M3/M3
4 (0.16")	M3	0,6 g	21.00-S-M3

M3 - ACCESSORIES



Length (L)	Thread	Weight	Part. No.
Adapter			
10 (0.39")	M3/M4	1,0 g	91.00-TA-M3/M4
5 Way-stylus centre			
13 (0.51")	M3	3,3 g	21.00-TK-M3

M4 - STYLI WITH CERAMIC SHAFT AND RUBY BALL



Length (L)	Ball (D)	Shaft (S)	Weight	Part No.
32,0 (1.25")	4 (0.16")	4,0 (0.16")	3,6 g	91.00-T32/4-KE-M4
33,0 (1.29")	6 (0.24")	4,0 (0.16")	4,3 g	91.00-T33/6-KE-M4
42,0 (1.65")	4 (0.16")	4,0 (0.16")	3,9 g	91.00-T42/4-KE-M4
42,5 (1.67")	5 (0.2")	4,0 (0.16")	4,3 g	91.00-T42,5/5-KE-M4
52,5 (2.06")	5 (0.2")	4,0 (0.16")	4,6 g	91.00-T52,5/5-KE-M4
53,0 (2.09")	6 (0.24")	4,5 (0.18")	5,6 g	91.00-T53/6-KE-M4
62,5 (2.46")	5 (0.2")	4,0 (0.16")	5,0 g	91.00-T62,5/5-KE-M4
83,0 (3.27")	6 (0.24")	4,5 (0.18")	7,0 g	91.00-T83/6-KE-M4
103,0 (4.06")	6 (0.24")	4,5 (0.18")	8,7 g	91.00-T103/6-KE-M4

M4 - STYLI WITH STAINLESS STEEL SHAFT AND RUBY BALL



Length (L)	Ball (D)	Shaft (S)	Weight	Part No.
20 (0.79")	2 (0.12")	1,5 (0.06")	2,3 g	91.00-T20/2-ST-M4-D7
20 (0.79")	3 (0.08")	2,5 (0.1")	2,0 g	91.00-T20/3-ST-M4-D7
20 (0.79")	4 (0.16")	3,0 (0.12")	2,2 g	91.00-T20/4-ST-M4-D7
20 (0.79")	5 (0.2")	3,5 (0.14")	2,5 g	91.00-T20/5-ST-M4-D7
20 (0.79")	6 (0.28")	4,5 (0.18")	3,1 g	91.00-T20/6-ST-M4-D7
20 (0.79")	8 (0.31")	5,5 (0.22")	4,1 g	91.00-T20/8-ST-M4-D7

M4 - STYLUS WITH TUNGSTEN CARBIDE SHAFT AND RUBY BALL



Length (L)	Ball (D)	Shaft (S)	Weight	Part No.
20 (0.79")	1 (0.04")	1,0 (0.04")	2,2 g	91.00-T20/1-HM-M4-D7

M4 - STYLUS WITH TUNGSTEN CARBIDE SHAFT AND NITRIDE BALL



Length (L)	Ball (D)	Shaft (S)	Weight	Part No.
20 (0.79")	2 (0.12")	-	1,2 g	91.00-T20/2-HM-M4-SI

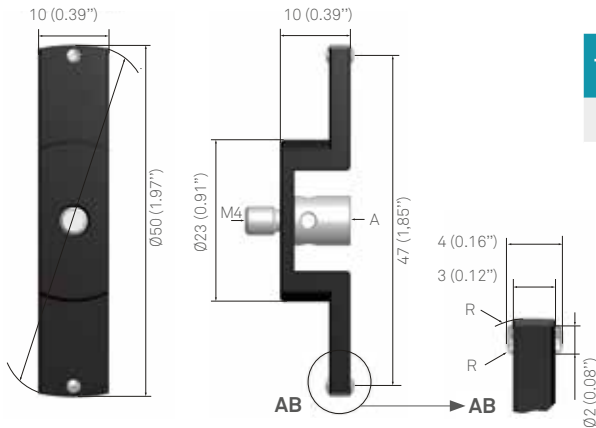
M4 - STYLI WITH CERAMIC SHAFT AND NITRIDE BALL



Length (L)	Ball (D)	Shaft (S)	Weight	Part No.
53,0 (2.09")	6 (0.28")	-	4,8 g	91.00-T53/6-KE-M4-SI
103,0 (4.06")	6 (0.28")	-	6,2 g	91.00-T103/6-KE-M4-SI

M4 - DISC STYLI

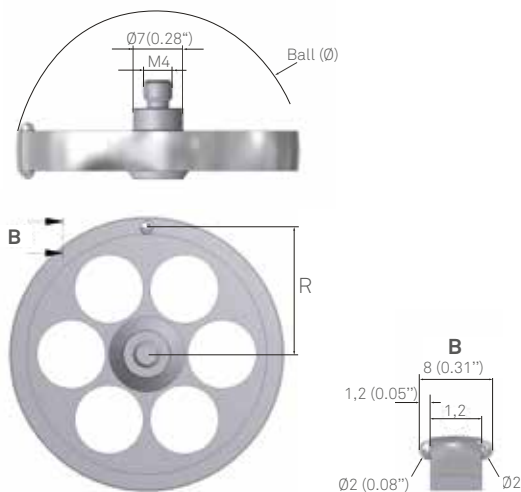
Material: Steel



Thread (A)	Diameter \varnothing	Weight	Part No.
M4/M4	50 (1.97")	16,1 g	91.00-TS-ST-M4
M4/M3	50 (1.97")	16,1 g	91.00-TS-ST-M4/M3

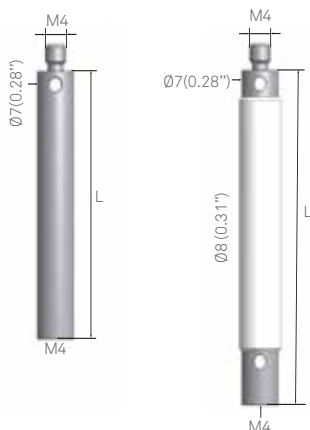
M4 - BALL DISC STYLI

Material: Stainless steel



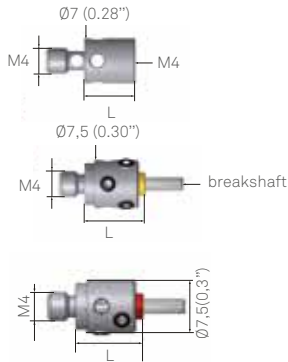
Radius (R)	Ball (\varnothing)	Weight	Part No.
16,0	32 (1.25")	22,0 g	91.00-TS32-ST-M4
18,5	40 (1.57")	24,0 g	91.00-TS40-ST-M4
23,5	50 (1.97")	34,0 g	91.00-TS50-ST-M4
30,0	63 (2.48")	11,9 g	91.00-TS63-ST-M4
38,5	80 (3.15")	67,0 g	91.00-TS80-ST-M4

M4 - STYLUS EXTENSIONS



Length (L)	Material	Weight	Part No.
10 (0.39")	Stainless Steel	2,7 g	91.00-TV10-ST-M4-D7
15 (0.59")	Stainless Steel	3,9 g	91.00-TV20-ST-M4-D7
20 (0.79")	Stainless Steel	5,2 g	91.00-TV40-ST-M4-D7
40 (1.57")	Stainless Steel	11,4 g	
30 (1.18")	Ceramic	6,7 g	91.00-TV30-KE-M4
50 (1.97")	Ceramic	8,9 g	91.00-TV50-KE-M4
100 (3.94")	Ceramic	13,8 g	91.00-TV100-KE-M4

M4 - STYLUS ADAPTERS WITH BREAK SHAFT



Length (L)	Thread	Weight	Part No.
8,0 (0.31")	M4/M4	1,9 g	91.00-S-M4/M4
9,5 (0.37")	M4	3,3 g	91.00-S-M4

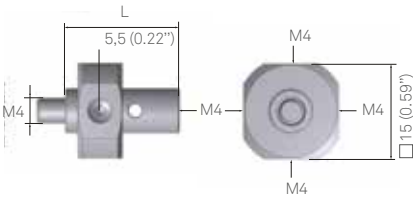
Stylus adapters with break shaft (High Force)

9,5 (0.37")	M4	3,3 g	91.00-S-M4-HF
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M4 - ACCESSORIES



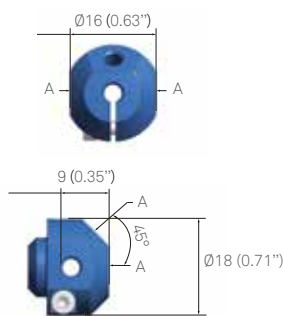
Length (L)	Thread (A)	Weight	Part No.
Adapter			
20 (0.79")	M4/M3	2,8 g	91.00-TA-M4/M3
20 (0.79")	M4/M2	2,3 g	91.00-TA-M4/M2



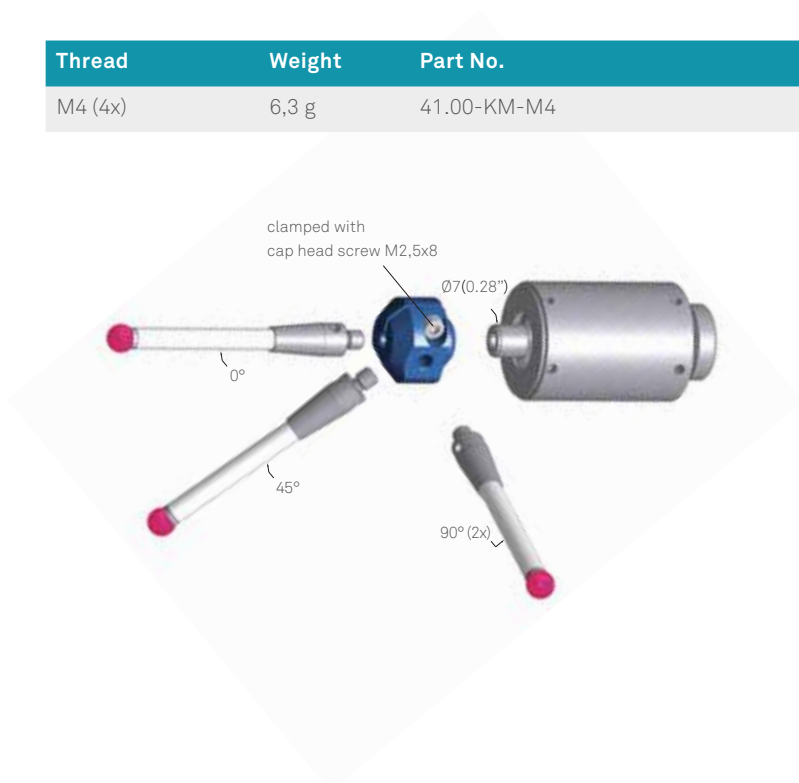
5 Way-stylus centre

18 (0.71")	M4	11,9 g	91.00-TK-ST-M4
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M4 - CLAMP ADAPTER (Ø7)



Thread	Weight	Part No.
M4 (4x)	6,3 g	41.00-KM-M4



TOOLS

AF4 (0.16")



Tools	Thread	Part No.
Spanner AF 4 mm	M3	1665

Ø1,9 (0.07") Ø1,2 (0.05")
46 (1.81")



Mounting pin	M2/M3/M4	0885
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Mounting pin for break shaft connections

Hexagon key AF 1,3 mm		0227
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AF1,3 (0.05")

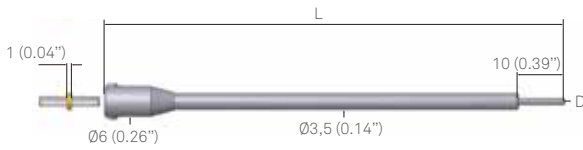


STYLI WITH STAINLESS STEEL SHAFT WITH RUBY BALL

for workpiece measurement



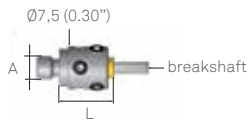
Length (L)	Ball (D)	Weight	Part No.
50 (1.97")	6,0 (0.24")	5,7 g	91.00-T50/6
80 (3.15")	6,0 (0.24")	8,1 g	91.00-T80/6
103 (4.06")	6,0 (0.24")	9,8 g	91.00-T103/6



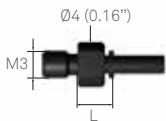
Length (L)	Stylus Tip (D)	Part No.
100 (3.94")	1,5 (0.51")	91.00-T100/R1,5

with break shaft 91.00-S

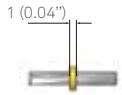
BREAK SHAFT ADAPTERS / BREAK SHAFTS



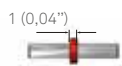
Length (L)	Thread (A)	Weight	Part No.
Break shaft adapter			
8,5 (0.34")	M4	3,3 g	91.00-S-M4



Stylus adapter			
4,0 (0.16")	M3	0,6 g	21.00-S-M3

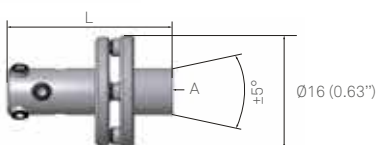


Break shaft			
		0,6 g	91.00-S



Break shaft (High Force)			
		0,6 g	91.00-S-HF

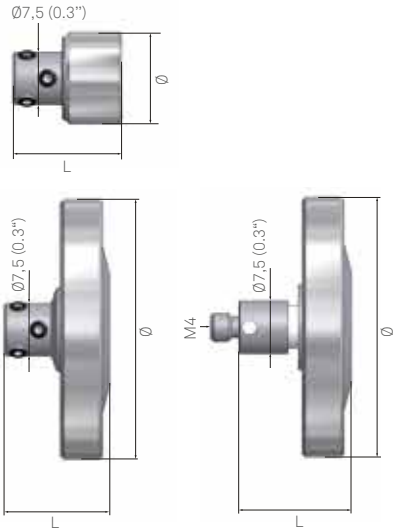
ADAPTERS WITH BREAK SHAFT CONNECTION



Length (L)	Thread (A)	Weight	Part No.
Adapter			
14,5 (0.57")	M3	2,6 g	91.00-TA-M3
14,5 (0.57")	M4	2,7 g	91.00-TA-M4
Inclination adapter			
24,5 (0.94")	M4	9,5 g	91.00-NA

CYLINDRICAL STYLI OF TUNGSTEN CARBIDE WITH BREAK SHAFT CONNECTION

for measuring rotating tools

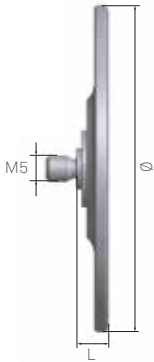


Length (L)	Cylinder (Ø)	Weight	Part No.
15,0 (0.59'')	13 (0.51'')	9,8 g	91.00-D13/24,5

14,5 (0.57'')	37 (1.46'')	40,0 g	35.10-D37/24
16,0 (0.63'')	37 (1.46'')	40,0 g	35.10-D37/16-M4

CYLINDRICAL STYLI OF TUNGSTEN CARBIDE WITHOUT BREAK SHAFT CONNECTION

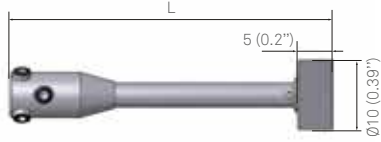
for measuring of non rotating tools | m&h Tool Setter 35.30



Thread	Length (L)	Cylinder (Ø)	Weight	Part No.
M5	6.2 (0.24'')	23 (0.90'')	24,8 g	35.30-D23
M5	6.2 (0.24'')	62 (2.44'')	89,0 g	35.30-D62

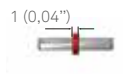
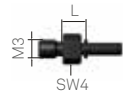
SQUARE STYLI OF TUNGSTEN CARBIDE FOR WORKPIECE MEASUREMENT

for measuring of non rotating tools



Length (L)	Cube	Weight	Part No.
26 (1.02")	10x10x5	11,9 g	21.00-WM26
46 (1.81")	10x10x5	14,2 g	21.00-WM46
76 (2.99")	10x10x5	14,6 g	21.00-WM76

BREAK SHAFT ADAPTERS / BREAK SHAFT



Length (L)	Thread (A)	Weight	Part No.
Break shaft adapter - High Force			
9,5 (0.37")	M4	3,3 g	91.00-S-M4-HF
Stylus adapter with break shaft			
4,0 (0.16")	M3	0,6 g	21.00-S-M3
Break shaft - High Force			
		0,6 g	91.00-S-HF

MEASURING UNIT EXTENSIONS

Material: Carbon



Length (L)	Thread (A)	Diameter (Ø)	Part No.
100 (3.94")	M16x1	25 (0.98")	41.00-VE100
200 (7.87")	M16x1	25 (0.98")	41.00-VE200
	M16x1	25 (0.98")	*41.00-VEXXX

*Customized extensions available. Price upon request.

MEASURING UNIT EXTENSIONS

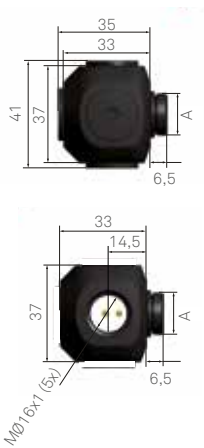
Material: Steel



Length (L)	Thread (A)	Diameter Ø	Part No.
30 (1.18")	M16x1	25 (0.98")	21.00-VE30
50 (71.97")	M16x1	25 (0.98")	21.00-VE50

CROSS ADAPTER

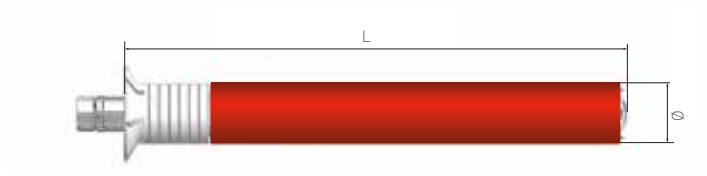
screwed up to 5 production probes



Discription	Thread (A)	Part No.
Cross adapter with Screw plugs (4x)	M16x1	41.00-KA
Screw plug	M16x1	41.00-KA-V



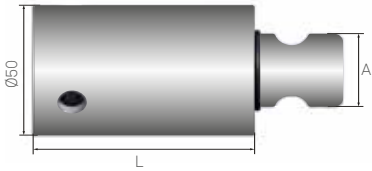
TEMPERATURE SENSORS



Length (L)	Diameter (Ø)	Part No.
50 (1.97")	12 (0.47")	44.00-T50
100 (3.94")	12 (0.47")	44.00-T100
150 (5.91")	12 (0.47")	44.00-T150

PROBE-EXTENSIONS

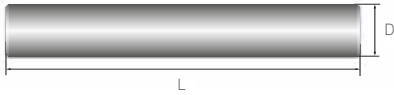
Material: stainless Steel



Length (L)	Thread (A)	Diameter Ø	Part No.
50 (1.97")	D28	50 (1.97")	91.00-V50
75 (2.96")	D28	50 (1.97")	91.00-V75
100 (3.94")	D28	50 (1.97")	91.00-V100

CALIBRATION PIN FOR TOOL SETTERS

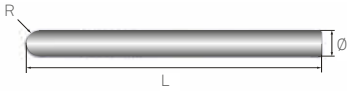
Material: high-alloy stainless steel | hardened



Length (L)	Diameter Ø	Part No.
60 (2.36")	10 (0.39")	35.20-CP

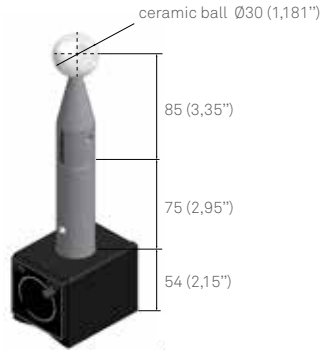
CALIBRATION PINS FOR LASER TOOL SETTERS

Material: high-alloy stainless steel | hardened



Length (L)	Diameter Ø	Radius (R)	Part No.
120 (4.72")	10 (0.39")	2,5	4286
50 (1.97")	5 (0.19")	2,5	5209
50 (1.97")	6 (0.24")	3,0	6164

CALIBRATION SETS



Discription	Part No.
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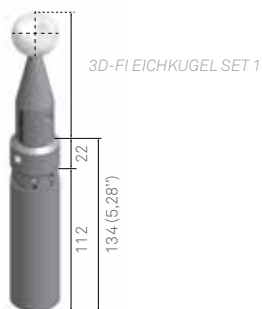
Calibration Ball SET 1	3D-FI EICHKUGEL SET1
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- Magnetic base for calibration ball
- Extension (L=75mm/2.95") for magnetic base
- Calibration ball (D=30mm/1.18")
- Measurement certificate for ball diameter
- Mounting pin D6x80
- Storage box



Calibration Ball SET 2	3D-FI EICHKUGEL SET2
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- Calibration Ball SET 1
- Calibration stand (L=125mm/4.92")
- Extension (L=75mm/2.95") for calibration stand
- Storage box



Calibration Ball SET 3	3D-FI EICHKUGEL SET3
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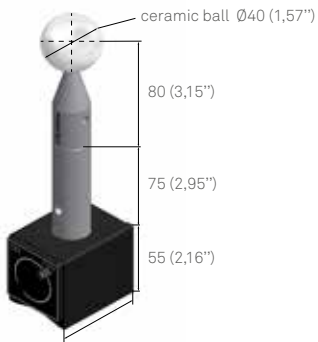
- Calibration Ball SET 1
- Cylindrical shaft with adapter (L=134mm/5.28")

CALIBRATION SETS



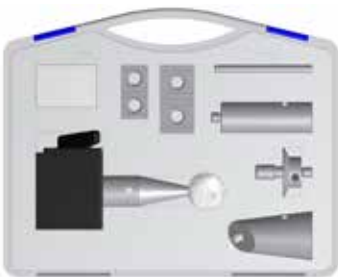
Discription	Part No.
Calibration Ball SET 4	3D-FI EICHKUGEL SET4

Magnetic base for calibration ball
 Extension (L=75mm/2.95")
 for magnetic base
 Calibration ball (D=10mm/0.39")
 Measurement certificate for ball diameter
 Mounting pin D6x80
 Storage box



Calibration Ball SET 5	3D-FI EICHKUGEL SET5
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Magnetic base for calibration ball
 Extension (L=75mm/2.95")
 for magnetic base
 Calibration ball (D=40mm/1.57")
 Measurement certificate for ball diameter
 Mounting pin D6x80
 Storage box



Calibration Ball SET 6	3D-FI-EICHKUGEL SET6
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Calibration Ball SET 1 3D-FI
 Extension for 3D-FI Calibration Ball
 (with 45° angle)
 T-Nut 18 mm (2x)
 T-Nut 14 mm (2x)
 3D-Thread Adapter M12
 Gauge Block 50 mm (1.97")
 Storage box



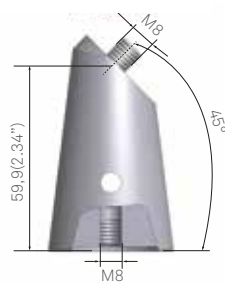
SUPPORT BASE FOR CALIBRATION BALLS

Delivered without balls.



Base Ø	Base height	Angle	Part No.
64 (2.52")	40 (1.57")	45° und 60°	3D-FI SUPPORT BASE

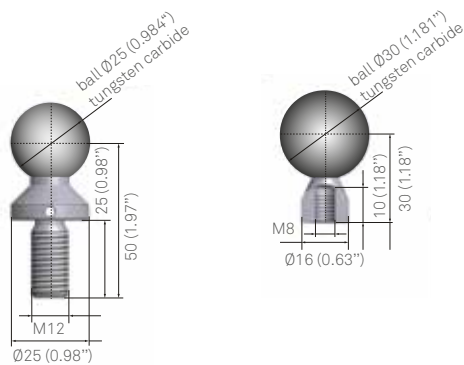
EXTENSION FOR CALIBRATION BALL SET 2



Base height	Angle	Thread (A)	Part No.
59,9 (2.34")	45°	M8	3D-FI EXTENSION 45

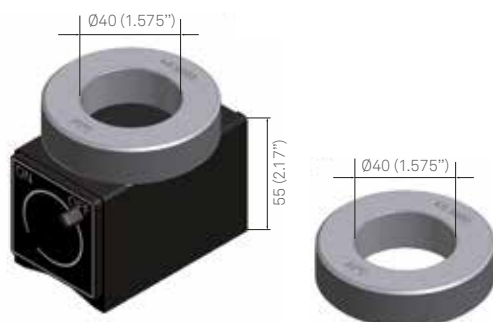
CALIBRATION BALLS

Material: Tungsten Carbide



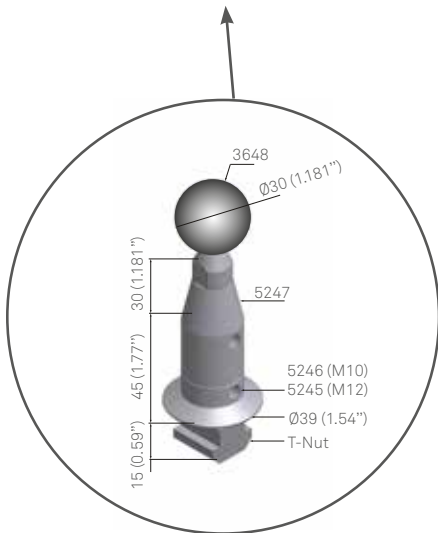
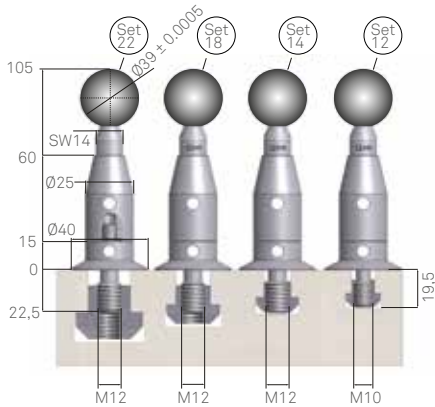
Ball Ø	Thread (A)	Part No.
25 (0.98")	M12 (External thread)	2675
30 (1.18")	M8 (Internal thread)	3468

CALIBRATION RINGS



Ring Ø	Base height	Part No.
with magnetic base		
40 (1.57")	55 (2.17")	91.00-CR-M
without magnetic base		
40 (1.57")	-	91.00-CR

CALIBRATION SETS FOR T-NUTS



Discription	T-Nut	Part No.
Calibrierset for T-Nut 12mm	12mm	CALIBRATION SET 12

Calibration ball, stainless steel
(D=30mm/1.18")
Mounting pin 5250
Storage box 5251

Discription	T-Nut	Part No.
Calibrierset for T-Nut 14mm	14mm	CALIBRATION SET 14

Calibration ball, stainless steel
(D=30mm/1.18")
Mounting pin 5250
Storage box 5251

Discription	T-Nut	Part No.
Calibrierset for T-Nut 18mm	18mm	CALIBRATION SET 18

Calibration ball, stainless steel
(D=30mm/1.18")
Mounting pin 5250
Storage box 5251

Discription	T-Nut	Part No.
Calibrierset for T-Nut 22mm	22mm	CALIBRATION SET 22

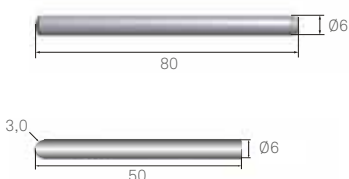
Calibration ball, stainless steel
(D=30mm/1.18")
Mounting pin 5250
Storage box 5251

EXTENSION FOR T-NUT CALIBRATION SETS 12/14/18/22



Length	Diameter Ø	Thread	Part No.
75 (2.95")	25 (0.98")	M8	5248

ACCESSORIES FOR T-NUT CALIBRATION SETS



Discription	Part No.
Mounting pin D6x80	5250


Calibration Pin	6164
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