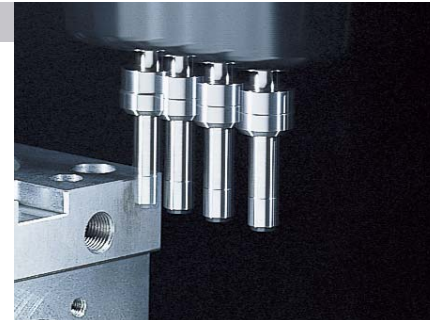


Assures precise measuring processes before machining

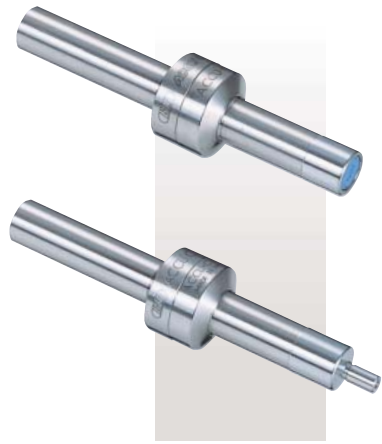
BIG COMPACT SENSOR SERIES
BIG DAISHOWA

Edge Finder
ACCU CENTER

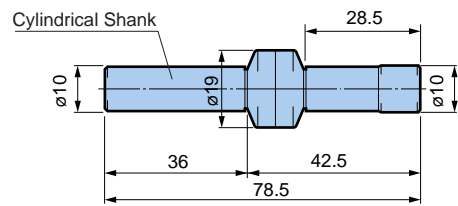
ACCU CENTER is a simple and precise edge finder offering repeatability within 3µm. Hard chrome plated stylus offers extended life.



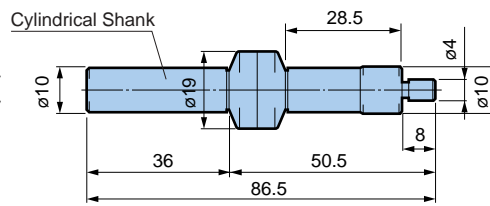
Suitable for all materials



(Not for use with horizontal machine tools)

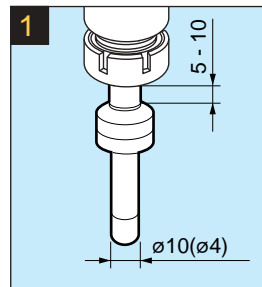


Model ACCU-C10

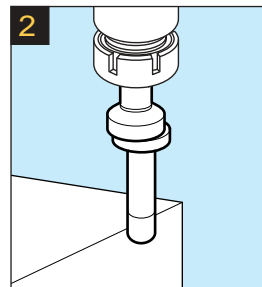


Model ACCU-C104

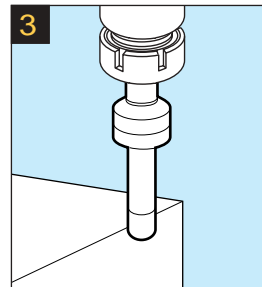
● Operation Instructions



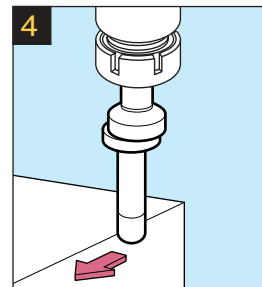
1 Clamp tool in a New Baby Collet Chuck.



2 Move the stylus off center, and rotate between 400 and 600 min⁻¹.



3 Bring the tool into contact with the workpiece and advance slowly until the stylus lines up with the body.



4 If advanced too far the stylus will again move off center. Be sure to compensate location for half the stylus diameter.

BIG
BIG DAISHOWA

Offset and Position Detection Tools

**COMPACT
SENSOR SERIES**

BIG DAISHOWA SEIKI CO LTD

CATALOG No. **EXm68**

High precision Compact Sensor Series enhances accurate machining.

Measuring Device

BASE MASTER
TOOL MASTER
ACCU CENTER

BASE MASTER GOLD
POINT MASTER

BASE MASTER MICRO
POINT MASTER PRO

BIG
BIG DAISHOWA

BIG DAISHOWA SEIKI CO LTD

Takaramachi 5-2, Higashiosakashi
Osaka 579-8025 JAPAN
Phone : (+81)-72-982-8277 Fax : (+81)-72-982-8370
http://www.big-daishowa.com E-mail: export@big-net.ne.jp



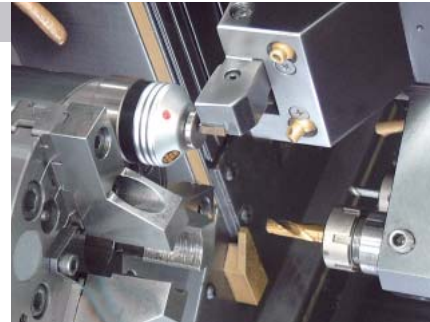
JQA-QMA11602
AWAJI No.1 Factory
JQA-QM3913
FA Dept.

CATALOG No. EXm68-0808-3

Subject to technical changes by further developments.

Tool Offset Sensors
BASE MASTER Series

BASE MASTER Series is a precision touch sensor to determine workpiece offsets and tool length. Mounted on workpiece surface or machine table, LED lamp illuminates immediately when the cutting edge touches the sensor plate and the position is detected.

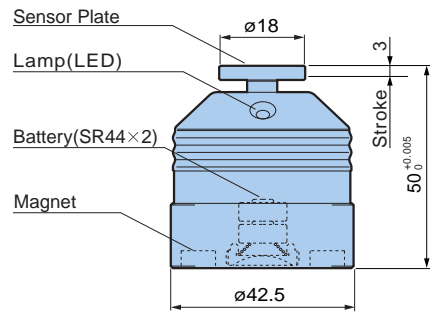


BASE MASTER

The most popular Base Master model with $\pm 1\mu\text{m}$ accuracy. Operates when a conductive circuit is completed.



Model **BM-50**



For use with conductive cutting tools, workpieces, and machine tools.



Height accuracy	$50^{+0.005}_0$ mm
Measureable pressure	3N
Repeatability accuracy	$\pm 1\mu\text{m}(2\sigma)$
Min. measurable tool diameter	1mm
Battery life	10hours (continuous use)
Weight	0.23kg

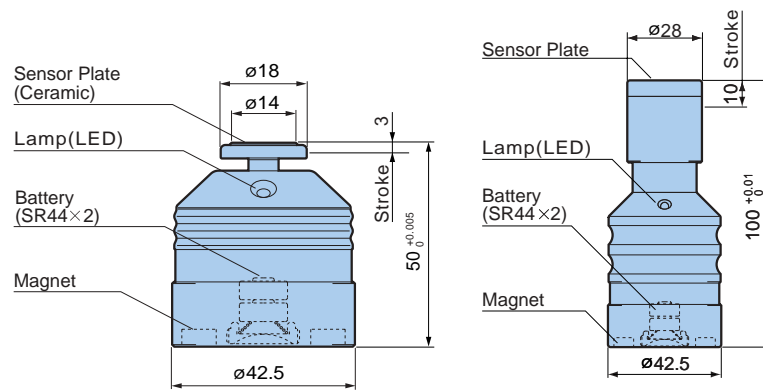
BASE MASTER GOLD

Suitable for various tools and workpieces, including non-conductive materials such as ceramics.



100mm detecting height. Larger measuring head eases operation.

Model **BM-100G**



For all materials, including non-conductive cutting tools, workpieces, and machine tools.



Model	BM-50G	BM-100G
Height accuracy	$50^{+0.005}_0$ mm	$100^{+0.01}_0$ mm
Measureable pressure	3N	2N
Repeatability accuracy	$\pm 1\mu\text{m}(2\sigma)$	
Min. measurable tool diameter	1mm	
Battery life	10hours (continuous use)	
Weight	0.24kg	0.36kg

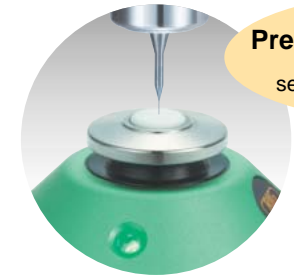
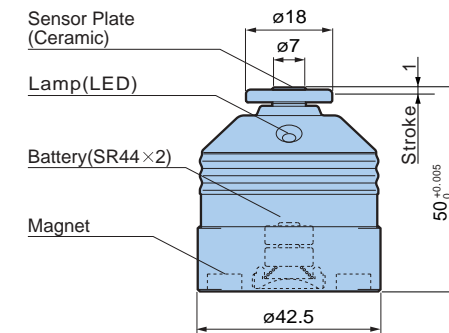
BASE MASTER MICRO

Specifically designed for micro cutting tools. Low measuring pressure protects the cutting edge.



Model **BM-50M**

For all materials, including non-conductive cutting tools, workpieces, and machine tools.



Pre-set $\phi 0.05\text{mm}$ tools. Considerable reduction of set-up time for small dia. tools.



Height accuracy	$50^{+0.005}_0$ mm
Measureable pressure	0.3N
Repeatability accuracy	$\pm 1\mu\text{m}(2\sigma)$
Min. measurable tool diameter	0.05mm
Battery life	10hours (continuous use)
Weight	0.24kg

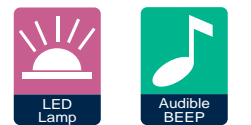
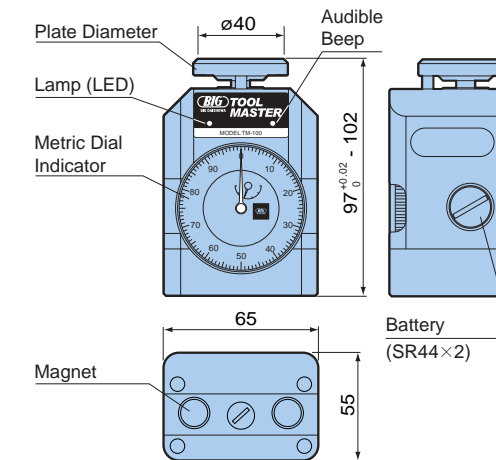
Tool Offset Sensors
TOOL MASTER

TOOL MASTER is a precision touch sensor with a large dial gauge. LED lamp and sound pre-indicate approach to 100mm height to ease the detecting operation.



Model **TM-100**

For all materials, including non-conductive cutting tools, workpieces, and machine tools.



Height accuracy	$100^{+0.02}_0$ mm	
Stroke	5mm	
Stroke range	97 - 102mm	
Measureable pressure	6N(100mm)	
Weight	1.2kg	
Dial gauge	Graduation	0.01mm
	Indication tolerance	$\pm 15\mu\text{m}$
	Repeatability	5 μm
	Return tolerance	5 μm

* Dial gauge accuracy in accordance with JISB7503:1997.

Touch Probe & Edge Finder
POINT MASTER Series

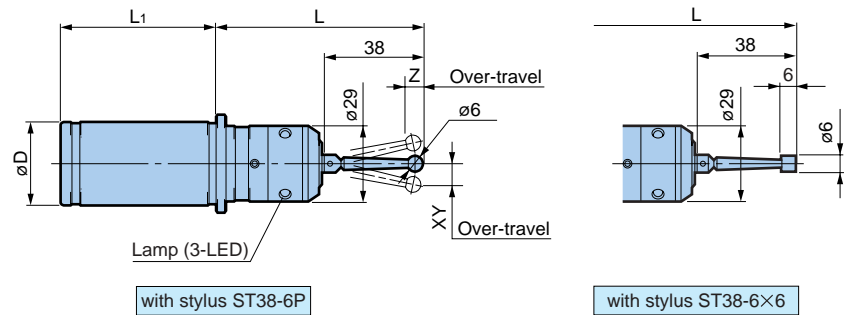
POINT MASTER Series is a precision 3-D touch sensor to center and measure the workpiece.
LED lamp illuminates when the stylus touches the workpiece.
Stroke of stylus provides sufficient over-travel for safety.



PMG Series

LED lamp illuminates when the stylus touches the workpiece.

● Cylindrical Shank



For use with conductive cutting tools, workpieces, and machine tools.

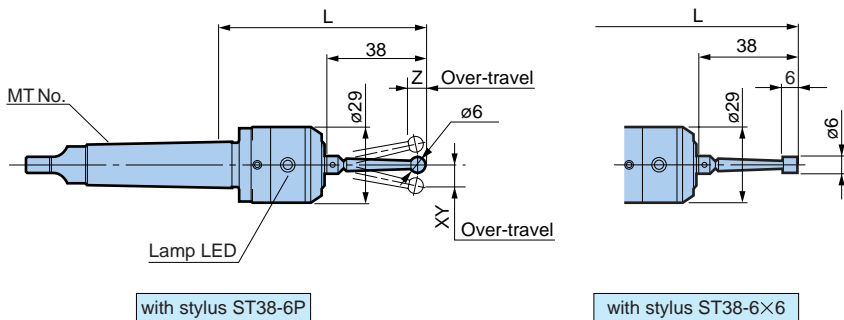


Model	øD h7	L	L1	Repeatability (Probe)	Over-travel		Measuring Pressure (N)		Battery	Battery life (Continuous use)	Standard Stylus	Weight (kg)	
					XY	Z	XY	Z					
PMG-10	10	75	50	±1µm (2σ)	±12	5	0.6	3	Panasonic Lithium BR435×1	12hours	ST38-6P	0.2	
-20	20	90	58										0.3
-32	32	80	60										0.5
PMG-10S	10	75	50	±1µm (2σ)	±12	5	0.6	3	Panasonic Lithium BR435×1	12hours	ST38-6×6	0.2	
-20S	20	90	58										0.3
-32S	32	80	60										0.5

1. PMG-10 and PMG-10S have one LED only.
2. ST38-6x6 cylindrical stylus is mounted on models with "S".
3. Above table indicates the specification when using standard stylus.

For stylus options:P6

● Morse Taper Shank



Model	MT No.	L	Repeatability (Probe)	Over-travel		Measuring Pressure (N)		Battery	Battery life (Continuous use)	Standard Stylus	Weight (kg)
				XY	Z	XY	Z				
PMG-MT2	MT2	80	±1µm (2σ)	±12	5	0.6	3	Panasonic Lithium BR435×1	12hours	ST38-6P	0.2
-MT2S										ST38-6×6	0.2

1. PMG-MT2 and PMG-MT2S have one LED only.
2. ST38-6x6 cylindrical stylus is mounted on models with "S".
3. Above table indicates the specification when using standard stylus.

For stylus options:P6

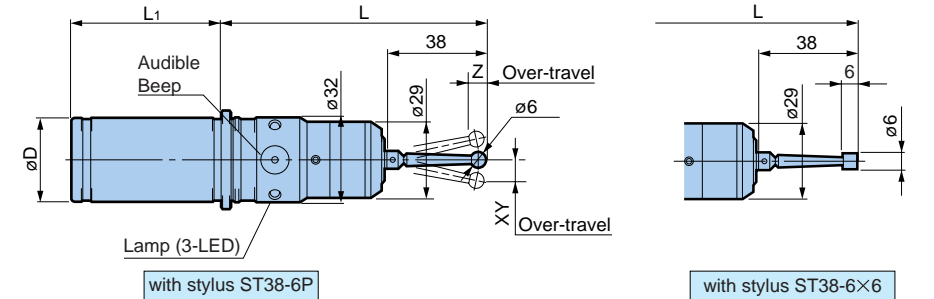
PMC Series

LED illuminates together with buzzer when the stylus touches the workpiece.

For use with conductive cutting tools, workpieces, and machine tools.



● Cylindrical Shank

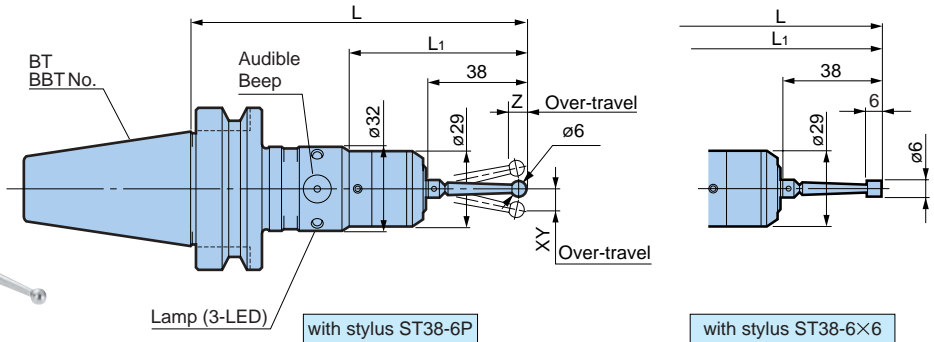


Model	øD h7	L	L1	Repeatability (Probe)	Over-travel		Measuring Pressure (N)		Battery	Battery life (Continuous use)	Standard Stylus	Weight (kg)
					XY	Z	XY	Z				
PMC-20	20	110	50	±1µm (2σ)	±12	5	0.6	3	LR1×2	33hours	ST38-6P	0.4
-32	32	102	58									
PMC-20S	20	110	50	±1µm (2σ)	±12	5	0.6	3	LR1×2	33hours	ST38-6×6	0.4
-32S	32	102	58									

1. ST38-6x6 cylindrical stylus is mounted on models with "S".
2. Above table indicates the specification when using standard stylus.

For stylus options:P6

● BT Shank



BT40/50 (MAS403)

Model	BT No.	L	L1	Repeatability (Probe)	Over-travel		Measuring Pressure (N)		Battery	Battery life (Continuous use)	Standard Stylus	Weight (kg)
					XY	Z	XY	Z				
BT40-PMC-130	BT40	130	69	±1µm (2σ)	±12	5	0.6	3	LR1×2	33hours	ST38-6P	1.2
BT50-PMC-160	BT50	160										
BT40-PMC-130S	BT40	130	69	±1µm (2σ)	±12	5	0.6	3	LR1×2	33hours	ST38-6×6	1.2
BT50-PMC-160S	BT50	160										

1. ST38-6x6 cylindrical stylus is mounted on models with "S".
2. Above table indicates the specification when using standard stylus.

For stylus options:P6



BBT40/50 (MAS403)

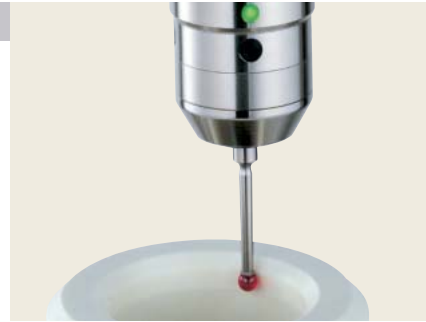
Model	BBT No.	L	L1	Repeatability (Probe)	Over-travel		Measuring Pressure (N)		Battery	Battery life (Continuous use)	Standard Stylus	Weight (kg)
					XY	Z	XY	Z				
BBT40-PMC-130	BBT40	130	69	±1µm (2σ)	±12	5	0.6	3	LR1×2	33hours	ST38-6P	1.2
BBT50-PMC-160	BBT50	160										
BBT40-PMC-130S	BBT40	130	69	±1µm (2σ)	±12	5	0.6	3	LR1×2	33hours	ST38-6×6	1.2
BBT50-PMC-160S	BBT50	160										

1. ST38-6x6 cylindrical stylus is mounted on models with "S".
2. Above table indicates the specification when using standard stylus.
3. BIG-PLUS toolholders can be used in machining centers with conventional spindles.

For stylus options:P6

Touch Probe & Edge Finder
POINT MASTER PRO

POINT MASTER PRO Series is a precision 3-D touch sensor which will operate in non-conductive as well as conductive applications, Resin, ceramic or coated workpieces, machines with ceramic spindle taper or bearings can all be accommodated etc.



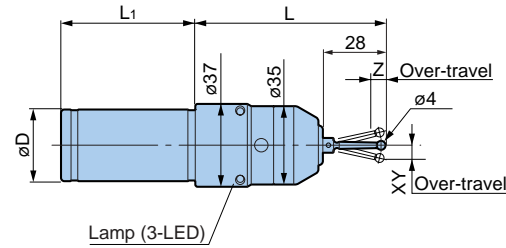
PMP Series

High-intensity green LED lamp illuminates when the stylus touches the workpiece.

Cylindrical Shank



For all materials, including non-conductive cutting tools, workpieces, and machine tools.

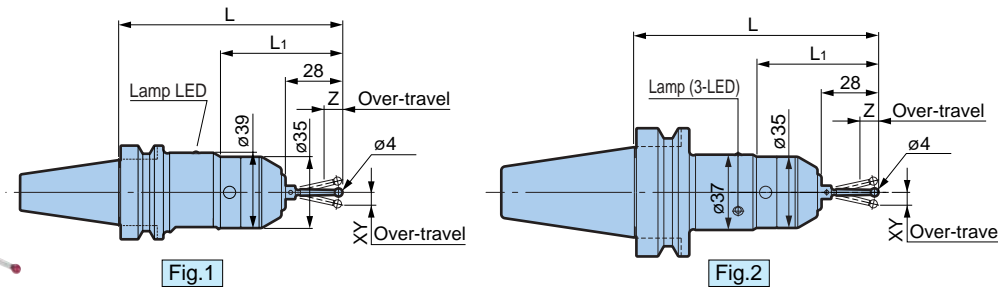


Model	øDh7	L	L1	Repeatability (Probe)	Over-travel		Measuring Pressure (N)		Battery	Battery life (Continuous use)	Standard Stylus	Weight (kg)			
					XY	Z	XY	Z							
PMP-10	10	75	49	±1µm (2σ)	±12	5	0.4	1.5	Panasonic Lithium BR435×1	20hours	ST28-4R	0.4			
-20	20	90	50										LR1×2	50hours	0.5
-32	32	80	60												

- PMP-10 have one LED only.
- Above table indicates the specification when using stylus ST28-4R.
- There is approx 5µm lag in X & Y directions and approx. 2µm lag in Z direction to illuminate LED lamp when stylus touches workpiece surface.

For stylus options:P6

BT Shank



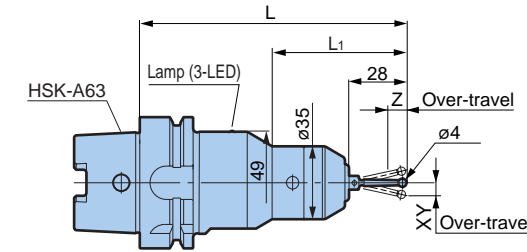
BBT30/40 (MAS403)

Model	Fig	BBT No.	L	L1	Repeatability (Probe)	Over-travel		Measuring Pressure (N)		Battery	Battery life (Continuous use)	Standard Stylus	Weight (kg)			
						XY	Z	XY	Z							
BBT30-PMP-110	1	BBT30	110	60	±1µm (2σ)	±12	5	0.4	1.5	SR44×2	24hours	ST28-4R	0.8			
BBT40-PMP-120	2	BBT40	120	60										LR1×2	50hours	1.3

- PMP-10 have one LED only.
- Above table indicates the specification when using stylus ST28-4R.
- There is approx 5µm lag in X & Y directions and approx. 2µm lag in Z direction to illuminate LED lamp when stylus touches workpiece surface.
- BIG-PLUS toolholders can be used in machining centers with conventional spindles.

For stylus options:P6

HSK Shank



HSK (ISO12164&DIN69893-1)

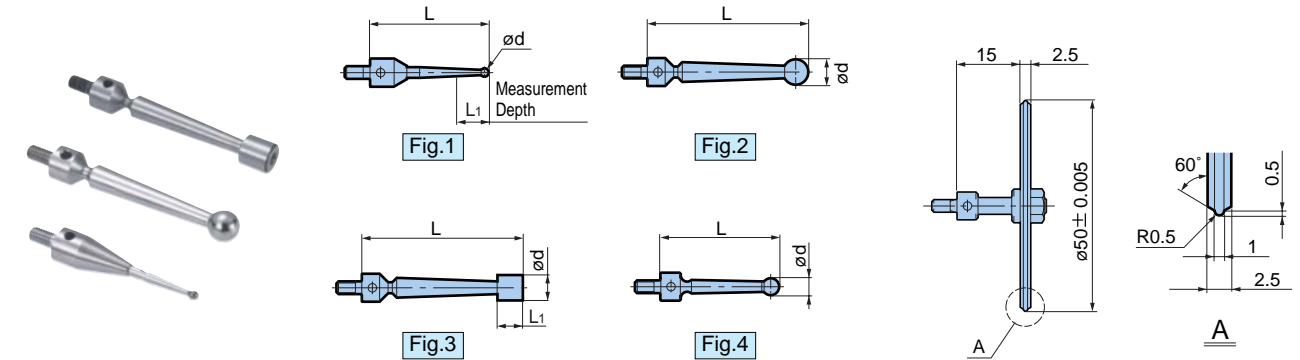
Model	HSK No.	L	L1	Repeatability (Probe)	Over-travel		Measuring Pressure (N)		Battery	Battery life (Continuous use)	Standard Stylus	Weight (kg)
					XY	Z	XY	Z				
HSK-A63-PMP-130	HSK63	130	65	±1µm(2σ)	±12	5	0.4	1.5	CR2×1	24hours	ST28-4R	1.3

- Above table indicates the specification when using stylus ST28-4R.
- There is approx 5µm lag in X & Y directions and approx. 2µm lag in Z direction to illuminate LED lamp when stylus touches workpiece surface.

For stylus options:P6

Alternative Stylii

The stylus (M3 thread) is replaceable. Please replace when different model of stylus required or if damaged.



Model	Fig	L	L1	ød	Material	Series
ST28-1P	1	28	—	2	Carbide	PMG-PMC-PMP
-2P				8		
-3P				—		
-4P				4		
ST38-6P	2	38	—	6	Steel (SUS)	PMG-PMC
ST38-6×6	3	38	—	6	Steel (SUS)	PMG□□S-PMC□□S
ST28-4R	4	28	—	4	Ruby	PMP

* Stylus model ST38-6×6 is exclusive for PMG□□S and PMC□□S series. Runout accuracy may worsen when used on PMG or series without "S".

Ideal for awkward shaped workpiece or tapered portion of plastic mold.

Model **ST15-50K**

*PMG&PMC-Series only.