

UNIVERSAL MICRO TOUCH

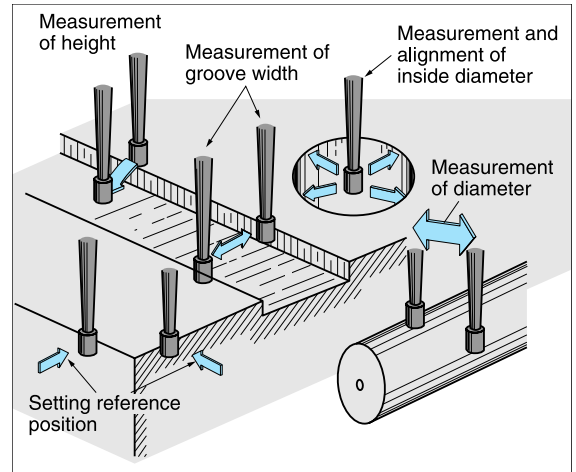


3D Electronic Edge Detector of Basic Point

- Precision Touch Sensor
Repeatability ± 2 micron.
- Long Safety Over-Travel Distance protects from damage. X, Y = ± 7 mm Z = 3mm
- Red lamp and electronic beep sound notice the touching position. When touching to the work piece, red lamp immediately lights up all around. The one with BT shank gives the electric beep sound also to make double notices.

How to obtain touching position

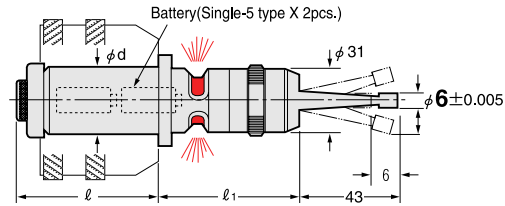
Make the stylus slowly get near to the measuring surface of work piece and the red lamp will light at the moment when the former touches the latter. A position where 3mm is compensated from that position (because of 6mm stylus diameter), is the touching position to be obtained.



Straight Shank UMT MICRO TOUCH



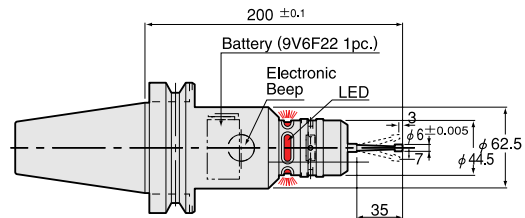
UMT



Code No.	ϕd	ℓ	ℓ_1	Weight (Kg)
S20-UMT	20	68	61	0.4
S32-UMT	32	65	65	0.7
MT2-UMT	MT2	66.5	75	0.4

★Ball type $\phi 6$ mm stylus is also available : **S32-UMTB**

BT-UMT-W MICRO TOUCH



TAPER	Code No.	Weight (Kg)
No. 30	BT30-UMT200W	2.1
No. 40	BT40-UMT200W	2.7
No. 50	BT50-UMT200W	5.0

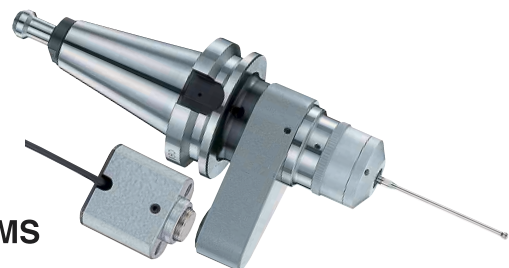
★Ball type $\phi 6$ mm stylus is also available : **BT40-UMTB200**
★**IT40-UMT200W** and **IT50-UMT200W** are also available.

BT-UMTH MICRO TOUCH for ring sensor

For Machining Centre with ring sensor, the electric circuits are different from standard, please purchase this through M/C Builder.



Universal Micro Sensor



UMS

- Repeatability ± 1 micron
- Perfect water/dust proof
- Inductive signal transmission type (No need for battery)
- The sensor signal can be managed with ultra high speed.
- Because of its internal circuit contact type, this sensor can be used for any materials of components.
- Interchangeable stylus. 50mm (standard), 100mm (Option)

BT30-UMS200
BT40-UMS200
BT50-UMS200

Please contact with us for more details.

Specification	
X·Y Over-Travel	10mm
Z Over-Travel	6mm
Stylus	$\phi 6$ Ball
Transmission	Inductive

Internal Contact System - can be used for not conductive work piece.

- Precision Touch Sensor
Repeatability ± 2 micron.
- Long Safety Over-Travel Distance protects from damage. X, Y = ± 7 mm Z = 3mm
- Not conductive work piece can be measured. Internal contact system is built-in.
Blue lamp and electronic beep sound notice the touching position. After touching to the work piece, blue lamp lights up all around. The one with BT shank gives the electric beep sound also to make double notices.

How to obtain touching position

Make the stylus slowly get near to the measuring surface of work piece and the blue lamp will light at the moment when the former touches the latter. A position where 2mm is compensated from that position (because of 4mm stylus diameter), is the touching position to be obtained.



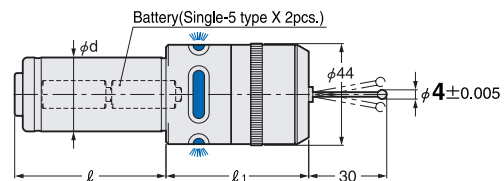
Photo shows with ruby stylus (option).

Straight Shank UMTX MICRO TOUCH



UMTX

Ruby stylus is available as an option.



Code No.	ϕd	l	l_1	Weight (Kg)
S20-UMTX	20	68	64	0.5
S32-UMTX	32	65	64	0.8
MT2-UMTX	MT2	66.5	64	0.5

★ $\phi 4$ mm steel stylus and battery are supplied as standard.

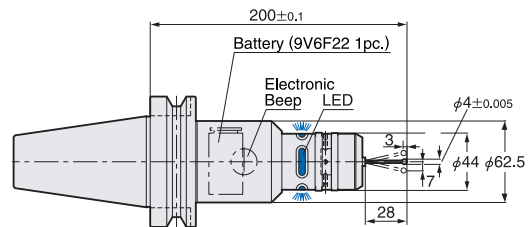
★ The delay of the system is within 0.01mm, because of the internal contact system.

BT-UMTX MICRO TOUCH



BT-UMTX

Ruby stylus is available as an option.



TAPER	Code No.	Weight (Kg)
No. 30	BT30-UMTX200W	2.3
No. 40	BT40-UMTX200W	2.9
No. 50	BT50-UMTX200W	5.2

★ $\phi 4$ mm steel stylus and battery are supplied as standard.

★ The delay of the system is within 0.01mm, because of the internal contact system.

Specification

Measuring Pressure	X, Y = 0.35N Z = 0.8N	
Battery	Straight Shank	An alkali dry cell Model 5 1.5V 2pcs
	BT Shank	Manganese dry cell 6F33 X 9V 1pcs
	36 Hours	
Stylus	Standard : $\phi 4$ mm steel stylus Option : $\phi 4$, $\phi 3$, $\phi 2$ and $\phi 1$ mm ruby stylus The ruby stylus can not be ordered alone. Please order the Micro Touch with the ruby stylus. When ordering, please add (RB○) at the end of the Micro Touch Code No.	
		e.g. BT30-UMTX200W (RB2) └ With $\phi 2$ mm ruby stylus S32-UMTX (RB4) └ With $\phi 4$ mm ruby stylus

TOUCH POINT (ELECTRONIC SENSOR)

NIKKEN

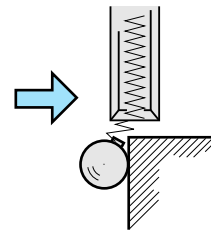
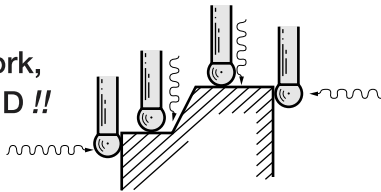
High Sensitive Position Sensor



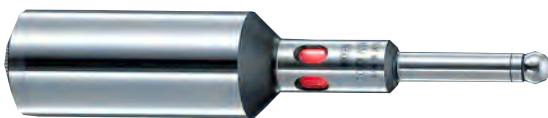
- Instant Indication of red LED Lamp.
- Instant Indication by red LED lamp at very light contact of Sensor Ball with Workpiece.
- Ideal for Centre Detecting with Milling Machine, Boring Mill, Drilling Machine and Machining Centre.
- Repeatability: within 2 micron.
- Safety Mechanism against Overrun !!

The ball is pulled up by spring. Even if overrun happens, ball will be detached from the ball seat.

- Easy Checking Location of Work, Face, OD and ID !!

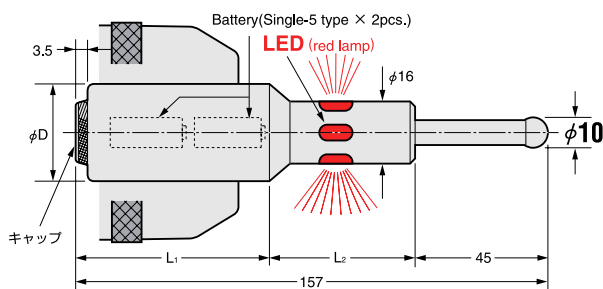


■ Straight Shank TOUCH POINT



TP

- Can be connected to NIKKEN Milling Chuck C20, C32



Code No.	φ D	L ₁	L ₂	Weight (Kg)
TP-20	20	77	35	0.2
TP-32	32	71	41	0.5

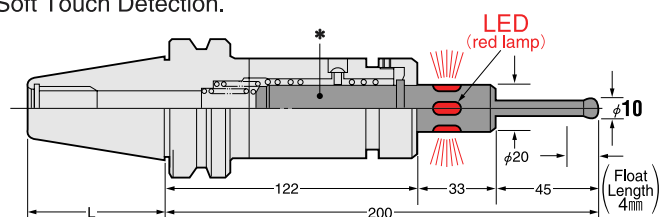
★ No Z-axis Float in straight shank type TOUCH POINT.
If Float is needed, please order UMT series (S20, S32-UMT). 図 P.127

■ TOUCH POINT for machining centre (with Z-axis Float Mechanism)



BT-TP

- The Ball End is located 200mm distant from Gauge Line, and can be used as Gauge Line Reference of Z-axis. Ultra precision Float Mechanism in the Thrust Direction enables Soft Touch Detection.



TAPER	Code No.	L	Float Length	Weight (Kg)
No.40	BT40-TP200	65.4	4	1.9
No.50	BT50-TP200	101.8	4	4.5

★ No applicable to Non-conductive work piece (Plastic, Bakelite and so on).
★ Included Battery (Single-5 type x 2 pcs.)
★ IT40-TP200 and IT50-TP200 are also available.
★ The Code No. of Touch Point marked * for the spare part is 9TP200S.

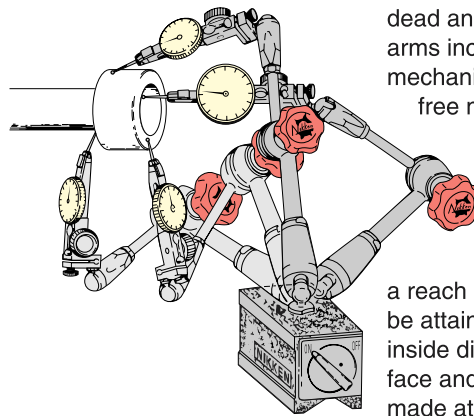
UNIVERSAL MICRO STAND

NIKKEN

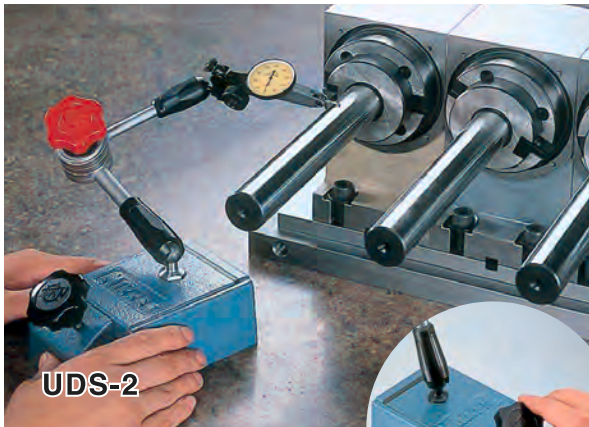


UDS-1

Long Reach 300mm



Free flexing with single knob, no dead angle and long reach, two arms incorporating ball joint mechanism at both ends provide free movement in any direction such as vertical, lateral, longitudinal or rotational etc. If stretched horizontally, a reach as long as **300mm** can be attained. Measurements of inside dia., outside dia., end face and back face etc, can be made at will.



UDS-2

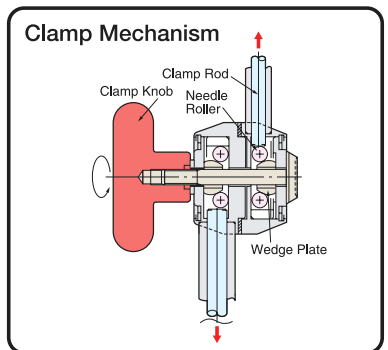
Remote Fine Adjusting Knob (UDS-2)

The base is made by heavy and precision casting and arms are clamped by a remote knob with fine adjustment. Measurement position of dial gauge can be easily adjusted without losing setup of Universal Micro Stand.

Remote Adjusting Knob

New mechanism permitting no looseness due to vibration

By only tightening the single red clamp knob, all articulated joints are locked firmly and no fine (micron) movement will occur even after being left as they are for 100 hours.

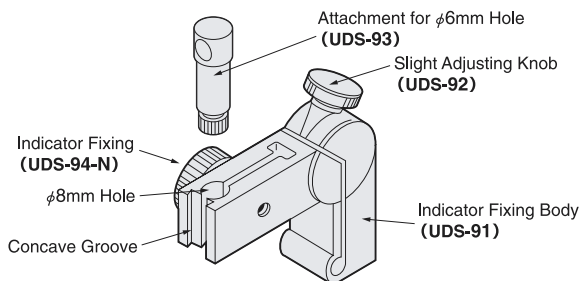


Strong magnet base makes it possible to adapt to vertical, angular, uneven surface, etc.

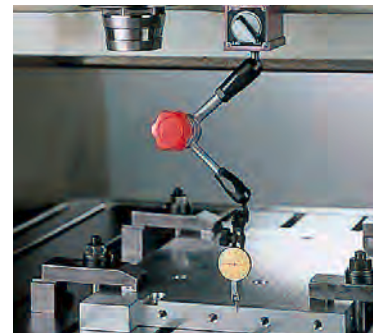
Code No.	Style
UDS-1	With magnet base
UDS-2	With precision casting base

★Dial gauge is supplied as an option.

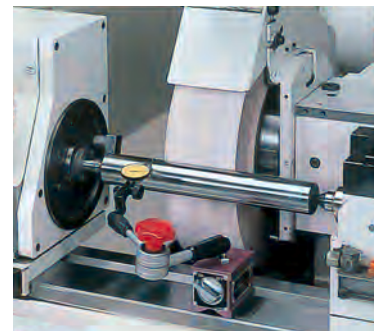
Any dial gauge, pick tester can be connected with this attachment.



On M/C



On NC Lathe



On Grinding Machine

MEASUREMENT



No need to test cut!
Reference point of work piece can be measured very quickly and accurately without damage of tool teeth.

Feature

- High Precision Measurement
- Easy to measure tooling off-set values on the machine accurately.
- Hard wearing powerful magnetic Base.
- Powerful magnetic base (700N) makes it suitable for use on manual machine as well as Vertical/Horizontal Machining Centres and NC Lathes.

■ Swarf Removal

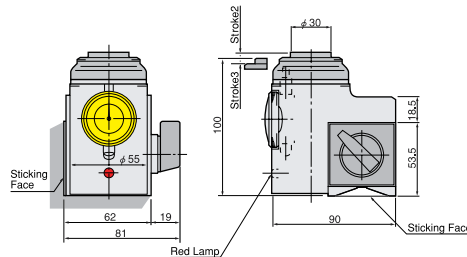
The Magnetic Base can be switched on and off allowing the reference face to keep clean.

■ Plunger Head is given a Anti-Rust Rubber Seal.

■ Proximity Lamp

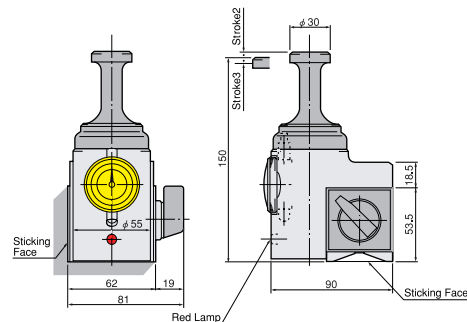
The red lamp is activated when the plunger comes within the measuring range of the reference height.

HP-100



★2 of Batteries LR44(HC) are supplied as standard with both of HP-100 and HP-150.

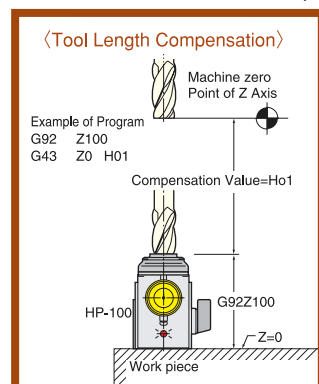
HP-150



HP-50K HEIGHT PRESETTER

Adjustment of Reference Point

No setting gauge plate is required to adjust Zero Point. Push Plunger down by hand, and adjust the large hand to the Zero Scale of Dial Gauge. The small hand indicates "-3" at this time.)



Example of usage at Vertical Machining Centre.



Example of usage at NC Lathe.



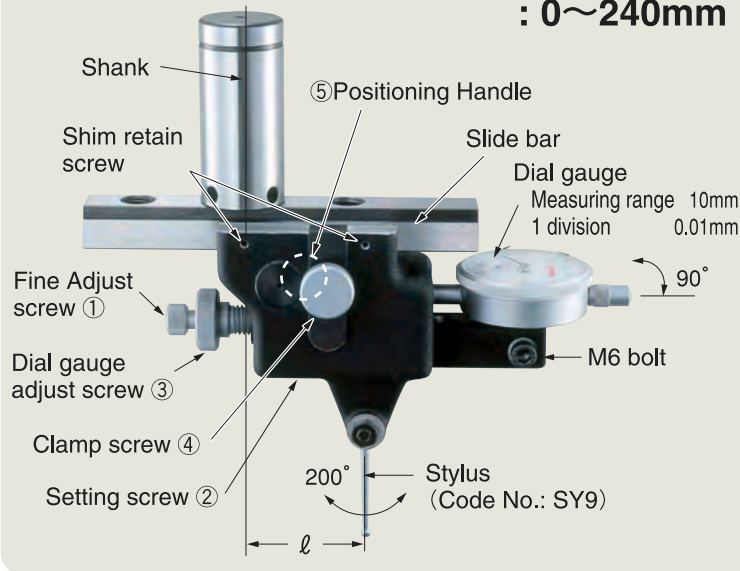
Also suitable for use of Micron Adjustment of Boring Arbor.

CENTERING HOLDER

NIKKEN

SY

**Large Measuring Range
: 0~240mm**



- No need of changing the setting of dial Gauge. Only by turning Knob, ID, OD and Parallelism can be easily measured.
- Large measuring range. Cross moving distance of stylus is 120mm in radius.

Centering Holder Code No.	ID of Milling Chuck	Measuring Range
SY20-120	$\phi 20$	0~ $\phi 240$
SY32-120	$\phi 32$	
SY42-120	$\phi 42$	

★0.01mm Dial Gauge is supplied as standard accessory.
★MT Shank (MT2~6), and IT Shank (#40/#50) are available.

Explanation of the Code No.

- SY** **32** - **120**
- MAX. Measuring Radius
 - OD of Shank : $\phi 22, 32, 42$
 - Symbol of Centering Holder

● Wide Range Measuring is possible both for ID and OD.



Parallelism Measuring



ID Centering



OD Centering

BALL CENTRALIZER

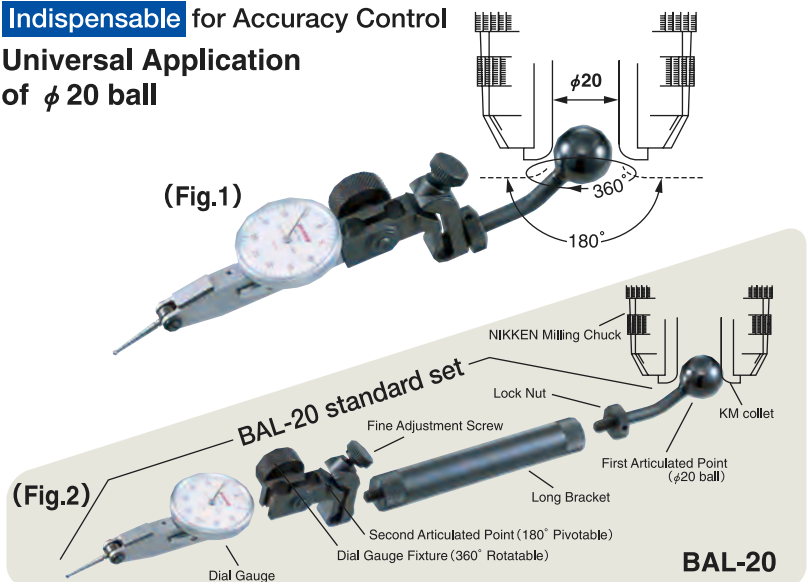
NIKKEN

BAL



Centering of ID and OD can be done by the Ball Centralizer gripping into Nikken Milling Chuck.

Indispensable for Accuracy Control
Universal Application
of $\phi 20$ ball



■ 0.01mm dial Gauge is supplied as standard accessory.

Code No.	Measuring Range	
	Using Fig.1	Using Fig.2
BAL-20	ID : $\phi 3.5 \sim \phi 320$	ID : $\phi 3.5 \sim \phi 520$
	OD : MAX. $\phi 300$	OD : MAX. $\phi 500$