

UNIVERSAL MICRO TOUCH



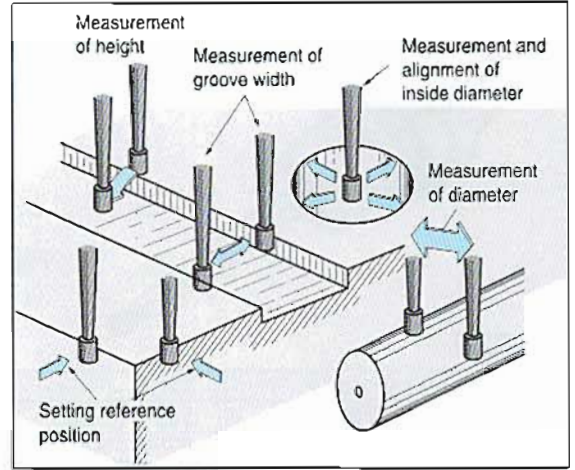
UMT

3D Electronic Edge Detector of Basic Point

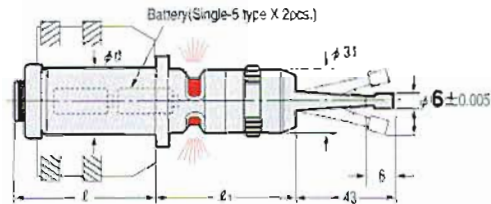
- Precision Touch Sensor
Repeatability ± 2 micron.
- Long Safety Over-Travel Distance protects from damage. X, Y = ± 7 mm Z = 3mm
- Red Lamp and Electronic Beep notice the Touch Position. Immediately on Touching, Red Lamp lights up all round. The one for Machining Centre further gives Electronic Beep to make double assurance.

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.



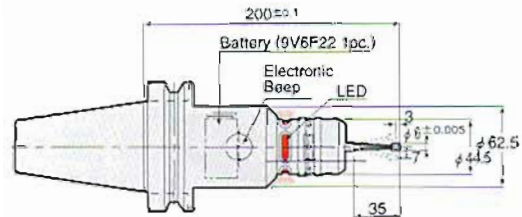
Straight Shank UMT MICRO TOUCH



Code No.	ϕd	l	l_1
S20-UMT	20	68	61
S32-UMT	32	65	65
MT2-UMT	MT2	66.5	75

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

BT-UMT-W MICRO TOUCH



TAPER	Code No.
No.30	BT30-UMT200W
No.40	BT40-UMT200W
No.50	BT50-UMT200W

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

BT-UMT-H MICRO TOUCH for ring sensor

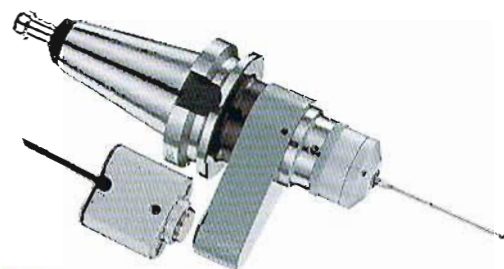


For Machining Centre with ring sensor, the electric circuits are different from standard, please purchase this through M/C Builder.

BT40-UMT200H
BT50-UMT200H

IT40-UMT200H
IT50-UMT200H

UMS Universal Micro Sensor



- 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
BT40-UMS200

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

Please contact with us for more details.

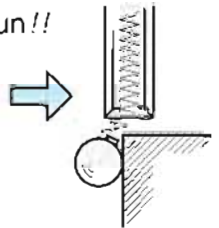
TP



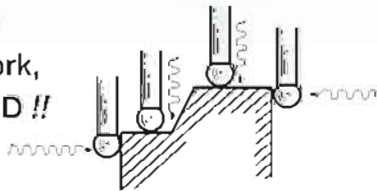
High Sensitive Position Sensor

- 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 !!

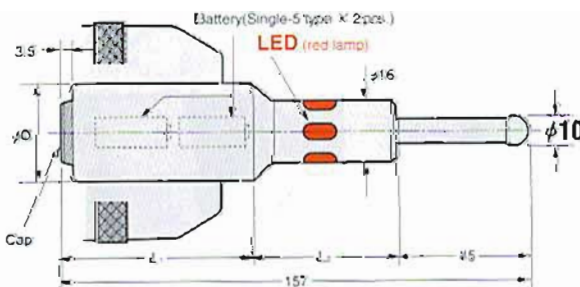


- Straight Shank TOUCH POINT

TP



- Can be connected to NIKKEN Milling Chuck C20.C32



Code No.	φ D	L ₁	L ₂
TP-20	20	77	35
TP-32	32	71	41

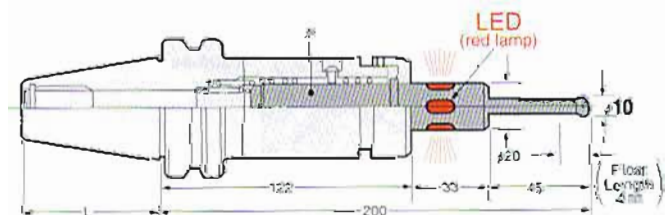
★ No Z-axis Float in straight shank type TOUCH POINT.
 If Fixat. is needed, please order UMT series (S20, S32-UMT). P.111

- 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.



Code No.	BT No.	L	Float Length
BT40-TP200	BT40	65.4	4
BT50-TP200	BT50	101.8	4

★ No applicable to Non-conductive work pieces (Plastic, Bakelite and so on).
 ★ Included Battery (Single-5 type × 2 pcs.)
 ★ BT40-TP200 and BT50-TP200 are also available.
 ★ The Code No. of Touch Point marked Ⓢ for the spare part is 9TP200S.

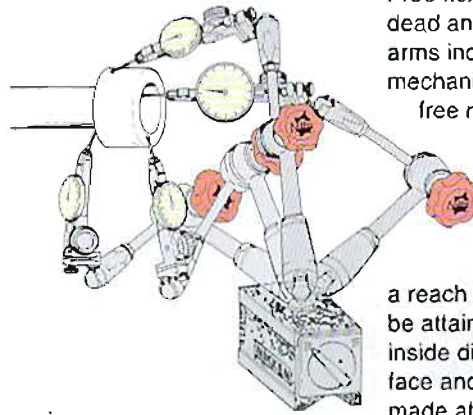
UNIVERSAL MICRO STAND

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)

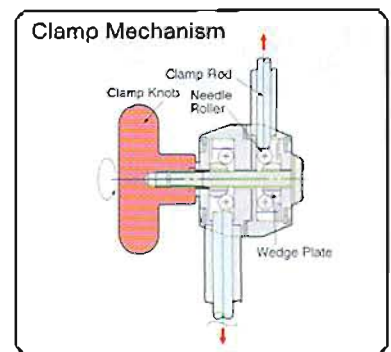
The base is made by heavy and precision casting and arms are clamped by a remote knob with fine adjustment. Measurement position of dial gauge can be easily adjusted without losing setup of Universal Micro Stand.



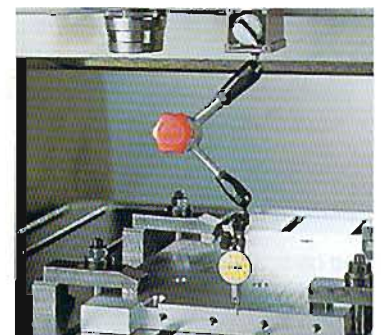
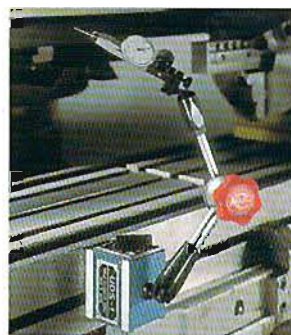
Remote Adjusting Knob

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.

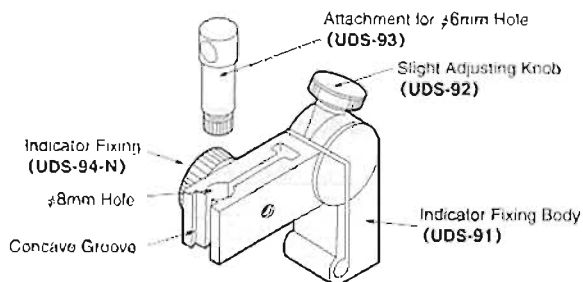


On M/C

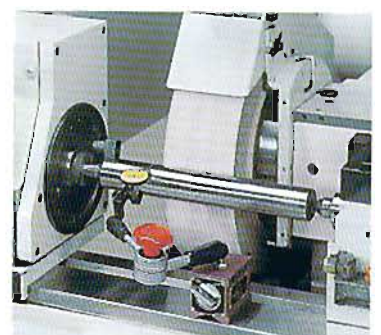
Code No.	Style
UDS-1	With magnet base
UDS-2	With precision casting base

★ Dial gauge is supplied as an option.

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



On NC Lathe



On Grinding Machine

HEIGHT PRESETTER

NIKKEN



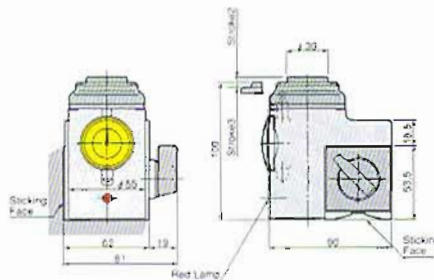
NO need to test cut!

Reference point of work piece can be measured very quickly and accurately without damage of tool teeth.

Feature

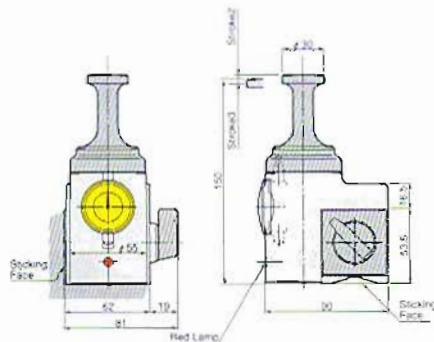
- High Precision Measurement
- Easy to measure tooling off-set values on the machine accurately.
- Hard wearing powerful magnetic Base.
- Powerful magnetic base (700N) makes it suitable for use on manual machine as well as Vertical/Horizontal Machining Centres and NC Lathes.
- Swarf Removal
The Magnetic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

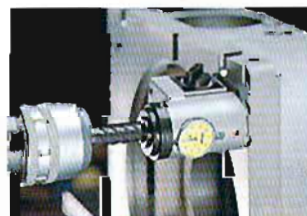
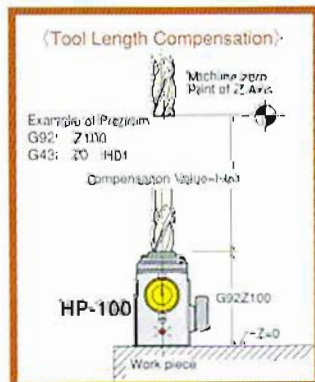
HP-150



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.



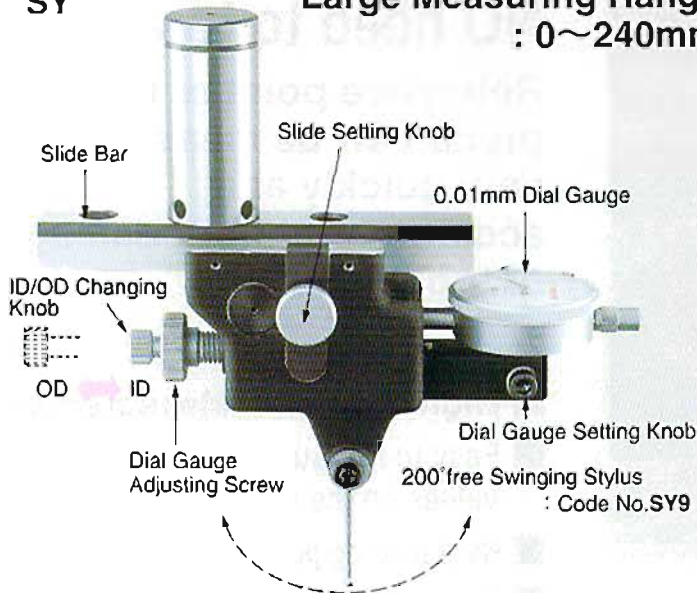
Also suitable for use of Micron Adjustment of Boring Arbor

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

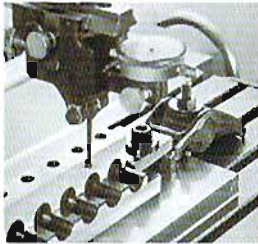
Centering Holder Code No.	ID of Milling Chuck	Measuring Range
SY22-120	$\phi 22$	0~ $\phi 240$
SY32-120	$\phi 32$	
SY42-120	$\phi 42$	

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

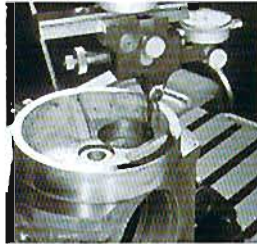
Explanation of the Code No.

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

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



Parallelism Measuring



ID Centering



OD Centering

BALL CENTRALIZER

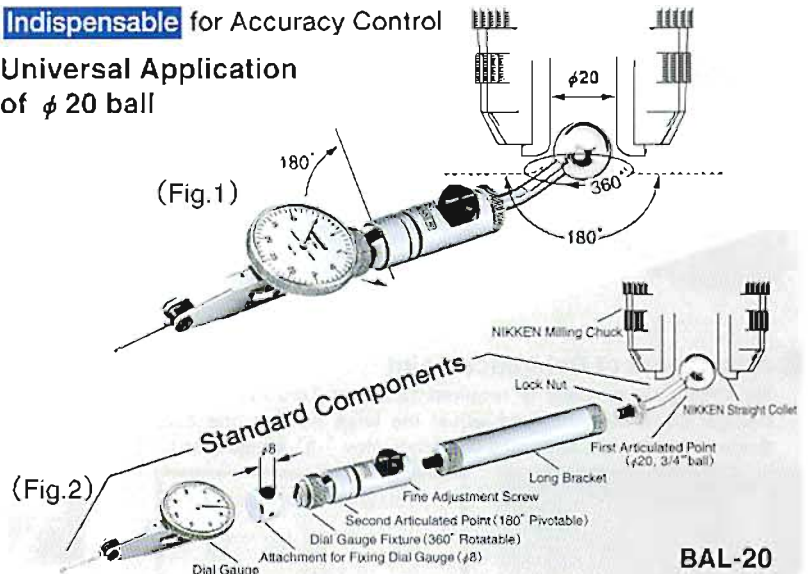
NIKKEN



NIKKEN Ball Centralizer, only being chucked at its ball position by NIKKEN Milling Chuck, enables simple and easy alignment of inside and outside diameters and measurement of parallelism etc.

Indispensable for Accuracy Control

Universal Application of $\phi 20$ ball



BAL-20

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. $\phi 500$

★0.01mm dial Gauge is supplied as standard accessory.

TEST BAR

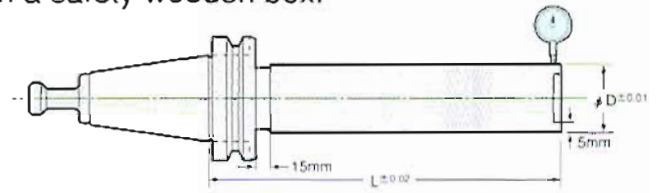


TB



Photo shows NC5 shank.

Indispensable for checking your machine spindle.
Prevented from deformation by sub-zero treatment.
Each test bar is installed in a safety wooden box.



Exact size of ϕD and L are made on each Test Bar.

TAPER	Code No.	ϕD	L	Run-out at the total length	Circularity, Straightness, Cylindricity
No.30	BT30-TB40-150	40	150	within 0.003mm	within 0.003mm
No.40	BT40-TB40-200	40	200		
No.50	BT50-TB50-300	50	300		

- ★The code No. for Test Bar without flange is **AST** instead of **BT**. e.g. Test Bar for #40=**AST40-TB40-200**
- ★Test Bars for other dimensions will be available.
- ★It comes with Pull Stud, please specify Pull Stud Code No. Please refer P.185 for Pull Stud.

TOOL WAGON, REDUCTION BUSH & TAPER CLANER



TAPER	Code No.	Storage
BT30	TW30	60 pcs
BT40	TW40	48 pcs
BT50	TW50	40 pcs
NC5- 46	TW-NC5- 46	48 pcs
NC5- 63	TW-NC5- 63	48 pcs
NC5- 85	TW-NC5- 85	40 pcs
NC5-100	TW-NC5-100	40 pcs

- ★The tool presetter is not supplied. Please refer P.117
- ★Special Tool Wagon is available as an option for **NMP Tool Presetter**.
- ★TW40 can be used for the Tool Wagon of **NC5-46** and **NC5-63** Tools with Reduction Bush **TWP-NC5-46** and **TWP-NC5-63**.
- TW50 can be used for the Tool Wagon of **NC5-85** and **NC5-100** Tools with Reduction Bush **TWP-NC5-85** and **TWP-NC5-100**.
- ★For the Code No. of Taper Cleaner, please add "-Taper No." at the end of "NTP-CLE" e.g. **NTP-CLE-BT50**



TW Tool Wagon
Weight : 36kg
Photo. shows with **NMP-50N** presetter.



Reduction Bush
TWP-NC5



Taper Cleaner
NTP-CLE
Photo. shows for **NC5**.

TOOL CLAMPER



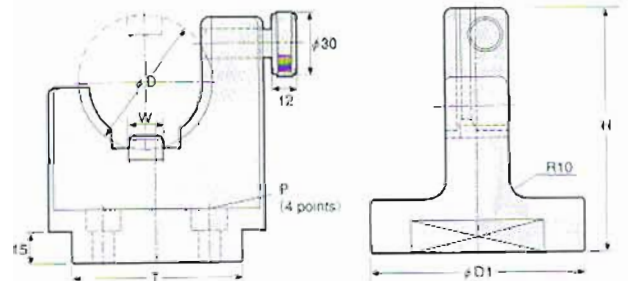
NCL



Please refer P.153
for Tool Clamper for HSK Tooling.



- TCL- 40GH
- 50GH
- 63GH
-100GH



Code No.	ϕD	W	$\phi D1$	H	T	P	Pitch	Remark
NCL-BT30	46	15.9	102	110	80	$\phi 10.3$ (M10)	50×60	
-BT40	63	15.9	102	115	80		50×60	NC5- 63 can be used
-BT45	85	19.2	115	124	90		60×70	NC5- 85 can be used
-BT50	100	25.6	130	133	100		70×80	NC5- 100 can be used
NCL-NC5-46	46	12	102	110	80		50×60	
-IT50	97.5	25.6	130	133	100		70×80	
-ICAT40	63.55	15.9	102	115	80		50×60	IT40, CAT40
-CAT50	98.45	25.6	130	133	100		70×80	

MICRO TOOL PRESETTER

NIKKEN

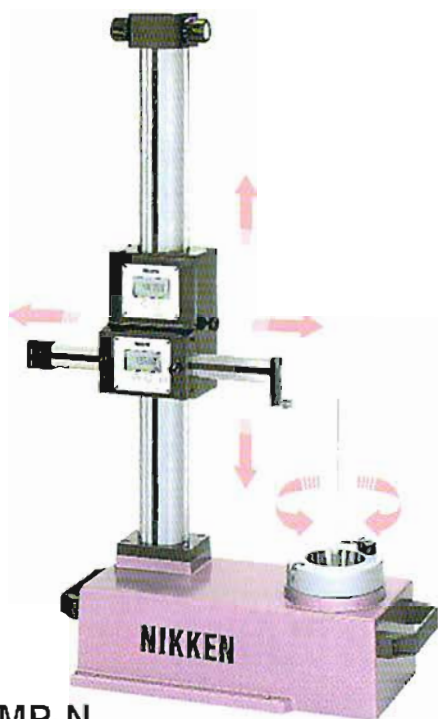
Better Run-Out Accuracy is accomplished due to the NIKKEN special radial and thrust bearings.



Easy Operation

Various Functions

- Fast Direct Measuring of 0.001mm
- Perfect Micron Measuring
- Simple Mechanism (Digital Readout)
- Selection of Diameter/Radius on Display
- Zero Setting
- mm/inch Selection
- Memory Hold
- Input of Preset Value and Recall
- MIN./MAX. Measuring Value Display
- Tolerance Check
- RS232C Interface (Option)
- Please refer system configuration below.
- Master Gauge as standard accessory
- Z Axis Extension Sizes are available (600, 800mm)



NMP-N



NMP-NC5 with Tool Clamping Unit

Item	Contents		NMP-40N	NMP-50N
Measuring Range	X Axis : Diameter of Tool Z Axis : Length of Tool *1		D=0 ~ ϕ 200mm L=0 ~ 300mm *1	D=0 ~ ϕ 300mm L=0 ~ 400mm *1
Min. reading	Reading Method Min. reading	X Axis	Liquid Crystal Display 0.01/0.001mm Selectable (Diameter)	
		Z Axis	Liquid Crystal Display 0.01/0.001mm Selectable	
Measuring System, Measuring Force			SYLVAC Scale X : 1N, Z : 2N	
MAX. Response Speed			1m / sec.	
Spindle			ISO40	ISO50
Master Gauge			ϕ 40X150L of the selected shank is supplied as standard accessory. GN40 : ISO40- ϕ 40-150mm GN50 : ISO50- ϕ 40-150mm	
Reduction Sleeve (Option) *2			TN430 : ISO40-ISO30 *2	TN540 : ISO50-ISO40 *2
External Output			RS232C (Option)	
Power			Battery (CR2032) X 2pcs. Battery Life: 2,000HR	
Weight			21kg (760x480x300)	35kg(950x580x390)

*1 Z Axis Extended size is available. L=0~600mm, 0~800mm

*2 Some other kinds of Reduction Sleeve is available. e.g.TNN50-NC5-63 : ISO50-NC5-63

*NMP Presetter for NC5 or 3LOCK is with tool clamping unit by air. e.g.NMP-NC5-100, NMP-MBT50

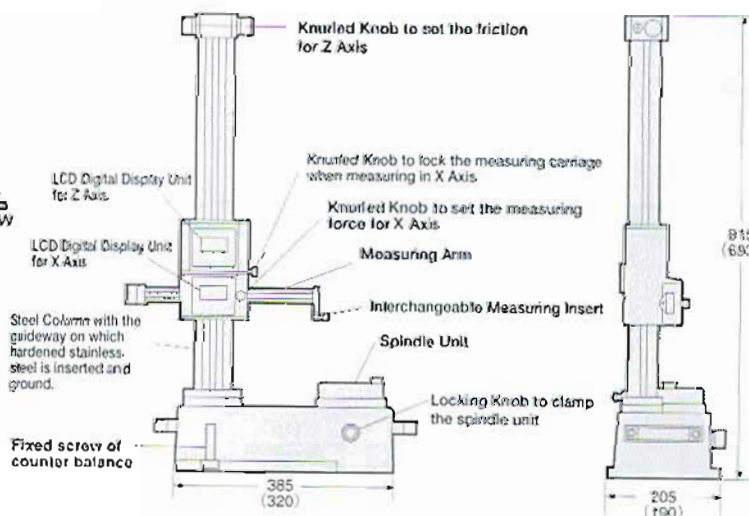
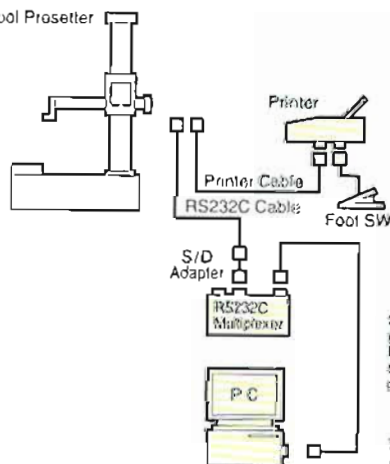
*Base (NMP-TRD) for automatic tool clamping unit is supplied as an optional accessory.

*In case of NMP Presetter with tool clamping unit, please inform us your Pull Stud Code No.

*NMP Presetter can not be mounted on the standard Tool Wagon. please use the special Tool Wagon for NMP Tool Presetter



NMP Tool Presetter



Each dimension shows for NMP-50N. (): NMP-40N

Caution : Counter balance inside is fixed for safety at shipping. Please remove the fixed screw when you use.

TOOL PRESETTER E238 **NEW**

NIKKEN



- High Precision / High Accuracy
- Ground granite base and column.
- Wide and well-visualized screen - 5.4" LCD monitor
Zoom in/out for X20/X40. of Actual Size.



Display of angular grid (1 degree increment) for inspection of Tool cutting edge

Display of reference circles for measurement of Nose Radius.

- Rapid and Accurate Measuring - Mechanism for switching between rapid positioning and fine adjustment.
- Exclusively designed for Multi-function Tool Measuring rather than just presetting the length and diameter.
 - Automatic Measurement (Automatic scanning for tool edge)
 - Display of angular grid (1 degree increment) for checking the tool cutting edge
 - Display of reference circle for checking nose radius.
 - Multiple calculation functions
o.g. calculation for, radius from 5 measured points, angle from 2 straight lines, or for the distance from 2 points.
- Tool Management System "TOOLIVE"

⚠ Sales area is limited. Please contact with us.

Item	Contents		E238-40	E238-50
Measuring range	X Axis : Diameter of Tool		0~φ280mm	0~φ280mm
	Z Axis : Length of Tool		0~380mm (100~480mm) ^{※1}	0~380mm (100~480mm) ^{※1}
Min. reading increment	Reading Method Min. reading	X Axis	Scale Counter 0.001mm (Radius) Radius/Diameter Chengable	
		Z Axis	Scale Counter 0.005mm	
CCD Camera			×20/×40 5.4" LCD Monitor	
Spindle Clamp			None (Standard) Tool Clamping unit ^{※2} is available as an option.	
Inter-changeable Spindle (other sizes available as optional extras)			NT40	NT50
Master Gauge			G40	G50
Reduction Sleeve (Option)			TN430 : NT40-NT30	TN540 : NT50-NT40
Interface.			RS232C (Optional accessory)	
Power supply			AC100 / 110V	

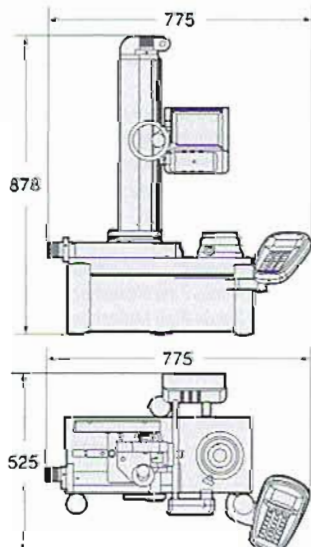
★※1 Extended Z axis of 100~480mm is available as an option. Please add "L" at the end of Code No. e.g. E238-50-L

★※2 Tool Clamping systems for 3LOCK Tooling and NC5 Tooling are also available. The code No. is e.g. E238-MBT50, E238-NC5-63.

★TOOLIVE software with interface function is only available in English Language. Minimum Computer Requirement : 486DX or above (Pentium 90 recommended), 8MB RAM (16MB recommended), 15 MB free space on HDD, Windows 95 or above, Mouse.



Tool clamping unit



Packaging box size: W800×H900×D600mm
Weight: 55Kg

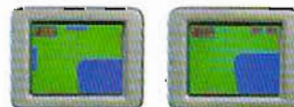
NEW E450 CCD Camera / Microscope (×40)

Dual function camera for : tool measuring, checking wear on the cutting edge, and inspection of the tool via the true image camera.



Packaging box size: W950×L995×D380mm
Weight: 90Kg

CCD Camera



- Measuring range
X : 400mm (in diameter)
Z : 500mm

Microscope



- Measuring unit
X : 0.001mm (in radius)
Z : 0.001mm

TOOL PRESETTER NTP300, 400, 500

NIKKEN

NTP

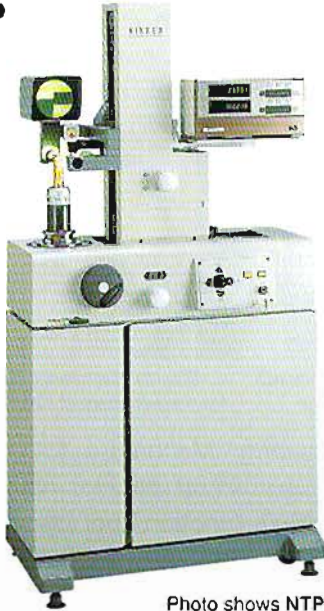


Photo shows NTP400DX-50

- Deluxe type Tool Presetter. Best to increase the productivity of expensive machining centre
- Large Measuring Range: Diameter: $\phi 300\sim 500$ / Length: 500mm, 600mm
- Opto-Fiber System Projector. Bright and least burning of bulb.
 - NTP300: $\phi 80 \times 10$
 - NTP400: $\phi 116 \times 10$ ($\phi 180 \times 20$ Option)
 - NTP500: $\phi 180 \times 20$
- Fast and smooth approach from a distance can be achieved with 2 speed motor.
- Pneumatic Tool Attaching Device ensures Safety and Sureness in Accuracy and Operation.
- High Precision Scale Counter is provided to both axes. (with new DX Counter, you can use Multi Functions such as Direct transmission of Compensation Value to NC, Memory for 2,000pcs., Print-out and so on.)

Explanation of the Code No.

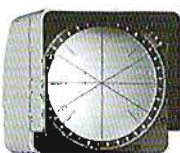
NTP400 XZ - 50 - PS6

- Pull Stud No (The Pull Stud of Master Gauge is ground after assembly in order to maintain the highest accuracy. Please specify the Pull Stud No. which you use most often.)
- Spindle Taper 30 : BT30
40 : BT40 Stud.)
50 : BT50
- Kind of Counter Unit DX : Multi-Functions
XZ : 2 Axes Display
- NTP300 Tool Presetter
- NTP400 Tool Presetter
- NTP500 Tool Presetter

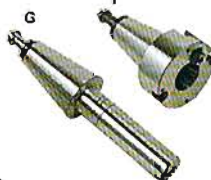
Item	Contents	NTP300XZ-50(40)	NTP400XZ-50(40)	NTP500XZ-50(40)
Measuring Range	X axis:Diameter of Tool Z axis:Length of Tool	D= 0~ $\phi 300$ mm L=50~ 500mm	D= 0~ $\phi 400$ mm L=50~ 500mm*	D= 0~ $\phi 500$ mm L=50~ 600mm
Min. Reading Unit	Reading Method Readable Unit	X axis	Digital Display 0.002mm(Diameter) or 0.001mm(Radius)	
		Z axis	Digital Display 0.001mm	
Min. Reading of Indicator		X axis	0.001mm	
		Z axis	0.01mm	
Spindle Taper		Select one from BT30/40/50 or IT40/50 (for NC5-46/63/85/100 is also available.)		
Master Gauge		$\phi 40 \times 150$ l of the selected shank is supplied as standard. e.g.) for BT50 Spindle, ISO50- $\phi 40 \times 150$ l is supplied.		
Power Supply	for Axis Driving and Projector	AC100V 50/60Hz 0.5KVA		AC200/220V 50/60Hz 1.2KVA
Air Pressure	for Tool Attaching Device	0.4~0.7MPa		
Net Weight and Packing		Net:300kg Gross:390kg Wooden Crate : 1220(W) \times 950(L) \times 1850(H)mm	Net:400kg Gross:480kg Wooden Crate : 800(W) \times 1200(L) \times 1900(H)mm	Net:700kg Gross:800kg Wooden Crate : 1800(W) \times 1400(L) \times 2400(H)mm
Standard Accessories		Motor Driving System*, Pneumatic Tool Attaching Device, Projector, Spindle Cleaner, Levelling Bolts		
Optional Accessories	DX Counter Spec.	Multi Functions Counter Unit (Memory Capacity:Tool 2,000pcs., RS-232C 2 Ports, Printer)		
		Reduction Sleeve, Extra Master Gauge, Special Color, RS-232C(for Interface with PC), Remote Control Cable, TMS System, Tool ID, Projector($\phi 180 \times 20$)		

* 100~600mm Spec. is also available as an option. *Ceramic Spindle is also available. *Changeable Sleeves for NC5 are also available * *1 Only for NTP400, NTP500

X20 Projector (Option)
 $\phi 180$ mm Screen with Size Scale



Reduction Sleeve
Master Gauge

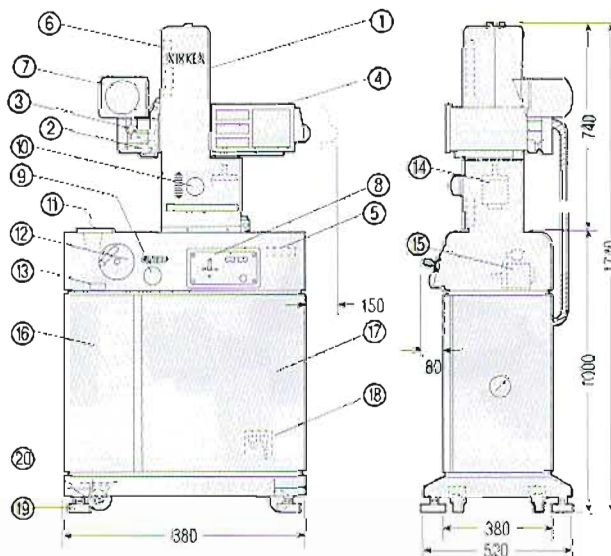


Reduction Sleeve

Code No.	OD	ID
T430	NT 40 - NT 30	
T530	NT 50 - NT 30	
T540	NT 50 - NT 40	

Master Gauge with Pull Stud

Code No.	TAPER	ϕD	L
G30	NT 30 - $\phi 30$	-150mm	
G40	NT 40 - $\phi 40$	-150mm	
G50	NT 50 - $\phi 40$	-150mm	



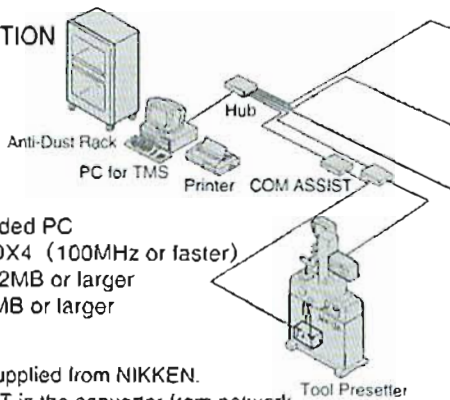
- 1 Z-axis Square Column
- 2 X-axis Indicator
- 3 Z-axis Indicator
- 4 Digital Display Unit
- 5 X-axis Scale
- 6 Z-axis Scale
- 7 Projector
- 8 Operation Panel
- 9 X-axis Fine Movement Knob
- 10 Z-axis Fine Movement Knob
- 11 Spindle
- 12 Spindle Rotating Handwheel
- 13 Spindle Fixing Knob
- 14 Z-axis Vertical Movement Motor
- 15 X-axis Longitudinal Movement Motor
- 16 Pneumatic Cylinder Housing
- 17 Stocker Door
- 18 Connections of Power Supply and Air Pipe
- 19 Levelling Bolt
- 20 Caster

TMS SYSTEM for Windows

NEW

NIKKEN

SYSTEM CONFIGURATION

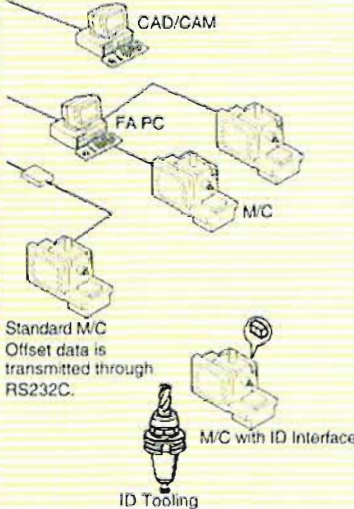


Recommended PC
 CPU : 486DX4 (100MHz or faster)
 Memory : 32MB or larger
 HDD : 100MB or larger

can be supplied from NIKKEN.
 COM ASSIST is the converter from network I/F to RS232C I/F.

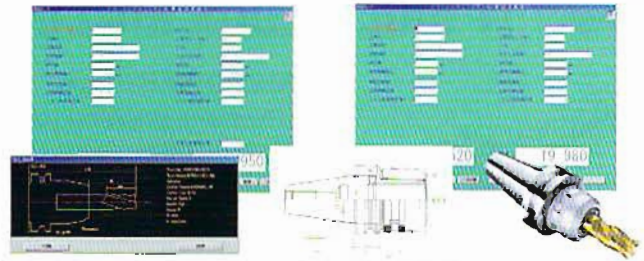
Tool ID I/F is supplied as an option. PC, Hub, Printer and Anti-Dust Rack are supplied as an option. The system configuration differs depending on your application. Please contact with us for more detail.

Application



Measuring Mode

The combination drawing of tooling and cutter, CAD drawing and photo can be confirmed before presetting the tool. The offset data can be calculated automatically according to pre-described formula as soon as the tool is measured. Read/ Write/ Initialize to ID, Label printing of Offset data, Cutter Inventory and some restriction for presetting (MAX. dia. or length checking) etc. can be done.



ID Mode

7 kinds of ID protocols are selected. (BALLUFF, OMRON etc.)

M/C Mode

Number of M/C : 1,000 or more M/Cs

Layout Mode

MAX. Tool Number per 1 Layout : 200 Tools
 Number of Layout : 10,000 or more Layouts
 Tool layout can be written by searching the registered tool data. Search/ Copy/ Merge of Layout Data, Tool List Printing and Output of Offset Data with G10 Format etc. can be done.



Tool Mode

Number of Tool : 20,000 or more Tools
 Tool data can be written by searching the registered cutter data. Copy/ Search of Tool Data and Automatic Cutting Condition Generation etc. can be done.

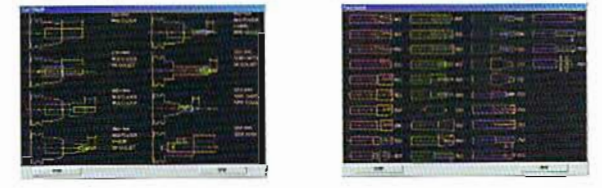


Cutter Mode

Number of Cutter : 20,000 or more Cutters
 Copy/ Search of Cutter Data and Cutter inventory etc. can be done.

Tool Group Mode

Number of Tool drawings : 80
 Number of Cutter Drawings : 99
 Number of combination drawings : 1,200
 The formula to calculate the offset data can be registered for the tool group.



Cutting Condition Mode

Offset Data Label Print

Label : A.ONE Computer Label 28105 (84×42mm)

Auto. Layout Generation from NC Program

Tool Life Management

Statistics Information

Utilities

means the optional function.

* OS : Windows NT4.0, Windows 98, Se. 2000, XP
 * CD-ROM drive, Mouse and Network Board have to be installed on PC.
 * NTP300, 400 and 500 can be connected with TMS System.

Windows NT4.0 and Windows 98, Se. 2000, XP are registered trade mark of Micro Soft.

