KOMA

COMPLETE TOOL PRESETTER GUIDE

KOMA PRECISION

For over thirty years Koma Precision has been the foremost source for the finest the world has to offer in machine tool Productivity Innovation.

With over 30,000 rotary table installations, Koma is the largest distributor of Tsudakoma NC rotary tables and indexers in the world. With over 12,000 angle heads and live tools installed, Koma is the world's largest supplier for Alberti - the originator and the foremost innovator of productivity tooling.

P368M

Tool Height Gauge

VERSATILE MEASURING TOOL

Ideal for accurate presetting right next to the machine, the P368M is the first step towards tool presetting. This is a great add-on for those who already have a presetter in their tool room. Easily set tool height and diameter in the production environment with the P368M.

PRECISE DESIGN

The P368M is constructed with a solid base and provides smooth, accurate movement during the tool setting process. Designed to capture height and diameter quickly and accurately, the P368M is built with easy to read LCD displays for each axis. The P368M has the ability to store 4 different machine origins.

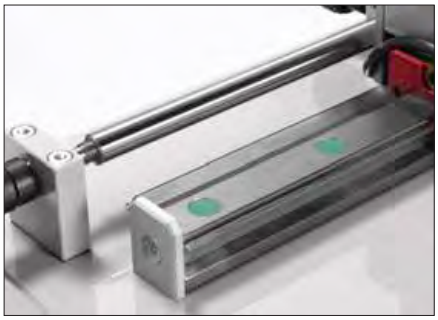
TOOL SLEEVES

Tool sleeves are created out of a solid block of hardened steel and are precision ground to the tightest tolerances. Easy to change tool sleeves allow the P368M to set any type of tooling quickly and accurately. Using precision ground tool sleeves, we can guarantee spindle runout ensuring the highest quality of measurements.

LINEAR GUIDES

The P368 uses oversized linear guides with preloaded recirculating bearings, giving smooth easy movement and precise measurements.

FEATURES



MODEL	P368.3	P368.4	P368. MEGA
MAX. DIAMETER	250 mm	250 mm	600 mm
MAX. HEIGHT	300 mm	400 mm	600 mm
RESOLUTION	0.01 mm	0.01 mm	0.01 mm
PRECISION	0.02 mm	0.02 mm	0.02 mm
REPEATABILITY	0.01 mm	0.01 mm	0.01 mm
MACHINE ORIGINS	4 ORIGINS CAN BE MEMORIZED		
X AXIS GUIDES	LINEAR GUIDES WITH PRELOADED RE-CIRCULATING BEARING SLIDES		
Z AXIS GUIDES	HIGH RIGIDITY DOUBLE LINEAR RAILS		
MEASUREMENT	HIGH PRECISION MAGNETIC STRIP		
TOOL SLEEVES	INTERCHANGABLE WITHOUT ADAPTERS (ISO, BT, HSK, VDI, SHAFT ETC.)		
POWER	BATTERIES		
DIMENSIONS	450x200x570 mm	450x200x690 mm	600x200x930 mm
WEIGHT	27 kg 59.5 lb	28.5 kg 62.8 lb	42 kg 92.5 lb

PRECISION WHERE YOU NEED IT MOST

The solid stable steel base and battery-operated display allows the P368M to be placed anywhere in the manufacturing environment. The P368M allows precise tool setting without the hassle of electrics and air.

LARTH

Basic Measurement Bench Model

LARTH CONSTRUCTION

- Bench Model
- Natural Granite Base & Column
- Stainless Steel Mechanical Elements
- Dimensions 512mm L x 406mm D x 827mm H
- Weight 45 Kg / 99 lbs

AXIS MOVEMENT

- X Axis (Radial) = 130mm / 5.188in
- Z Axis = 360mm / 14.17in
- Resolution X & Z Axis - 1 µm
- Manual Rapid & Fine Adjustment Movement (Zero Backlash)

SPINDLE

- Fixed or Interchangeable Rotating Spindles
- ISO / HSK / CAPTO / VDI / Interchangeable Rotating Spindles Available
- ISO 40, 50 Fixed Rotating Spindle Holder & Adapters Available
- Manual Mechanical Brake
- Concentricity - 4 µm
- Maximum Tool Weight 30kg / 66 lbs.

OPERATING SYSTEM

- 5.7" Color LCD Touchscreen Display / Operator Interface / 640 x 480 Resolution
- Connectivity - USB / RS-232
- Printer Support (optional)
- Capable of Storing 9 Different Machine Specifications
- Capable of Storing 9 Different Tool Sets (99 tools per set)

CAPABILITIES

- Measure - Full Screen Auto Targeting
- Measure - X&Z Axis Focusing Control Bar
- Measure - Automatic Radius & Angle Computing Cycle
- Measure - Radius/Diameter, MM/Inches, Absolute/Incremental Modes
- Measure radial and axial runout

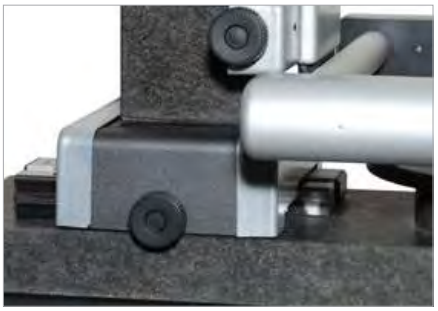
VISION SYSTEM

- Telecentric Lens / C-MOS Image Sensor with 0.001mm resolution / 20x Magnification

DPP SOFTWARE (Optional)

- Tool List Management / Tool Sets & Post Processor Universal Generator
- CNC Machine Origin Management
- Free software upgrades

FEATURES



NATURAL GRANITE

Our tool presetters utilize natural granite for the column and base to insure the best thermal stability. This solid base construction, together with excellence in manufacturing, all but eliminates the need for re-alignments and guarantees proper functioning over the life of the unit.

ERGONOMICALLY DESIGNED CONTROLS

Ergonomically designed micrometric hand wheels for X and Z axes allows for precise and smooth fixed-target and auto adjustments. The operator can move the axis simultaneously or independently.

PROPRIETARY VISION SYSTEM

High resolution camera system utilizing our realized technology. The telecentric lens with C-MOS sensor produce the most accurate lighting system available.

Integrated LCD touchscreen / vision screen for quick and easy operation.

OPTIONS

SPINDLE HOLDER OPTIONS

Fixedorinterchangeablerotatingspindle holder available.

VERSIONS
-ISO / BT 40, 50 / HSK / CAPTO / VDI Interchangeable Rotating Spindle
-ISO 40, 50 Fixed Rotating Spindle Holder & Adapters Available.

OPTIONAL DATA POST PROCESSING SOFTWARE (DPP)

User friendly and flexible software for applications that require precision measurement. DPP software allows you to upgrade BIOS, manage tool tables and set machine tool origins, to create files to send to the NC Controller.

E346

Measure & Inspect, Bench Model

FEATURES

E346 CONSTRUCTION

- Bench Model
- Natural Granite Base & Column
- Stainless Steel Mechanical Elements
- Dimensions 598mm L x 408mm D x 901mm H
- Weight 70 Kg / 155 lbs

AXIS MOVEMENT

- X Axis (Radial) = 180mm / 7.09in
- X Axis (Diameter) = 360mm / 14.2in
- Z Axis = 460mm / 18.11in
- Resolution X & Z Axis - 1 µm
- Manual Rapid & Fine Adjustment Movement (Zero Backlash)

SPINDLE

- Fixed or Interchangeable Rotating Spindles
- ISO / HSK / CAPTO / VDI / Interchangeable Rotating Spindles Available
- ISO 40, 50 Fixed Rotating Spindle Holder & Adapters Available
- Manual Mechanical Brake
- Concentricity 2 µm
- Maximum Tool Weight 30kg / 66 lbs.

OPERATING SYSTEM

- 9" Color TFT Touchscreen Display / Operator Interface / 640 x 480 Resolution
- Connectivity - USB / RS-232
- Printer Support
- Capable of Storing 9 Different Machine Specifications
- Capable of Storing 9 Different Tool Sets (99 tools per set)

CAPABILITIES

- Measure - Full Screen Auto Targeting
- Measure - X&Z Axis Focusing Control Bar
- Measure - Automatic Radius & Angle Computing Cycle
- Measure - Radius/Diameter, MM/Inches, Absolute/Incremental Modes
- Measure radial and axial runout

VISION SYSTEM

- Telecentric Lens / C-MOS Image Sensor with 0.001mm resolution / 25x Magnification
- Cutting Edge Inspection for wear and tear
- Diascopic Illuminator for Greater Contrast and Enhanced Clarity for Geometrical Profiling when Measuring
- Episcopic Illuminator to Best Expose Tool Surfaces for Inspection

TD346 SOFTWARE (Standard)

- Tool List Management / Tool Sets & Post Processor Universal Generator
- 50 CNC machine-specific postprocessors
- User friendly backup
- Free Software Upgrades

E346 shown with optional stand and printer.

PROPRIETARY VISION SYSTEM

High resolution camera system utilizing our realized technology. The telecentric lens with C-MOS sensor produce the most accurate lighting system available.

ERGONOMICALLY DESIGNED CONTROLS

Ergonomically designed micrometric hand wheels for X and Z axes allows for precise and smooth fixed-target and auto adjustments. The operator can move the axis simultaneously or independently.

SPINDLE HOLDER OPTIONS

Interchangeable revolving spindle with mechanical rotation brake. Two preloaded ball cages allow a concentricity accuracy within 2 µm.

VERSIONS

- **ISO / BT 40, 50 / HSK / CAPTO / VDI Interchangeable Rotating Spindle**
- **ISO 40, 50 Fixed Rotating Spindle Holder & Adapters Available.**

NATURAL GRANITE

All tool presetters utilize natural granite for the column and base to insure the best thermal stability. This solid base construction, together with excellence in manufacturing, all but eliminates the need for re-alignments and guarantees proper functioning over the life of the unit.

SPINDLE ROTATION BRAKE

Mechanical spindle rotation brake: acting clockwise on the spindle-brake knob, it will be achieve a clutch of the spindle-holder.

TOOL DATA 346 SOFTWARE

Td346 allows to generate the corrector files, in more than 50 CNC machine-specific postprocessors by the universal post-processor creator. User friendly backup and restore management of machine origins and tool-lists.

UNIKO

Measure & Inspect, Bench Model

FEATURES

UNIKO CONSTRUCTION

- Thermally stabilized steel structure
- Tempered steel, high precision sleeve with reference notch
- Dimensions= **44**: 1,080mm L x 626mm D x 950mm H
- **45**: 1,080mm L x 626mm D x 1,050mm H
- **46**: 1,080mm L x 626mm D x 1,150mm H
- Weight= **44**: 136Kg (299 lbs.) / **45**: 142Kg (313 lbs.) / **46**: 148Kg (326 lbs.)

AXIS MOVEMENT

- X Axis (Diameter) = 400mm / 15.75in
- Z Axis = **44**: 400mm (15.7 in.) / **45**: 500mm (19.6 in.) / **46**: 600mm (23.6 in.)
- Resolution X & Z Axis - 1 µm
- Mechanical axis lock

SPINDLE

- Interchangeable tool sleeve
- Manual tool sleeve rotation brake
- Fine micrometric adjustments
- Glass optical scales, SP class precision linear guides
- Concentricity - 2 µm
- Maximum tool weight 40kg / 88 lbs.

OPERATING SYSTEM

- Vertical 19" Monitor
- CVS Smart, user friendly, multilingual software
- Windows Operating System with data back-up system
- Storage of up to 200 machine origins and 40,000 tools
- 4 port USB hub
- 1 Network LAN port

CAPABILITIES

- Measure - Line
- Measure - Angle
- Measure - Radius
- Measure - Protractor
- Measure - Tool Profile
- Measure - Set Radius
- Measurements of GHOST, multitool & angular heads available with optional Tool Pack software

VISION SYSTEM

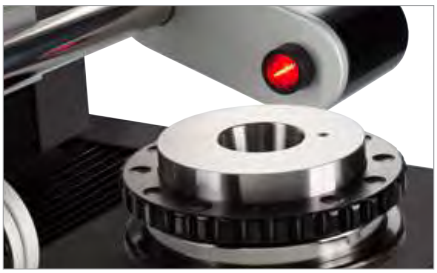
- HD Camera
- 40x Magnification
- 5 x 5 field of view

OPTIONS

- Cool light LED ring illuminator
- Label printer
- Presetter support table C231
- Tool Pack additional software package

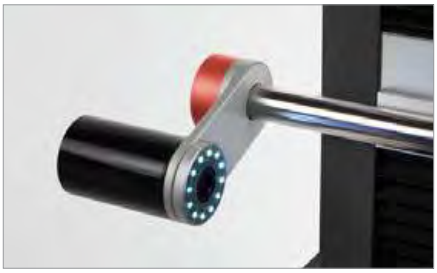
USER-FRIENDLY INTERFACE

Entering the world of tool presetting is made easy with the Uniko. Fully equipped and easy to use, the Uniko offers a user-friendly intuitive interface, allowing for easy setting of tools and inspection. Easily check tool geometry using one of the auto-measuring functions, and quickly send tool offsets direct to CNC controls using the post-processor.



CONSTANT GEOMETRY TECHNOLOGY

Material choice is at the heart of Constant Geometry Technology. Using only like materials with an identical thermal expansion coefficient, we can guarantee constant presetter geometry in all working conditions.



ERGONOMICALLY DESIGNED CONTROLS

With the operator in mind, the Uniko presetter was designed with an ergonomic micrometric hand wheel allowing for easy fine adjustment of the presetter's optics. A "zero gravity" support column allows smooth, effortless movement of the camera optics in both X and Z. Easy to use interchangeable tool pots allows the presetter to be quickly switched to accommodate any type of tooling.

SOFTWARE

Simple and intuitive, the CVS Smart software is easy to use. All functions are easy to find and shown using simple, graphical icons. It has never been easier or faster to set your tooling. Create tool lists and generate tool offsets in minutes with the CVS Smart software.

OVERSIZED HD DISPLAY

Easy to use software combined with a 19" monitor provides the operator with full control. Easily select any of the presetters measuring options with one click while still viewing the edge of the cutting tool.

SLIDEWAYS / OPTICAL SCALES

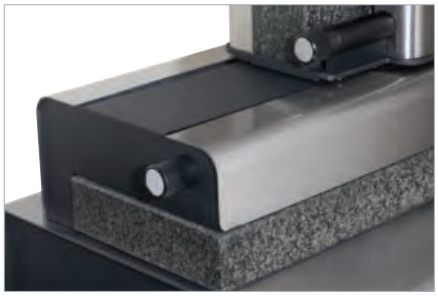
The Uniko is built with dual SP Precision guides and preloaded recirculating bearings mounted to a stabilized steel base ground to 2 microns of planarity. 1-micron glass optical scales are used to ensure the highest accuracy of tool measurements.

SETHY SIX

Measure & Inspect, Bench Model

MANUAL AXES MOVEMENT

Axis un-clamping by means of a single pneumatic control system.



ERGONOMICALLY DESIGNED CONTROLS

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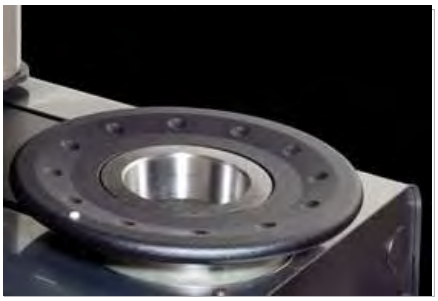


PRECISION SPINDLE SYSTEM

All precision spindle systems are fully interchangeable. The one-piece cartridge eliminates the need for adapters and the errors associated with their use.

NATURAL GRANITE

Our tool presetters utilize natural granite for the column and base to insure the best thermal stability. This solid base construction, together with excellence in manufacturing, all but eliminates the need for re-alignments and guarantees proper functioning over the life of the unit.

SETHY SIX CONSTRUCTION

Bench Model
Natural Granite Base & Column
Stainless Steel Mechanical Elements
Dimensions 1070 mm L x 595mm D x 1140 mm H
Weight 110 Kg / 242 lbs

AXIS MOVEMENT

X Axis (Radial) = 200mm / 7.874 in
NEW Increased Measuring Range Z Axis = 600mm / 23.62 in
Resolution X & Z Axis - 1 µm
Double Pneumatic Axis Clamping
Manual Rapid & Fine Adjustment Movement

SPINDLE

Interchangeable ISO40 or 50 for Different Tapers
Optional Interchangeable Holders Available - HSK, VDI, Capto
Manual Mechanical Brakes
Concentricity - 4µm
Maximum Tool Weight 40kg / 88 lbs.

NEW OPERATING SYSTEM

NEW 15" TFT Touch Screen
INTEL®
SSD Data Storge
Connectivity - (2) RS-232 Printer / PC
LINUX
Printer Support
Capable of Storing 9,999 Different Machine Specifications
Capable of Storing 1M Different Tool Specifications

CAPABILITIES

Measure - Full Screen Auto Targeting
Optical Autofocus to determine largest and widest X + Z dimensions
Measure radial and axial runout
Measure - X&Z Axis Focusing Control Bar
Measure - Automatic Radius & Angle Computing Cycle
Measure - Radius/Diameter, MM/Inches, Absolute/Incremental Modes
Measure - Analog & Digital Visualization
Measure - Tool Profile Photograph - Difference Between Cutting Edges
Inspection - 4 Color Tool Inspection

VISION SYSTEM

Telecentric Lens for Accurate Dimensional Measurements / C-MOS Image Sensor with 0.001mm resolution
Diascopic Illuminator for Greater Contrast and Enhanced Clarity for Geometrical Profiling when Measuring
Episcopic Illuminator to Best Expose Tool Surfaces for Inspection
Cutting Edge Inspection for wear and tear
30x Magnification | 15" TFT LCD Touch Screen

TD SIX SOFTWARE

Tool List Management / Tool Sets & Post Processor Universal Generator
CNC Machine Origin Management
RFID Tool Detection Designed for Systems Like Balluff, etc.
Free software upgrades

SLIDEWAYS / OPTICAL SCALES

Custom designed optical scales incorporated with a double rail system for the X axis movement with 3 double recirculating ball bearing sliding block grant the highest degree of accuracy. Both X & Z axes have a resolution of 1 µm.

PROPRIETARY VISION SYSTEM

High resolution camera system utilizing our realized technology. The double lit, variable LED arrangement in combination with a C-MOS sensor and telecentric lens produces the most accurate lighting system available.

NEW

USER FRIENDLY INTERFACE

ergonomic design combined with a 15" TFT LCD Touch Screen. This system provides full operator control and selection of options and functions via an intuitive icon system allowing operational and functional simplicity that is second to none..

POWERFUL COMPUTING SYSTEM

Tool Data Management

This powerful new operating system utilizing a Linux OS, features state-of-the-art tool measuring, inspection and data management solutions. Koma presetters increase efficiency, reduce down time and are supported by extensive applications, technical support, and a global service network.

LEADER plus

Measure & Inspect, Bench Model

LEADER plus CONSTRUCTION

- Thermally stabilized steel structure
- Tempered steel, high precision sleeve with calibration spheres
- Dimensions= **44**: 1,080mm L x 626mm D x 950mm H
  45: 1,080mm L x 626mm D x 1,050mm H
  46: 1,080mm L x 626mm D x 1,150mm H
- Weight= **44**: 136Kg (299 lbs.) / **45**: 142Kg (313 lbs.) / **46**: 148Kg (326 lbs.)

AXIS MOVEMENT

- X Axis (Diameter) = 400mm / 15.75in
- Z Axis = **44**: 400mm (15.7 in.) / **45**: 500mm (19.6 in.) / **46**: 600mm (23.6 in.)
- Resolution X & Z Axis - 1 µm
- Pneumatic axis lock

SPINDLE

- Interchangeable tool sleeve
- Tool sleeve rotation brake
- Fine micrometric adjustments
- Glass optical scales, SP class precision linear guides
- Concentricity - 2 µm
- Maximum Tool Weight 40kg / 88 lbs.

OPERATING SYSTEM

- Vertical Full HD 22" Monitor
- CVS, user friendly, multilingual software
- Windows Operating System with data back-up system
- Storage of up to 200 machine origins and 40,000 tools
- 7 port USB hub
- 1 Network LAN port

CAPABILITIES

- Measure - Line
- Measure - Angle/Max. Angle
- Measure - Radius/Max. Radius
- Measure - Protractor
- Measure - Tool Profile
- Measure - Set Radius
- Measure - Cog
- Meaure - Multicutter
- Measurements of GHOST, Multitool & Angular heads with standard Tool Pack software

VISION SYSTEM

- HD Camera
- 40x Magnification
- 7 x 7 field of view
- Cool light LED ring illuminator

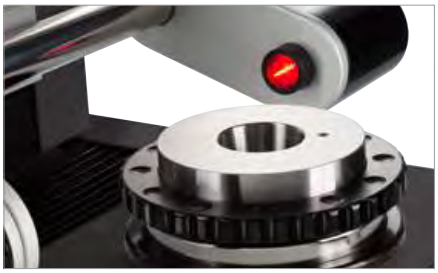
OPTIONS

- Label Printer
- Presetter support table C231
- Tool locking mechanism interlock system
- DXF Software - Import/Export of tool profiles
- Other connection systems such as Balluff®

FEATURES

HIGH PERFORMANCE

Powerful and easy to use, the Leader Plus Presetter is a sophisticated machine for tool analysis. With many advanced features and the ability to manage your tooling library, the Leader Plus presetter is the ultimate in tool presetting.



CONSTANT GEOMETRY TECHNOLOGY

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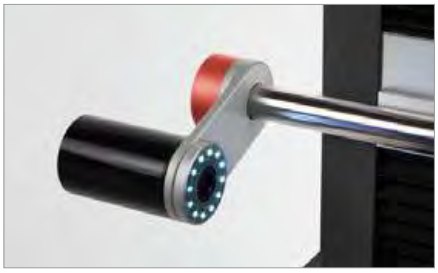


ERGONOMICALLY DESIGNED CONTROLS

With the operator in mind, the Leader Plus presetter was designed with an ergonomic micrometric hand wheel allowing for easy fine adjustment of the presetter's optics. A "zero gravity" support column allows smooth, effortless movement of the camera optics in both X and Z. Easy to use interchangeable tool pots allows the presetter to be quickly switched to accommodate any type of tooling.

SOFTWARE

Simple and intuitive, the CVS software is easy to use. All functions are easy to find and shown using simple, graphical icons. It's never been easier or faster to set your tooling; create tool lists and tool offset files in minutes. The Leader Plus allows up to 200 machine origins and tool lists up to 200 tools. The optional DXF function allows the operator to quickly compare tool profiles or create and export a tool profile. The easy to use post-processing system allows the presetter to communicate with over 40 CNC control types.

OVERSIZED HD DISPLAY

Easy to use software combined with a 22" HD monitor provides the operator with full control. Easily select any of the presetter's measuring options with one click while still viewing the edge of the cutting tool.

SLIDEWAYS / OPTICAL SCALES

The Leader Plus is built with dual SP Precision guides and preloaded recirculating bearings mounted to a stabilized steel base ground to 2 microns of planarity. 1-micron glass optical scales are used to ensure the highest accuracy of tool measurements.

HATHOR SIX

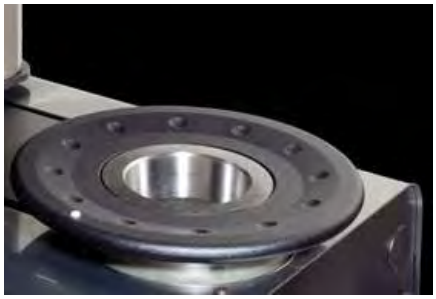
Enhanced Measure & Inspect, Floor Model

MANUAL AXES MOVEMENT

Axis un-clamping by means of a single pneumatic control system.

ERGONOMICALLY DESIGNED CONTROLS

Ergonomically designed micrometric hand wheels for X and Z axes allows for precise and smooth fixed-target and auto adjustments. The operator can move the axis simultaneously or independently.



PRECISION SPINDLE SYSTEM

All precision spindle systems are fully interchangeable. The one-piece cartridge eliminates the need for adapters and the errors associated with their use.

NATURAL GRANITE

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HATHOR SIX CONSTRUCTION

- Floor Model
- Natural Granite Base & Column
- Stainless Steel Mechanical Elements
- Dimensions 1,240 mm L x 558mm D x 1,840mm H
- Weight 135 Kg / 297 lbs

AXIS MOVEMENT

- X Axis (Radial) = 200mm / 7.874 in
- **NEW** Increased Measuring Range Z Axis = 600mm / 23.62 in
- Resolution X & Z Axis - 1 µm
- Double Pneumatic Axis Clamping
- Manual Rapid & Fine Adjustment Movement

SPINDLE

- Interchangeable ISO40 or 50 for Different Tapers
- Optional Interchangeable Holders Available - HSK, VDI, Capto
- Pneumatic Mechanical Brakes with Radial Compensation of Clamping Force
- Concentricity - 2µm
- Maximum Tool Weight 40kg / 88 lbs.
- Tool Clamping - Automatic Pull-Stud Recognition

NEW OPERATING SYSTEM

- **NEW** 15" TFT Touch Screen
- INTEL®
- SSD Data Storge
- Connectivity - (2) RS-232 Printer / PC
- LINUX
- Printer Support
- Capable of Storing 9,999 Different Machine Specifications
- Capable of Storing 1M Different Tool Specifications

CAPABILITIES

- Measure - Full Screen Auto Targeting
- Measure - X&Z Axis Focusing Control Bar
- Measure - Automatic Radius & Angle Computing Cycle
- Measure - Radius/Diameter, MM/Inches, Absolute/Incremental Modes
- Measure - Analog & Digital Visualization
- Measure - Tool Profile Photograph - Difference Between Cutting Edges
- Optical Autofocus to determine largest and widest X + Z dimensions
- Measure radial and axial runout
- Inspection - 4 Color Tool Inspection

VISION SYSTEM

- Telecentric Lens for Accurate Dimensional Measurements / C-MOS Image Sensor with 0.001mm resolution
- Diascopic Illuminator for Greater Contrast and Enhanced Clarity for Geometrical Profiling when Measuring
- Episcopic Illuminator to Best Expose Tool Surfaces for Inspection
- Cutting Edge Inspection for wear and tear
- 10.4" Color LCD Display Screen
- 30x Magnification | 15" TFT LCD Touch Screen

TD SIX SOFTWARE

- Tool List Management / Tool Sets & Post Processor Universal Generator
- CNC Machine Origin Management
- RFID Tool Detection Designed for Systems Like Balluff, etc.
- Free software upgrades

SLIDEWAYS / OPTICAL SCALES

Custom designed optical scales incorporated with a double rail system for the X axis movement with 3 double recirculating ball bearing sliding block grant the highest degree of accuracy. Both X & Z axes have a resolution of 1 µm.

PROPRIETARY VISION SYSTEM

High resolution camera system utilizing our realized technology. The double lit, variable LED arrangement in combination with a C-MOS sensor and telecentric lens produces the most accurate lighting system available.

NEW

NEW

USER FRIENDLY INTERFACE

ergonomic design combined with a 15" TFT LCD Touch Screen. This system provides full operator control and selection of options and functions via an intuitive icon system allowing operational and functional simplicity that is second to none..

POWERFUL COMPUTING SYSTEM

Tool Data Management

This powerful new operating system utilizing a Linux OS, features state-of-the-art tool measuring, inspection and data management solutions. Koma presetters increase efficiency, reduce down time and are supported by extensive applications, technical support, and a global service network.

HATHOR SIX A

Enhanced Measure & Inspect, Floor Model

HATHOR SIX A CONSTRUCTION

- Floor Model
- Natural Granite Base & Column
- Stainless Steel Mechanical Elements
- Dimensions 1,240 mm L x 558mm D x 1,840mm H
- Weight 190 Kg / 418 lbs

AXIS MOVEMENT

- X Axis (Radial) = 200mm / 7.874 in
- **NEW** Increased Measuring Range Z Axis = 600mm / 23.62 in
- Resolution X & Z Axis - 1 µm
- Double Pneumatic Axis Clamping
- Manual Rapid & Fine Adjustment Movement

SPINDLE

- Interchangeable ISO40 or 50 for Different Tapers
- Optional Interchangeable Holders Available - HSK, VDI, Capto
- Motor providing automatic rotation of the spindle with pneumatic engagement or the motion transmission for zero backlash (patented system)
- Peripheral speed of the spindle rotation is calculated and controlled based on the diameter of the current tool being measured
- Pneumatic Mechanical Brakes with Radial Compensation of Clamping Force
- Concentricity - 2µm
- Maximum Tool Weight 40kg / 88 lbs.
- Tool Clamping - Automatic Pull-Stud Recognition

NEW OPERATING SYSTEM

- **NEW** 15" TFT Touch Screen
- INTEL®
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- Connectivity - (2) RS-232 Printer / PC
- LINUX
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- Diascopic Illuminator for Greater Contrast and Enhanced Clarity for Geometrical Profiling when Measuring
- Episcopic Illuminator to Best Expose Tool Surfaces for Inspection
- Cutting Edge Inspection for wear and tear
- 10.4" Color LCD Display Screen
- 30x Magnification | 15" TFT LCD Touch Screen

TD SIX SOFTWARE

- Tool List Management / Tool Sets & Post Processor Universal Generator
- CNC Machine Origin Management
- RFID Tool Detection Designed for Systems Like Balluff, etc.
- Free software upgrades

Autofocus

Autofocus function: all new operating mode and capability that allows the machine to measure the toolsautomatically, without operator presence.

Possibility to acquire X and Z values with automatic recognition of the cutting edge & set the measuring priority for X or Z axis. Absolute maximum measurement automatic searching with complete revolution of the spindle.

Software displays the measuring progression during the automatic acquisition cycle of the cutting edge by circular percentage loader.

PERFORMANCE

Advanced Measure & Inspect, Floor Model

PERFORMANCE CONSTRUCTION

- Thermally stabilized steel structure
- Tempered steel, high precision sleeve with calibration spheres
- Integrated support bench
- Tempered steel interchangeable tool holders with a ±2µ maximum run-out.

AXIS MOVEMENT

- X Axis (Diameter) = 400mm / 15.75in
- Z Axis = **44**: 400mm (15.7 in.) / **45**: 500mm (19.6 in.) / **46**: 600mm (23.6 in.)
- Pneumatic axis locking
- Air - Max 8 bar

SPINDLE

- Interchangeable tool sleeves
- Tool sleeve rotation brake
- Fine micrometric adjustments
- Glass optical scales, SP-class precision linear guides
- Tool locking mechanism interlock system

OPERATING SYSTEM

- Vertical Full HD 24" Monitor
- CVS, user friendly, multilingual software
- Windows Operating System with data back-up system
- Storage of up to 200 machine origins and 40,000 tools
- 7 port USB hub
- 1 Network LAN port
- Keyboard, mouse and label printer included with adjustable support tray
- CVS Software includes 40 post-processing templates
- Ability to create work groups with dedicated tools for specific machining processes

CAPABILITIES

- ID Image for each machine origin
- Fixed/Mobile Axis
- Area of Interest (A.O.I.)
- Opposite tool measurement
- Countersink tool measurement
- Real-view tool inspection
- Geometric measurement functions
- Multicutter measurement
- Ghost function, max profile of tool is measured when rotated
- DXF Import/Export

VISION SYSTEM

- HD C-Mos sensor camera with telecentric lenses
- 40x Magnification
- 7 x 7 field of view
- Cool light LED ring illuminator with light intensity regulation

DIMENSIONS

Model	44	45	46	65	66	68
Max ø mm	400	400	400	600	600	600
Height mm	400	500	600	500	600	800
Dimensions (w,d,h) mm	1167x600x1757	1167x600x1857	1167x600x1957	1267x600x1857	1267x600x1957	1267x600x1957
Net Weight kg(lb.)	260 (573)	265 (584)	270 (595)	295 (650)	300 (661)	310 (683)

FEATURES

HIGH PERFORMANCE

Powerful and easy to use, the Performance presetter is a sophisticated measuring machine for tool analysis. With many advanced features and the ability to manage your tooling library, the Performance presetter is the ultimate in tool presetting.

CONSTANT GEOMETRY TECHNOLOGY

Material choice is at the heart of constant geometry technology. Using only like materials with identical thermal expansion coefficients, we can guarantee constant presetter geometry in all working conditions.

ERGONOMICALLY DESIGNED CONTROLS

With the operator in mind, the Performance presetter was designed with an ergonomic micrometric hand wheel allowing for easy fine adjustment of the presetter's optics. A "zero gravity" support column allows smooth, effortless movement of the camera optics in both X and Z. Easy to use interchangeable tool pots allow the presetter to be quickly switched to accommodate any type of tooling. The full keyboard and mouse rest on an adjustable tray allowing any operator to quickly adjust for height.

SOFTWARE

Simple and intuitive, the CVS software is easy to use. All functions are easy to find and shown using simple, graphical icons. It's never been easier or faster to set your tooling; create tool lists and tool offset files in minutes. The Performance allows up to 200 machine origins and tool lists up to 200 tools. The new DXF function allows the operator to quickly compare tool profiles or create and export a tool profile. The easy to use post processing system allows the presetter to communicate with over 40 CNC control types.

VIEWING SYSTEM

Easy to use software combined with a full 24" HD monitor provides the operator with full control. Easily select any of the presetters measuring options with one click, while still viewing the edge of the cutting tool. The telecentric lenses on the HD cameras provide a full field of vision.

SLIDEWAYS / OPTICAL SCALES

The Performance is built with dual SP Precision guides and preloaded recirculating bearings mounted to a stabilized steel base, ground to 2 microns of planarity. 1-micron glass optical scales are used to ensure the highest accuracy of tool measurements.

TOOL HOLDERS

High precision, interchangeable spindle pots allow a guaranteed maximum of ±2 microns of run-out. A built-in calibration sphere eliminates the need for an extra calibration gauge, and allows for fast and precise setup.

E46L

Advanced Measure & Inspect, Floor Model

www.komaprecision.com • info@komaprecision.com • 1-800-249-5662

FEATURES

E46L CONSTRUCTION

- Integrated Stand with Natural Granite Base & Column
- Stainless Steel Mechanical Elements
- Dimensions 1,282mm L x 672mm D x 1,874mm H
- Weight 295Kg / 650 lbs.

AXIS MOVEMENT

- X Axis (Radial) = 200mm / 7.87in
- X Axis (Diameter) = 400mm / 15.75in
- Z Axis = 600mm / 23.62in
- Resolution X & Z Axis - 1 µm
- Manual Rapid & Fine Adjustment Movement (Zero Backlash)

SPINDLE

- Interchangeable Rotating Spindles
- Pneumatic Mechanical Brake with Radial Compensation of Clamping Force
- Tool Clamping - Automatic Pull-Stud Recognition
- Spindle-holder identification system (SP-ID)
- Concentricity - 2 µm
- Maximum Tool Weight 40kg / 88 lbs.

OPERATING SYSTEM

- Full HD LCD 22" Color Touchscreen Monitor
- Intel I3 Quad Core Processor
- UBUNTU 14.04 LTS LINUX operating system
- SSD Data Storage
- 4 USB ports (keyboard, mouse, printer and one spare)
- 1 Network LAN port

CAPABILITIES

- Optical Autofocus to determine largest and widest X + Z dimensions
- Measure - radial and axial runout
- Measure - Full Screen Auto Targeting
- Measure - X&Z Axis Focusing Control Bar
- Measure - Automatic Radius & Angle Computing Cycle
- Measure - Radius/Diameter, MM/Inches,
- Absolute/Incremental Modes
- Measure - Analog & Digital Visualization
- Measure - Tool Profile Photograph - Difference Between Cutting Edges
- Inspection - 4 Color Tool Inspection

VISION SYSTEM

- C-MOS sensor - Framed image area 10 x 10mm.
- 32X Magnification
- Cutting Edge Inspection for wear and tear
- Diascopic Illuminator for Greater Contrast and Enhanced Clarity for Geometrical Profiling when Measuring
- Episcopic Illuminator to Best Expose Tool Surfaces for Inspection

PRESETTER SOFTWARE

- Tool List Management / Tool Sets & Post / Tool Graphics Processor Universal Generator
- Printable tool set report
- Theoretical measurements and tolerances management.
- Free software upgrades

PRECISION SPINDLE SYSTEM

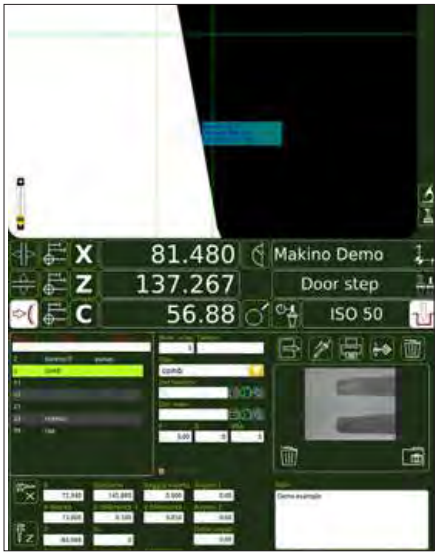
Fully interchangeable precision spindle system with cartridges available for all types of machine tapers: CAT, ISO, BT, HSK, CAPTO, VDI One-piece cartridge eliminates the need for adapters and the errors associated with their use. Spindle-holder identification system (SP-ID) with NFC technology automatically identifies the spindle holder in the presetting machine.

NATURAL GRANITE

All tool presetters utilize natural granite for the column and base to insure the best thermal stability. Larger granite base for increased accuracy and rigidity.

ERGONOMICALLY DESIGNED CONTROLS

Ergonomically designed micrometric hand wheels. Micrometric Adjustments - 2 fine adjustment hand wheels for the X and 1 fine adjustment hand wheel for the Z axis. Precise and smooth fixed-target and auto adjustment measurements. The axis can be moved simultaneously or independently.



SOFTWARE

Also included is DNC Connection software that allows the transfer of the tool offset data directly into the tool table of the numerical control (depending on CNC controller capabilities)

USER FRIENDLY INTERFACE

Ergonomic design combined with a 22" HD Color LCD Touch Screen. This system provides full operator control and selection of options and functions with simplicity that is second to none. Unit comes standard with 2 graphical icon layouts. ISO 7000 or Koma's Graphical Interface.

SLIDEWAYS / OPTICAL SCALES

Custom designed optical scales incorporated with a double rail system for the X axis movement with 3 double recirculating ball bearing sliding block grant the highest degree of accuracy. Both X & Z axes have a resolution of 1 µm.

PROPRIETARY VISION SYSTEM

High resolution camera system utilizing our realized technology. The double lit, variable LED arrangement in combination with a C-MOS sensor and telecentric lens produces the most accurate lighting system available.

E46L TW

Advanced Measure & Inspect, Twin Cameras, Floor Model

E46L TW CONSTRUCTION

- Integrated Stand with Natural Granite Base & Column
- Stainless Steel Mechanical Elements
- Dimensions 1,282mm L x 672mm D x 1,874mm H
- Weight 295Kg / 650 lbs.

AXIS MOVEMENT

- X Axis (Radial) = 200mm / 7.87in
- X Axis (Diameter) = 400mm / 15.75in
- Z Axis = 600mm / 23.62in
- Resolution X & Z Axis - 1 µm
- Manual Rapid & Fine Adjustment Movement (Zero Backlash)

SPINDLE

- Interchangeable Rotating Spindles
- Pneumatic Mechanical Brake with Radial Compensation of Clamping Force
- Tool Clamping - Automatic Pull-Stud Recognition
- Spindle-holder identification system (SP-ID)
- Concentricity - 2 µm
- Maximum Tool Weight 40kg / 88 lbs.

OPERATING SYSTEM

- Full HD LCD 22" Color Touchscreen Monitor
- Intel I3 Quad Core Processor
- UBUNTU 14.04 LTS LINUX operating system
- SSD Data Storage
- 4 USB ports (keyboard, mouse, printer and one spare)
- 1 Network LAN port

CAPABILITIES

- Optical Autofocus to determine largest and widest X + Z dimensions
- Measure - radial and axial runout
- Measure - Full Screen Auto Targeting
- Measure - X&Z Axis Focusing Control Bar
- Measure - Radius/Diameter, MM/Inches,
- Absolute/Incremental Modes
- Measure - Analog & Digital Visualization
- Measure - Tool Profile Photograph - Difference Between Cutting Edges

VISION SYSTEM (MAIN CAMERA)

- C-MOS sensor - Framed image area 10 x 10mm.
- 32X Magnification
- Cutting Edge Inspection for wear and tear
- Diascopic Illuminator for Greater Contrast and Enhanced Clarity for Geometrical Profiling when Measuring
- Episcopic Illuminator to Best Expose Tool Surfaces for Inspection

VISION SYSTEM (SECOND CAMERA)

- C-MOS sensor - Framed image area 4 x 4mm.
- 90 degree, rotating camera support
- 60X Magnification 2x and 4x digital zoom
- Cutting Edge inspection for wear and tear

PRESETTER SOFTWARE

- Tool List Management / Tool Sets & Post / Tool Graphics Processor Universal Generator
- Printable tool set report
- Theoretical measurements and tolerances management.
- Free software upgrades

FEATURES

PRECISION SPINDLE SYSTEM

Fully interchangeable precision spindle system with cartridges available for all types of machine tapers: CAT, ISO, BT, HSK, CAPTO, VDI One-piece cartridge eliminates the need for adapters and the errors associated with their use. Spindle-holder identification system (SP-ID) with NFC technology automatically identifies the spindle holder in the presetting machine.

NATURAL GRANITE

All tool presetters utilize natural granite for the column and base to insure the best thermal stability. Larger granite base for increased accuracy and rigidity.

ERGONOMICALLY DESIGNED CONTROLS

Ergonomically designed micrometric hand wheels. Micrometric Adjustments - 2 fine adjustment hand wheels for the X and 1 fine adjustment hand wheel for the Z axis. Precise and smooth fixed-target and auto adjustment measurements. The axis can be moved simultaneously or independently.

SOFTWARE

Also included is DNC Connection software that allows the transfer of the tool offset data directly into the tool table of the numerical control (depending on CNC controller capabilities)

USER FRIENDLY INTERFACE

Ergonomic design combined with a 22" HD Color LCD Touch Screen. This system provides full operator control and selection of options and functions with simplicity that is second to none. Unit comes standard with 2 graphical icon layouts. ISO 7000 or our Graphical Interface.

SLIDEWAYS / OPTICAL SCALES

Custom designed optical scales incorporated with a double rail system for the X axis movement with 3 double recirculating ball bearing sliding block grant the highest degree of accuracy. Both X & Z axes have a resolution of 1 µm.

PROPRIETARY VISION SYSTEM

High resolution camera system utilizing our technology. The double lit, variable LED arrangement in combination with a C-MOS sensor and telecentric lens produces the most accurate lighting system available.
The new E46LTW is equipped with 3 cameras for the front view and side view of the tool. The system allows tool manufacturers and tool regrinders to measure all the geometrical features of the tool.

E46L A

Advanced Measure & Inspect, Twin Cameras, Floor Model

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FEATURES

E46LA CONSTRUCTION

- Integrated Stand with Natural Granite Base & Column
- Stainless Steel Mechanical Elements
- Dimensions 1,282mm L x 672mm D x 1,874mm H
- Weight 270Kg

AXIS MOVEMENT

- X Axis (Radial) = 200mm / 7.87in
- X Axis (Diameter) = 400mm / 15.75in
- Z Axis = 600mm / 23.62in
- Axis Resolution X = 1 µm , Z = 1 µm

SPINDLE

- Spindle-holder identification system
- Interchangeable rotating spindle-holder (to be selected) max run-out error < 2µm
- C Axis display spindle body and spindle-holder
- Spindle index in four angular positions: 0° -90° -180° -270°

OPERATING SYSTEM

- Full HD LCD 22" colour Touch Screen monitor
- Intel I3 Quad Core Processor
- UBUNTU 14.04 LTS LINUX operating system
- X and Z axes lock management for a translation speed lower than 2 mm/sec
- Data storage on solid state disk SSD
- 1 Network LAN port

CAPABILITIES

- Measuring range: diameter max 400 mm (radius 200 mm); height max 600 mm
- AutoFocus function: automatic search & measurement for single edged tools.
- Powerful PC running Ubuntu 14,04 LTS for the integrated management and control of all the functions of measurement/tool inspection
- Universal electro-mechanical tool clamping
- Multi edged cutter acquisition cycle
- Multi measurement directly on the screen
- Fully customizable tool tables to handle all measurements and tool features

VISION SYSTEM

- C-MOS sensor - Framed image area 10 x 10mm.
- Bi-telecentric lens
- 26X Magnification
- Optical doublets at low F/Number to eliminate error

PRESETTER SOFTWARE

- Tool List Management / Tool Sets & Post / Tool Graphics Processor Universal Generator
- Printable tool set report
- Theoretical measurements and tolerances management.
- Automatic change of CNC machine origin allocation
- Spindle Identification System

PRECISION SPINDLE SYSTEM

Fully interchangeable precision spindle system with cartridges available for all types of machine tapers: CAT, ISO, BT, HSK, CAPTO, VDI One-piece cartridge eliminates the need for adapters and the errors associated with their use. Our Spindle-holder identification system (SP-ID) with NFC technology automatically identifies the spindle holder in the presetting machine.

NATURAL GRANITE

Our tool presetters utilize natural granite for the column and base to insure the best thermal stability. Larger granite base for increased accuracy and rigidity.

ERGONOMICALLY DESIGNED CONTROLS

Ergonomically designed micrometric hand wheels. Micrometric Adjustments - 2 fine adjustment hand wheels for the X and 1 fine adjustment hand wheel for the Z axis. Precise and smooth fixed-target and auto adjustment measurements. The axis can be moved simultaneously or independently.

SOFTWARE

Also included is DNC Connection software that allows the transfer of the tool offset data directly into the tool table of the numerical control (depending on CNC controller capabilities)

USER FRIENDLY INTERFACE

Ergonomic design combined with a 22" HD Color LCD Touch Screen. This system provides full operator control and selection of options and functions with simplicity that is second to none. Unit comes standard with 2 graphical icon layouts. ISO 7000 or our Graphical Interface.

SLIDEWAYS / OPTICAL SCALES

Custom designed optical scales incorporated with a double rail system for the X axis movement with 3 double recirculating ball bearing sliding block grant the highest degree of accuracy. Both X & Z axes have a resolution of 1 µm.

PROPRIETARY VISION SYSTEM

High resolution camera system utilizing our realized technology. The double lit, variable LED arrangement in combination with a C-MOS sensor and telecentric lens produces the most accurate lighting system available.
The new E46LTW is equipped with 3 cameras for the front view and side view of the tool. The system allows tool manufacturers and tool regrinders to measure all the geometrical features of the tool.

68B

Advanced Large Capacity, Enhanced Measure & Inspect, Floor Model

68B CONSTRUCTION

- Floor Model
- Natural Granite Base & Column
- Stainless Steel Mechanical Elements
- Dimensions - 1,865mm L x 687mm D x 1,957mm H
- Weight Z 600 - 300 Kg / 660 lbs / Z 800 - 310 Kg / 682 lbs

AXIS MOVEMENT

- X Axis (Radial) = 300mm (11.81in)
- Z Axis = 600mm (23.6in) or 800mm (31.50in) Max.
- Resolution X & Z Axis - 1 µm
- Double Pneumatic Axis Clamping
- Servo Motor Rapid & Fine Adjustment Movement

SPINDLE

- Interchangeable ISO40 or 50 for Different Tapers
- Optional Interchangeable Holders Available - HSK, VDI, Capto
- Pneumatic Mechanical Brakes with Radial Compensation of Clamping Force
- Concentricity - 2µm
- Maximum Tool Weight 50kg / 110 lbs.
- Tool Clamping - Automatic Pull-Stud Recognition

OPERATING SYSTEM

- 15" Color TFT Saga Monitor / Keyboard / Mouse
- Celeron M Processor
- Connectivity - 1 USB / 10/100 Ethernet Card / Integrated WiFi
- Ubuntu LINUX
- Printer Support
- Capable of Storing Unlimited Machine Origins & Tool Specifications

CAPABILITIES

- Optical Autofocus to determine largest and widest X + Z dimensions
- Measure radial and axial runout
- Measure Full Screen Auto Targeting
- Measure X&Z Axis Focusing Control Bar
- Measure Automatic Radius & Angle Computing Cycle
- Measure Radius/Diameter, MM/Inches, Absolute/Incremental Modes
- Measure Analog & Digital Visualization
- Measure Tool Profile Photograph - Difference Between Cutting Edges
- Inspection - 4 Color Tool Inspection

VISION SYSTEM

- Telecentric Lens for Accurate Dimensional Measurements / 1.3 Mega Pixel / C-MOS Image Sensor with 0.001mm resolution
- Diascopic Illuminator for Greater Contrast and Enhanced Clarity for Geometrical Profiling when Measuring
- Episcopic Illuminator to Best Expose Tool Surfaces for Inspection
- Cutting Edge Inspection for wear and tear
- 30x Magnification

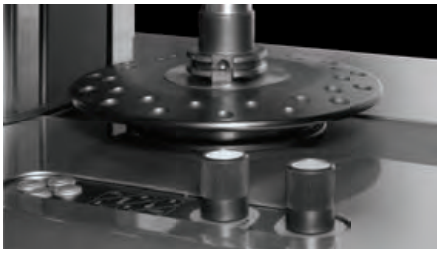
TD SIX SOFTWARE

- Tool List Management / Tool Sets & Post Processor Universal Generator
- CNC Machine Origin Management
- RFID Tool Detection Designed for Systems Like Balluff, etc.
- Free Software Upgrades

PRODUCT DESIGN

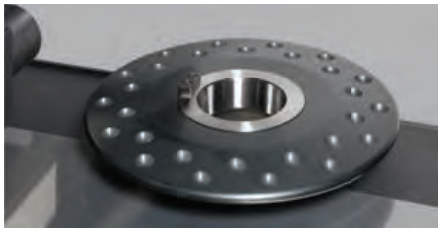
ERGONOMICALLY DESIGNED CONTROL

Step-by-step motors servo control the axes movements and provide two operation modes: rapid (2.5 m/min) and fine micrometric mode (positioning accuracy 0.8 µm).



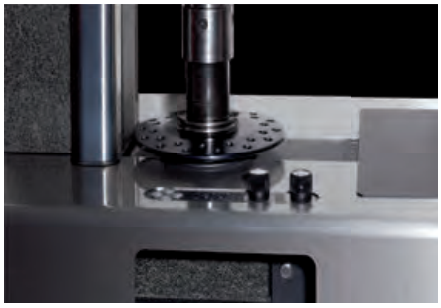
MICROMETRIC MOVEMENTS

Micrometric movements (electronic handwheels) are used to collimate the tool profile and to acquire the measurement. The automatic clearance recovery system is patented.



PATENTED SPINDLE

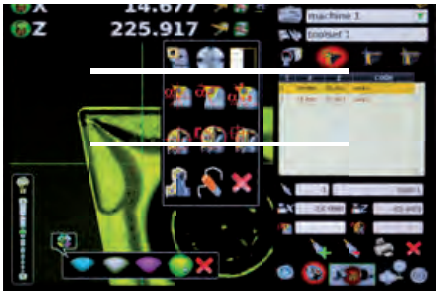
Spindle body with double ball retainer. Patented interchangeable spindle (run-out error < 2 µm). Patented universal shank locking system. Rotation brake. Angular index.



NATURAL GRANITE

Base and column made of natural granite. The low thermal inertia of the material assures non-deformability in time and the possibility to directly install the machine in the workshop.

NEW FEATURES



ELECTRONIC CONTROL

A powerful PC with Linux operating system for the integrated management of the functions of measurement / inspection tools, machine origins and toolsets. Ease of use thanks to the integrated touch screen.

LARGE 15" TOUCH SCREEN

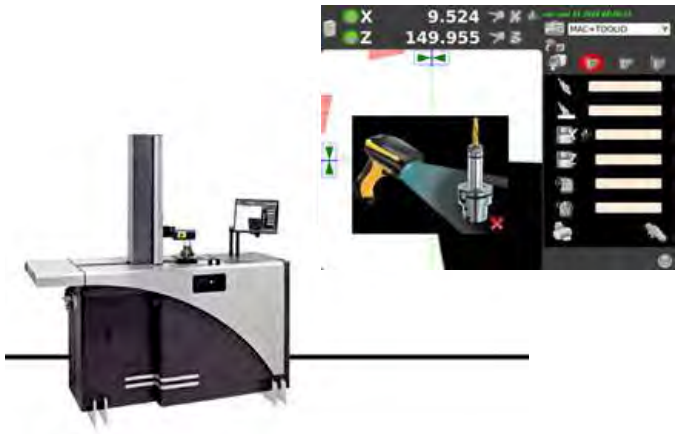
Large 15" touch screen for the best visualization of the tools and simple management functions to operate the measuring machine.

NEW TOOL IDENTIFICATION SYSTEM

The new TID system completely eliminates errors during data transfers. It allows full customization, sends tool data directly to machine control, adjust tool wear & tool life, integrates with all NC controls and prevents additional costs.

The TID System is an innovative tool identification system that empowers workshops with an easy, affordable solution for tool data management. The TID system is a tool identification system that establishes an interface between the tool presetter and the machine tool NC controller. The TID system features an intuitive graphical user interface that enables operators to eliminate errors during data transfer.

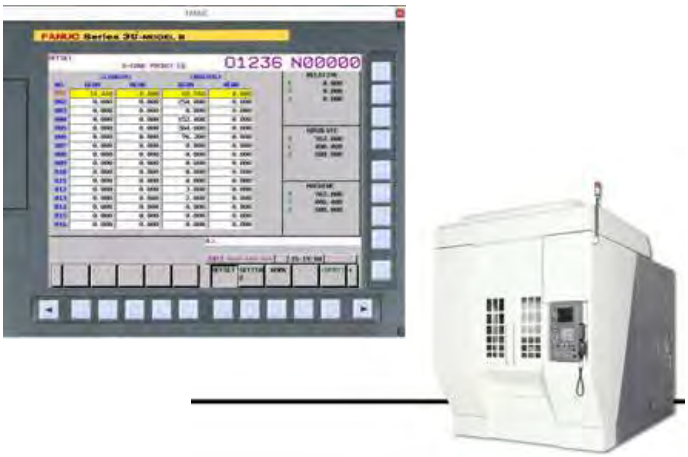
The traditional expensive storage media are replaced with a barcode datamatrix code that uniquely identifies a tool. The code can be applied to a tool with a laser marking system or a printed label. A 2D datamatrix reader is included with the purchase of the software license. The TID software stores the tool data for each tool in a database. The software updates the tool information during loading and unloading of the tool.



Step 1 Measure tool with presetter. Scan datamatrix code with 2D reader to save and update tool data onto the datamatrix code.

Step 2 Remove tool from presetter and bring to the CNC machine. Select the machine model you are loading tool into on your laptop or tablet.

Step 3 Once tool data is scanned into the tool database, select tool number you wish to save to in machine tool list.



Step 4 Select OK to load data. Tool data will now appear on the NC control of the selected machine model.

KOMA
KOMAPRECISION.COM

Tel: 1.800.249.5662
Fax: 860.623.4132

info@komaprecision.com
www.komaprecision.com

20 Thompson Road
East Windsor, CT 06088