

elbo controlli 

TOOL PRESETTERS



 **KOMA**
KOMAPRECISION.COM

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elbo controlli

Tool Presetters

Sethy
SIX
Measure & Inspect



Hathor
SIX
Enhanced Measure & Inspect



- 🏆 Balluff / RFID Ready
- 🏆 Large 15" touch screen
- 🏆 Optical Autofocus
- 🏆 Advanced Tool Geometry Inspection
- 🏆 Network Compatible

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Basic Measurement

Easy to use

**Quickly measure length, diameter,
radius & angles**

**Elbo Controlli proprietary high
resolution vision system**

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

Full screen auto targeting

**Can store up to 9 different
NC machine specifications and 9 Tool Sets
(99 tools per set)**

Label printer (optional)



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

Fixed or interchangeable rotating spindle holder available.

VERSIONS

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



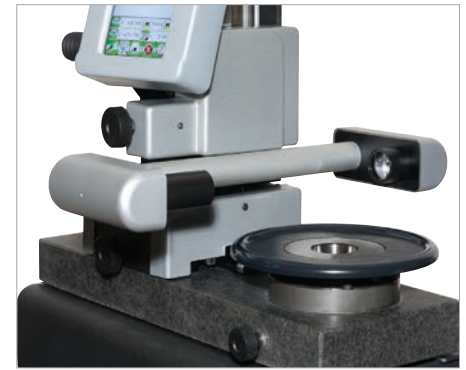
NATURAL GRANITE

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



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 - 2 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



PROPRIETARY VISION SYSTEM

High resolution camera system utilizing Elbo Controlli's 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.

OPTIONAL DATA POST PROCESSING

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

**MECHANICS
 ELECTRONICS
 OPTICS
 SOFTWARE**

by
elbo controllli

E346

Measure & Inspect | Bench Model

Easy to use

**Quickly measure length, diameter,
radius & angles**

**Elbo Controlli proprietary high
resolution vision system**

**Integrated 9" touchscreen / vision
screen for quick and easy operation**

Full screen auto targeting

**Can store up to 9 different NC
machine specifications and 9 tool sets**

**Cutting Edge Inspection for wear and
tear**

**Td346 post processing software
available as a standard**



PROPRIETARY VISION SYSTEM

High resolution camera system utilizing Elbo Controlli's 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.

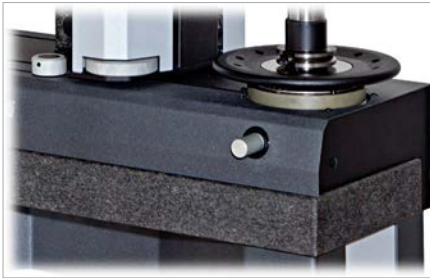


SPINDLE HOLDER OPTIONS

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.



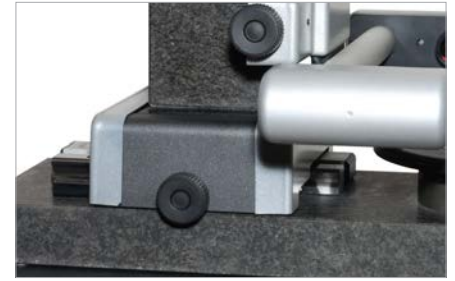
SPINDLE ROTATION BRAKE

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

TOOL DATA 346 SOFTWARE

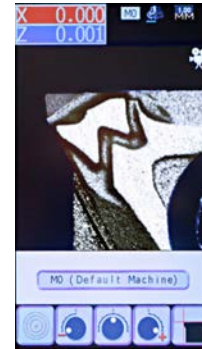
Td346 allows to generate the corrector files, in more than 50 CNC machine-specific post-processors by the universal post-processor creator. User friendly backup and restore management of machine origins and tool-lists.

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	



NATURAL GRANITE

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



INSPECTION MODE



E346 shown with optional stand and printer.



Sethy SIX

Measure & Inspect, Bench Model

Increased measuring range

New 15" TFT touch screen

Improved operating system

Elbo Controlli designed optical scales | slideways and revolutionary vision system guarantees the highest degree of accuracy

Can store up to 9,999 different NC machine specifications and 1 million tool sets

TD SIX Software
Tool Data Management Software
for precision measuring,
tool inspection, tool data
management
and networked
communication



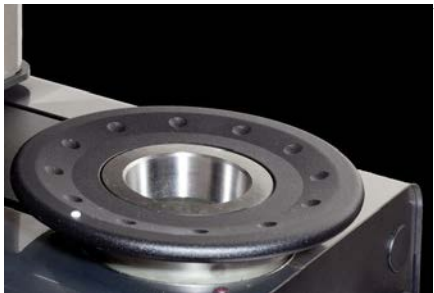
MANUAL AXES MOVEMENT

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



NATURAL GRANITE

All Elbo Controlli tool presettlers utilize natural granite for the column and base to insure the best thermal stability. This solid base construction, together with Elbo Controlli's 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 Storage
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



SLIDWAYS / OPTICAL SCALES

Elbo Controlli 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 Elbo Controlli's 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. Elbo Controlli's presettlers increase efficiency, reduce down time and are supported by extensive applications, technical support, and a global service network.

Hathor SIX

Enhanced Measure & Inspect, Floor Model



Increased measuring range

New 15" TFT touch screen

Improved operating system

Precision spindle system is fully interchangeable

Elbo Controlli designed optical scales | slideways and revolutionary vision system guarantees the highest degree of accuracy

Can store up to 9,999 different NC machine specifications and 1 million tool sets

**TD SIX Software
Tool data management software for precision measuring, tool inspection, tool data management and communication**



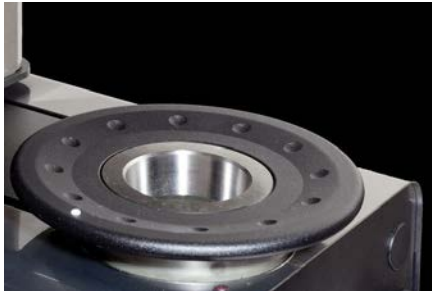
MANUAL AXES MOVEMENT

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



NATURAL GRANITE

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

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 Storage

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

Elbo Controlli 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 Elbo Controlli's 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. Elbo Controlli's presettlers increase efficiency, reduce down time and are supported by extensive applications, technical support, and a global service network.

68B

Advanced Large Capacity, Enhanced Measure & Inspect

Floor Model

Increased measuring range

New 15" TFT touch screen

Improved operating system

Larger capacity to handle bigger and heavier tools

Precision spindle system is fully interchangeable

**Elbo Controlli designed optical scales | slideways
and revolutionary vision system guarantees the
highest degree of accuracy**

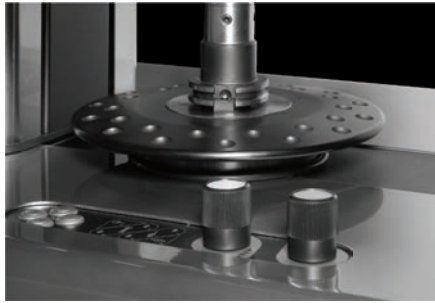
**Can store up to 9,999 different NC machine
specifications and 1 million tool sets**

**TD SIX Software
Tool data management software for precision
measuring, tool inspection,
tool data management and communication**

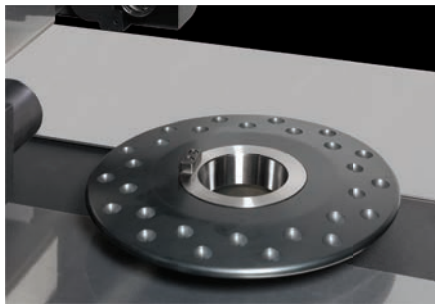




ERGONOMICALLY DESIGNED CONTROL
Step-by-step motors servo control the axes movements and provide two operation modes: rapid (2.5 m/min) and fine micrometric mode (positioning accuracy 0.8 µm).



MICROMETRIC MOVEMENTS
Micrometric movements (electronic hand-wheels) are used to collimate the tool profile and to acquire the measurement. The automatic clearance recovery system is patented.



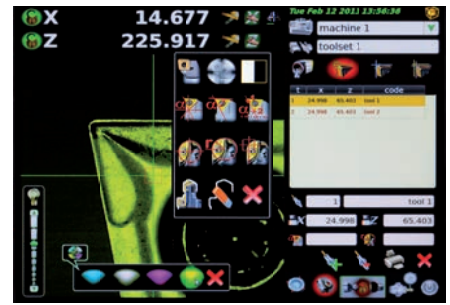
PATENTED SPINDLE
Spindle body with double ball retainer. Patented interchangeable spindle (run-out error < 2 µm). Patented universal shank locking system. Rotation brake. Angular index.



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.

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 Wireless (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

NEW



NEW 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.

NEW



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



MECHANICS
ELECTRONICS
OPTICS
SOFTWARE
by
elbo controllii

E46L

Advanced Measure & Inspect, Floor Model



Advanced measurements & inspections

**Precision spindle system
fully interchangeable, one piece
cartridge eliminates the need for adapters
and the errors associated with their use**

Automatic tool clamping

**Elbo Controlli proprietary high
resolution vision system**

**Elbo Controlli designed optical scales
and slideways guarantees the highest
degree of accuracy**

**Can store unlimited
NC machine specifications and tool sets**

**Advanced Tool Data Management Software
for basic tool measurement, inspection, and
label printing to high end networking
integration, geometric scanning and tool DXF
profile acquisition**



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. Elbo Controlli's patented Spindle-holder identification system (SP-ID) with NFC technology automatically identifies the spindle holder in the presetting machine.



NATURAL GRANITE

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



SOFTWARE

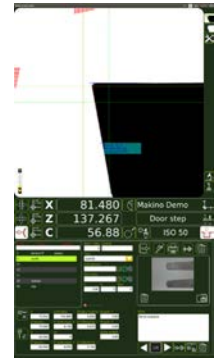
Also included is DNC Connection software that allows the transfer of the tool offset data directly into the tool table of the numerical control (depending on CNC controller capabilities)

E46L CONSTRUCTION
Integrated Stand
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



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.



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 Elbo Controlli's Graphical Interface.

SLIDWAYS / OPTICAL SCALES

Elbo Controlli 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 Elbo Controlli's 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.

MECHANICS
ELECTRONICS
OPTICS
SOFTWARE
by
elbo controllli

E46L TW

Advanced Measure & Inspect, Twin Cameras, Floor Model



Twin Cameras - Innovative 90° rotating support for a second camera allows for cutters to be viewed from top and also from the side

Full HD LCD 22" Touchscreen Monitor

Motorized tool holder clamping system that simulates the working conditions of the CNC spindles

Precision spindle system fully interchangeable, one piece cartridge eliminates the need for adapters and the errors associated with their use

Elbo Controlli designed optical scales and slideways guarantees the highest degree of accuracy

Can store unlimited NC machine specifications and tool sets

Advanced Tool Data Management Software for basic tool measurement, inspection, and label printing to high end networking integration, geometric scanning and tool DXF profile acquisition



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. Elbo Controlli's patented Spindle-holder identification system (SP-ID) with NFC technology automatically identifies the spindle holder in the presetting machine.



NATURAL GRANITE

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

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 Elbo Controlli's Graphical Interface.



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)

E46L TW CONSTRUCTION

Integrated Stand
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.
60X Magnification 2x and 4x digital zoom
90 degree, rotating camera support
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



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.

SLIDEWAYS / OPTICAL SCALES

Elbo Controlli 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 Elbo Controlli's 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 E46L TW 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.



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Amon Ra

Top Level, Premium Large Capacity Tool Presetter



Larger capacity to handle bigger and heavier tools

Patented spindle system with double-ball, high-precision spindle designed to allow for the lowest rotation inaccuracies with run out errors close to zero

Automatic tool clamping

Elbo Controlli proprietary high resolution vision system

Elbo Controlli designed optical scales and slideways guarantees the highest degree of accuracy

Can store unlimited NC machine specifications and tool sets

Innovative measurement function for angle head tools

Q-Presetter TDM Software for basic tool measurement, inspection, and label printing to high end networking integration, geometric scanning and tool DXF profile acquisition



PATENTED SPINDLE

Double-ball, high-precision spindle designed to allow for the lowest rotation inaccuracies with run out errors close to zero. Elbo Controlli's state-of-the-art spring system produces a preloading between the two taper seats, resulting in perfect concentricity between the fixed preset machine spindle and the interchangeable tool spindle holder.

The spindle is also equipped with Elbo Controlli's patented universal shank locking system, rotation brake, and optional angular index.



ERGONOMICALLY DESIGNED CONTROL

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



MANUAL ADJUSTMENTS

Manual, real time crosshair measurement adjustment option to prevent errors associated with auto-adjustment only vision systems.



AMON RA CONSTRUCTION	
Floor Model	
Natural Granite Base & Column	
Stainless Steel Mechanical Elements	
Dimensions - Z 600 - 1,873mm L x 687mm D x 1,960mm H	
Z 800 - 1,873mm L x 687mm D x 2,160mm 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	
19" Color TFT Saga Monitor / Keyboard / Mouse	
Celeron M Processor	
Connectivity - 1 USB / 10/100 Ethernet Card / Integrated Wireless (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	
Cutting Edge Inspection for wear and tear	
Episcopic Illuminator to Best Expose Tool Surfaces for Inspection	
10.4" Color LCD Display Screen / 35x Magnification / 1280 x 1024 Resolution	
TOOLINGUP SOFTWARE	
Tool List Management / Tool Sets & Post Processor Universal Generator	
CNC Machine Origin Management	
RFID Tool Detection Designed for Systems Like Balluff, etc.	
Import & Display DXF Drawings / Capture Tool Profile & Export in DXF Format	
Free software upgrades	



Q-Presetter TDM Software with Elbo Controlli Realized Vision System

Q-Presetter Tool Data Management Software performs basic tool measurement, inspection, and label printing to high end networking integration, geometric scanning and tool DXF profile acquisition.

DXF graphic files can be superimposed in real time to check the tool's outline. In addition, whole tool profiles can be captured, and exported in DXF format compatible with all CAD systems.

The system also includes an innovative measurement function for angle head tools. By simply setting and measuring the inclination angle of the angular head tools, the Q-Presetter Software can calculate the radius / diameter of the tool, as well as coordinate the axis rotation center.

Elbo Controlli's Q-Presetter Tool Data Management Software utilizes a high resolution 1.3 mega pixel C-MOS image sensor, a regulated LED doubling lighting system for episcopal inspection, and telecentric lens for maximum magnification. For utmost stability and flexibility, the complete Elbo Controlli system is operated using Ubuntu LINUX.

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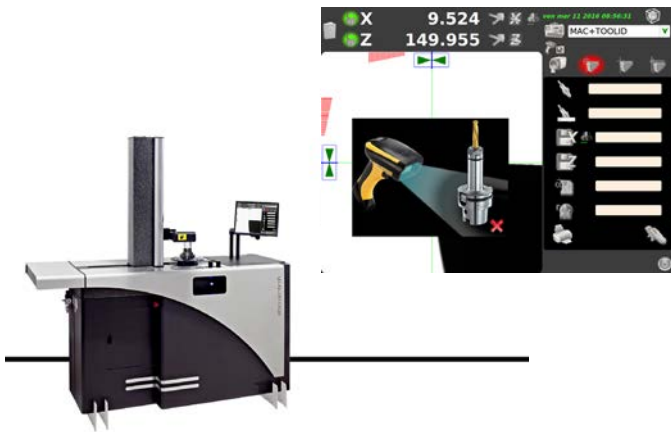
NEW TOOL IDENTIFICATION SYSTEM

- ▶ Eliminates Errors during Data Transfers
- ▶ Full Customization
- ▶ Sends Tool Data Directly to Machine Control



- ▶ Adjust Tool Wear & Tool Life
- ▶ Integrates with All NC Controls
- ▶ Prevents Additional Costs

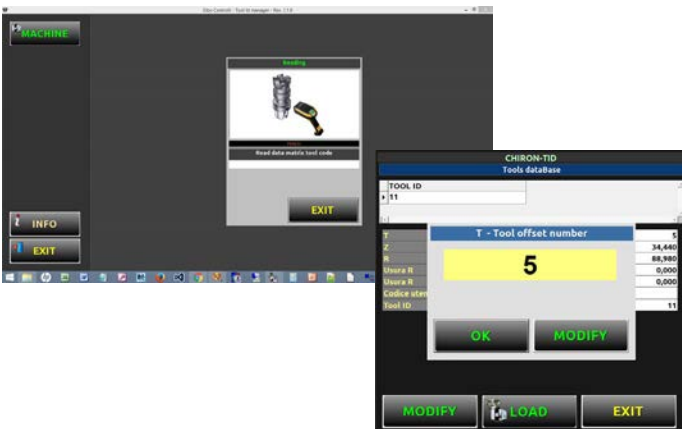
The TID System is an innovative tool identification system from Elbo Controllii that empowers workshops with an **easy, affordable solution** for tool data management. The TID system is a tool identification system that establishes an interface between the Elbo Controllii tool presetter and the machine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



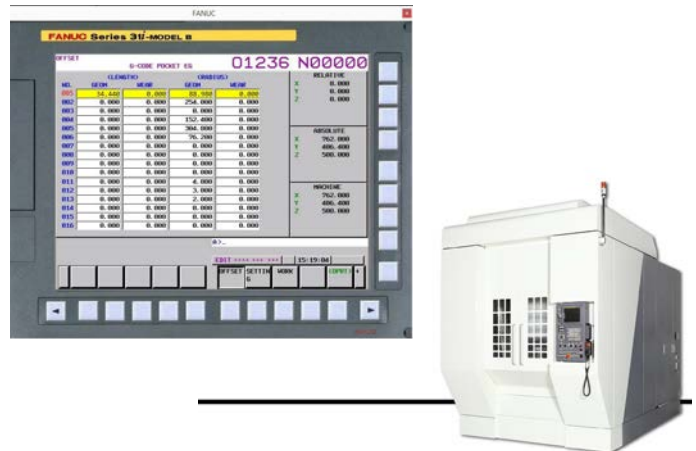
Step 1) Measure tool with presetter. Scan datamatrix code with 2D reader to save and update tool data onto the datamatrix code.



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.

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ROTARY TABLES | ANGLE HEADS | LIVE TOOLS | SWISS TOOLS | TOOL PRESETTERS