BTC
Presetting Units

www.bilz.de

BTC I STARTER, TABLE VERSION

ADVANTAGES AND BENEFITS

Quick start-up with minimal training and easy operation

High precision spindle SK50 with integreted calibration balls

Quickly measure, preset, and inspect tools (length and diameter)

Easy set up of tool contours

Various measuring programs for easy measurement at the cutting edge of values such as concentricity and axial runout

Fast and simple label printing of measuring results (optional)

One-handed operation for quick and simultaneous positioning of the Z and X axis

OPTIONS

Base Table

Inspection of the cutting edge (12 times zoom on the cutt **tor function**

Software function for printing thermal labels

Tool management

Compass needle

Pneumatic spindle indexing and brake

Tool location spindle SK50 vacuum

Adapter and utensil tray (only available with base table)

Adapters SK, HSK, Capto, VDI and many more

Label Printer

Designation	Measuring range X	Measuring range Z	End gauge
BTC I Starter 3235	320 mm	350 mm	0 mm
BTC I Starter 4242	420 mm	420 mm	100 mm
BTC I Starter 4260	420 mm	600 mm	100 mm

BTC II ALLROUNDER

Device tower with 4 guides
in 4 variations

Standard measuring functions such as length, diameter, radius, two cutting angles and also concentricity and axial runout can be easily selected and implemented via the **13,3“ touch screen monitor**

ADDITIONAL BENEFITS OVER BTC I STARTER

Quickly measure, preset, and inspect tools
(length, diameter, radius, two cutting angles)

20 x zoom on the cutting edge
in incident light for quality control

Easily position the camera to measure target values for tools using the compass needle

Power-operated tool clamping (optional)

BASIC EQUIPMENT

- **Base Table**
- **Cutting edge inspection**
  (20 x zoom on the cutting edge in incident light)
  and projector function
- **Software function** for printing thermal labels
- **Tool management** (tool data)
- **Compass needle**
- **Fast measuring** of standard tools
- **Pneumatic spindle indexing and brake**
- **Adapter and Utensil Tray**
- **Label Printer**
- **Data output via RS232 interface**

OPTIONS

- **Tool mounting spindle SK50 vacuum**
- **Universal spindle for power-operated tool clamping**
- **Adapters SK, HSK, Capto, VDI** and many more
- **Storage shelf including keyboard and mouse**

Designation	Measuring range X	Measuring range Z	End gauge
BTC II Allrounder 3235	320 mm	350 mm	0 mm
BTC II Allrounder 4242	420 mm	420 mm	100 mm
BTC II Allrounder 5742	570 mm	420 mm	0 mm
BTC II Allrounder 4260	420 mm	600 mm	100 mm
BTC II Allrounder 5760	570 mm	600 mm	0 mm

BTC VACUUM TOOL MOUNTING SPINDLE SK50

Basic Tool Holder Spindle SK50
with high concentricity

Integrated Calibrated Balls
make separate zero gauges unnecessary

Basic spindle option for the BTC I Starter

The **vacuum clamping** option is operated via the membrane keyboard,

in the same way as all other power-operated functions of the tool location such as the **spindle brake and 4 x 90° locking**

High Precision Spindle SK50

The built-in calibration balls make separate zero gauges unnecessary.
For different tool shanks there are **suitable adapters:**

Steep Taper
SK 30 to SK 45

VDI Straight Shank
VDI 16 to VDI 60

Polygon Shaft
PSC 32 to PSC 80

Hollow Shank Taper
HSK 25 to HSK 100
with manual eccentric clamping

Hollow Shank Taper
HSK 25 to HSK 100
without tool clamping

All adapters are case hardened, burnished, polished, and – as far as technically possible – equipped with an integrated calibration ball

Power-operated tool clamping (BTC II Allrounder upwards)

Universal Spindle for Power-operated Tool Clamping
Power-operated tool clamping with direct, universal adapter mounting in the mounting spindle — direct adapter mounting and power-operated clamping of tool holder for high precision.

Adapter for Power-operated Tool Clamping
Universal, power-operated tool clamping for steep tapers DIN 69872-1 and HSK DIN 69893 — tool clamping is activated through the keyboard.

ACCESSORIES

Label Printer
for printing measuring results.
Dymo Label Writer for output of measured values (X and Z value, radius, 2 angles)

Maintenance Unit
for easy preparation of compressed air supplies directly to the tool presetting device

Adapter and Utensil Tray
for secure and professional storage

Robust Base Table
for the shop floor to set up directly beside your CNC machine
Ergonomic and space-saving

Work Bench for BTC I Presetting Unit
1500 B x 900 T x H 840 mm
with 40 mm solid beech wood surface

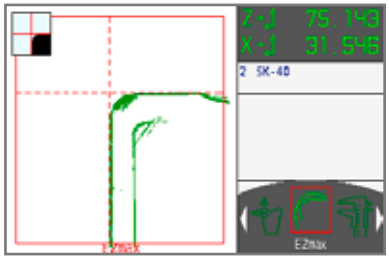
SOFTWARE FOR BTC I STARTER IN DETAIL

7“ Monitor

Menu Navigation
quick and easy menu navigation through pictograms

Additional
short and explanatory texts

Simple Operation
ECO-Image Processing via rotary push button

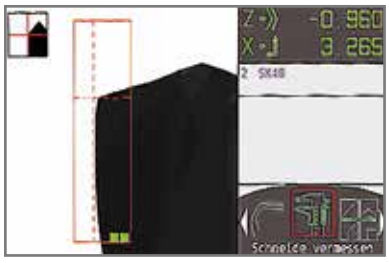


Measuring the Tool Contour

- Software function for determining and measuring the maximum contour of tools

Measuring Programs

- Operator independent measurement with dynamic crosshairs and automatic cutting edge shape recognition.
- Up to two (BTC I Starter) measuring results in Starter: Length, Diameter
- Optional: 3 more measuring results: cutting edge, corner radius, and 2 cutting angles
- Defined nominal input value
- Number of cutting edge shapes: 104



Measuring Programs

- By converting the counter, for example: to absolute dimension, differential dimension and chain dimension; distances such as step length can be measured easily and accurately
- Software function to determine oversized radii, angles, concentricity, and much more*
- Print out measuring results conveniently and quickly on label*

Zero Point Monitoring

- Zero point monitoring for 100% precise measurements after every change of adapter
- If the user forgets to change the adapter zero point, this can lead to false measurements and a machine crash

*BTC I Starter: Option

Navigator / Compass Needle

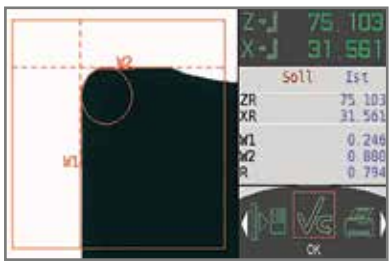
- Compass Needle – simple positioning of camera for gauging purposes of nominal values on the tool

Data Output via Serial Interface RS232

- The data output is entered via the serial interface RS232 in ASCII-Format

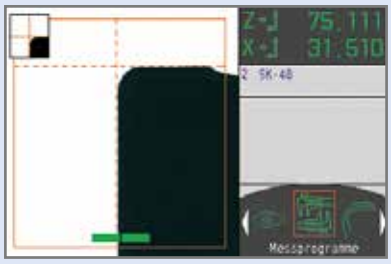
Cutting Edge Inspection*

- The cutting edge is lit up with 12-times magnification for cutting edge inspection and control of wear and eruption of tool
- Brightness setting of 12 long-life Power-LEDs



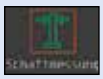
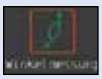
Measuring Extension for the Radius and Angles*

- Measuring extension to the radius and two measuring angles in addition to the Z- and X-Values



Software Functions for Determining Oversized Radii, Angles, Concentricity, and much more*

1| Concentricity on tool shaft
2| Angle measurement incl. theoretical peak
3| Radius measurement using measuring points
4| Specification measurements
5| Projector mode (crosshairs)

1|  2|  3|  4|  5| 

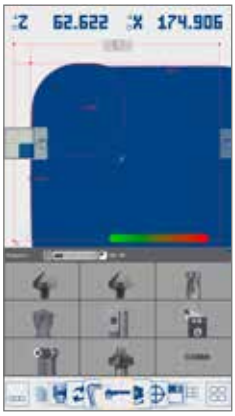
Tool Management*

Tool management for at least 1.000 complete tools including entering the ID number, designation, T-number, and input options for dimensions Z, X, Radius, and two angles with an integrated compass function

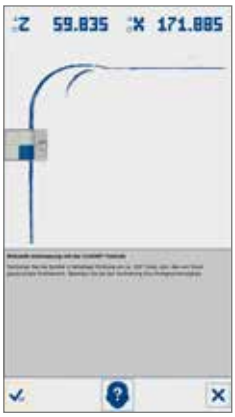
*BTC I Starter: Option

BTC II ALLROUNDER EASIER THAN EVER BEFORE

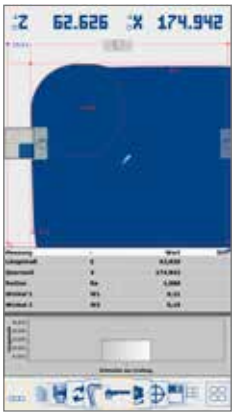
BTC II Allrounder Software makes measuring tools easier than ever before – simply select the right tool from the menu and follow the measurement tasks stored for that specific tool. With BTC II Allrounder Software, you can complete user-independent measurements of standard tools easily and quickly.



Select the right tool type

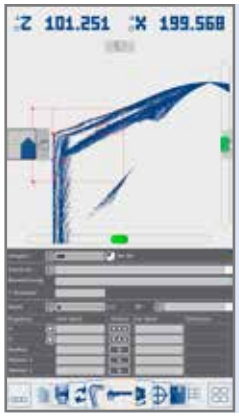


Tool-specific measurement process starts

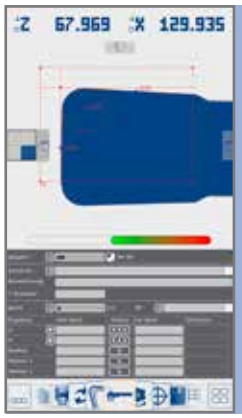


Determine up to 5 measurement results
(Z, X, radius, angle 1, angle 2)

SOFTWARE FOR BTC II ALLROUNDER

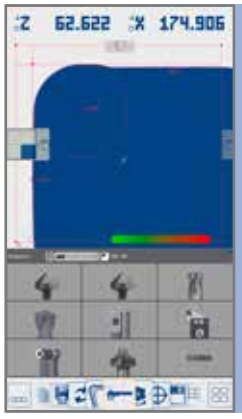


- By switching the meter, for instance, to absolute measurement, differential measurement, or incremental measurement, distances are measured easily and precisely, down to the µm
- Software function to determine oversized radii, angles, concentricity, and much more
- Quickly and easily print out measurement results on labels
- Software function to determine and measure the maximum contour of the tool



- User-independent measurements with dynamic cross hairs and automatic cutting edge shape recognition
- Up to five measurement results: Length, diameter, radius, and two angles
- Defined target value input
- Number of cutting edge shapes: 113

- Tool cutting edges in incident light with 20x zoom to inspect cutting edges for wear and tool breakage
- Brightness adjustment using 12 long-lasting power LEDs



- Quick and easy measuring
- Graphical menu for selecting tool type
- After selecting the tool type, the tool-specific measurement is completed automatically, and the machine outputs the desired result

SAVINGS
WITH BILZ TOOL PRESETTING UNIT

Increased Productivity Through Higher Machine Uptime

- No adjustments to the machine needed due to precisely measured and preset tools
- Tools measured with the presetting unit optimize machine uptime
- No scrap, the first workpiece is already true to size

Quick Familiarization Through Simple and Intuitive Operation

- Fast measuring, calibration, and testing of tools with different measuring programs
- Simple operation with one-hand control and measuring with dynamic crosshairs
- Zero point monitoring adapter and printing of measuring results

Increased Cutting Quality on the Workpiece

- Non-contact measuring of the tools prevents damage to the cutting edge
- Testing of the cutting edge with cutting inspection and controlling of wear and eruption
- Process safety by preventing chatter

Saving with BILZ Tool Presetting Unit:

10 number of Tool Changes per Machine **x** **3 minutes** saved Time per Change **x** **3 number of** Machines

=

90 minutes Time Saving per Day **x** **200 days** of Work **x** **65 €** Hourly Rate

=

19.500 € Savings per Year

PRODUCT SELECTION

BTC I Starter	BTC II Allrounder	Ident-No.	Designation	Function	Description
		5113974	BTC I Starter 3235	Presetting Unit	Max. Tool Length Z = 350 mm Max. Tool Diameter D = 320 mm Standard Optics Carrier incl. ; Snap Gage d = 0 mm
		5113976	BTC I Starter 4242	Presetting Unit	Max. Tool Length Z = 420 mm Max. Tool Diameter D = 420 mm Standard Optics Carrier incl. ; Snap Gage d = 100 mm
		5113977	BTC I Starter 4260	Presetting Unit	Max. Tool Length Z = 600 mm Max. Tool Diameter D = 420 mm Standard Optics Carrier incl ; Snap Gage d = 100 mm
		5113978	BTC II Allrounder 3235	Presetting Unit	Max. Tool Length Z = 350 mm Max. Tool Diameter D = 320 mm Standard Optics Carrier incl ; Snap Gage d = 0 mm
		5113979	BTC II Allrounder 4242	Presetting Unit	Max. Tool Length Z = 420 mm Max. Tool Diameter D = 420 mm Standard Optics Carrier incl. ; Snap Gage d = 100 mm
		5113980	BTC II Allrounder 5742	Presetting Unit	Max. Tool Length Z = 420 mm Max. Tool Diameter D = 570 mm Standard Optics Carrier incl. ; Snap Gage d = 0 mm
		5113981	BTC II Allrounder 4260	Presetting Unit	Max. Tool Length Z = 600 mm Max. Tool Diameter D = 420 mm Standard Optics Carrier incl. ; Snap Gage d = 100 mm
		5113982	BTC II Allrounder 5760	Presetting Unit	Max. Tool Length Z = 600 mm Max. Tool Diameter D = 570 mm Standard Optics Carrier incl. ; Snap Gage d = 0 mm
Operation / Features					
incl.	-		Bilz-Control	Bilz-Control	Operation menu with turn-push knob
incl.	-		TFT-TFT-Colour Monitor	TFT-Colour Monitor	BILZ Device Control "eco", Image processing electronics with software, 7" display
-	incl.		Bilz-Touch	Bilz-Touch	Navigate through menu via touch-screen 13,3" operating system: Windows 10
X	X	5116670	BTC-Keyboard-Mouse	Board	Board including keyboard and mouse
X	incl.	5116669	BTC-Table	Table	Table in a stable industrial design
X	X	5116671	BTC-MAINTAIN	Maintenance unit	Pneumatic maintenance unit
Tool Holder Spindle					
inkl.	incl.	5081142	BTC-Spin-Basic-SK50	Basic Spindle	Tool Holder Spindle SK50 »basic«
X	incl.	5114090	BTC-Spin-pn-Index	Pneumatic spindle function	Spindle brake
X	incl.	5114091	BTC-Spin-Break-Index	Pneumatic spindle function	Spindle indexing 4 x 90°
X	X	5114092	BTC-Vac-Clamp	Pneumatic vacuum clamping & spindle function	Vacuum suction system, Spindle brake and Spindle indexing 4 x 90°
X	X	50....	BTC-Spin-Red-XXXX	Adapter Reduction	Steep Taper Adapter SK 30 to SK 45 VDI Straight Shank Adapter VDI 16 to VDI 60 Polygon Shaft Adapter PSC 32 to PSC 80 Hollow Shank Taper Adapter HSK 25 to HSK 100
-	X	5114095	BTC-Spin-power-Basic-SK50	Universal spindle for power operated tool clamping	Universal spindle for poweroperated tool clamping
-	X	5114096	BTC-Spin-power-Red-SK...	Adapter for power operated tool clamping ISO...	Adapter for power operated tool clamping ISO...
-	X	5114097	BTC-Spin-power-Red-HSK...	Adapter for power operated tool clamping HSK...	Adapter for power operated tool clamping HSK...
Software					
incl.	incl.		BTC- . . . -Starter	Language Dialog . . . for BTC I Starter	Language Dialog . . .
incl.	incl.		Dynamic Cross Threads	Dynamic Cross Threads	Dynamic Cross Threads for Automatic Measurement
incl.	incl.		Cutting Shape Recognition	Cutting Shape Recognition	Automatic Cutting Shape Recognition
-	incl.		BTC-Start	Quick Measurement	Software function for quick measurment
X	incl.	5096809	BTC-Inspection	Cutting Edge Inspection	Cutting Edge Inspection 12 times magnification of the cutting edge with LED light for the quality control of the tool cutting
X	incl.	5097151	BTC-SF-measurement extension	Measurement Extension	Software function for 3 measuring extension: cutting egde, flanging radius and 2 cutting edge angle
X	incl.	5096812	BTC-SF-RunMes	Runout and oversized radius/angle	Software function for measuring runout of tool holders and oversized radii and angles
incl.	incl.		SF Tool Contour	SF Tool Contour	Software function to determine and measure the tool contour
incl.	incl.		Zero Point Monitoring	Zero Point Monitoring	Security check for adapter zero point to prevent machine crashes
incl.	incl.		Adapter Zero Point	Adapter Zero Point	Store and manage adapter zero point
X	incl.	5096813	BTC-Toolmanagement	Tool Management	Saving tool data with Identification Number, Designation, T Number, Zero Point, Nominal Values for Z and X, Memory for 1000 Tools
incl.	incl.		Online Help	Online Help	Integrated help texts
				Navigator	Compass needle - easy positioning of the camera for the measurement of the target tool values
Data Output					
X	incl.	5096814	BTC-Printer-USB	Printer Label USB	Output of Thermo labels
incl. 1x	incl. 4x		USB	USB	USB 2.0 interface, data output via USB
incl.	incl.		COM/serial	COM/serial	Data output via RS232 interface
X	X	5081384	BTC-Clean	BTC-Clean	Cleaning agent for the cutting tool
X	X	5106253	BTC-Thermo-labels	Thermo labels	Thermo labels for BTC printer (950 labels per roll)
Operating Manual					
incl.	incl.	5096815	BTC-OP-Man-Starter	Operating Manual	Operating Manual
Packaging					
X	X	5096816	BTC-TVP-Starter	Cardboard Packaging HT	Cardboard Packaging HT
Options					
X	X	5097150	BTC-INB	Commissioning /Training	Cost for 8h/day for three employees at your company (BRD). Travel costs will be charged additionally if multiple arrivals are required by the customer
X	-	5081139	BTC-TISCH-BTC I	Base cabinet for BTC I	1500 B x 900 T x H 840 mm

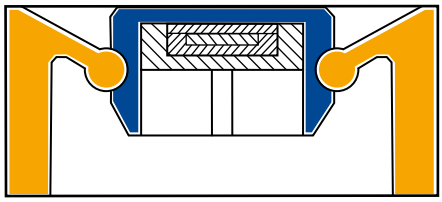
SPECIFICATION OF THE **TDSc** DATA CHIP

Transmission in UHF-Range, ISO 18000-6

- Small frame size
- Compact design
- Low-cost chip with small storage area (EPC 16 byte)
- Identification with globally unique ID-Number (TID 12 Byte)
- Data management in primary database
- max speed 30.000 rpm

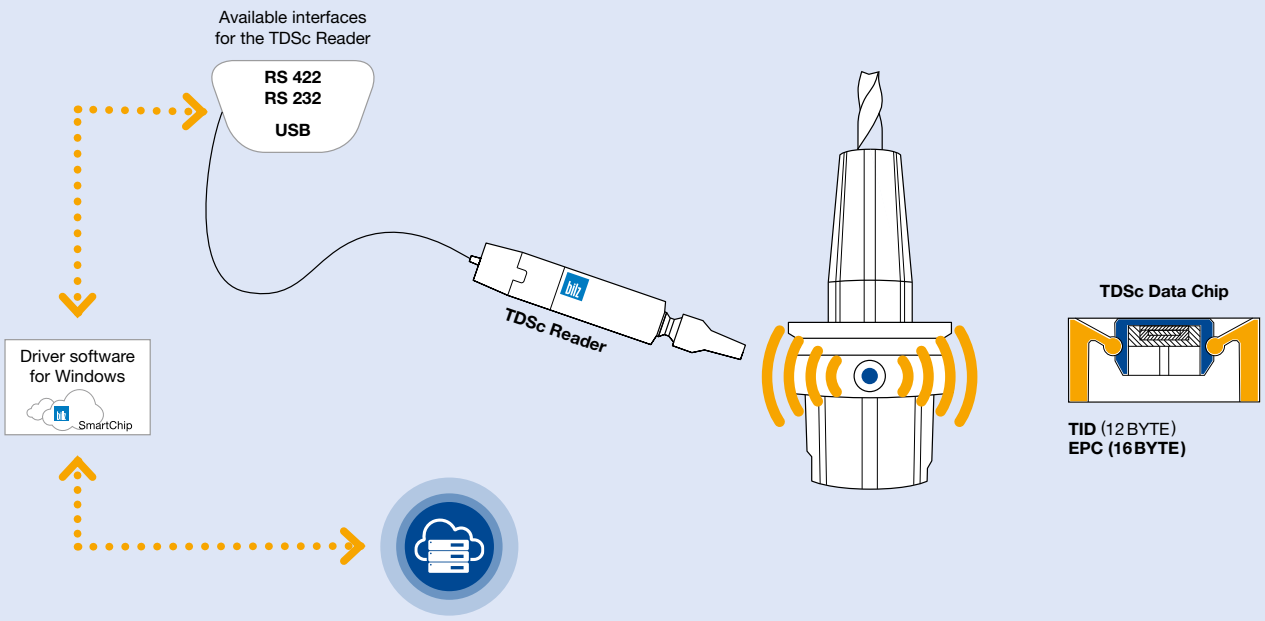
Advantages of the small frame size

- New type of mounting: no glue necessary
- Chip is also applicable in small workpieces (for example: tools)
- Clipping onto disk bore within seconds, in accordance with DIN ISO 7388-3



Chip in assembled state with fixing ring

SYSTEM DESIGN **TDSc** READER DATA CHIP



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