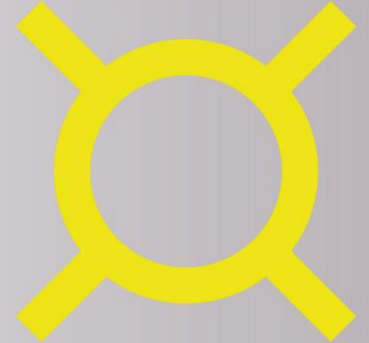


Technical Description TMS Tool Management Solutions

»zidCode 4.0«

»zidCode«





»zidCode 4.0« / »zidCode«

Note:

We reserve the right to make technical and optical changes to the product during ongoing product development. The machines shown may include options, accessories and supplemental components, which differ from the configuration of your product. Reproduction or dissemination of content to third parties is not permitted without the express consent of the author and manufacturer.

All images are non-binding example illustrations and may show options, accessories and equipment, which differ from the actual product configuration.

Equipment, options/default are stated in your quote or order confirmation.

Table of Contents

- »zidCode 4.0« 5**
 - Procedure..... 5
 - Interfaces on the Rear of the »zidCode 4.0« 8
- Software 9**
 - »zidCode 4.0« Software (Default)..... 9
 - Load Machine 9
 - Unload Machine 9
 - Information Mode 9
 - Settings 9
 - »zidCode 4.0« Exchange List (Optional) 9
 - »toolXchange« (Optional) 9
 - »zidCode« Module for »pilot 4.0« 10
 - Measure Tool 10
 - Info/Inventory 10
 - Setup Sheet 10
 - Optimized Setup Sheet 10
 - Tool Exchange (»toolXchange«) 10
 - ZOLLER »zidCode« Service 11
 - ZOLLER WebService 11
- Technical Data 12**
 - Basic Requirements 14
- »zidCode« 15**
 - Procedure..... 16
 - QR Code 17
- Interfaces 19**
 - Ethernet – Data Transfer..... 19
 - Serial – Data Transfer 19
 - USB Keyboard Simulation 19
 - USB - Provision of Files by Simulating an External Mass Storage Device..... 19
- Technical Data 20**
 - Basic Requirements 20
- Accessories 21**
 - Thermo-label printer..... 21
 - Thermal Transfer Printer 21
 - »idLabel« Adhesive Labels, Single Row 21
 - Data Clip 21

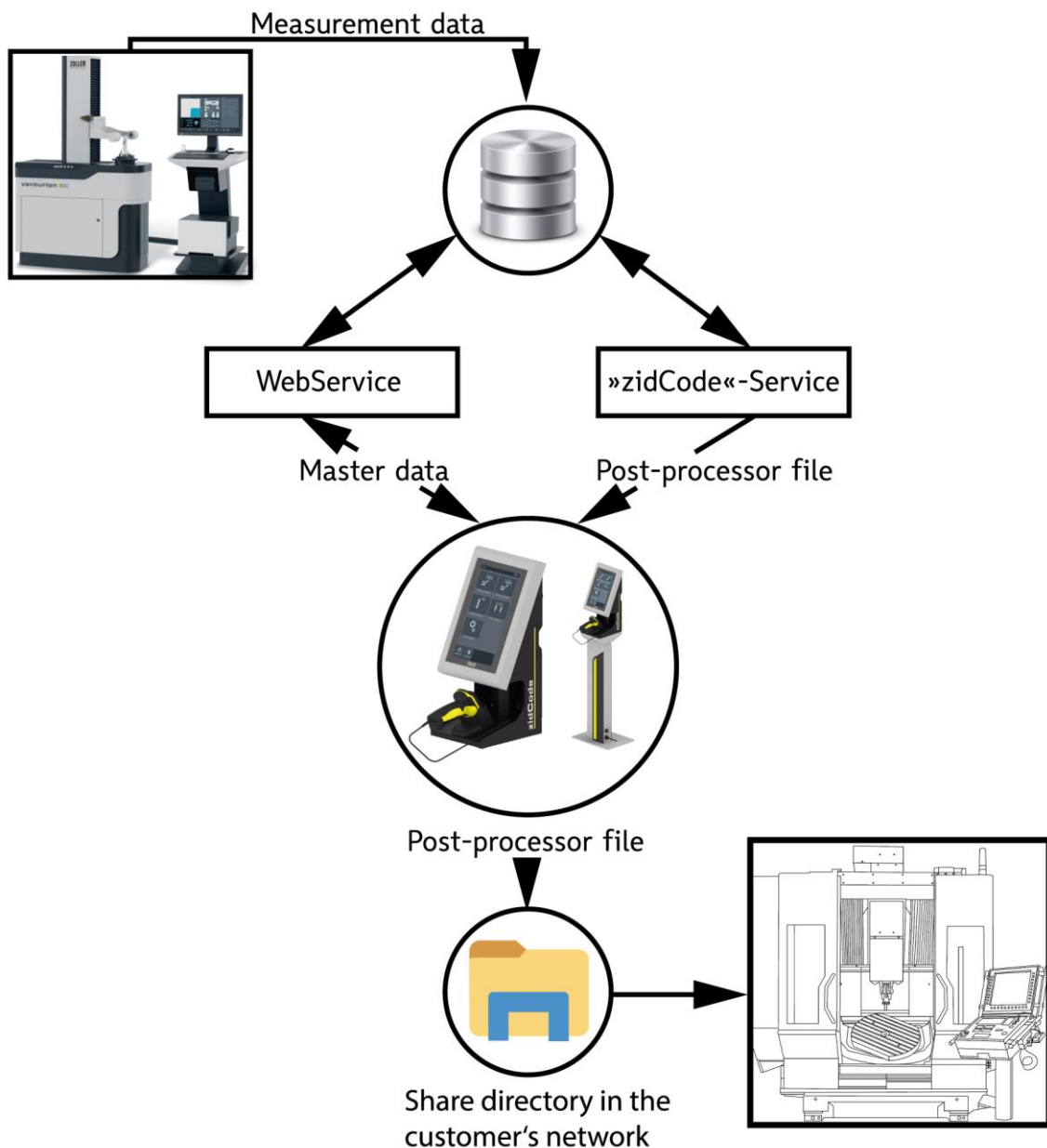
Tooltags	22
Memory Expansion	22
Additional Accessories	22
Commissioning & Basic Training	23
Knowledge on site worldwide.....	23

»zidCode 4.0«

The ZOLLER »zidCode 4.0« unit is a terminal for transferring tool data to an exchange directory via post-processors. It is possible to import files using the machine controls. The »zidCode 4.0« unit either mounted directly on the machine or is placed next to it.

A 2D code on the tool holder is scanned in order to clearly identify the tools. First of all the tool is measured with the »zidCode« control module on the ZOLLER presetting and measuring machine and a label is printed with the 2D code. A Windows service communicates with the ZOLLER database in order to load required data from the database and to provide it to the »zidCode 4.0« unit. The data is processed and displayed on the »zidCode 4.0« unit.

Procedure





1	12.5" touchscreen	4	Hand-held scanner
2	Connections	5	Magnet
3	Panel PC		



5 Column (optional)

Interfaces on the Rear of the »zidCode 4.0«

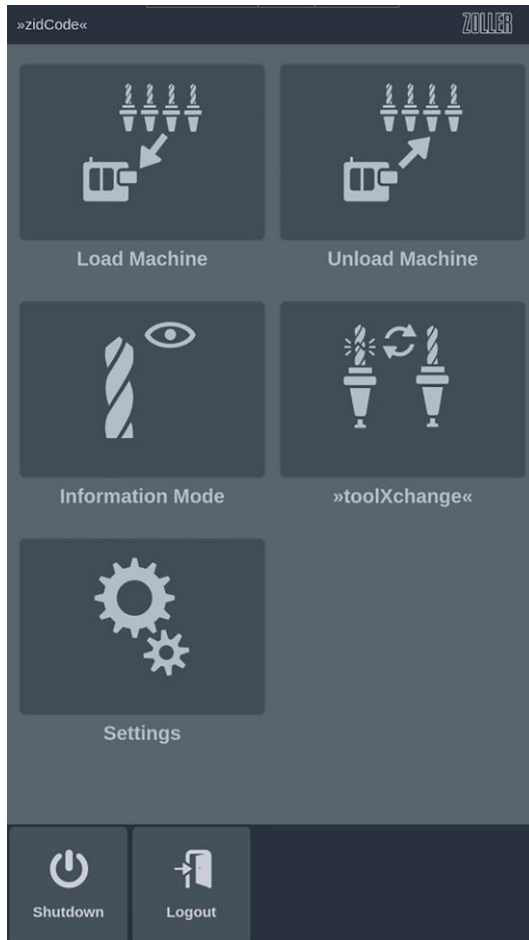


Item	Type	Connection/Function
1	USB interface	Touch monitor
2	USB interface	Hand-held scanner
3	USB interface	Not occupied
4	USB interface	Not occupied
5	Network card	Network
6	Serial interface	Not occupied
7	Power connection	Power connection

Software

»zidCode 4.0« Software (Default)

The following functions are selectable in the basic software:



Load Machine

Tools, which have been prepared with the »zidCode« module in the »pilot« image processing software, are loaded to the machine with the «Load machine» button. After successfully generating the related data, the control-appropriate data is transmitted to the exchange directory.

Unload Machine

Tools loaded to the machine via the »zidCode 4.0« unit are unbooked from the machine with the «Unload machine» button. This ensures that all tools have been removed. Tool lives can be reset. Data can then be deleted from the controls.

Information Mode

Tool data can be queried with the «Information mode» button. The tool data must be measured with the »zidCode« control module. The information from the data fields for the tool is displayed.

Settings

As administrator, it is possible to make settings for the connection and for the individual functions.

»zidCode 4.0« Exchange List (Optional)

An additional function for optimized loading and unloading of the machine tool by gross-net comparison.

Requirements:

- Connection with the ZOLLER presetting and measuring machine and »zidCode« module in the »pilot« image processing software
- »zidCode 4.0« control module

»toolXchange« (Optional)

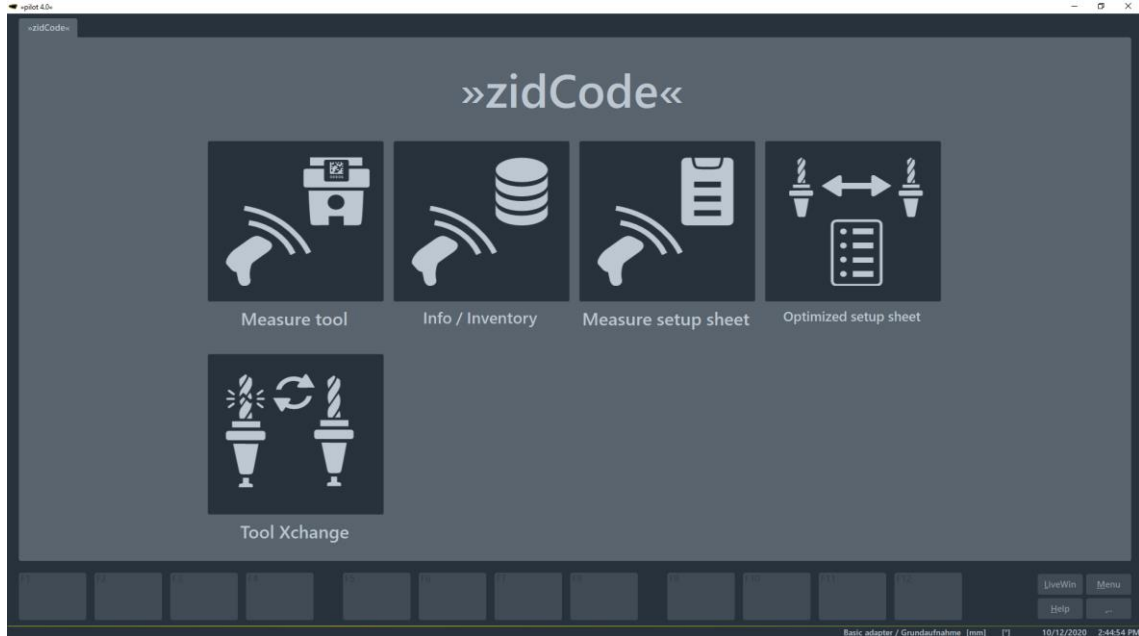
Tools, which are in the machine and which have been transferred via the »zidCode 4.0« unit, are exchanged with the »toolXchange« button.

Requirements:

- Connection with the ZOLLER presetting and measuring machine and »zidCode« module in the »pilot« image processing software
- »zidCode 4.0« control module

»zidCode« Module for »pilot 4.0«

The »zidCode« module for the »pilot 4.0« image processing software on the ZOLLER presetting and measuring machine contains all the functions necessary for the »zidCode« workflow. Additional functions for procedures have to be licensed on the »zidCode 4.0« unit.



The following functions are selectable:

Measure Tool

For measuring single tools without a previously created setup sheet. Tools can be summarized in a temporary setup sheet.

Info/Inventory

For identifying and inventorying labeled tools with 2D code.

Setup Sheet

Setup sheets can be loaded here and measured tools can be assigned to this setup sheet.

Optimized Setup Sheet

For creating a gross/net list for setup sheets. Tools on the setup sheet are compared to tools in the machine. Booked and prepared setup sheets are taken into account when unloading (temporary or created setup sheets possible).

Tool Exchange (»toolXchange«)

The »toolXchange« software function allows tools to be exchanged. If the machine reports that a tool has to be exchanged, the machine operator can select the tool manually in the »zidCode 4.0« unit or scan and order the tool. Depending on the requirement, a date can be specified for the exchange or the exchange can be assigned immediately. The order appears in the »zidCode 4.0« software module on the presetting and measuring machine, identified by an exclamation point on the »toolXchange« button. Both a new tool in the store and the existing tool can be prepared. The tool on the presetting and measuring machine is then measured with the »zidCode« module. The measured data is saved in the database and the tool can be exchanged or replaced on the machine using the »zidCode 4.0« unit.

Requirements:

Connection with the ZOLLER presetting and measuring machine and »zidCode« module in the »pilot« image processing software.

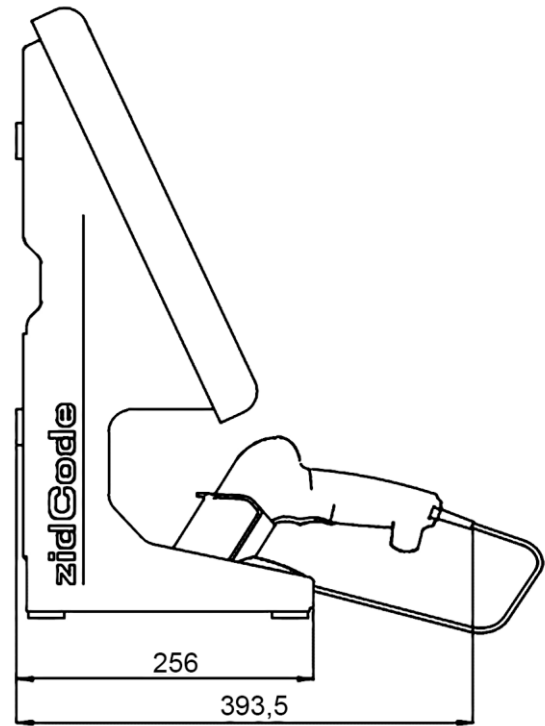
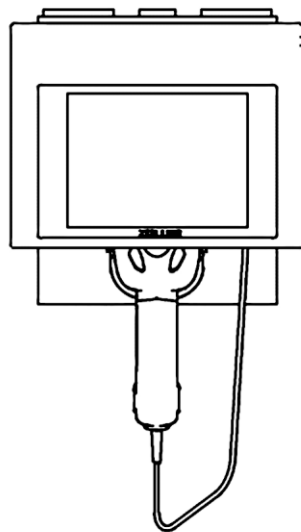
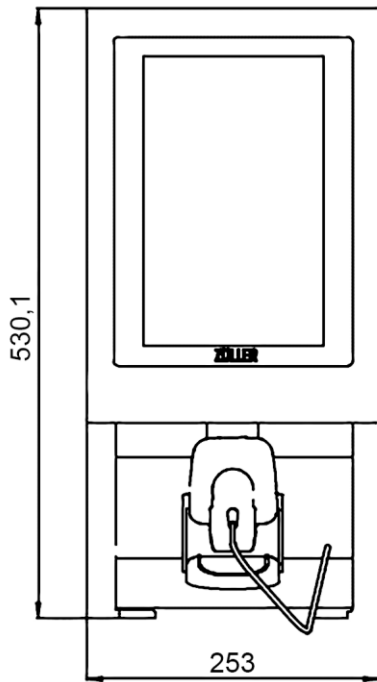
ZOLLER »zidCode« Service

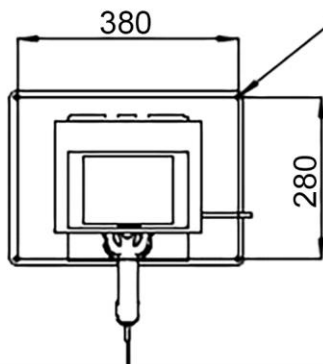
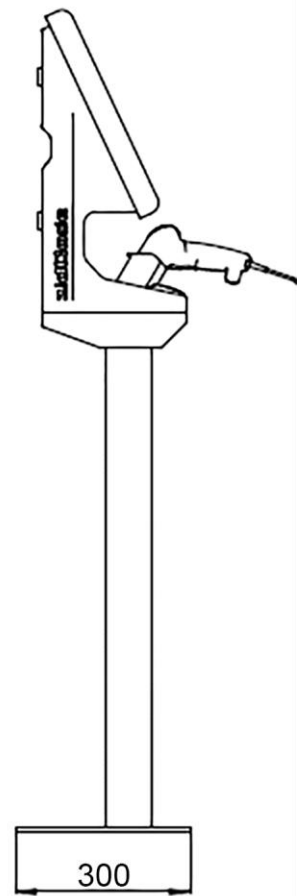
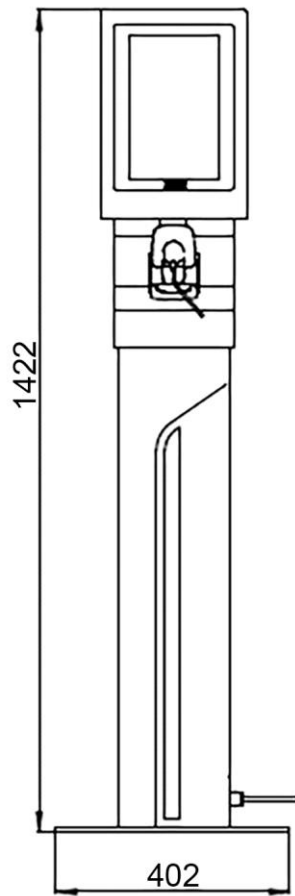
The ZOLLER »zidCode« service aids communication by the »zidCode« platform in the customer's network. Only available in connection with the »zidCode 4.0« unit.

ZOLLER WebService

ZOLLER WebService allows third-party systems to use API standard in order to call up information from the ZOLLER tool database. The requested tool data is provided in XML format.

Technical Data





Fastening drill hole 4 x 9 mm

Basic Requirements

- CNC machine with network connection and access to the exchange directory and function, in order to be able to import post-processor data (unique IP address)
- »zidCode 4.0« with network access to the customer-supplied production network
- »zidCode« service
- ZOLLER WebService
- ZOLLER presetting and measuring machine with »pilot 4.0« image processing software from version 1.18.7 with »zidCode« module
- Tool holder with 2D code (QR code or datamatrix code)
- Post-processor
If a standard ZOLLER post-processor is not available, this has to be developed by ZOLLER. An exported tool memory or post-processor specification is needed for this. This has to be transmitted to ZOLLER together with the order.

»zidCode«

ZOLLER »zidCode« for all machine controls without network connection.

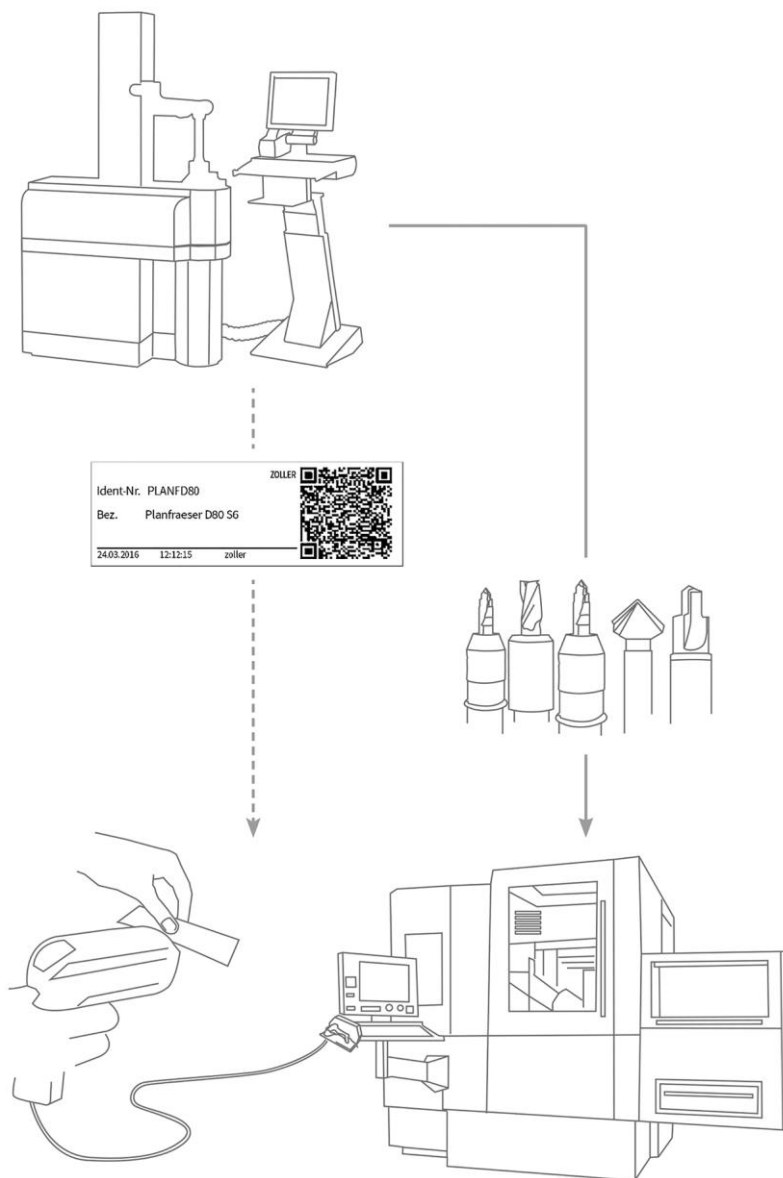
The identification code developed by ZOLLER does not need a network connection, but instead transmits the required tool data by scanning a QR code. By simulating the keyboard strokes, ZOLLER »zidCode« translates the data from the QR code into the machine's interface. A file can also be provided by USB, Ethernet or serial connection.



1	Drop protection	4	USB cable
2	Hand-held scanner	5	Magnet
3	Table holder		

Procedure

Tool is measured and set on the ZOLLER presetting and measuring machine. The actual tool data is printed on a label as a QR code. The data encrypted in the QR code is imported with the »zidCode« hand-held scanner and entered automatically into the corresponding data fields of the CNC machine. The tool can then be physically loaded into the CNC machine.



QR Code

After measuring the tool, machine-specific data can be printed on a label with the »zidCode« software function. This data is converted into a QR code. Apart from the tool data, the QR code also includes step data for the tool, up to a maximum of the first three steps.

The output values are separated by a semicolon ";" (0x3B). Only the final semicolon is provided for fields without information.

A period "." (0x2E) is used as a decimal separator for floating comma values.



Sample Configuration

This QR code contains the following values:

Position in QR code	Name	Value
1	Identification number	T_00000026
2	T-number	20
3	Code	1
4	Tool identifier	1
5	Tool size	0
6	Duplo number	2
7	Change speed	1
8	Adapter number	9
9	Description	Countersink_90_/tapered countersinking cutter_90G
10	Tool type	1
11	Length (Z) (step 1)	131,500
12	Tool radius (X) (step 1)	1,500
13	Point angle (step 1)	
14	Tool life (step 1)	50
15	Remaining tool life (step 1)	45
16	Warning limit (step 1)	5
17	Cutting edge radius (step 1)	
18	Offset (Y) (step 1)	
19	Tool type (step 2)	
20	Length (Z) (step 2)	85,000
21	Tool diameter (X) (step 2)	3,000
22	Point angle (step 2)	

Position in QR code	Name	Value
23	Tool life (step 2)	
24	Remaining tool life (step 2)	
25	Warning limit (step 2)	
26	Cutting edge radius (step 2)	
27	Offset (Y) (step 2)	
28	Tool type (step 3)	
29	Length (Z) (step 3)	
30	Tool diameter (X) (step 3)	
31	Point angle (step 3)	
32	Tool life (step 3)	
33	Remaining tool life (step 3)	
34	Warning limit (step 3)	
35	Cutting edge radius (step 3)	
36	Offset (Y) (step 3)	

Interfaces

Ethernet – Data Transfer

The printed QR code is scanned with »zidCode«. The data in the code is transferred serially by Ethernet. For the data transfer, »zidCode« creates an « NC – Offset – Program » in the control-appropriate format of the CNC machine. The data of the measured tool can be transferred into the machine with this file.

Serial – Data Transfer

The printed QR code is scanned with the »zidCode«. The data in the code is transferred serially via RS232. For the data transfer, »zidCode« creates an « NC – Offset – Program » in the control-appropriate format of the CNC machine. The data of the measured tool can be transferred into the machine with this file.

Requirement:

- Transmission using Xon/Xoff protocol

USB Keyboard Simulation

The printed QR code is imported with the »zidCode«. The data transfer then takes place by keyboard simulation and the data transfer is automatically transferred to the machine type.

So that data transfer by keyboard simulation to the CNC machine is supported, an external USB keyboard has to be connected to the machine first and tested. If the external USB keyboard can be used, use of the keyboard simulation is guaranteed.

Requirement:

- CNC machine with USB connection, which supports an external USB keyboard and its data input
- Operating system at least Windows XP

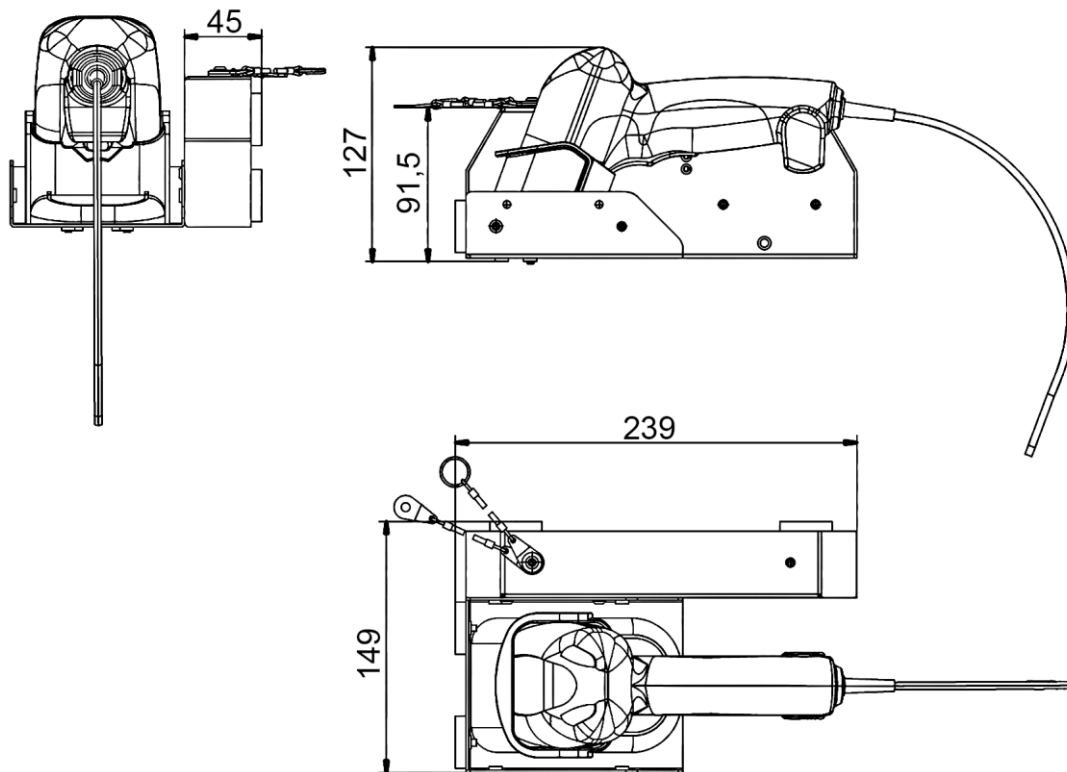
USB - Provision of Files by Simulating an External Mass Storage Device

To provide files by simulating an external mass storage device, the measured tool data is printed in the form of a QR code and imported with the »zidCode« reader. The imported QR code is detected by the control as an external mass storage device. A file is generated on this external mass storage device in the defined format, which can then be imported via control-specific import functions.

Requirement

- USB port with the function of being able to import files or NC programs.

Technical Data



Basic Requirements

- CNC machine with USB connection, which recognizes a simulated USB keyboard and can simulate data input with this.
- It is possible to fasten the hand-held scanner to the machine controls by magnet.
- ZOLLER presetting and measuring machine with image processing software »pilot 4.0« or »pilot 3.0« or »pilot 2 mT« from Version 1.15.0 or »pilot 1.0« from Version 1.15.13.
- »zidCode« label is the basic requirement and must be created for printing with the corresponding image processing software on the ZOLLER presetting and measuring machine

Accessories

Thermo-label printer

The thermo-label printer prints labels with various parameters such as ID, T, inventory, and adapter numbers, designations, Z, X, radius, angle, radial run-out, and axial run-out dimensions, and/or QR, line, data matrix, or bar codes.

- Print thickness 8 dots/mm (0.04 in.)
- Print width 108 mm (4.25 in.)
- USB interface
- Mains voltage 100-240 V



Thermal Transfer Printer

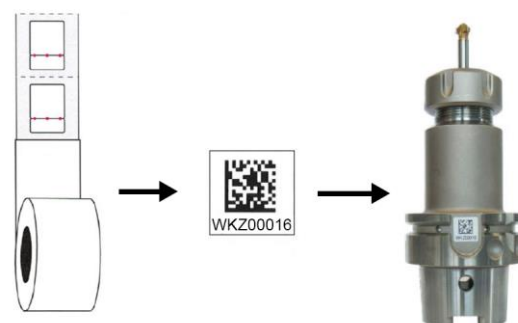
For printing a data matrix code with ID or inventory number.

- »idLabel« software for »pilot 3.0/4.0« or ZOLLER-TMS from Version 1.16.0
- Transfer ribbon for TTP-323, ribbon width: 56 mm (2.2 in.)



»idLabel« Adhesive Labels, Single Row

- 12 mm x 12 mm (0.47 in. x 0.47 in.) –
- 1 row unprinted
- 1000 labels/roll,
- CoreØ 76 mm (3 in.),
- RollØ 110 mm (4.34 in.)
- Temperature resistant to +180°C (+356°F)



Data Clip

Data clip and data clip holder for

- SK 40 / HSK 63
- SK 50 / HSK 100



Tooltags

For tool labeling and secure fastening of adhesive labels.

- Content of packaging 20 pieces
- For SK 50/HSK 100 and SK 40/HSK 63



Memory Expansion

The »zidCode« unit provides additional storage on the network. This is expanded by 6GB.

- Additional network connection to the tool machine tool required.

Additional Accessories

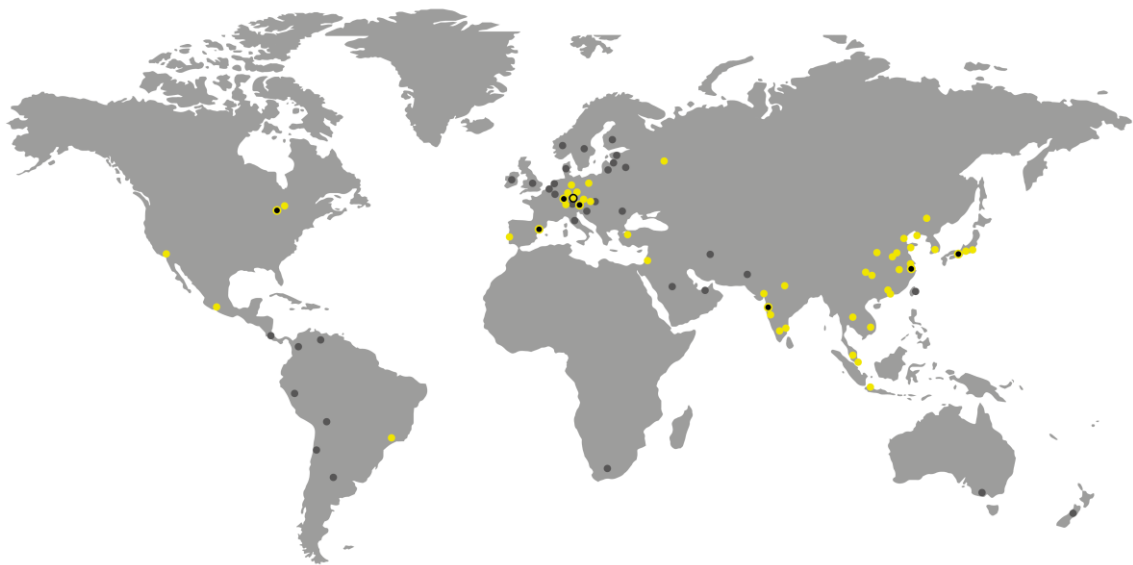
- External power supply for »zidCode«

	approx. dimensions (W x L x H)
»zidCode 4.0« »zidCode«	260 x 360 x 230 mm (10.2 x 14.2 x 9.1 inch)
Column	1510 x 500 x 550 mm (59.4 x 19.7 x 21.6 inch)

Commissioning & Basic Training

The professional »zidCode« installation and commissioning, including functional check, as well as training (8h/day) for three employees are performed at the customer's site. Travel costs and working hours in Germany are included.

Knowledge on site worldwide



We offer service where you need it – around the world in 58 countries.

			
Head office	Headquarters	Branch office	Representative

Our customers have trusted us for many decades, partially because ZOLLER offers first-class customer service. Just like all of our services, this customer service improves your production efficiency and quality. You benefit from freedom from maintenance, long lifetimes, and the ongoing further development of our solutions.



ZOLLER

Solutions

More speed, higher quality, reliable processes – with ZOLLER you get more out of your production process. We combine hardware, software and service to create optimum system solutions for presetting, measuring, inspecting and managing tools.

Presetting & Measuring

Tool Management

Inspection & Measuring

Automation

Everything from a single source.

Everything for your success.

Everything with ZOLLER Solutions.

ZOLLER
expect great measures

Headquarters in Pleidelsheim

E. Zoller GmbH & Co. KG

Tool presetter and measuring machines

Gottlieb-Daimler-Straße 19 | D-74385 Pleidelsheim

Phone: +49 7144 8970-0 | Fax: +49 7144 8060-807

post@zoller.info | www.zoller.info