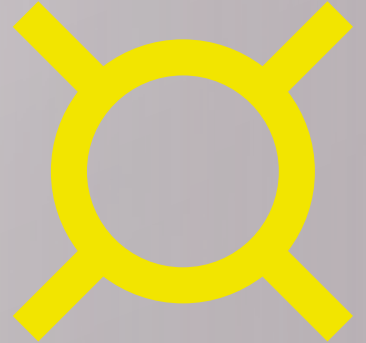


Management System for a Seamless,
Connected and Safe Manufacturing Process

ZOLLER
expect great measures

TMS Tool Management Solutions

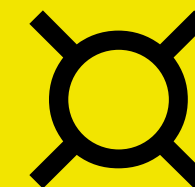


TMS Tool Management Solutions

Today, efficient tool management is the key to stable processes, low costs, and transparent manufacturing. Keeping tool data, equipment, and stock levels under control prevents search times, incorrect orders, and machine downtime – and boosts productivity from day one. This is exactly where ZOLLER comes in: You start with the powerful »TMS Core« and expand your system step by step with six add-ons.

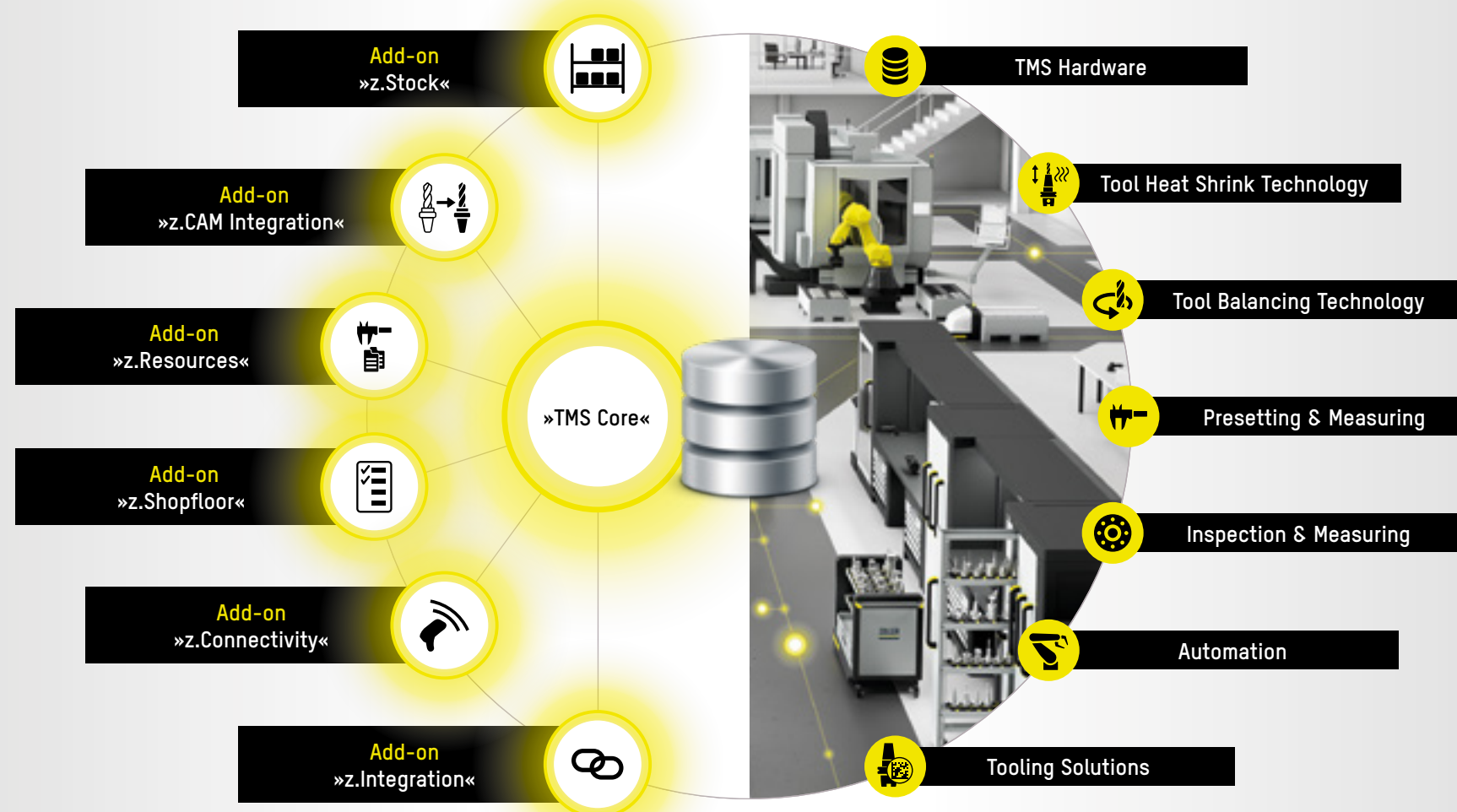
Benefits of TMS Tool Management Solutions

- Comprehensive tool management
- Independent, flexible system integration
- Modular software solution



The result: full transparency, secure processes, and tool management that reliably scales with your requirements in your manufacturing environment. Use to get started and make your tool management ready for the future. ZOLLER creates a connection between software and hardware to create a smart factory management system, which makes tooling processes measurably more efficient and visible:

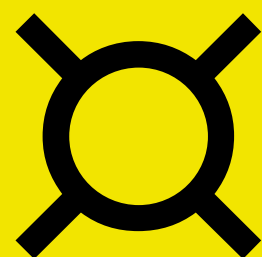
Start with a solution – Enter a system



ZOLLER TMS – Digital Tool Management

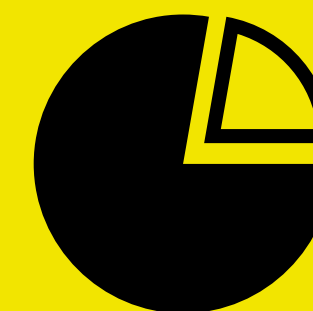
Ten Benefits

- 01 Reliable tool assembly
- 02 Digitization of tool data
- 03 Transparent tool inventories
- 04 Tool traceability
- 05 Standardized production processes
- 06 Maximum tool data transparency
- 07 Cross-site access
- 08 Seamless integration with ZOLLER hardware
- 09 Measurable increase in productivity
- 10 Seamless integration all the way to the machine



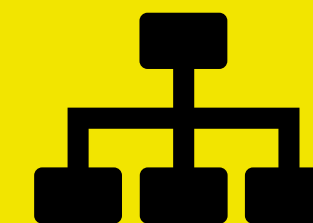
All-inclusive package

ZOLLER TMS has a modular design and can be expanded in a targeted manner – all the way to a fully automated smart factory. Starting is intentionally simple: You begin with exactly the functions you need today. This ensures your tool management remains a sound long-term investment – from a quick start to the fully expanded final stage with automated processes. **Start easily. Grow modularly. Automate for the future.**



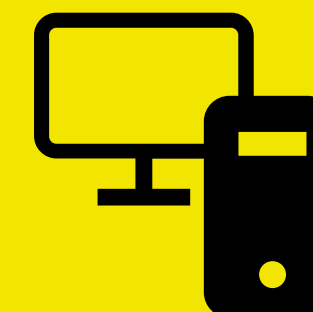
Floating licenses

ZOLLER's floating licenses offer maximum flexibility when using the tool management system. The licenses are available centrally on the network, are automatically assigned as needed, and are immediately approved again after TMS is closed. This licensing model is ideal for manufacturing environments with fluctuating requirements and ensures that **100% scalable** access to all information is available.



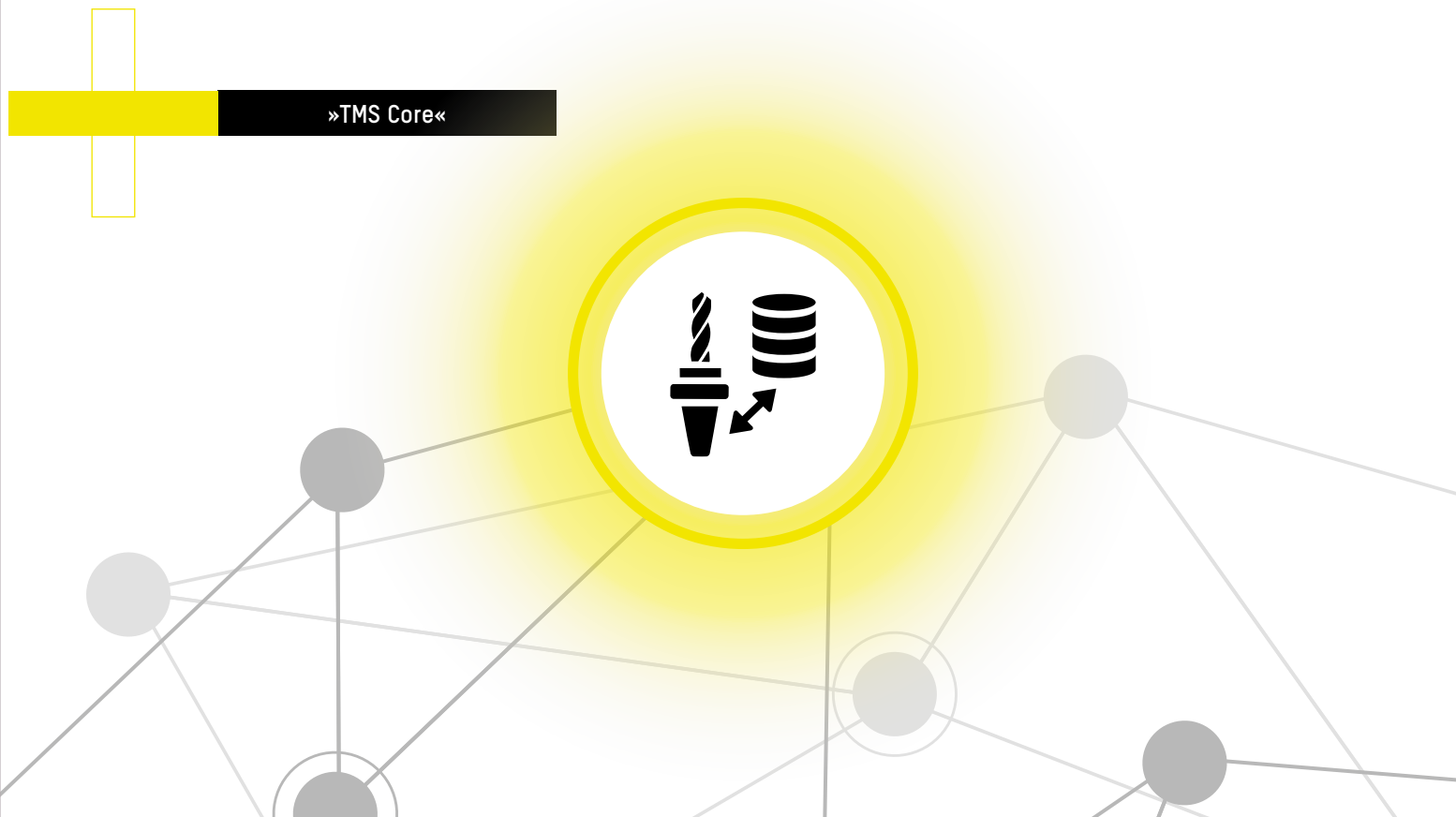
Web app

ZOLLER TMS is installed centrally on the company server and provides **tool- and production information across all locations and on any device – depending on the available feature set.** Access is browser-based via mobile devices, while central updates significantly and sustainably reduce maintenance- and administrative effort for users and the IT department.



Modular System – »TMS Core«

With »TMS Core« ZOLLER offers the ideal start point for digital tool management. Streamlined, with an overview, and ready to use immediately – perfect for structuring processes and centrally storing tool data. With TMS, you remain flexible at all times: browser-based, available across locations, and simple to scale – suitable for any level of production. If desired, »TMS Core« can be expanded at any time with six add-ons – exactly at the pace at which your tool management should grow.



Benefits of »TMS Core«

- Import data from tool manufacturers with no extra effort
- No duplicate data entry – the system is simple and scales with your needs
- Significant time savings thanks to a centralized tool database



»TMS Core« (3 floating licenses)	Web browser*	Desktop
Individual components	●	●
Tools	●	●
Setup sheets	●	●
Machines	●	●
Accessories	●	●
Inventory	●	●
Integration of the presetting machine**	–	●
Web service REST API	–	●
Login using user ID	–	●
Single Sign-On (SSO)	–	●
Import/Export	–	●
Support and updates	●	●

*Browser-based; accessible on laptop, tablet, or smartphone

**ZOLLER or third-party manufacturers ● Basic – has no availability

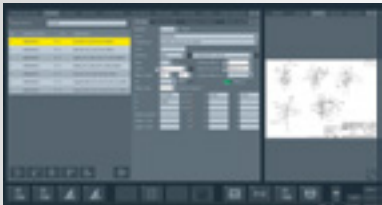
Overview of optional ZOLLER hardware for »TMS Core«



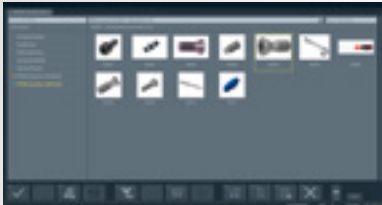
Individual components management



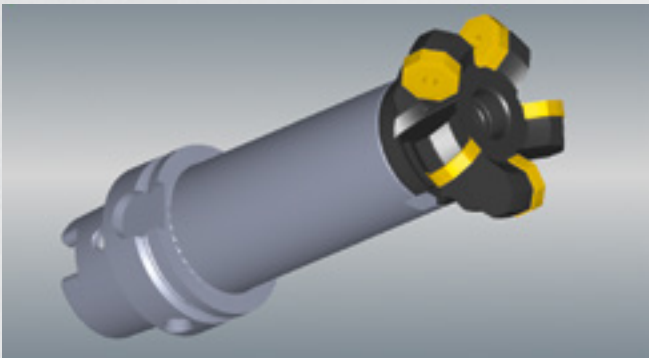
Management of complete tools, including parts lists



Management of setup sheets as digital workbooks



Management of accessories and personal protective equipment



Tool Management as the key to tool transparency



ZOLLER TMS for top-level process reliability



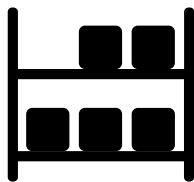
Growth potential – »TMS Core«

- The software is specifically designed for expandability: Start today, expand tomorrow – with the add-ons, that your tool management really needs.
- Thanks to centralized data storage, »TMS Core« reduces administrative overhead.
- »TMS Core« ensures that tool data can be created once and used everywhere.

Exact Stocks – add-on »z.Stock«

ZOLLER TMS with the **add-on »z.Stock«** ensures clear transparency in the tool warehouse: The 3D-storage location management system displays all stocks accurately, while the inventory control feature makes availability and usage locations visible at all times. Suppliers, prices, and order quantities are managed centrally, order proposals are generated automatically and orders are sent via email. Incoming tools are digitally entered and inspected. All tool data, storage locations and stocks are immediately accessible at – for efficient, secure, and fully digital tool management.

Add-on »z.Stock«



Benefits of the add-on »z.Stock«

- End-to-end traceability of every tool
- Quick analysis of usage, frequency of use, and circulation rates
- Reduced material costs through optimized stocks



Add-on »z.Stock«	Web browser*	Desktop
3D warehouse location management	●	●
»quickPick«	●	●
Ordering system	–	●
Article statistics	–	●
Reporting service	–	●
Exchange/Repair	–	●
Warehouse interfaces	–	⊙
ERP interfaces	–	⊙

*Browser-based; accessible on laptop, tablet, or smartphone

● Basic ⊙ optional – has no availability

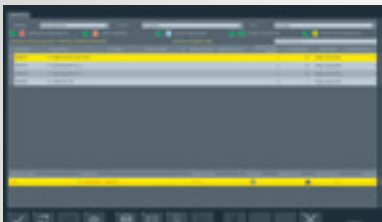
Overview of optional ZOLLER hardware for the add-on »z.Stock«



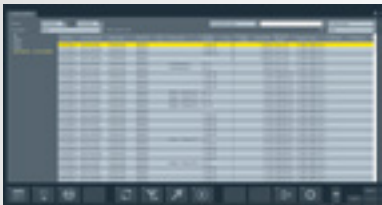
3D inventory management of all components at a glance



»quickPick« as a warehouse interface for all components and orders



Ordering system including minimum inventory monitoring



Article statistics for evaluation and management of data records



Simple warehouse handling with »quickPick«



ZOLLER Smart Cabinets for tool storage



Planning certainty – add-on »z.Stock«

- The add-on ensures complete transparency from the goods receipt through to their use – the foundation for fact-based purchasing.
- The add-on provides real-time-stock updates for maximum reliability and helps avoid downtime.
- The add-on enables the traceability of every tool for targeted consumption analysis.

Efficient Workflow – add-on »z.CAM Integration«

ZOLLER TMS, with the **add-on »z.CAM Integration«**, expands the system with powerful interfaces and integrates tool data directly into the workflow. DIN/ISO-article characteristics, the integrated 2D and 3D editors, as well as technology data, ensure unambiguous, complete tool definitions. The NC program management and more than 25 CAM interfaces enable seamless process integration. Clear tool structures reduce CAM programming and setup times and increase process reliability.



CAM interfaces with user-friendly surfaces



DIN 4000/ISO 13399 – for the unambiguous description of tools

Benefits of the add-on »z.CAM Integration«

- Standardized data entry in accordance with DIN/ISO
- Digital manufacturing expertise through technology data
- Less coordination effort between CAM and manufacturing

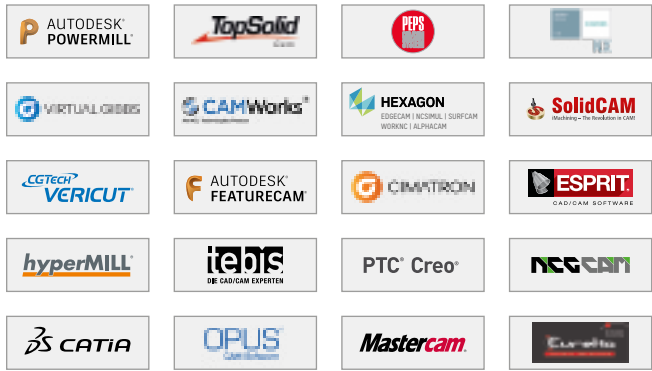


Add-on »z.CAM Integration«	Web browser*	Desktop
DIN/ISO article characteristics	–	●
2D and 3D editor	–	●
Technology data	–	●
NC interpreter	–	●
NC program management	–	●
CAM interfaces (25+)	–	⊙

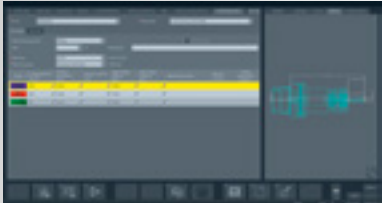
*Browser-based; accessible on laptop, tablet, or smartphone

● Basic ⊙ optional – has no availability

Selection of supporting CAM systems



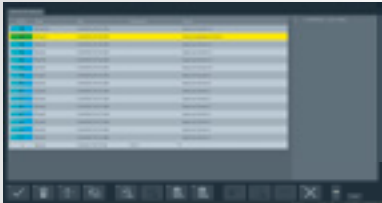
Product characteristics bar according to DIN 4000 and ISO 13399



Complete data for each tool as 2D/3D graphics



Graphic tool assembly of all tools components



NC program management including version control as well as bidirectional data transfer from to and from the machine



Process plus – add-on »z.CAM Integration«

- The add-on delivers measurable ROI through short lead times.
- The add-on provides centralized, consistent tool data for CAM, NC and manufacturing without version conflicts.
- The add-on integrates seamlessly into existing systems and scales to meet your requirements.

Central Capacities – add-on »z.Resources«

ZOLLER TMS, with the **add-on »z.Resources«**, manages all additional resources: All relevant resources are directly associated with the component and automatically appear in the setup sheet – in addition to for test equipment, fixtures and optionally NC program management. The optional NC program management enables centralized, component- and machine-specific storage as well as versioning of NC programs, ensuring that the correct program in its current version is always available.



Benefits of the add-on »z.Resources«

- A centralized system for all equipment
- Complete traceability of every use
- Direct consolidation of all equipment in the setup sheet



Add-on »z.Resources«	Web browser*	Desktop
Fixtures	●	●
Inspection tool	–	●
Components	●	●
NC interpreter	–	⊙
NC program management	–	⊙

*Browser-based; accessible on laptop, tablet, or smartphone

● Basic ⊙ optional – has no availability



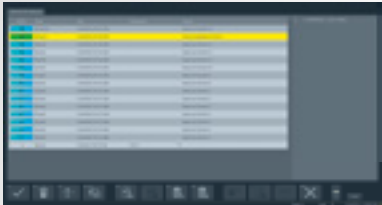
Management with documented calibration intervals



Inspection tool management of the setup sheet and monitoring of the calibration intervals

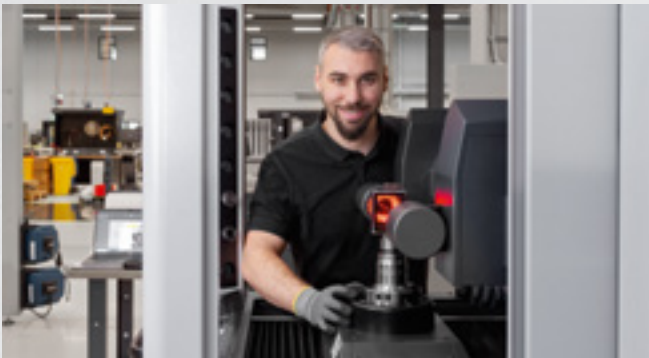


Management of individual parts and assembly groups with setup sheets, tools and production times



NC program management including version control as well as bidirectional data transfer from to and from the machine

Overview of optional ZOLLER hardware for the add-on »z.Resources«



Direct access during the running process



Gauges, inspection tools and fixtures organized centrally



Continuity – add-on »z.Resources«

- The add-on ensures that all necessary resources are immediately available at during setup – without any searching, inquiries or delays.
- Incorrect equipment, outdated programs or missing resources are ruled out.
- With the add-on, every use of resources is fully documented and traceable.

Digital Transparency – add-on »z.Shopfloor«

ZOLLER TMS with the **add-on »z.Shopfloor«** brings clear structure to manufacturing: The order management system provides correct tool- and setup information at all times, while the order management service seamlessly establishes a connection between planning and the shop floor. The digital resharpener process provides full transparency into every rework operation, and tool life management ensures predictable tool availability – supplemented, if desired, by the optional »flash«-monitoring system for early detection of critical tool conditions. This creates a seamless, efficient tool lifecycle directly on the shop floor.



Benefits of the add-on »z.Shopfloor«

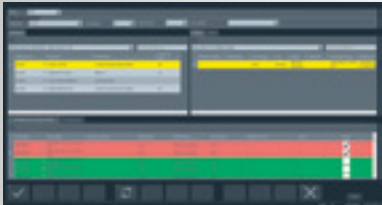
- End-to-end data consistency all the way to the machine
- Increased efficiency through clearly defined tool cycles
- Seamless workflows in the manufacturing process



Add-on »z.Shopfloor«	Web browser*	Desktop
Order management		
- Web browser	●	-
or		
- Desktop	-	●
Order management service	-	●
Resharpener process	-	●
Tool life management	-	●

*Browser-based; accessible on laptop, tablet, or smartphone

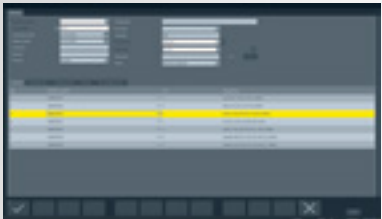
● Basic - has no availability



Order management with an overview of all stages of your order



Book out the tools at taking into account the difference, which is already on the machine

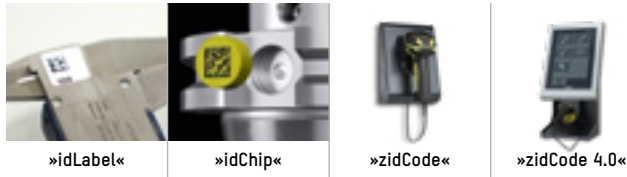


Order overview showing the resources relevant to production



Resharpener process for handling resharpener procedures

Overview of optional ZOLLER hardware for the add-on »z.Shopfloor«



Tooling Solutions – with integrated ZOLLER »idChip« technology



Reliable order management – manageable from any location



Process reliability – add-on »z.Shopfloor«

- With this add-on, orders and tool conditions are visible in real time at all times.
- The add-on provides complete transparency throughout the process through paperless feedback.
- The add-on standardizes workflows, speeds up onboarding, and efficiently reduces employee workload.

Secure Data Transfer – add-on »z.Connectivity«

ZOLLER TMS, with the **add-on »z.Connectivity«**, uses »zidCode 4.0« to create a seamless, digital connection between tool measurement, tool management and the machine. Tool data is uniquely assigned, is always up to date, and is transferred error-free to the CNC-control. The data is managed digitally via apps and interfaces, while functions such as »z.Stats« and »flash« ensure transparency from the machine all the way to the store. This avoids manual inputs, stabilizes processes and sustainably safeguards production.



Add-on »z.Connectivity«



Transfer tool data safely and quickly



Optimized setup sheet process for seamless data flow

Benefits of the add-on »z.Connectivity«

- Real-time data availability with consistently up-to-date tool data
- Unique tool identification prevents mix-ups
- Automated data transfer for consistently error-free inputs

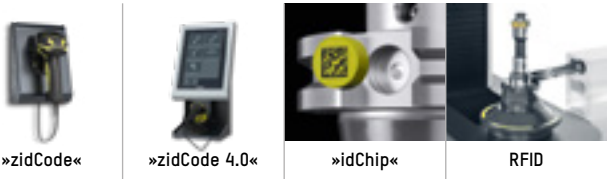


Add-on »z.Connectivity«	Webbrowser*	Desktop
»zidCode«**	-	-
»zidCode« software**	-	●
»zidCode 4.0«**	●	-
»z.Stats«**	●	-
Tool life management - RFID technology - »z.DMI« technology	-	●
Tool life monitoring »flash« - »z.DMI« technology	-	●
Post processors	-	●
Magazine inquiry	-	●
Data entry/Data output/DNC, including format generator	-	●

*Browser-based; accessible on laptops, tablets, or smartphones

**Can only be used with additional hardware ● Basic - has no availability

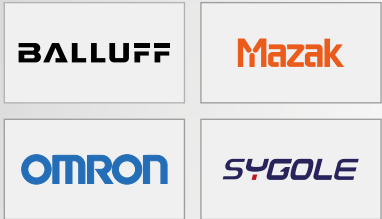
Overview of optional ZOLLER hardware for the add-on »z.Connectivity«



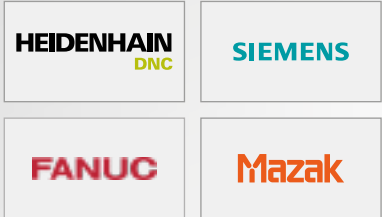
Tool life management with integrated statistics feature



»flash« tool life monitoring with management and organization of cutting tools



RFID-based tool identification with direct machine integration – e. g., in leading system solutions



»z.DMI« technology automatically transfers tool data directly to the machine control system – e. g., in leading CNC control systems

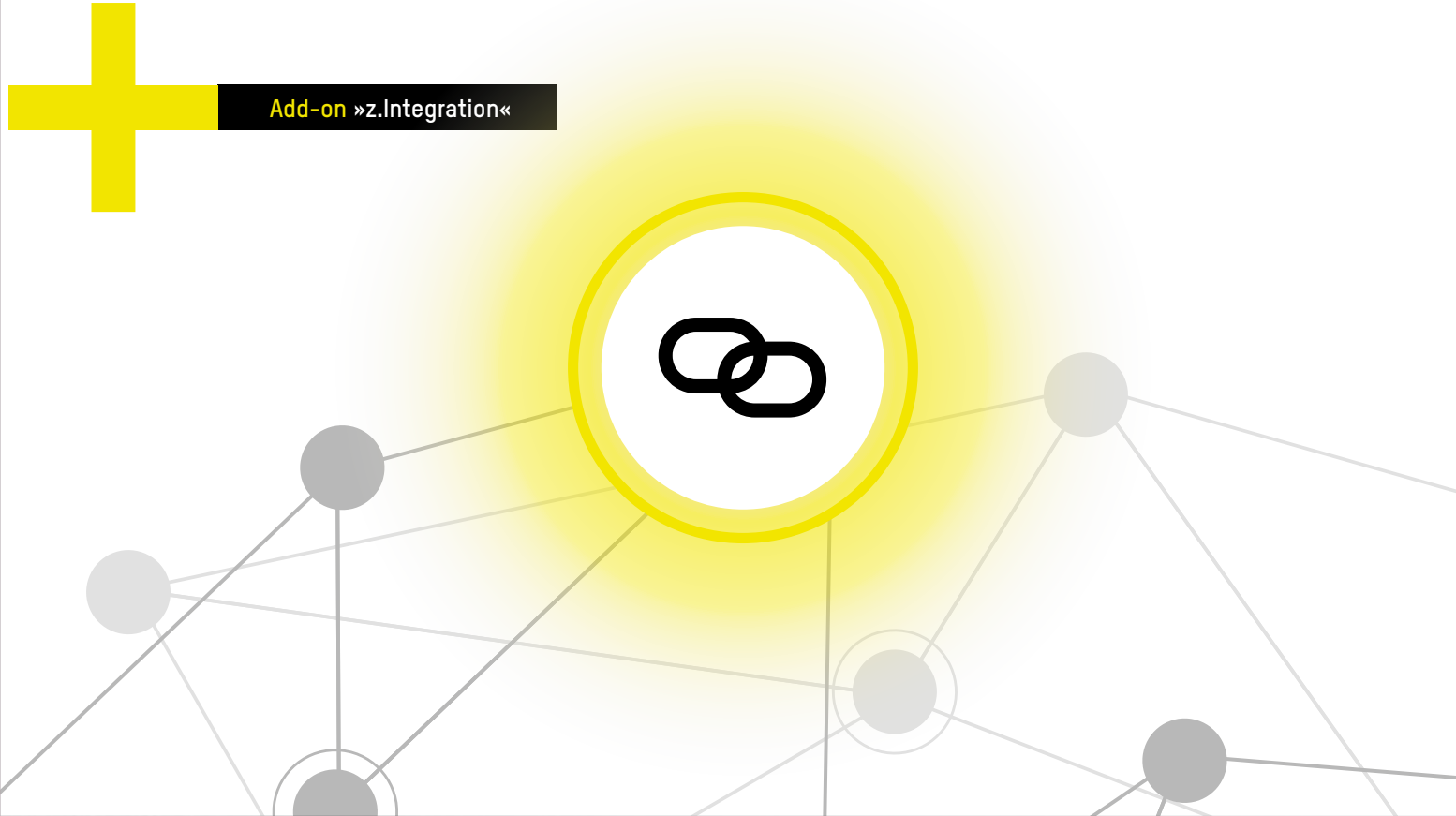


Data flow – add-on »z.Connectivity«

- The add-on provides complete transparency across the entire tool lifecycle from the machine to the store.
- The add-on makes it easy to get started with digitalization.
- The add-on enables seamless integration with existing machines.

Smart Connectivity – add-on »z.Integration«

ZOLLER TMS with the **add-on »z.Integration«** is the vendor-neutral tool management solution for established manufacturing environments. As a true brownfield connector, the system connects to hundreds of interfaces and seamlessly integrates different third-party systems into a central tool database – without compromise. Regardless of which systems are in use – from presetting and measuring machines to automatic storage systems, ERP and CAM environments – ZOLLER TMS ensures a continuous flow of data throughout the entire tool lifecycle.



Add-on »z.Integration«

Benefits of the add-on »z.Integration«

- Integrate existing systems rather than replace them
- A centralized database rather than siloed solutions
- Future-proof digitalization without being tied to a specific manufacturer



Add-on »z.Integration«	Web browser*	Desktop
Excel import interface V1/V2	-	●
Integration of third-party presetting machine	-	⊙
CAM interfaces	-	⊙
Simulation interfaces	-	⊙
ERP interfaces	⊙	⊙
Warehouse system interfaces	-	⊙
Data acceptance from third-party systems	⊙	⊙
Integration of third-party systems	⊙	⊙
OEM data import interface Sandvik/KM/Iscar + many more	-	●
ToolsUnited interface	-	●
TOOLS ERA interface	-	●

*Browser-based; accessible on laptop, tablet, or smartphone

● Basic ⊙ optional - has no availability

Selection of possible third-party systems via the add-on »z.Integration«

STORE	SIMULATION	ERP
- Gühring - Hänel - Iscar - Kardex - Kennametal + many more	- NCSimul - Vericut + many more	- abas - Mantis - SAP + many more

1.

Analysis
&
Consulting

2.

Solution
&
Integration

3.

Installation
&
Networking

4.

Support
&
Optimization



ZOLLER in dialogue – consulting on an equal footing



Training on how to get the optimal use of ZOLLER systems



Process quality – add-on »z.Integration«

- With this add-on, existing investments are fully preserved – without having to exchange existing systems.
- This add-on measurably speeds up processes – thanks to an automated and end-to-end data flow.
- The add-on removes system silos, enabling seamless integration across all application.

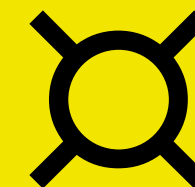
Centrally Managed Toolroom Management

ZOLLER TMS is the central solution for efficient toolroom management and ensures end-to-end transparency throughout the entire tool lifecycle. From planning through commissioning to reconditioning, all tools, components, and data are managed in a central database.

The result: ZOLLER TMS becomes the controlled, digital hub of production. Search times are reduced, stock is optimized, and processes are standardized. From the CAM-system through the store to the presetting and measuring of tools, ZOLLER TMS creates a seamless workflow – for maximum process reliability, cost transparency, and productivity in the toolroom.

Benefits of TMS in the toolroom

- Increased efficiency through standardized, digital processes
- Tools are available on time and meet quality standards
- Lower costs due to longer tool life



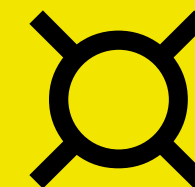
Tool Transparency in Manufacturing

The »coraLogistic« system automatically transports the tools that have been inspected on the ZOLLER presetting- and measuring machine. Using ZOLLER's »zidCode 4.0«, the corresponding tool data is transferred directly and error-free to the CNC-machine via a scan. Each tool is uniquely assigned to a machine, and the data is fed directly into the control system. This ensures that correct, up-to-date and consistent tool data is available in production at all times – quickly, reliably, and without manual data entry.

The result: Tool data is transferred directly to the CNC-machine via RFID or post processors using »zidCode 4.0« or »zidCode« – simple, reliable, and with process reliability.

Benefits of TMS for digital manufacturing

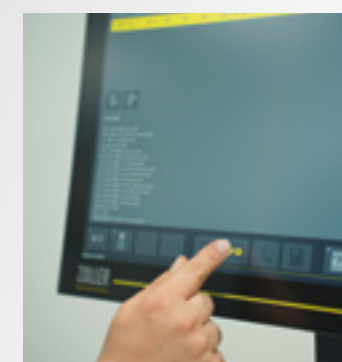
- Unique tool identification and error-free data transfer
- Shorter setup times and optimized tool utilization
- Relevant tool information throughout the entire manufacturing process



»zidCode« ensures unique tool identification and secure, error-free data transmission via QR code



»zidCode 4.0« featuring »idChip« technology uniquely identifies tools and transmits data automatically and securely



Post processors prepare tool data to be compatible with the CNC-control and enable automatic, error-free data transmission



RFID-based data transfer enables contactless transmission of tool data directly to the machine



7

Automated
tool logistics

8

Data transfer with
»zidCode«



9

Data transfer with
»zidCode 4.0«



10

Data transfer with
post processors or RFID systems



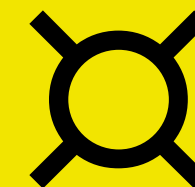
Smartly connected Tool Management Data

With ZOLLER TMS serving as the central database, end-to-end automation begins in the tooling process. TMS controls »coraLogistic« the intelligent logistics solution, which automates processes such as tool identification, tool measurement, tool storage and automated tool exchange within the machine. ZOLLER TMS integrates »loadBox«, »coraMeasure LG«, and »coraMachineLoad« into a closed, end-to-end process – from identification to automated machine loading. All tool data is managed in TMS and transferred to the machine in a reliable and process-secure manner.

The result: ZOLLER TMS controls the entire tooling process and lays the foundation for future-proof, 24/7-automation at the highest quality level.

Benefits of TMS for automation

- Unique tool identification and error-free data transfer
- Short setup times and optimized tool utilization
- Relevant tool information throughout the entire manufacturing process



Made in Germany – Available Wherever You Are

ZOLLER quality is “made in Germany” and there for you, anywhere in the world.

Our company has its own locations and branches at 85 sites in 62 countries, guaranteeing we are close to customers and can provide first-class, personal customer service in local markets.

Your Advantage
ZOLLER presence

Global. Close. Personal.

- Parent company
- Headquarters
- Branch office
- Representative

GERMANY

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