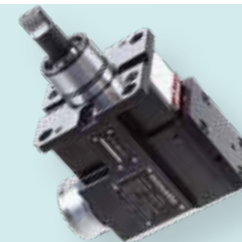# eltimon®

Free Your Tool Monitoring With
eltimon

eltimon® existing platform since 2015 for partners and customers

- **Preventive Maintenance**
- **Management Desk**
- **Augmented Operator**
- **Sensors**

Solutions for digitalisation have to be integrated into a network. The interfaces seam to be the challenge.
One level of IOT is the factory with all its communicating elements. There we have process optimisation, real time data, big data and digital mirror. These tasks are handeled by universities and larger global companies.

Another task concerns peventive maintenance, process reliability and unpredicted production stopps. Components in production, wich could not be monitored because of missing sensors seem to be most critical.
This is the area for eltimon. eltimon is the open platform for partners and customers. eltimon offers all the elements for a total digitalisation without any problems regarding interfaces.

eltimon sensors and modules for communication are avaliable for partners to be integrated into technical/mechanical hardware. More eltimon elements: eltimon reader, software for visualisation, eltimon cloud and the Management Desk. eltimon is the total solution for preventive maintenance with many integrated services.

eltimon cloud:
Customers are enabled to monitor their components in production of different manufacturers through one tool with comparable results. Manufacturers and suppliers will find synergies. Multiple source purchasing.

Management Desk:
One screen: all components in production with their actual status. For example: machines, robots, live tools etc. Relevant status information will be found, such as "automatic mode", "manual mode" , "under Maintenance", " interruption" , "yield" etc..

Long lasting, functionality and rigidity

It is our goal to design and supply live tools with convincing features.
This example: mimatic multi spindlehead with eltimon N1.0. Two years heavy duty usage with almost non stop operation. All mechanical and electronical parts are in good condition. Due to eltimon a perfect timing for maintenance.

Maintenance at the right time saves money. All workpieces are manufactured with the same high quality. No rejects.
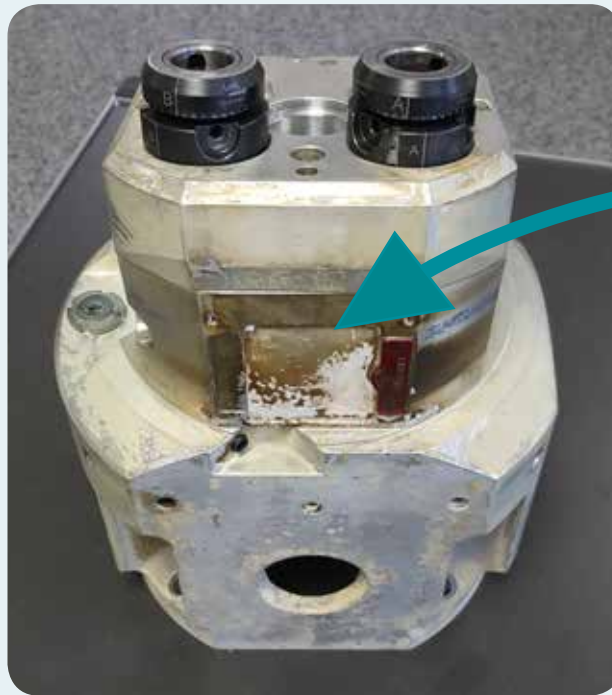
eltimon®
N1.0 inside

eltimon® Live Tool N1.0 since 2015

eltimon reader

eltimon® Live Tool B 2.0

Machine & Gateway

Gateway

catch back
eltimon®

eltimon reader

Two ways - one goal

eltimon® Cloud

Enduser live tool monitoring:
- ✓ Status
- ✓ Availability
- ✓ Performance
- ✓ Predictive maintenance
- ✓ Service logbook
- ✓ Technical information

eltimon® Data download
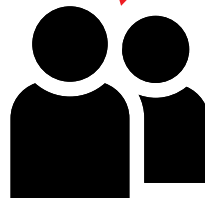
Customer

eltimon® catch back - the story

Totaly independent eltimon B2.0 Systems could be compared with a satel-lite on it´s way to very far away planets. These satellites are intelligent, do have an energy source, sensors and a communication device. The journey is very long and the satellite is set into deep sleep mode for certain peri-ods of time in order to save energy. But there are circumstances where the control center on earth needs to interact at an unplanned point of time. The experts in the control center are very happy if they have catched back the control over their satellite!

eltimon B2.0 is calling as well in predifined periods. eltimon catch back is the solution for operators or for the tool management to ask eltimon at any point of time for information. Previously the live tool was not accessible for data. Spontaneous data demand - despite deep sleep - will be possible with eltimon catch back for live tools with Bluetooth. Communication for 5 years is possible without battery change. The control of the live tool is given back to the operator by eltimon catch back. The operator could even change parameters of the data collection systems.

Bluetooth (BluetoothLowEnergie) – challenges & solutions for industrial applications

Bluetooth – technologies have been developed for consumers and initially not for the industry. BLE is the latest development for the Internet of Things. Conventional batteries shall last months instead of days. In live tools we have less space and smaller batteries shall last for years. This requires an innovation like eltimon catch back. The eltimon catch back technology is available for all partners of the open eltimon platform.
Bluetooth receivers accept signals from various devices at the same time. For the live tool application we will find the following scenario: Our re-ceiver is showing live tools in different locations as machine, shelf, and so forth.

If one of the live tools goes to red, it has to be sent for maintenance! Theo-retically there is the possibility to have a central registration for the location of each tool. The location on the turret could be found in the control system of the machine. The eltimon reader features a simple and reliable identifi-cation of the live tools.
eltimon offers additionally an automatic system for locating. The identifica-tion code for the stock location (turret or shelf) will be automatically collec-ted by eltimon catch back. eltimon will be always updated by the informa-tion of its location! This will help to reduce the set up time of the machine.
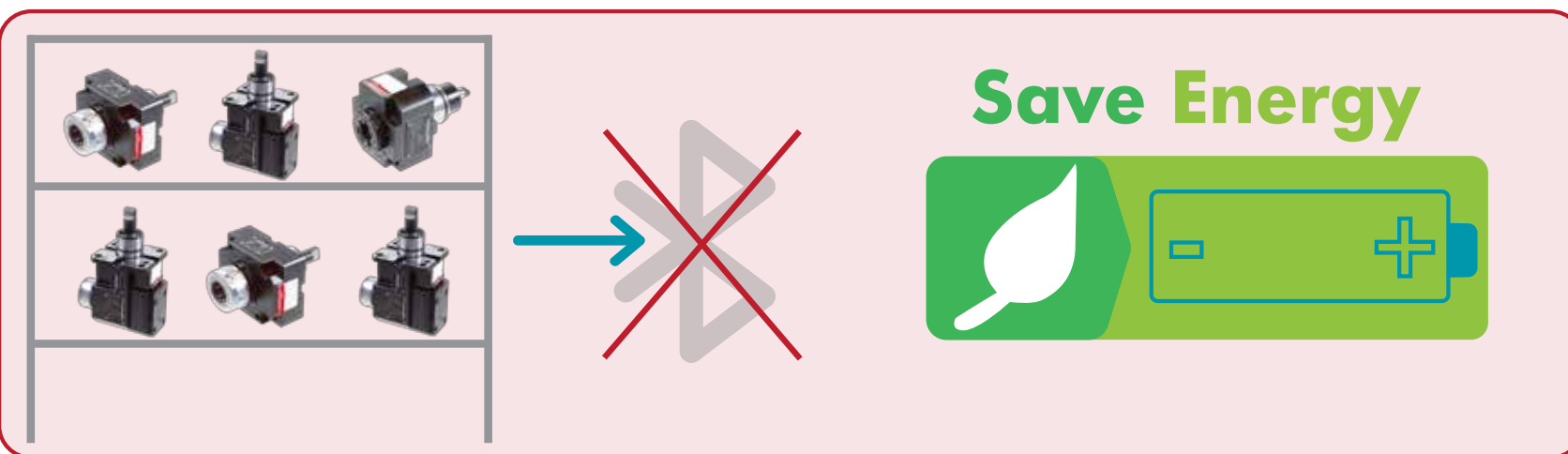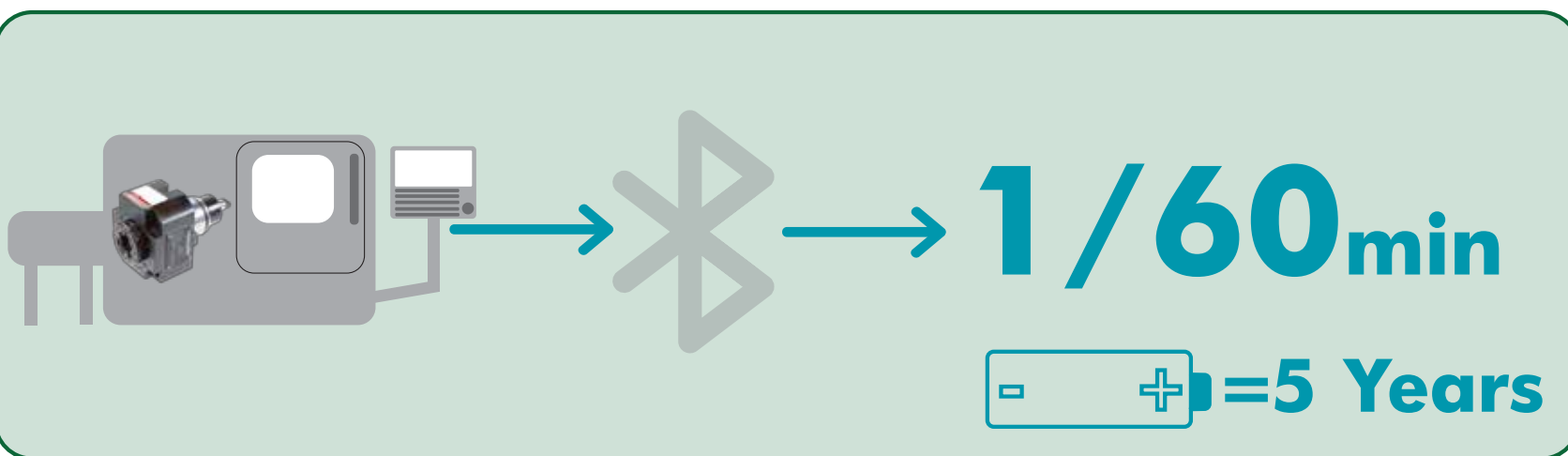
Features:

Identification Live Tool with eltimon B 2.0

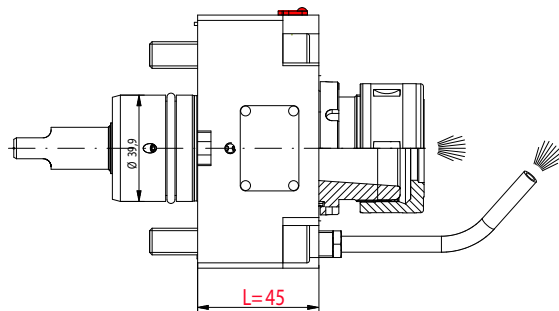| Live Tool 1	Live Tool 2	Live Tool 3	Live Tool 4	Live Tool 5	Live Tool 6
Mori Seiki BMT 40	Mori Seiki BMT 40	Doosan BMT 45	Mori Seiki BMT 40	Mori Seiki BMT 40	Mori Seiki BMT 40

Transmission interval Bluetooth (BluetoothLowEnergie)

1/60min

=5 Years

Save Energy

catch back
eltimon®

Features:

Smaller size by Bluetooth
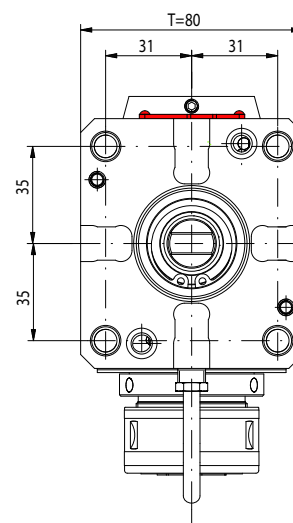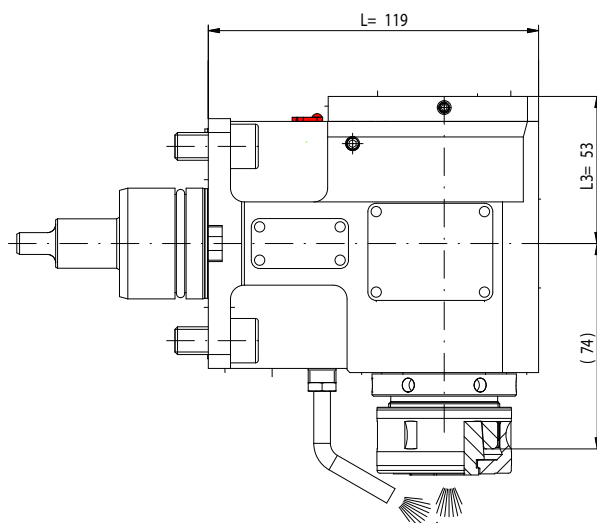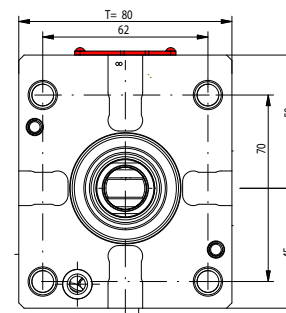
eltimon® Features:

Size Live Tool N1.0 feat. Live Tool B2.0

The space-saving technology of the Bluetooth module allows a small size.

75 mm

45 mm

eltimon N 1.0 - proven system since 2015

The functionality of eltimon N 1.0 is similar to RFID-systems for door locks or at accesspoints for ski lifts. There is no electromagnetic radiation in the environment. In comparison to the well known systems, eltimon has an inbuild intelligence.

Management Desk – cloud.eltimon.de
Example for the AMB Smart Factory 2018

A clear overview of the producing elements in the factory. Status information important to the management.
One more mouse click leads to detailed deeper information.

eltimon® Management Desk				AMB Smart Factory
emco	Machine 1	Automatic OP	Manual OP	Interruption
mimatic	eltimon life tools in machine	Ready	Critical	Maintenance
eltimon®	eltimon life tools stand by	Ready	Critical	Maintenance
FANUC	Handling Robot	Ready	Interruption	Disconnected
HAHN+KOLB	Ausgabesystem	Ready	Reordering	Tools missing
	Assembly	In operation	Standby	No operation
CAS	Shopfloor Software	Active	Data missing	Offline
ELO	Commission Software	Active	Data missing	Offline
plusserver	Plusserver	Active	Data missing	Offline

eltimon®
by mimatic
Tool Systems

mimatic GmbH
Westendstraße 3
D-87488 Betzigau (Germany)

Phone: +49 (0831) 57444-0
Fax: +49 (0831) 57444-90

Internet: www.eltimon.de
eMail: info@eltimon.de