ENERGY

BLUETOOTH
LOW ENERGY

90%

SERVICE INTERVAL

35%

TEMPERATURE

70°C

RPM

6,000

E

OPERATING MANUAL

EWS . CyberCon4

xx.xxx-CC4
Version 1.0
As of 29.03.2019

EWS
Tool Technologies

E

EWS Weigele GmbH & Co. KG
Maybachstraße 1
D-73066 Uhingen

Telephone   +49(0)7161-93040-100
Fax   +49(0)7161-93040-30

Mail   info@ews-tools.de
             www.ews-tools.de

Frank Weigele
Matthias Weigele Dipl.-Ing.

Operating manual

Please read the operating manual carefully and follow the instructions. Keep the operating instructions for the entire service life of the product. Use these operating instructions to familiarize yourself with the device, its correct use and the safety instructions.

Intended Use

When operating driven tools on turning and milling centers, changing operating parameters arise. EWS.CyberCon4 is intended for data acquisition in the machining process of the driven tool. EWS.CyberCon4 is to be understood as an extension and may only be used in this combination and for no other purpose. EWS.CyberCon4 is delivered assembled and can only be read out in connection with the CyberCon4 app.

⚠ The user is liable for improper use.

CONTENTS

1. SAFETY

⚠️ **DANGER!** The device generates an electromagnetic field during operation. The field may interact with medical implants. Recommendation: Consult your doctor before operating the device to avoid the risk of serious or fatal injury.

Children and adolescents under 16 years of age as well as persons who are not familiar with these operating instructions may not use the device. Persons with limited physical or mental abilities may only use the device if they are supervised or instructed by a competent person. Never use the device if you are tired, sick or under the influence of alcohol, drugs or medication.

⚠️ **WARNING!**
Risk of explosion if the battery is incorrectly replaced.
The battery may only be changed by EWS service staff. Contact details under 10. Service/guarantee.

2. FUNCTION

With EWS.CyberCon4, driven tools (1) for turning and milling centers are expanded with sensors. The extension is used to monitor the operating parameters (see 4.2 Operation / operating parameters & functions) that arise during the use of the driven tool. This enables integration into Industry 4.0 processes and the control of maintenance measures. The sensor system is located under the cover (2) and sends the recorded data to the receiver (3) via Bluetooth. The values can be read out with the CyberCon4 app.

1   Driven tool
2   EWS.CyberCon4
3   Receiver with CyberCon4-App
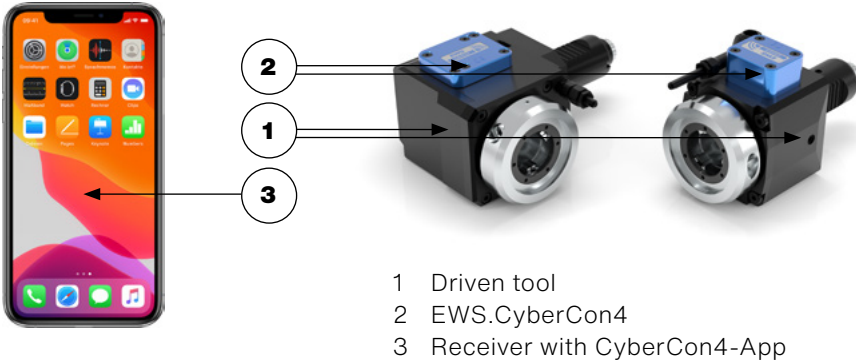
3. INSTALLATION

When delivered, EWS.CyberCon4 is in stand-by mode.
The operating time is 12 months from the time of commissioning,
with normal use (2x app query per day).

Assembly on the machine:
- Mount the driven tool properly
- Operating instructions at
  https://www.ews-tools.de/en/downloads

Activate:
- Drive the driven tool with at least 500 / min for 5 seconds
- EWS.CyberCon4 is now activated and can be read in the
  CyberCon4 app
- The data can now be read out without rotation!

⚠️ **DANGER!**
Risk of injury with rotating parts!
Always keep the machine door closed.

4. OPERATION

A receiver with an active Bluetooth interface is required to operate EWS. CyberCon4 (tablet, smartphone). EWS.CyberCon4 is operated via the CyberCon4 app.
The app can be installed via the Apple App Store or the Google Play Store.

E

4.1 REQUIREMENTS

BLE (Bluetooth Low Energy 4.1)

Software
Apple   from iOs 10
Android   from Android 5.1.1

For best compatibility, an update to the latest version of the operating system is recommended.

4.2 OPERATING PARAMETERS & FUNCTIONS

The following data (operating parameters) can be read out and functions can be used with the CyberCon4 app as standard.

- Serial number driven tool
- Rotational speed
- Temperature
- Service intervals
- Battery status

Optional in the Premium Package
- Average duty cycle
- Number of starts
- Average speed
- Percentage use temperature and speed range
- Storage of data for offline access
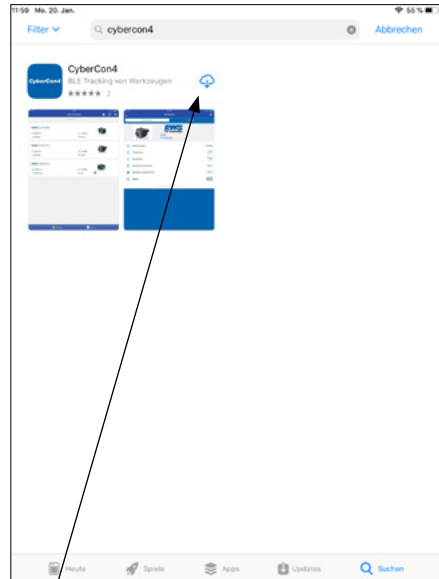- Export of the collected data by email

4.3 CYBERCON4 APP
4.3.1 INSTALLATION OF THE APP

1 Activate the data connections for the Internet and Bluetooth on the receiver (tablet, smartphone).
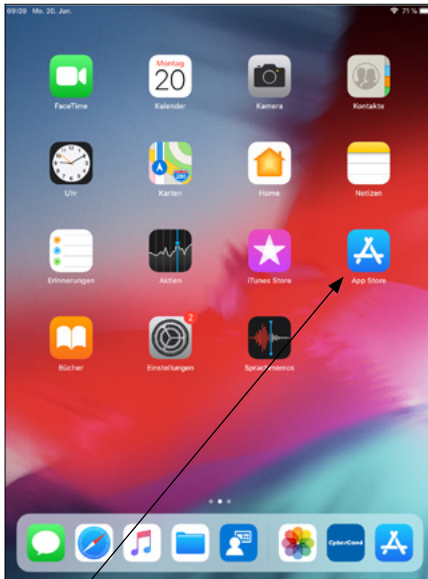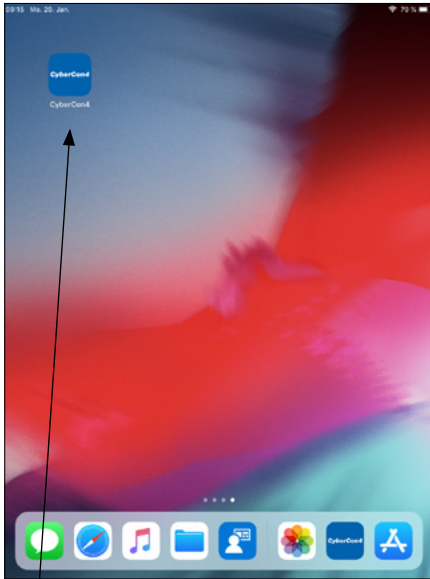

2 You can find the app under the name „CyberCon4" (SYMBOL) in the Apple App Store or Google Play Store.
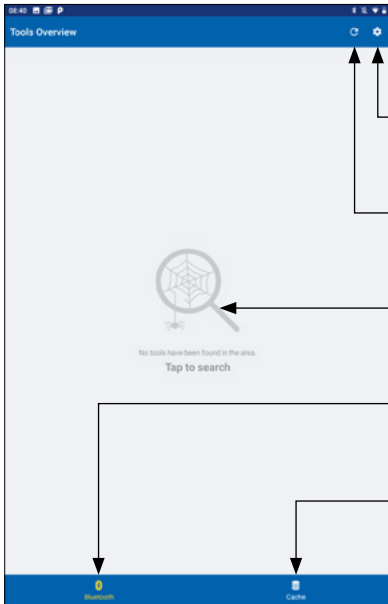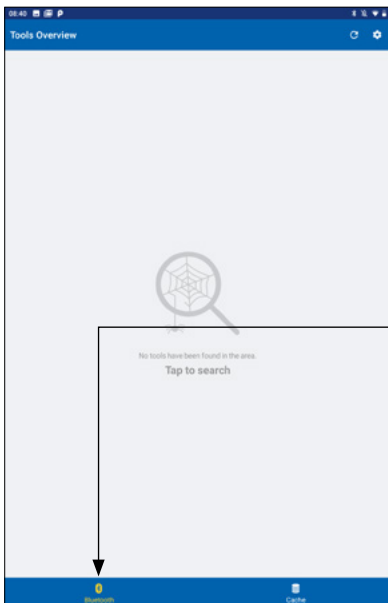
3 Install the app.

4.3.2 OPEN

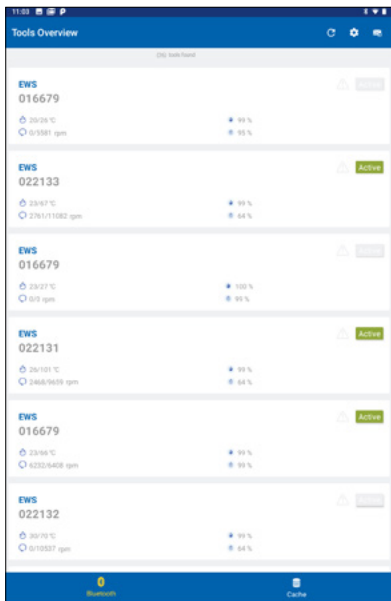**4** Open the app with CyberCon4 Icon.

4.3.3 CYBERCON4 OPERATOR MASKS

Surface

1 Settings

2 Refresh page

5 Control panel

3 Bluetooth Live data

4 Stored data
Access only with premium package

Bluetooth
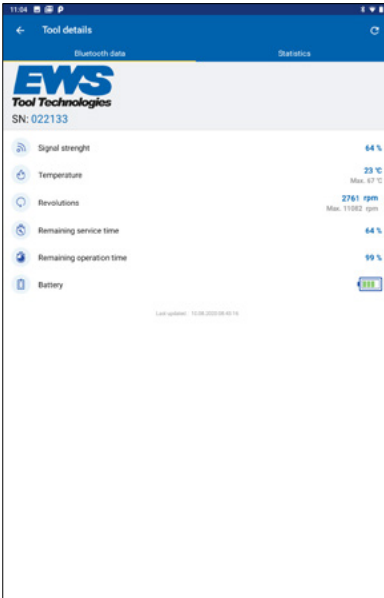The driven tools equipped with EWS.CyberCon4 can be searched for and received under the „Bluetooth" tab.

■ To do this, tap in the middle of the control panel

List of the driven tools found in the range with EWS.CyberCon4.

- Data is updated and displayed regularly (depending on settings).
- Further data and details can be read by tapping a field.

EWS 022132	Serial number driven tool	Number corresponds to the serial number of the driven tools (S/N)
🔥 30/70 ℃	Temperature °C	Current / maximum recorded temp.
◯ 0/10537 rpm	Rotational speed 1/min	Current / maximum recorded speed
⏱ 64 %	Time remaining service %	Remaining % until the service is due depending on the time used (12 months)
⏱ 99 %	Time remaining operation%	Remaining% until service is due depending on the operating parameters used, such as speed and temperature
⚠	Service symbol	A service is due. Please send the driven tool in for service. The symbol lights up as soon as the remaining time is below 10% See 6. Maintenance and care
Active	Active symbol	Driven tool is in use / spindle rotates

www.ews-tools.de

Bluetooth Data

Here you will find all the data for the selected driven tool.

	Signal strengh	Current signal strength
	Temperature	Current / maximum recorded temp.
	Revolutions	Current / maximum recorded speed
	Remaining servic	Remaining % until the service is due depending on the time used (12 months)
	Remaining opera	Remaining % until service is due depending on the operating parameters used, such as speed and temperature
	Battery	Battery status 100% Battery status 0% Driven tool must be sent in to change the battery.
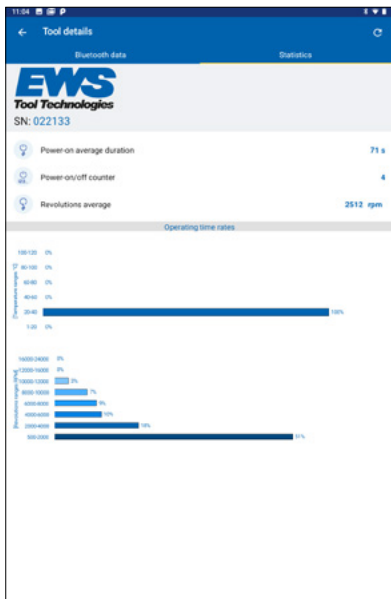
Statistics

This page is only visible with the „Premium Package" add-on.

- Display of additional data of the selected driven tool
- For activation, see

Power-on average duration	Average duty cycle in relation to the entire runtime
Power-on/off counter	Number of start-ups in the entire runtime
Revolutions average	Average speed in relation to the entire runtime
Operating time rates	Percentage display of temperature and speed in relation to the total runtime
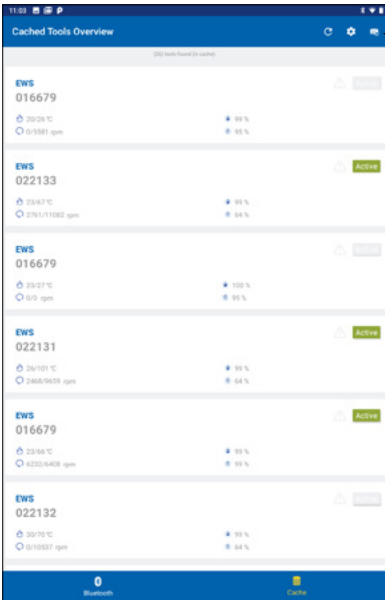
History / Cache

The received driven tool holders are saved with EWS.CyberCon4 under the „Cache" tab.

- Data readable without Bluetooth connection
- Further data and details can be read by tapping a field
- All data can be sent via email as an Excel file

This page is only visible with the „Premium Package" add-on.

- For activation see
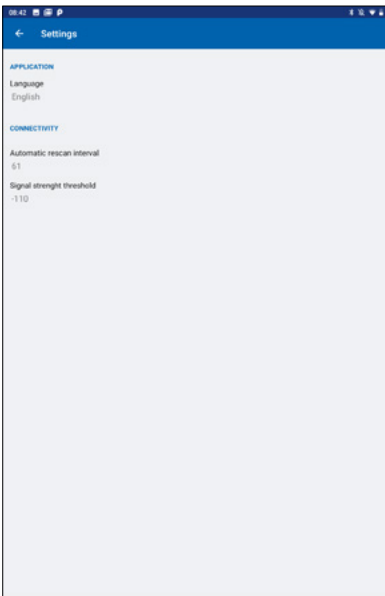
Settings

You can make various settings here.

- Language (German, English)
- Threshold for signal strength
- Automatic refresh interval
- Setting the update interval

Limit values for the operation of driven tools

Temperature:	max. 80°C
Speed:	see labeling of driven tool
Other:	see operating instructions driven tool
	https://www.ews-tools.de/en/downloads

5. PREMIUM PACKAGE

Additional functions Premium Package:
- Average duty cycle
- Number of starts
- Average speed
- Percentage use temperature range
- Percentage use speed range
- Storage of 50 tools in the „Histroy" area
- You have offline access to all data
- Export of the collected data by email
- Monitoring of the driven tools

For costs and Data management internal / external see
https://www.ews-tools.de/en/products/ews-cybercon4
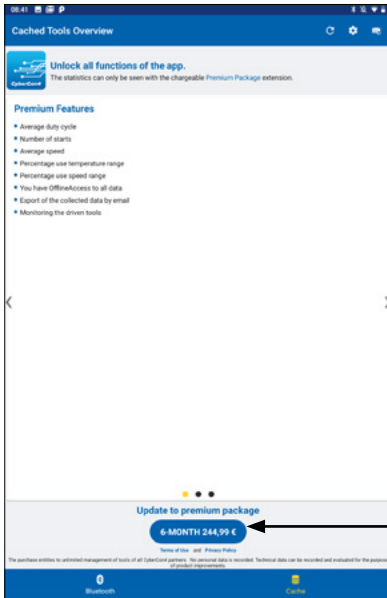
Purchase of the Premium Package

Go to the „History" tab and tap the update button.
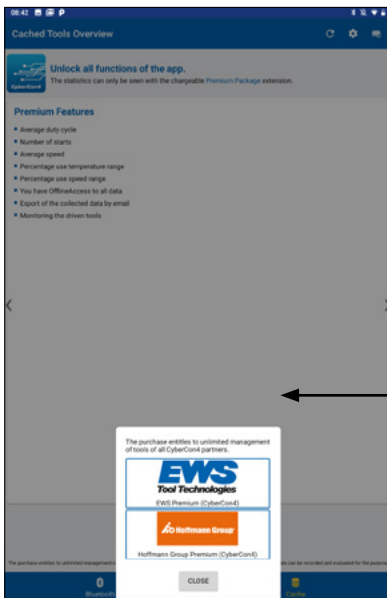
Now select the Cyber.Con4 partner of your choice.
You will only be shown the partners from whom you have received CyberCon4 tools.

After agreeing to the terms of use, you can complete the purchase and use the Premium Package immediately.

6. MAINTENANCE AND CARE

Cleaning: Clean only with a cleaning cloth. Never use compressed air or any cleaning agents.

Battery status 0%: A battery change is necessary if the battery display in the CyberCon4 app shows 0%.
Batteries may only be replaced by the manufacturer EWS Weigele GmbH & Co. KGrespectively.
Please contact the service staff:
service@ews-tools.de

Service case: In the event of a defect of any kind, contact the service staff. When the service icon lights up in the app, contact the service staff.
service@ews-tools.de

TIP: Annual maintenance prevents major damage.

WARNING!
Under no circumstances may the cover of the EWS.CyberCon4 be removed.
Failure to do so exposes you to the risk of electric shock or fire.

7. STORAGE, TRANSPORT AND DISPOSAL

Always store and transport the device dry at a minimum of 10 °C to a maximum of 40 °C.

Do not dispose of in normal household waste.
Please conPlease contact our service or send the device back to us.

DANGER!
Return transportation by air freight is prohibited.

8. TROUBLESHOOTING

In case of malfunctions, please report under

EWS Weigele GmbH & Co. KG
Telephone   +49(0)7161-93040-100
Mail   service@ews-tools.de

> ⚠ In the event of other faults, please contact our service.

9. TECHNICAL DATA

Supply voltage	Integrated 3V lithium battery (permanently installed, not changeable)
Radio frequency	2.4 GHz RF transceiver, compatible with Bluetooth Low Energy (BLE) 4.1 Specification
Max. Radio	power +5 dBm
Temperature application range	+ 10 ° C to + 80 ° C Approval testing radio properties after ETSI EN 300 328 V 2.1.1 Immunity tests according to ETSI EN 301
489-1 Battery life	approx. 12 months
Weight	40g EWS.CyberCon4 + driven tool holder
Range BLE	up to. max. 7m, depending on environment

CE declaration of conformity $C\:E$

Herewith, EWS Weigele GmbH & Co. KG declares that this EWS CyberCon4 radio module complies with the essential requirements and other relevant provisions of the following guidelines:

Directive 2014/35 / EU - Provision of electrical equipment
Directive 2014/30 / EU - Electromagnetic Compatibility
Directive 2014/53 / EU - provision of radio equipment
Directive 2011/65 / EU - Restriction of the use of certain dangerous substances in electrical and electronic devices

10. SERVICE / GUARANTEE

Services
- Professional, quick repairs through our service
- Competent advice in the event of malfunctions through our service

Service address

EWS Weigele GmbH & Co. KG
Telephone   +49(0)7161-93040-100
Mail   service@ews-tools.de

Guarantee
1 year warranty on the device for all major defects that are demonstrably attributable to material or production defects.

In the event of a warranty claim, please contact our service.