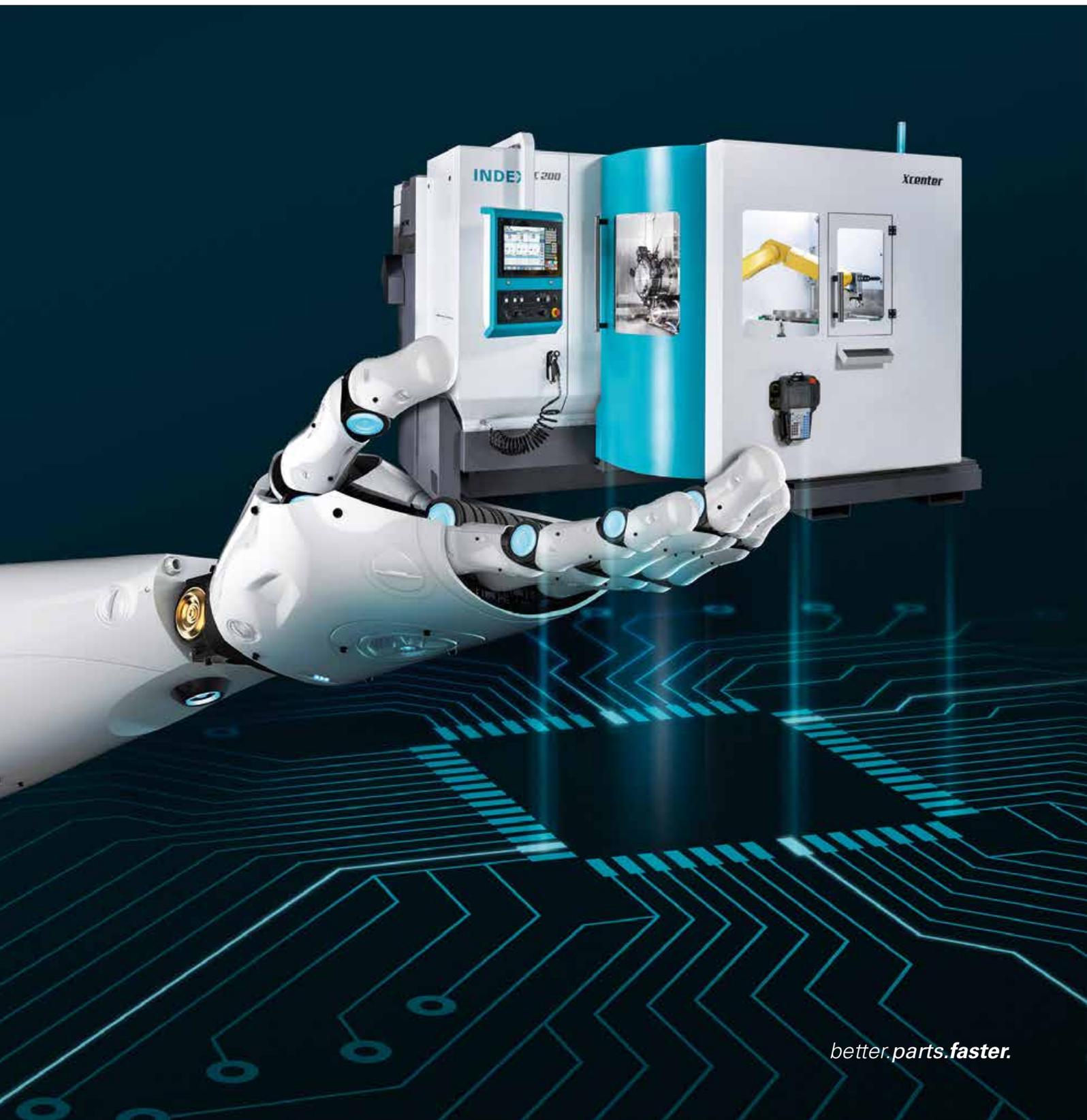


# X4.0

**INDEX**  
**TRAUB**

## CONNECTING YOUR FUTURE

The IoT platform for your production



*better.parts.faster.*

# Ideally equipped for the digitization of your production environment

**Connectivity** – connecting your entire machine fleet in a cloud lies at the heart of Industry 4.0 solutions. iX4.0 is the INDEX IoT platform that allows you to integrate all of your production machines into the digital world.

The **iX4.0 apps** allow you to make wide-ranging improvements:

**Machine Management** structures your machine fleet and simplifies maintenance.

**Performance Management** enables significant production optimizations.

**Condition Monitoring** supplies extensive data for analysis and enables proactive maintenance.

All new machines are now supplied with the required connectivity resources. Existing machines can be connected following hardware retrofits.

**SAP cloud**  
[protected area]

The iX4.0 apps are suitable for any device with a standard web browser



# 4.0



**Customer**  
[protected area]



## Security and transparency

- Data ownership remains with the customer
- Secure data transmission and storage in the SAP cloud
- Established security mechanisms against unauthorized access

## Efficiency

- Edge computer ensures IT power in production
- No strain on the control – only required data is transmitted

## Compliance with standards

- OPC UA as recognized standard interface
- Umati interface as industrial solution

# iX4.0 Machine Management

Structuring and maintaining your machine fleet

# 4.0 APPS



## MachineManager

### All relevant information at a glance

This app enables the individual structuring of your entire machine fleet by area of responsibility – users only see the data that is relevant to them.

MachineManager supplies the following information:

- In which area is the machine?
- What is the machine's scheduled occupancy?
- What job is running on the machine and for how long?
- What is the current machine condition?
- What is today's productivity level?
- Has the machine had a crash?
- Is maintenance due?



## OnlineDocument

### All documents available anywhere

All documents for your production machines can be stored online for easy retrieval.

The advantages this offers you:

- New machines are supplied with online documentation
- Access your documents via a web browser
- Access possible via QR code (simply print out QR code and stick on the machine)
- Interface for storage of documents by customer (for documentation from other manufacturers and other documents such as acceptance reports)



## MaintenanceManager

### Easy organization of maintenance and service activities

All maintenance, servicing and regulatory compliance for your entire machine fleet can be clearly managed, scheduled and documented.

The advantages this offers you:

- New machines are supplied with maintenance recommendations and instructions
- Scheduling and documentation of maintenance work
- Automatic generation of jobs, e.g. lubrication of chucks after a specific number of clampings
- Personalized instructions can be gathered for machines from other manufacturers
- Documentation is available anywhere and at any time, e.g. evidence of cooling lubricant checks



## SparepartFinder

### Reliably identify spare parts, order online and avoid returns

Use the SparepartFinder to retrieve the spare parts list for your INDEX machine online, find the spare part you need and order it directly.

The advantages this offers you:

- Clear overview of spare and wear parts for your machine
- Click on a spare part in the part list or on the 3D model to add it to your cart
- 3D models help you to find the right parts

If you have purchased an incorrect part, returns processing is simple in the iXshop. Call up orders, mark returns, print out transport documents.

## TicketManager

### Rapid support from INDEX service

Machine downtimes are a nuisance and must be rectified quickly. The first step is to record the fault message in TicketManager.

How TicketManager supports you:

- Direct transmission of your messages to the INDEX service system
- Additional information can be attached as a file (e.g. alarm messages, photos and videos)
- Status overview of all service messages
- Push notifications for technician scheduling

### MachineManager

|  |            |             |                                 |         |
|--|------------|-------------|---------------------------------|---------|
|  | INDEX G250 | 540211_v2   | Produktion läuft<br>43m         | 60.77 % |
|  | INDEX G300 | 500595      | Nicht eingeschaltet<br>> 24h    |         |
|  | INDEX R200 | 10610004_v2 | Läuft nicht (mit Fehler)<br>22m | 5.64 %  |
|  | INDEX R200 | 10610004_v3 | Produktion läuft<br>10m         | 84.12 % |
|  | INDEX R200 | 10610003    | Produktion läuft<br>3m          | 90.01 % |

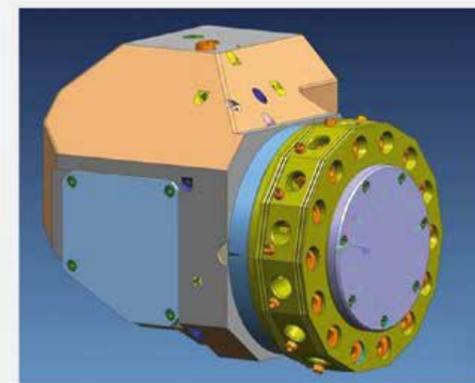
An overview of your entire machine fleet – at all times

### SparepartFinder

Scheibe St B 8,4 bruiniert 125 B 8,4 bruiniert  
Artikel-Id: 10407978  
frühere Artikel-Id: 419010.08

Verfügbarkeit: 10 Tage  
Stück: 1  
In den Warenkorb

Easy identification and efficient procurement



# iX4.0 Performance Management

Significant optimization of your production

# 4.0 APPS



## StatusMonitor

### Systematic problem analysis

Transparency on the shop floor sits at the heart of efficient production. Use the StatusMonitor to stay on top of your production at all times.

The advantages this offers you:

- Current machine status
- Analysis of condition data over a freely configurable time period
- Display of scheduled machine occupancy times
- Production data acquisition (PDA) – recording of reasons for downtimes
- Usage/productivity evaluations
- Interface to higher-level scheduling systems, e.g. to report quantities

Use the **Dashboard** to visualize daily productivity and the current status of your production.



## JobManager

### Know what's happening

Matching up produced jobs with your machine conditions improves your analysis capabilities.

The advantages this offers you:

- Use the JobManager to assign production jobs and performance issues to specific times
- Identify production deviations in good time when manufacturing larger batches



## AlarmMessenger

### If there's a problem, your machine lets you know

Push messages are issued by email or SMS if the machine stops during unattended operation and requires support.

The advantages this offers you:

- Notification of material problems and machine faults
- Custom setting of parameters for notification (who is notified about which errors and when?)



## AlarmReport

### Analyze alarms, detect and eliminate faults

Matching up reported alarms with your machine conditions improves your analysis capabilities.

The advantages this offers you:

- All alarms available online in the browser
- Identify main faults thanks to the filtered and structured overview of alarms



## CrashSensor

### Detect and prevent collisions

CrashSensor quickly detects collisions. This facilitates fault diagnosis and enables specific countermeasures.

The advantages this offers you:

- You are notified of all crash situations at the milling spindle on INDEX machines
- Monitoring and recording of nonconformities on all axes of TRAUB machines
- Avoid crash situations with a quick stop and retraction of axes on TRAUB machines

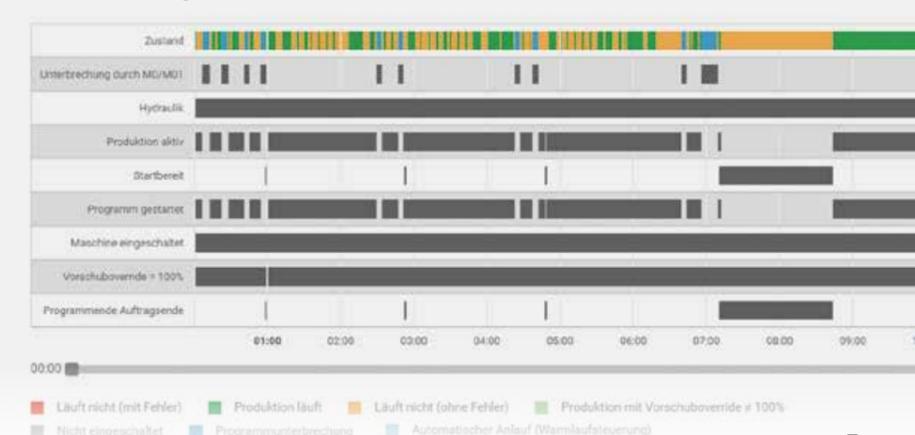
## Dashboard



Machine conditions and productivity always in view

Machine monitoring in real time

## Individual signals



# iX4.0 Condition Monitoring

Check the condition of your machines

# 4.0 APPS



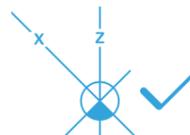
## SpindleCheck

### Analyze the centerpiece of your machine

Permanent spindle condition monitoring. Monitoring of threshold values and immediate alarm triggering help to prevent damage. You also obtain condition data that can be used for proactive maintenance of your machine in the future.

Maintenance and service activities can be initiated with the help of this usage-based data:

- Speed histogram
- Utilization histogram
- Spindle motor temperature curve
- Number of clamping operations



## DriveCheck

### Monitor all axes of your machine

Permanent condition monitoring of axes and their travel distances. Monitoring of threshold values and immediate alarm triggering help you to identify faults in good time. You also obtain condition data that can be used for proactive maintenance of your machine in the future.

DriveCheck monitors these factors:

- Travel distances of all axes
- Traverse times
- Number of traversing operations, also classified according to speeds



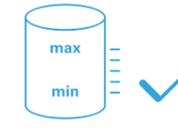
## TempCheck

### Check temperature curves on your machines

Controlled conditions are essential for ensuring a consistently high quality of production. Using TempCheck, you can identify temperature fluctuations in good time and correct them before production deviations occur.

How TempCheck supports you:

- Temperature display of hydraulic fluid, cooling lubricant, cooling water, machine environment and control cabinet (depending on machine)
- Immediate alarm triggering if relevant threshold values are exceeded



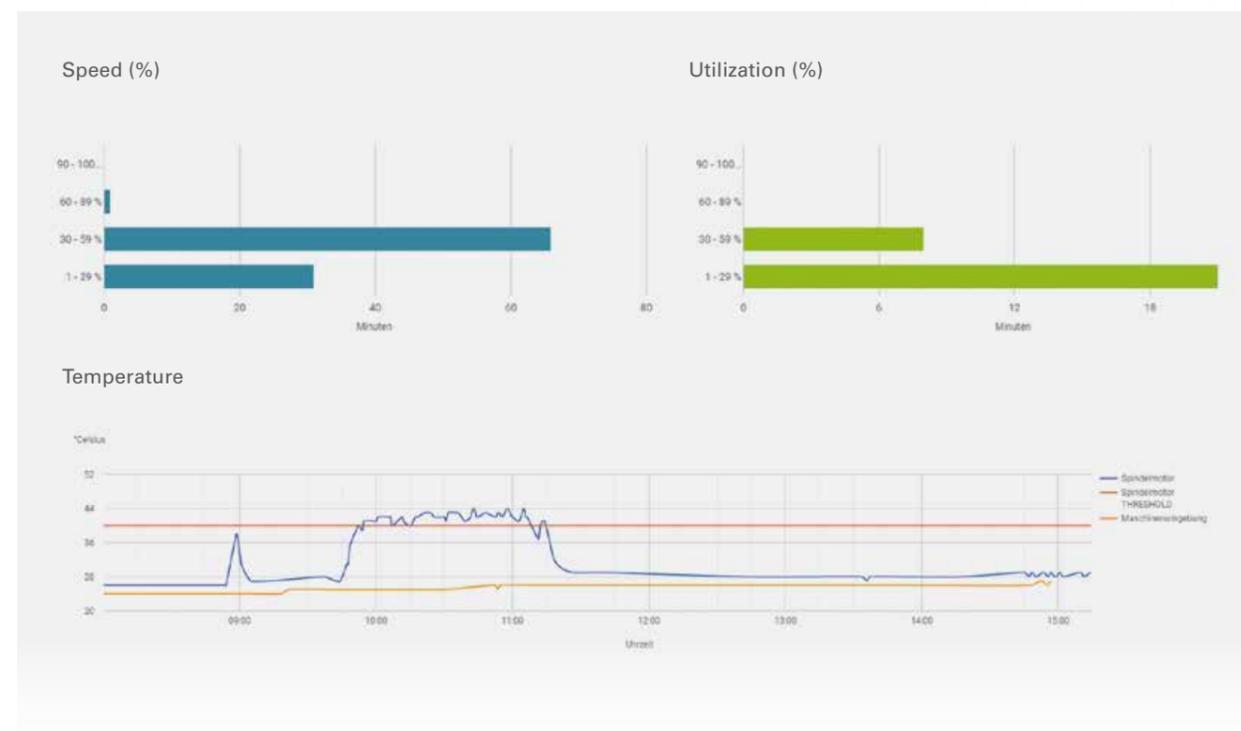
## LevelCheck

### All machine fill levels at a glance

Simplify service work on your machines with early notification of fill levels: You save your employees unnecessary trips through production. In addition, leaks can be detected and immediately repaired.

LevelCheck monitors these fill levels:

- Hydraulic fluid
- Cooling lubricant



All relevant data visible at all times



## iX4.0 go

The easy way to get started with the digitization of your production environment

Get off to a risk-free start with **iX4.0 go** and use all applications free of charge for twelve months



### Advantage 1

#### All applications free for twelve months

With iX4.0 go, we've developed a service that enables an easy and risk-free start. All available iX4.0 apps are free of charge for twelve months so you can test them in depth. Only then do you need to decide which applications you wish to continue using for a fee.



### Advantage 2

#### Free support during the start phase

Our team will support you during the start phase – free of charge. Objectives are set out and worked through together with you.

We assist you in connecting your entire machine fleet, so that you can fully benefit from the significant optimization of your production environment.



### Advantage 3

#### MachineManager remains free of charge

MachineManager with Online-Document, SparepartFinder and MaintenanceManagement remains free of charge, even after the end of the start phase.

Cost-effective package offers are available for Performance Management and Condition Monitoring.

# X4.0

#### Connection of new INDEX and TRAUB machines

INDEX sets up connectivity for all new machines **free of charge at the factory**. You can use all iX4.0 apps out of the box.

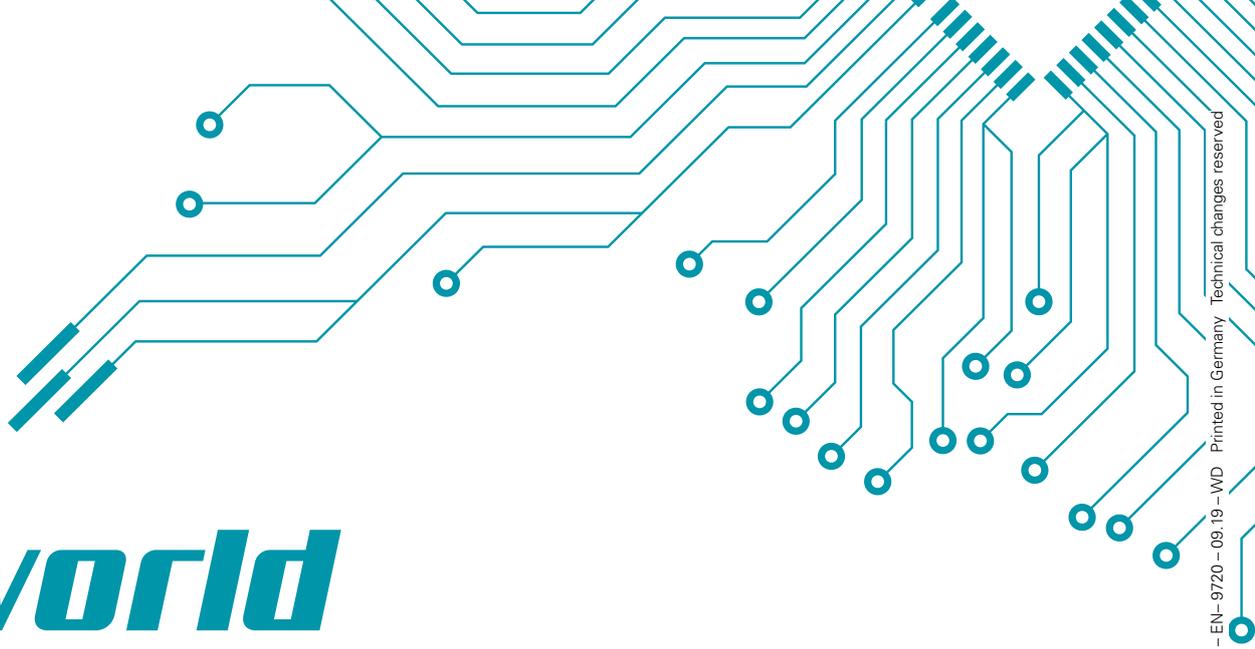
#### Connection of existing or third-party machines

The required connectivity is established with a **hardware retrofit**. This involves an **IoT connector** if a connection via the control is not possible. The connections can be installed by your electricians.

Please note possible restrictions in the applications, depending on your machine generations.

#### Contact the iX4.0 team now

[ix40@index-traub.com](mailto:ix40@index-traub.com)  
[www.index-traub.com/iX40](http://www.index-traub.com/iX40)



# ***X*world**

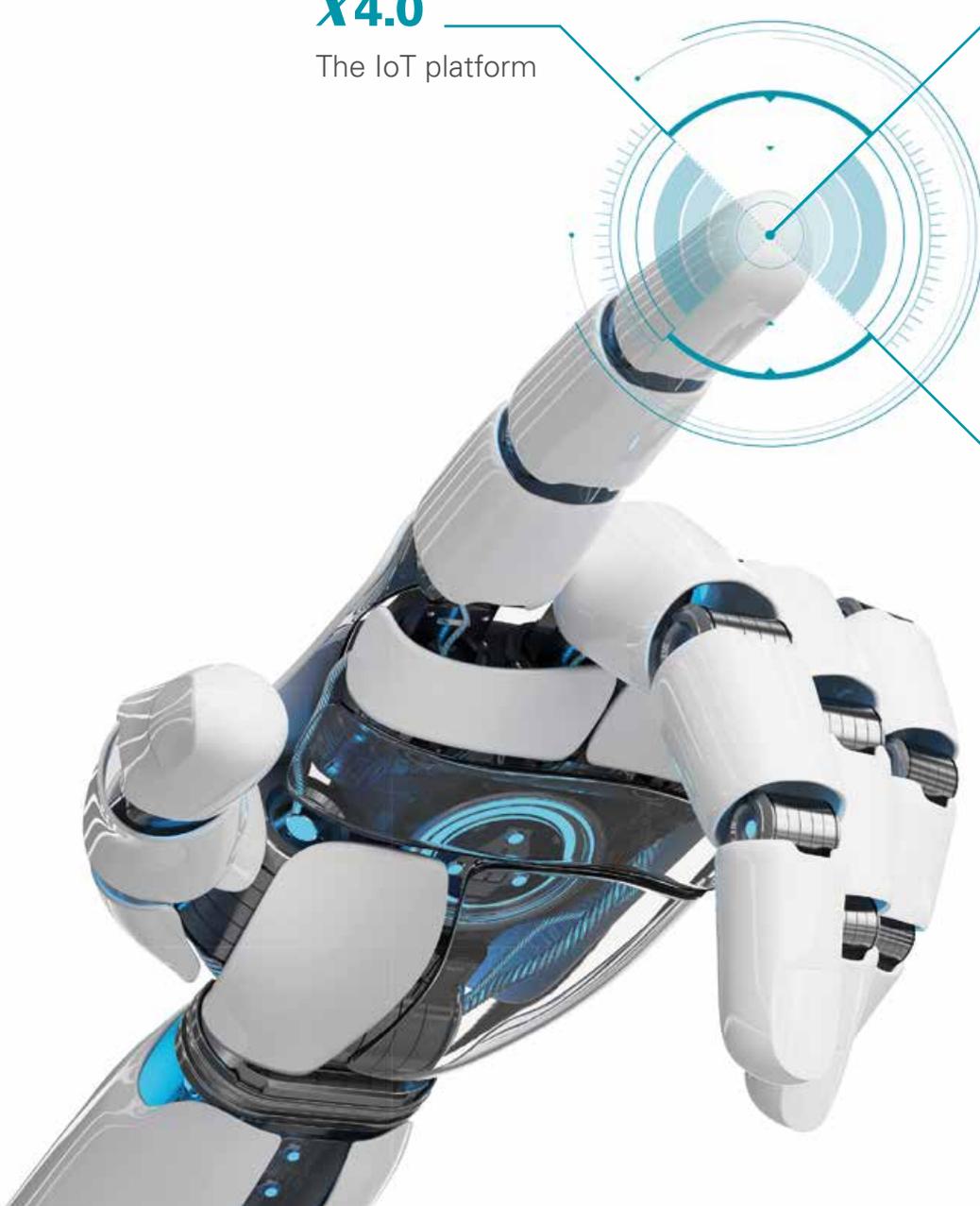
*The world of digital integration*

iXworld is the cloud platform for everything to do with your machines – from procurement through to operation and service. [www.iXworld.com](http://www.iXworld.com)

***X*4.0**  
The IoT platform

***X*services**  
The service portal

***X*shop**  
The procurement portal



## **INDEX** **TRAUB**

**INDEX-Werke GmbH & Co. KG  
Hahn & Tessky**  
Ploching Strasse 92  
D-73730 Esslingen, Germany  
Phone +49 711 3191-0  
Fax +49 711 3191-587  
[info@index-werke.de](mailto:info@index-werke.de)  
[www.index-werke.de](http://www.index-werke.de)