



# AUTOMATION SOLUTIONS FOR FOOD PROCESSING AND **PACKAGING MACHINERY**

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## PACK & FOOD – THE KEB KNOW-HOW

Food and well-packed goods are central when it comes to supplying society. This requires high-performance food and packaging machines. Customised drive and automation solutions from KEB Automation ensure that machines and systems are highly productive and reliable.

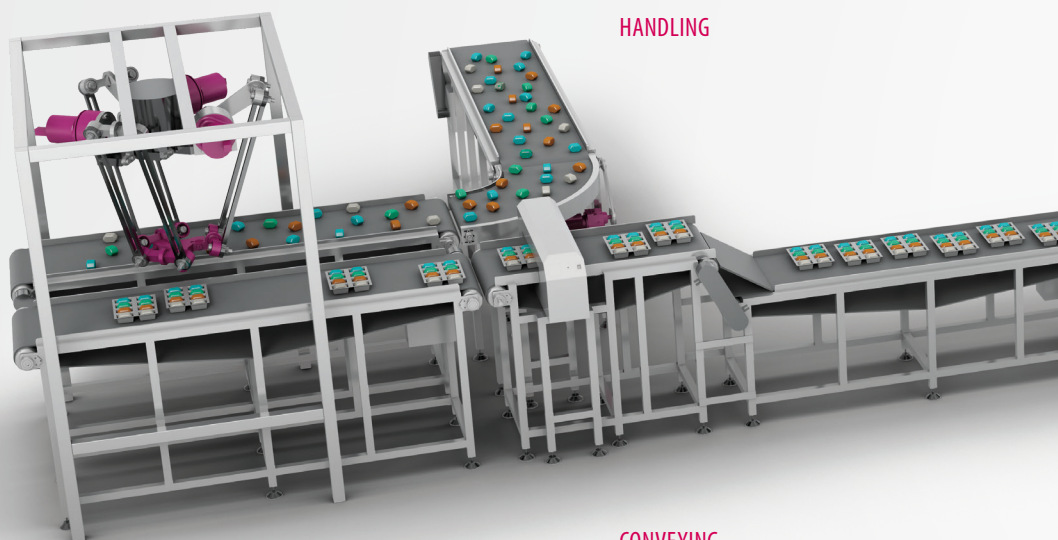
COMMISSIONING AND  
MAINTENANCE SOFTWARE

TRACKING

FORMING

SORTING

HANDLING



CONVEYING

CONVERTING

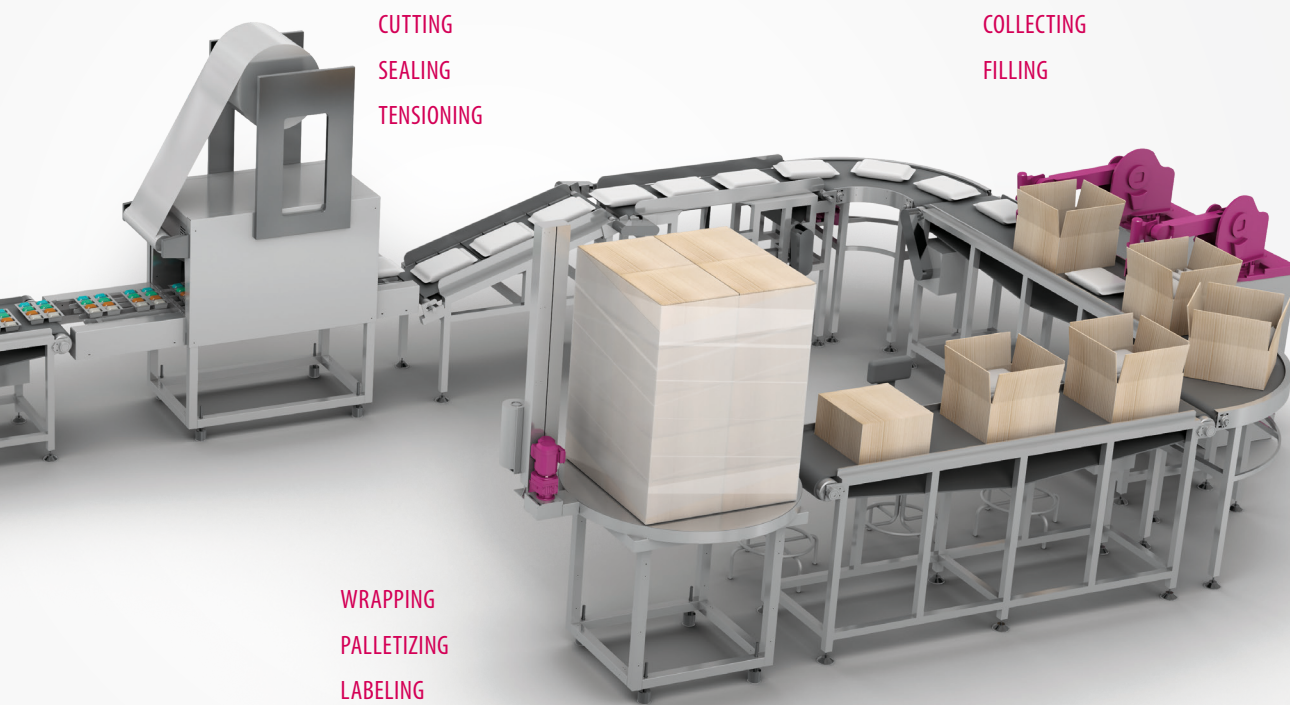
The KEB logo consists of the letters 'KEB' in a bold, white, sans-serif font, set against a solid red rectangular background.

### PACKAGING MACHINERY

Every packaging is different: depending on the type of packaging required, the complexity of the technology behind it varies. As a result, drive and automation solutions for packaging machines are needed that can be individually adapted – and meet the high demands for resource efficiency and sustainability. Here, hardware and software solutions from KEB Automation go hand in hand.

### FOOD PROCESSING MACHINERY

High-performance food processing machines are found in the production of ready meals, dairy products, meat, baked goods and confectionery, among other things. They perform tasks such as cutting, sorting or filling. KEB Automation has been implementing drive and automation solutions for food processing machines and special machine construction for around 40 years.



CUTTING  
SEALING  
TENSIONING

COLLECTING  
FILLING

WRAPPING  
PALLETIZING  
LABELING



## HIGHLIGHTS

- Control technology from simple PLC applications up to complex motion control tasks
- Highly dynamic servo controllers for fast and precise positioning
- Scalable safety functions directly integrated in the drive controller
- Automation components: flexibly scalable and integrable into existing automation concepts
- Encoderless control methods for robustness and cost savings
- Saving energy and reducing installation costs: operation in a DC system possible

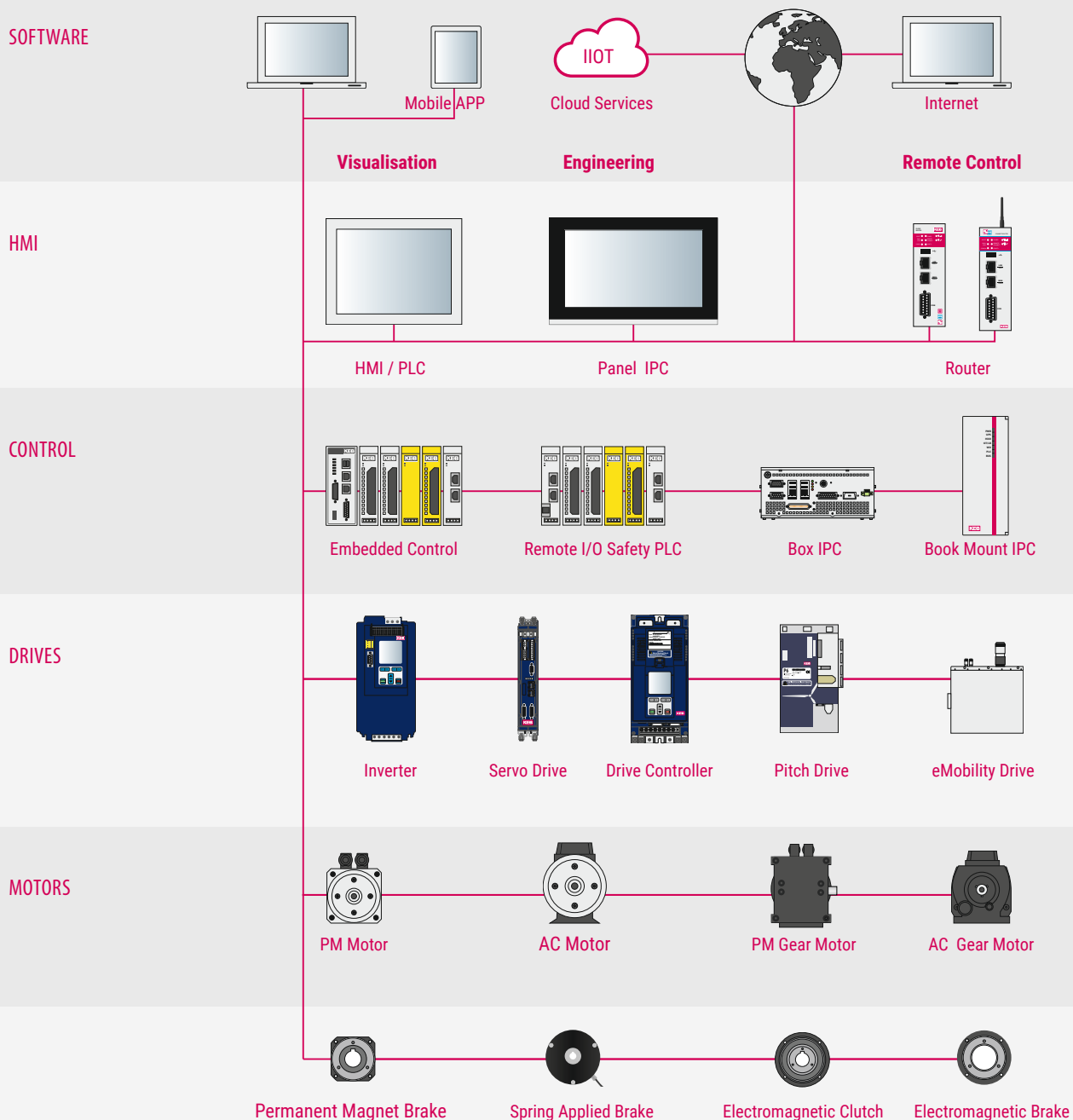
## SYSTEM SOLUTIONS FOR FOOD AND PACKAGING MACHINERY

From HMIs and controls to drive controllers, motors and brakes, KEB Automation implements drive solutions from a single source. The individual components are optimally matched to each other and thus lead to the highest efficiency.

### AUTOMATE AND VISUALISE MACHINES

KEB's range offers comprehensive hardware solutions in combination with excellent software functionalities from display to motion profile. The wide-ranging product portfolio starts with compact controllers and extends to the powerful C6 P34, which is available as a Box, Panel or Book Mount IPC.

KEB also offers the C6 Safety PLC and Safety I/Os, a certified safety controller with safe inputs and outputs that comply with the EC 61508 SIL 3 and DIN EN ISO 13849-1 PLe standards. Optimal for the Pack&Food sector: operating panels are optionally made of stainless steel and have a particularly high degree of protection of IP69K. High-pressure cleaning and even high temperatures of 50 °C do not affect the units.





## DRIVE CONTROLLER – ROBUST, DYNAMIC AND FLEXIBLE



The COMBIVERT F6 drive controllers from KEB Automation combine frequency inverter and servo drive in only one device. In the power range from 2.2 kW to 450 kW they control the most different motor technologies, increase the efficiency and reliably ensure safety in the most different machines.

The COMBIVERT S6 servo drive controller is available for space-saving installation in the control cabinet. It is a modern, compact and at the same time flexible servo drive controller for a rated current of 2.6 A to 16.5 A in two housing sizes and in a space-saving book format. Its high overload brings the best dynamics.

Since high temperatures, aggressive washing substances or high-pressure cleaners are commonplace in food processing, among other areas, KEB inverters are designed to be particularly durable by means of a special coating on all circuit boards. This means that the sensitive electronics remain protected even in these environments.



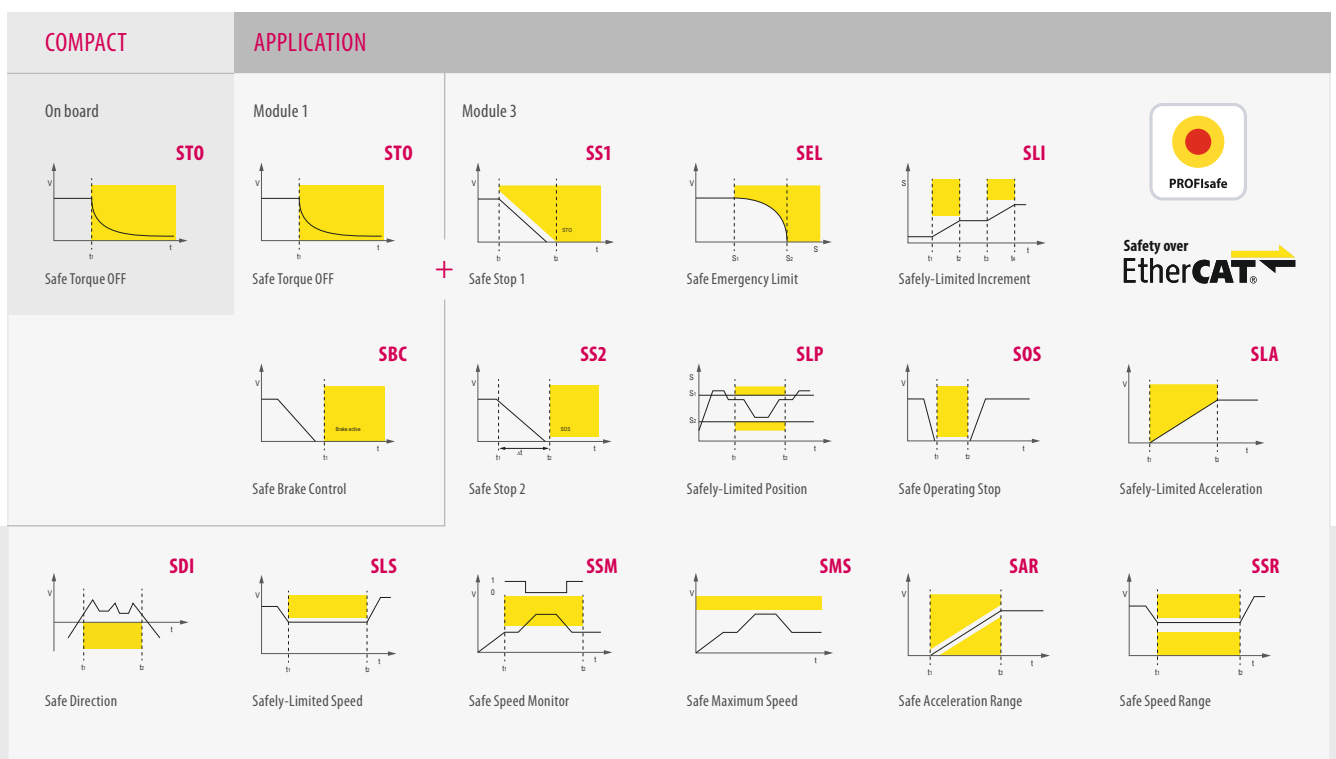
### HIGHLIGHTS

- One for all: asynchronous or PM motors, high-torque or synchronous reluctance motors, rotary or linear motors
- Multi-encoder interface, switchable: operation with and without encoder, analogue and digital encoder types
- Multi-fieldbus interface, switchable: flexibly adaptable to all common control systems
- Various cooling concepts: elimination of additional air-conditioning of the control cabinet possible
- Obligatory 3C3 protective coating (IEC/EN 60721-3-3 Class 3C3) of the circuit boards

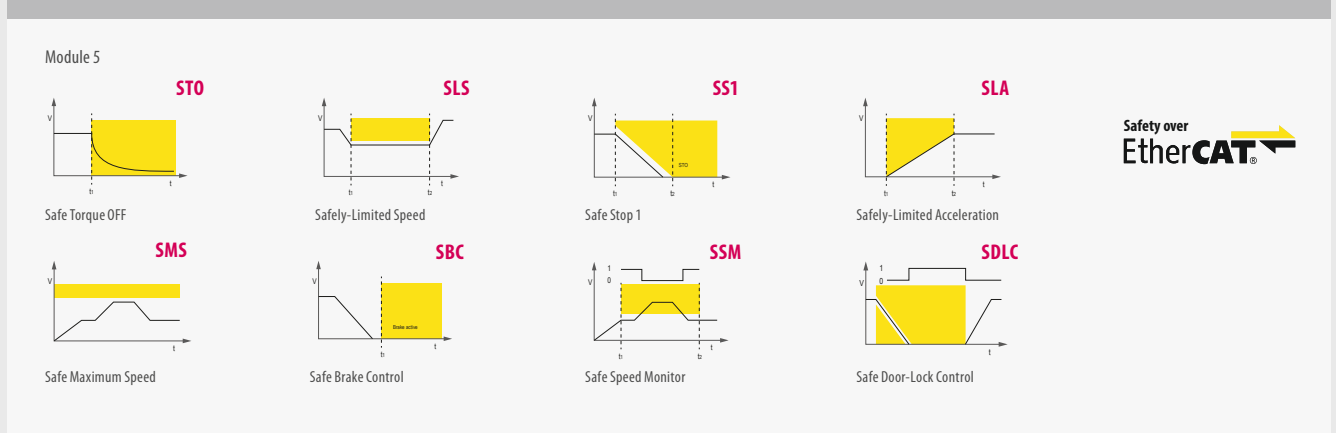
## FUNCTIONAL SAFETY

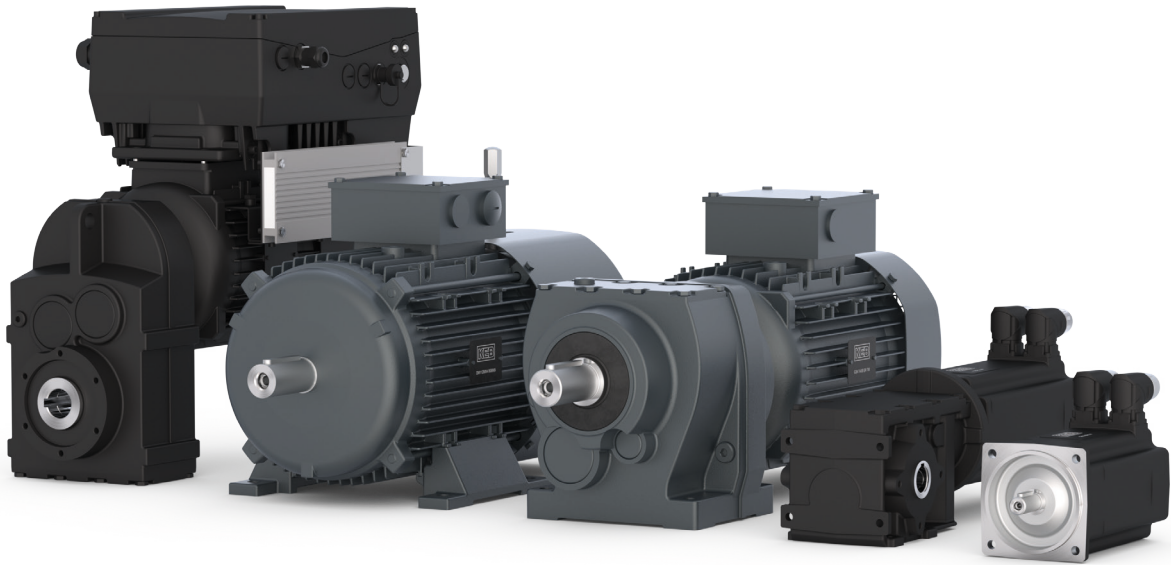
KEB enables machines and plants to work “with safety”. Whether it is a question of safe motion enable or safe speed or position monitoring: A broadly graduated solution package from KEB for encoder and encoderless safety in motion axes makes it possible. Drives are available in COMPACT, APPLICATION and PRO device variants and offer scalable safety functions.

- Safe communication: as a widely used and established solution with Safety over EtherCAT (FSoE) or via PROFIsafe
- Safe Door-Lock Control (SDLC): The SDLC function can be used as the machine’s bonnet lock, which only opens the bonnet when the motor is at a safe standstill
- Safe Torque Off (STO) integrated in drive controllers
- Safely-Limited Speed (SLS): Drive monitors speed safely



## PRO SAFETY WITHOUT ENCODER





Whether you need asynchronous motors with a particularly wide power range and smooth running or synchronous motors with compact dimensions and high pulse torque for highly dynamic applications: KEB offers the ideal motor for every customer requirement.

Designed as a variable modular system, individual geared motor solutions are the standard at KEB Automation. In-house development, design and production at the Schneeberg site (Germany) create numerous possibilities and ensure optimum interaction with other KEB components.



#### HIGHLIGHTS

- Geared motors “Made in Germany”
- Powerful: asynchronous, synchronous and servo motors
- Motors with integrated frequency inverter for decentralised drive solutions
- Numerous corrosion protection options: including double sealing for output shafts, stainless steel shaft as an option
- STEEL-IT paint available as a cost-effective alternative to stainless steel motors for servo and geared motors
- Use of food-compatible oils possible



## KEB'S COUNTRY ORGANISATIONS

### **Austria** | KEB Automation GmbH

E-Mail: [info@keb.at](mailto:info@keb.at) Web: [keb-automation.com](http://keb-automation.com)

### **Benelux** | KEB Automation KG

E-Mail: [info.benelux@keb.de](mailto:info.benelux@keb.de) Web: [keb-automation.com](http://keb-automation.com)

### **Canada** | KEB Canada

E-Mail: [sales@keb-automation.ca](mailto:sales@keb-automation.ca) Web: [keb-automation.ca](http://keb-automation.ca)

### **Czech Republic** | KEB Automation s.r.o.

E-Mail: [info@keb.cz](mailto:info@keb.cz) Web: [keb-automation.com](http://keb-automation.com)

### **France** | Société Française KEB SASU

E-Mail: [info@keb.fr](mailto:info@keb.fr) Web: [keb-automation.com](http://keb-automation.com)

### **Germany** | **Geared Motors**

KEB Antriebstechnik GmbH

E-Mail: [info@keb-drive.de](mailto:info@keb-drive.de) Web: [keb-automation.com](http://keb-automation.com)

### **Germany** | **Headquarters**

KEB Automation KG

E-Mail: [info@keb.de](mailto:info@keb.de) Web: [keb-automation.com](http://keb-automation.com)

### **Italy** | KEB Italia S.r.l. Unipersonale

E-Mail: [info@keb.it](mailto:info@keb.it) Web: <https://blog.keb.it>

### **Japan** | KEB Japan Ltd.

E-Mail: [info@keb.jp](mailto:info@keb.jp) Web: [keb.jp](http://keb.jp)

### **P. R. China** | KEB Power Transmission Technology (Shanghai) Co. Ltd.

E-Mail: [info@keb.cn](mailto:info@keb.cn) Web: [keb.cn](http://keb.cn)

### **Poland** | KEB Automation KG

E-Mail: [roman.trinczek@keb.de](mailto:roman.trinczek@keb.de) Web: [keb-automation.com](http://keb-automation.com)

### **Republic of Korea** | KEB Automation KG

E-Mail: [vb.korea@keb.de](mailto:vb.korea@keb.de) Web: [keb-automation.com](http://keb-automation.com)

### **Spain** | KEB Automation KG

E-Mail: [vb.espana@keb.de](mailto:vb.espana@keb.de) Web: [keb-automation.com](http://keb-automation.com)

### **Switzerland** | KEB Automation AG

E-Mail: [info@keb.ch](mailto:info@keb.ch) Web: [keb-automation.com](http://keb-automation.com)

### **United Kingdom** | KEB (UK) Ltd.

E-Mail: [info@keb.co.uk](mailto:info@keb.co.uk) Web: [keb-automation.com](http://keb-automation.com)

### **United States** | KEB America, Inc.

E-Mail: [info@kebamerica.com](mailto:info@kebamerica.com) Web: [kebamerica.com](http://kebamerica.com)

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THE COMPLETE WORLDWIDE KEB PARTNER NETWORK



# Automation with Drive

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KEB Automation KG Suedstrasse 38 32683 Barntrup Germany Phone +49 5263 401-0 E-Mail: [info@keb.de](mailto:info@keb.de)