

MADE  
IN  
GERMANY

AUTOMATION with DRIVE



Product Portfolio 2016





## SYSTEM OVERVIEW AUTOMATION WITH DRIVE

Drive is movement, dynamics, precision, endurance, continuity and much more.

Whether managing formulations, an optimized operator interface or the controlled movement of axes – it all requires a clear overview combined with logic and is based essentially on the selection of the right technology.

The integrated KEB system offers the best basis for high performance and economics in the application as well as excellent efficiency in the practical implementation.

KEB provides the right solutions!

## AUTOMATION

Flexible and economical automation solutions permit the maximum utilization of technological developments in wide fields of applications. The KEB offer provides extensive hardware solutions in combination with excellent software functionality from the display to the movement profile.

The tool for application development:

### KEB COMBIVIS STUDIO 6

Within a working environment the IEC61131-3 application development, the drive parameterization, extensive diagnostic possibilities and the design of the user interface are merging.

### KEB COMBIVIS STUDIO HMI

Visualization made simple: The software is the basis for the design of high-quality man-machine interfaces. Current technologies with many graphic elements ensure an easy implementation of machine surfaces at the highest stage.



### KEB COMBIVIS CONNECT

The remote maintenance of machinery and plants simplifies safe remote access and remote maintenance of controls and drives installed world-wide – a knock-out criterion for a modern software environment. With COMBIVIS connect a VPN (Virtual Private Network) connection is established between office computer and local infrastructure in remote sub-networks, which also completely meets the aspects of IT security.

Controls:

### KEB COMBICONTROL C6 COMPACT

The „Embedded Controls“: KEB COMBICONTROL C6 compact is designed for high functionality and performance in controlling motion sequences of several synchronous or functional-dependent coordinated axes.

### KEB COMBICONTROL C6 E22 / C6 P30

IPC Control include scalable processor performance in industrial PC technology for control cabinets available in the mechanical versions BOX-PC BOOK-MOUNTED-IPC AND PANEL IPC with integrated touch screen from 7" up to 24" for the incorporated man-machine interfaces directly at the control.

### KEB COMBICONTROL C6 HMI

Is for the convenient operation and display as robust man-machine interface, available with touch screens in 4:3 and 16:9 format from small (4.7") to large (21"). The automation platform is completed by signal collection and output.

### KEB COMBICONTROL C6 REMOTE I/O

Signal acquisition and processing: is a decentralized terminal system for distributed installation structures with EtherCAT communication in real-time to the input/output point of the system.



## DIGITAL DRIVE TECHNOLOGY

We offer you: KEB COMBIVERT including frequency inverters and servo systems for the open-loop and closed-loop operation of three-phase, synchronous, spindle, torque and special motors with outstanding drive shaft features. The control procedures A.S.C.L. and S.C.L. optimize the encoder-less operation in a unique range of applications, available for

- 0.37 kW ... 45 kW / 230 V
- 0.75 kW ... 800 kW / 400 V
- 160 kW ... 900 kW / 690 V

### SERVO DRIVES

**0.37 ... 900 KW**

For the precise speed, torque and position control of synchronous, torque or linear motors.

### SUPPLY-/REGEN UNITS

**18 ... 2.000 KVA**

Feed the generator-based braking energy in temporary and continuous processes back into the mains power supply thereby reducing the operating costs in an environmentally friendly way.

### APPLICATION DEVICES

Meet the special requirements as vehicle inverter, pitch inverter, multi-purpose device or autonomous artificial mains network up to 1.600 Hz.

### EMC, SINUSOIDAL AND HARMONIC FILTER TECHNOLOGY

KEB COMBILINE damp with passive components external influences or backlashes in systems, thereby protecting the windings of high-frequency motors against premature ageing or the mains power supplies from the impact of harmonics. The compliance with legal limits for conducted- or radiated-bound disturbances is one element for the high functional reliability of machines.



## KEB GEAR UNITS & MOTORS

### THREE-PHASE MOTORS

A wide range of KEB three-phase motors in the power range 0.12 ... 45 kW ensures that with the configuration KEB DRIVE you get exactly the model suitable for your application. The motors are optimally prepared for the operation with frequency inverters and proven in dynamic tasks as asynchronous servo system. The portfolio includes options like the spring-applied brake KEB COMBISTOP for the secure holding in hoisting and moving applications or encoder feedbacks for special individual versions. Integrated frequency inverters up to 2.2 kW are available.

### SERVO MOTORS

Highest dynamic for speeds up to 6,000 rpm and rated torques up to 100 Nm are characteristic properties of the permanent magnet servo motors, which as position feedback are equipped either with robust resolver or high-resolution single or multiturn absolute value encoder or optional holding brake. The TA-series also offers the direct integration of different gear types and with it the feature for extremely space-saving drive solutions.

### HELICAL GEARED MOTORS

High reliability, compact design, wide gear ratio – the KEB helical geared motor is a must for every modern facility. Output torques with a fine speed graduation available up to 13,000 Nm.

### SHAFT MOUNTED HELICAL GEARED MOTORS

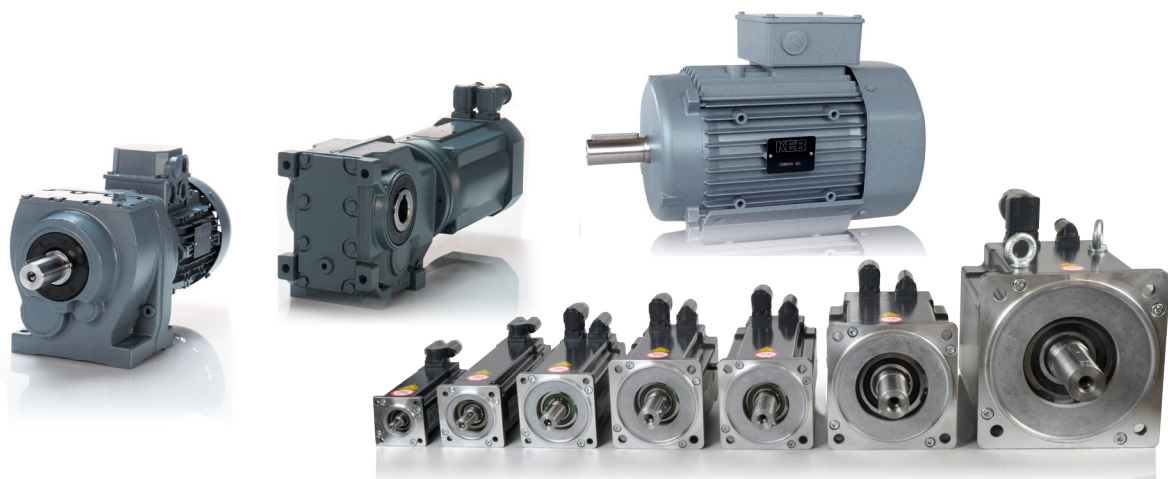
The robust and durable construction of the KEB shaft mounted helical geared motor offers you the combination of optimal performance and convenient mounting options. Currently available are seven sizes and torques up to 9,000 Nm.

### HELICAL WORM GEARED MOTORS

With the upstream helical gear stage the KEB helical worm geared motor combines high torque and low speed in a most compact design with lateral output. The large number of variants ensures diversity for the optimal selection of output torques up to 1,200 Nm.

### HELICAL BEVEL GEARED MOTORS

Highest performance levels, optimal efficiency factor as well as the wide speed range make the KEB helical bevel geared motor an excellent choice for demanding applications. Available in sizes up to 12,000 Nm output torque.



## KEB ELECTROMAGNETIC TECHNOLOGY

More than 40 years of experience in design and production of electromagnetic components with solutions for secure holding, starting or stopping.

### ELECTROMAGNETIC CLUTCHES AND BRAKES:

**KEB COMBINORM 0.5 ... 750 NM**

Single-surface elements with asbestos-free friction linings for clearance-free torque transmission without residual torque at short switching times.

### SPRING-APPLIED BRAKES:

**KEB COMBISTOP 1 ... 3,000 NM**

Double-surface brakes with adjustment of air gap. Asbestos-free friction linings with steel inserts warrant the highest level of safety and protection even under extreme stress. The special geometry of armature and magnet creates considerable wear reserves.

### PERMANENT MAGNETIC BRAKES:

**KEB COMBIPERM 0.4 ... 145 NM**

High-temperature resistant SmCo / NeFeB magnets for high braking torques with a small building volume for the clearance-free holding of positions. Residual torque-free separation for large maximum air gaps with large ventilation areas.

### CLUTCH-BRAKE COMBINATION

KEB COMBIBOX 7 ... 250 Nm

Ready-to-install clutch-brake combination in a housing for the start/stop operation. The patented adjustment procedure of the air gap allows for wear adjustment without disassembly.

### AUTOMOTIVE PRODUCTS

Clutches and brakes for applications in the automobile industry for demand-oriented switching of auxiliary generating units to reduce the CO<sub>2</sub> production in passenger cars or utility vehicles.



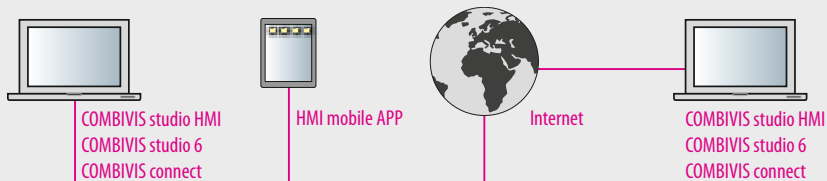
# PERFECT COMBINATION - EFFICIENTLY USED



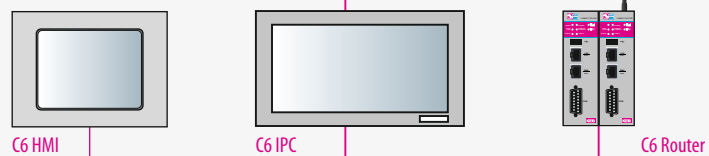
## HIGHLIGHTS

- Competent customer consulting
- Professional selection
- Integrated tools
- Powerful products
- Reliable quality

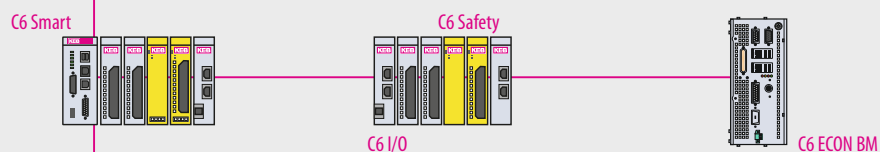
## SOFTWARE



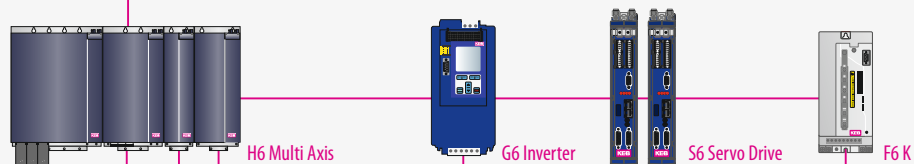
## HMI



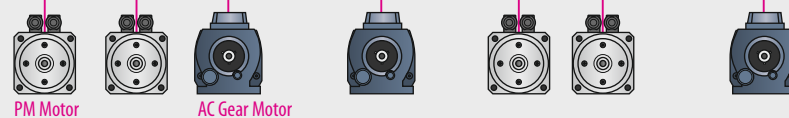
## CONTROL



## DRIVES



## MOTORS



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**HIGHLIGHTS**

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