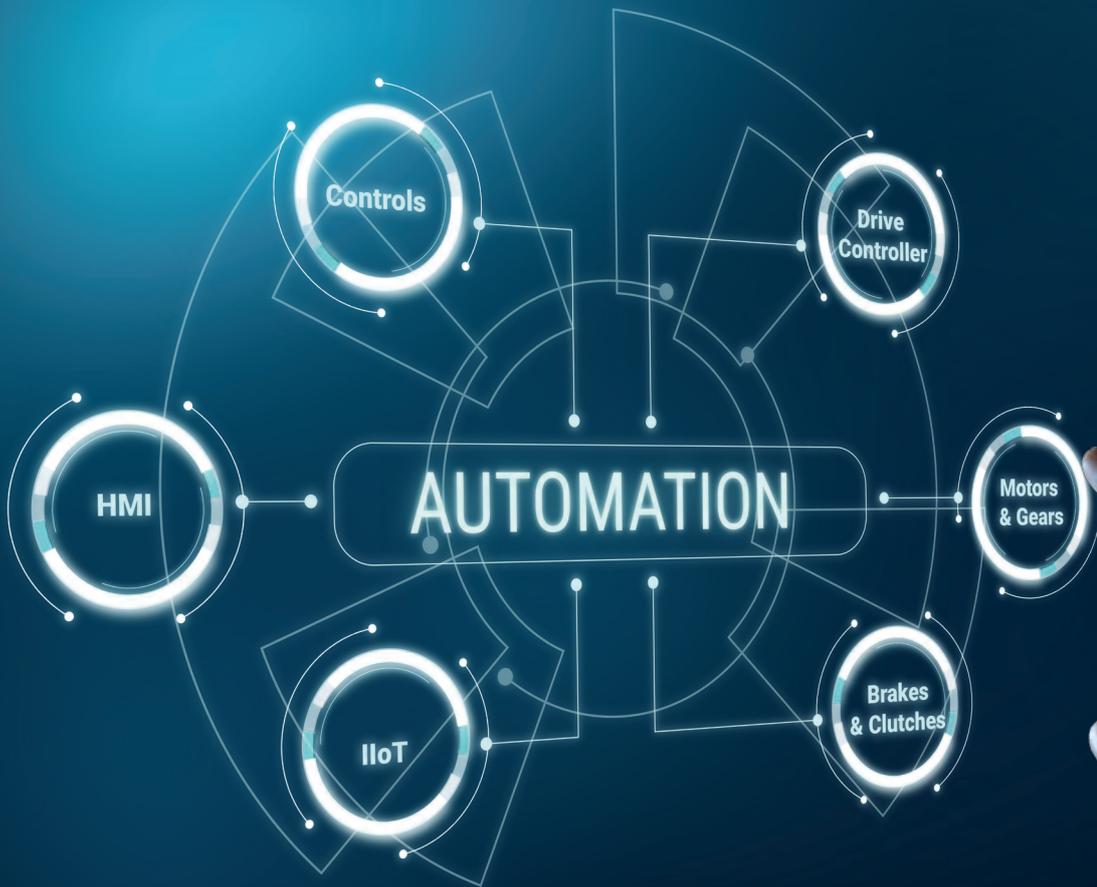


**KEB**



**#MAKEYOURAUTOMATIONWORK**

PORTFOLIO 2023

EN

PREMIERE



## COMBIPERM P2

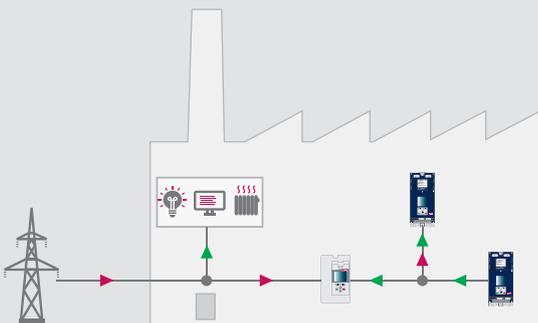
OPTIMISED FOR SERVOMOTORS  
**Powerful permanent magnet brakes**

- Low heating and power consumption
- Higher braking torque
- Compact design
- Optimised magnetic flux

## DC READY

PERFECT ENERGY EXCHANGE

Coupled drive axes with DC supply – the smart solution for energy optimisation.



NEW



## C6 COMPACT 3

SMALL DIMENSIONS – BIG PERFORMANCE  
**EMBEDDED CONTROL Technology in a new way**

- Control, HMI, OPC UA
- Real-time motion control
- Linux-based, open microservice architecture

## DL4-LC

INCREASED POWER DENSITY  
**Servo motors with liquid cooling**

In combination with the Liquid Cooled-Drive Controllers F6, a complete drive system for special environments and requirements is created.

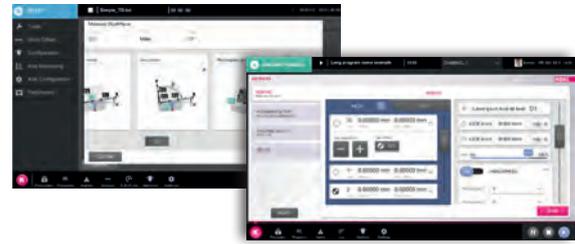


## CNC CONTROL

### FLEXIBLE AND SIMPLE

#### The CNC modular system

- CNC solution with ISG KERNEL
- Extension of machine functionality via IEC 61131



## HIGH SPEED DRIVES

### UP TO 2,000 Hz

#### Drive controller and filter technology

Drive systems from the small machining spindle to the turbo compressor with 450 kW / 800 A.



# HELIO

## HMIs WITHOUT PROGRAMMING EFFORT

With HELIO you can quickly and easily create intuitive HMIs that are truly responsive and independent of platforms and end devices thanks to web technology.

HELIO templates include professional interface design already out-of-the-box and not only make the result easy to use – HELIO itself is also quick and easy to learn and thus helps to significantly reduce development costs.



PREVIEW

Become a pilot customer now: [www.helio-hmi.com](http://www.helio-hmi.com)

# CONTROL & AUTOMATION

For flexible and economical automation solution the KEB portfolio provides extensive hardware solutions and software functionalities from the display to the motion profile.

## SOFTWARE

### COMBIVIS studio 6 **ENGINEERING TOOL**

COMBIVIS studio 6 combines t IEC 61131-3 programming, drive parameterization, diagnostic and design of the user interface in one working environment.

### COMBIVIS studio HMI **VISUALIZATION**

Visualization made simple: COMBIVIS HMI for the design of high-quality human machine interfaces (HMIs).

### REMOTE CONTROL / CLOUD ACCESS

Simple and safe remote and maintenance access via COMBIVIS Remote and secure transfer of recorded data to assigned cloud accounts with COMBIVIS cloud.



## HARDWARE

### Touch displays

Convenient operation and display with COMBICONTROL C6 HMI or with integrated PLC as C6 HMI-LC in standard and widescreen format up to 15.6".

### VPN Router

COMBICONTROL C6 Router enables secure access to machines and systems, the integrated HMI functionality allows long-term analyses, data logging and notifications via email or SMS.

### PANEL-, BOX-, BOOK MOUNT-, DIN rail IPC and REMOTE I/O

COMBICONTROL C6 provides scalable, central and decentralized IPC solutions with EtherCAT communication in real time together with I/O terminal system. The safety-related part of the overall system is handled by Safety PLC, Safety I/O module together with S6 / F6 drive controllers - in short safety in the system.

### SAFETY IN THE SYSTEM

with safe data transfer via Safety over EtherCAT (FSoE).



# DRIVES

## THE SINGLE AND MULTI AXIS DRIVE PACKAGE FOR MACHINES AND PLANT ENGINEERING

**COMBIVERT** stands for 50 years of experience in frequency inverters and servo systems – made by KEB. Universal for three-phase, synchronous, spindle, torque, linear and special motors. Drive electronics with outstanding shaft characteristics as the basis for precise speed, torque and position control, open loop, closed loop, with and without encoder – we call it **Drive Controller**.

### DRIVE CONTROLLER

The KEB control methods ASCL (Asynchronous Sensorless Closed Loop) and SCL (Synchronous Sensorless Closed Loop) are benchmarks for the operation of motors in a unique range of applications with rated powers of up to **45 kW / 230 V, 800 kW / 400 V**.



### Supply-/Regen Units **up to 1,000 kVA**

Generate braking energy from processes and reduce operating costs.

### EMC, sine wave and harmonic filters

Passive components reduce influences or feedback in systems, protect motor windings, reduce harmonics and create functional reliability of machines.



# MOTORS & GEARS

## MOTORS

### Three-phase motors **UP TO 45 kW**

The robust, versatile electric drive, with brake, encoder, external ventilation, etc.

### Servo motors **UP TO 500 Nm**

High dynamics with up to 5 times peak torque – permanent magnet servomotors, optionally with resolver, single or multiturn absolute encoder and holding brake.



## GEARS

### Helical geared motors **up to 13,600 Nm**

High reliability, compact design, wide gear ratio – the first choice for the horizontal output in modern systems.

### Shaft mounted helical geared motors **up to 8,900 Nm**

The robust and durable construction offers the combination of optimal performance and convenient mounting options.

### Helical worm geared motors **up to 1,160 Nm**

Good efficiency thanks to the upstream helical gear stage, high torque and low speed in the smallest installation space with lateral output.

### Helical bevel geared motors **up to 12,200 Nm**

Optimal efficiency factor, wide speed range – the perfect solution for designs with lateral output.



## BRAKES AND CLUTCHES

50 years of experience in the design and production of electromagnetic solutions for safe holding, starting or stopping.

### Electromagnetic brakes and clutches **up to 750 Nm**

COMBINORM are single-surface elements with asbestos-free friction linings for backlash-free torque transmission without residual torque at short switching times.

### Spring-applied brakes **up to 3,000 Nm**

COMBISTOP – double-surface brakes with adjustment of air gap, asbestos-free friction linings warrant the highest level of safety and protection even under extreme stress.

### Permanent magnet brakes **up to 145 Nm**

COMBIPERM stands for large braking torques with a small building volume, backlash-free holding, residual torque-free separation without, maximum air gaps, large release window.

### Clutch-brake combination **up to 250 Nm**

Housing version for start / stop operation with wear adjustment.



## AUTOMOTIVE PRODUCTS

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

## E-MOBILITY

T6 APD – the **modular and scalable DRIVE CONTROLLER system** for mobile use, flexible in three sizes of 16.5 A, 33 A and 60 A for up to six independently driven electric motors, including control unit for regulating individual system properties and as communication gateway for vehicle control.

## WIND POWER

**CLEAN ENERGY FROM ON- AND OFFSHORE OPERATION** in large-scale wind turbines.

KEB pitch systems and yaw / azimuth drive solutions regulate the amount of energy and reliably protect the systems from overload.



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