



**KEB**

# #MakeYourAutomationWork



Plastics  
Machinery



Blowers &  
Turbo Compressors



e-mobility



Lifts &  
Escalators



Medical  
Technology



Material  
Handling



Woodworking  
Machinery



Wind  
Energy



Pack &  
Food

## PRODUCT PORTFOLIO

EN



# Next Open Automation

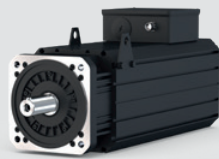
## The digital platform for OEM machines & systems

PREVIEW

### LINUX & CONTAINER BASED ARCHITECTURE

MACHINE LEARNING   ■   MONITORING   ■   COMMUNICATION  
ANALYSIS   ■   CUSTOMER APPS   ■   CONTROL   ■   HMI

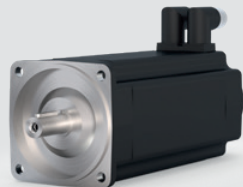
#### GEARS & MOTORS



##### DL4-LC

SERVO MOTORS WITH LIQUID COOLING

- High power density and efficiency
- Rated torques up to 520 Nm
- Use in applications with high loads
- In the system with Drive Controller COMBIVERT F6

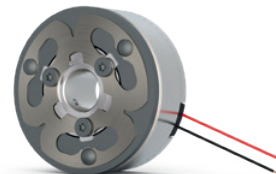


##### SERVO MOTORS TA4/TA5

NEW POWER DENSITY

- Powerful driving with high efficiency
- Compact dimensions
- High dynamic torques
- Precise positioning

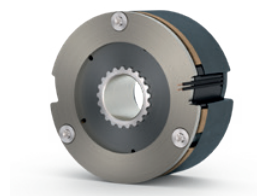
#### BRAKES & CLUTCHES



##### COMBIPERM P2

POWERFUL PERMANENT MAGNET BRAKES

- Optimised for the servo motor
- Low heating and power consumption
- More braking torque
- Compact design



##### COMBISTOP S1

SPRING-APPLIED BRAKE WITH  
FAIL-SAFE FUNCTIONS

- Safety brake
- High torque, small installation space
- Execution of numerous emergency stops
- Innovative, patented friction system

NEW

PREVIEW

# CONTROL & AUTOMATION

NEW



## C6 COMPACT 3

### NEW EMBEDDED CONTROL

- Small dimensions, big performance
- Control, HMI, OPC UA
- Real-time motion control
- Linux-based, open microservice architecture



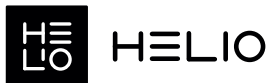
PREMIERE

## C6 X1 WEB HMI

### SLIM DESIGN WITH HIGH FUNCTIONALITY

- 7" to 21.5" display
- Capacitive multi-touch screen
- Various mounting options
- Wi-Fi, NFC

NEW



## HMI MANAGEMENT SYSTEM

### CREATE INTUITIVE HMIS QUICK AND SIMPLE

- No Code: HMI development without programming effort
- Future-proof and flexible thanks to true responsiveness
- HELIO takes care of the UX design
- Edit with real live data from the plant

# DRIVES

## HIGH-SPEED DRIVES

### UP TO 2,000 Hz

- Drive Controller with matched filter technology
- Power from 30 kW to 450 kW
- Switching frequencies up to 16 kHz
- For processing spindles, turbo compressors, etc.



## PEAK POWER DRIVES

### HIGH OVERLOAD CAPACITY

- High switching frequencies for low-noise operation
- Overload capacity to absorb load jumps and current peaks
- Optional software package for lift applications



More information: [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

### ENGINEERING TOOL

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

### 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.

### VISUALISATION

Visualisation made easy – design high-quality HMIs quickly and easily with HELIO.



## HARDWARE

### Web HMI

With capacitive multi-touch screens ranging in size from 7" to 21.5" and various mounting types, the C6 X1 panels can be used in a variety of ways.

### 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

## DRIVE SYSTEMS FOR MACHINE AND PLANT MANUFACTURING

COMBIVERT inverters and servo systems – Made by KEB – are universally applicable up to 45 kW / 230 V respectively 450 kW / 400 V 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:

### 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. The integrated safety functions provide an excellent basis for high-quality machines and plants.



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

Generate braking energy from processes and reduce operating costs.

### EMC, mains and motor filters

Chokes, sine-wave or harmonic filters – passive components reduce influences or feedback in systems, protect motor windings, lower harmonics and ensure the functional safety 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**

Highest dynamics with up to 5 times the nominal torque – permanent magnet servo motors, optionally with or without feedback (resolver, single or multi-turn absolute encoder) as well as holding or safety 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 development and production of electromagnetic solutions for safe holding, starting, stopping or positioning.

### 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.



## 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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# Automation with Drive

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