BECKHOFF

Fact sheet
Distributed drive technology

Intelligence in the drive reduces the footprint

The trend toward individualization and smaller batch sizes poses new challenges for machine and system engineering. Production systems need to be modular, flexible, and quickly adaptable.

In this context, central drive architectures often reach their limits due to issues such as the amount of cabling effort required, increasing space requirements in the control cabinet, or a lack of scalability.

This is precisely where distributed drive systems from Beckhoff come in: With integrated control intelligence directly in the motor, they enable compact, flexible machine layouts that can be easily expanded, converted, and operated efficiently. At the same time, they reduce control cabinet requirements, save on cabling, and enable true modularity – without compromising on performance, safety, or integration.

How you benefit from distributed drive

+ **High modularity:** integration of electrical and mechanical connection technology enables flexible machine and system concepts.
+ **Reduced footprint:** due to shorter cable runs and lower space requirements
+ **Less effort:** when it comes to cabling, installation, and commissioning
+ **Full compatibility:** with EtherCAT and TwinCAT

▶ www.beckhoff.com/
distributed-drive-technology

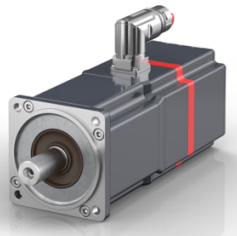
Smart, compact, and powerful – with distributed drive systems from Beckhoff

Distributed drive systems from Beckhoff bring the drive technology out of the control cabinet and place it directly in the machine. This has numerous advantages both for you as a developer and for your customers. Here is a brief overview.

Flexibility for modular machines
With distributed solutions, you can combine drive and motor technology directly in the field – ideal for modular machine concepts. Cascadability, compact design, and the integration of control intelligence enable flexible machine layouts with minimal cabling effort.

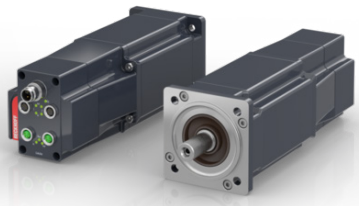
Compact, efficient, resource-saving
Control cabinets can be made smaller or even omitted entirely, and there is no need for long cable runs either. This saves space, material, time, and costs – from the design stage right through to commissioning. Your machines will be more compact and energy-efficient.

Options to suit every requirement
With AMP8000, AMI8100, and ASI8100, Beckhoff offers three powerful series for distributed drive technology – from 48 V DC to 480 V AC, with up to 11 kW power, integrated I/Os, TwinSAFE, and EtherCAT. Combine drives, safety, and engineering seamlessly in one system.



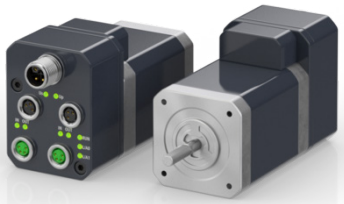
AMP8000 – distributed servo drive system

- voltage range from 120 V AC to 480 V AC
- total output of up to 11 kW
- with distributed supply and distribution modules for control cabinet-free implementation
- TwinSAFE for the integrated STO/SS1 safety functions or, as an option, with TwinSAFE Safe Motion



AMI8100 – integrated servo drives

- voltage range up to 48 V DC
- combines servomotor, servo drive, and fieldbus connection for motion applications up to 400 watts
- can be used as a stand-alone solution without a control cabinet
- TwinSAFE STO/SS1 safety functions available as an option
- 2 integrated I/Os



ASI8100 – integrated stepper motor drives

- voltage range up to 48 V DC
- combines stepper motor, stepper motor output stage, and fieldbus connection for motion applications up to 250 watts
- can be used as a stand-alone solution without a control cabinet
- 2 integrated I/Os

“With distributed drive systems, we are bringing together the elements that belong together: the motor and output stage, combined in a compact housing. This saves valuable resources and opens up completely new design possibilities for developers in machine and system engineering.”

Matthias Risse
Product Management Motion, Beckhoff Automation

Learn more here:

▶ www.beckhoff.com/distributed-drive-technology