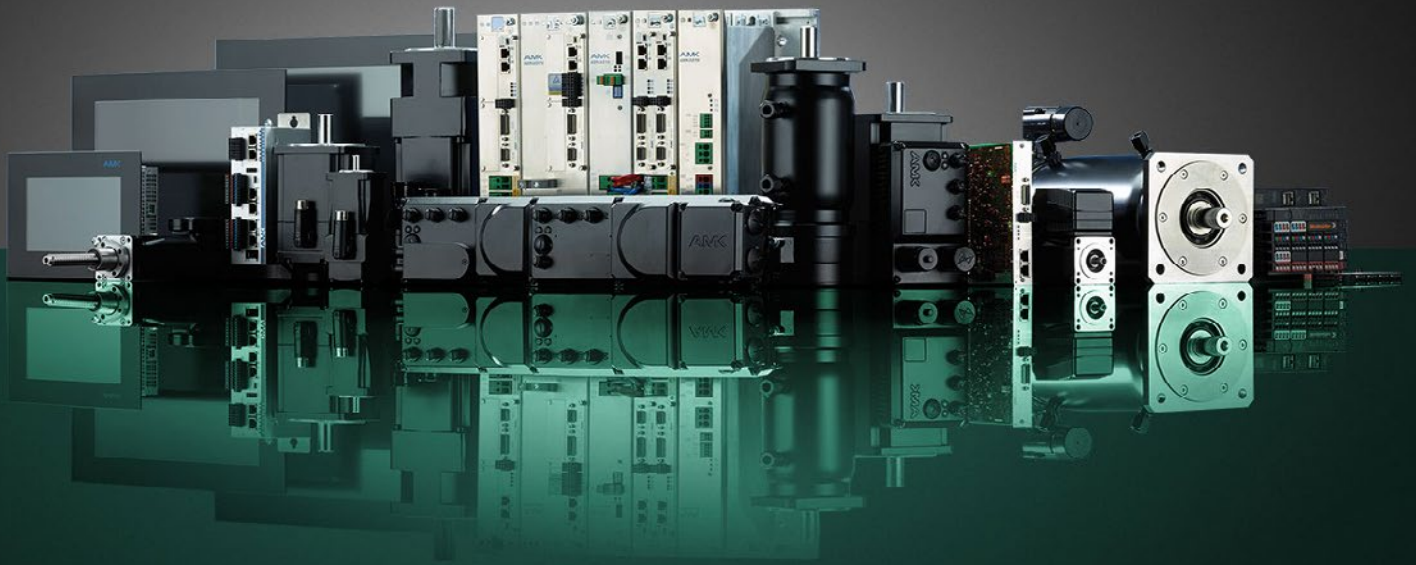


**AMK***motion*

MEMBER OF THE ARBURG FAMILY



# Hybrid Automation Solutions

Centralized, Decentralized, Individualized

## Flexible & Combinable

Due to the modularization in machine building, processes are being functionally and spatially divided into subprocesses. As a result, drives are moving ever closer to where the action takes place. A perfect environment for decentralized drive concepts.

But then there are obviously also power-intensive processes that require an automation solution with a centralized configuration.

Conventional drives with power supply and inverter inside a control cabinet remain an essential automation solution.

In contrast. Regardless of the locations where computing and controlling take place, the surefire recipe for efficiency gains is to combine both solution approaches. The benefits of each approach can then be combined.

That is why AMK relies on the flexibilization of automation technology and, in particular, on the combinability of the various system architectures.

These hybrid automation solutions offer unforeseen opportunities for machine design and become the standard in automation technology.



### Consulting

We support you with individual and project-based consultation on your drives and controls. This saves you valuable engineering resources and cost.

### Training

Our extensive training program provides theoretical and practical experience with drives and controls technology and is offered in diverse training options: Either in our training center or at your facility.

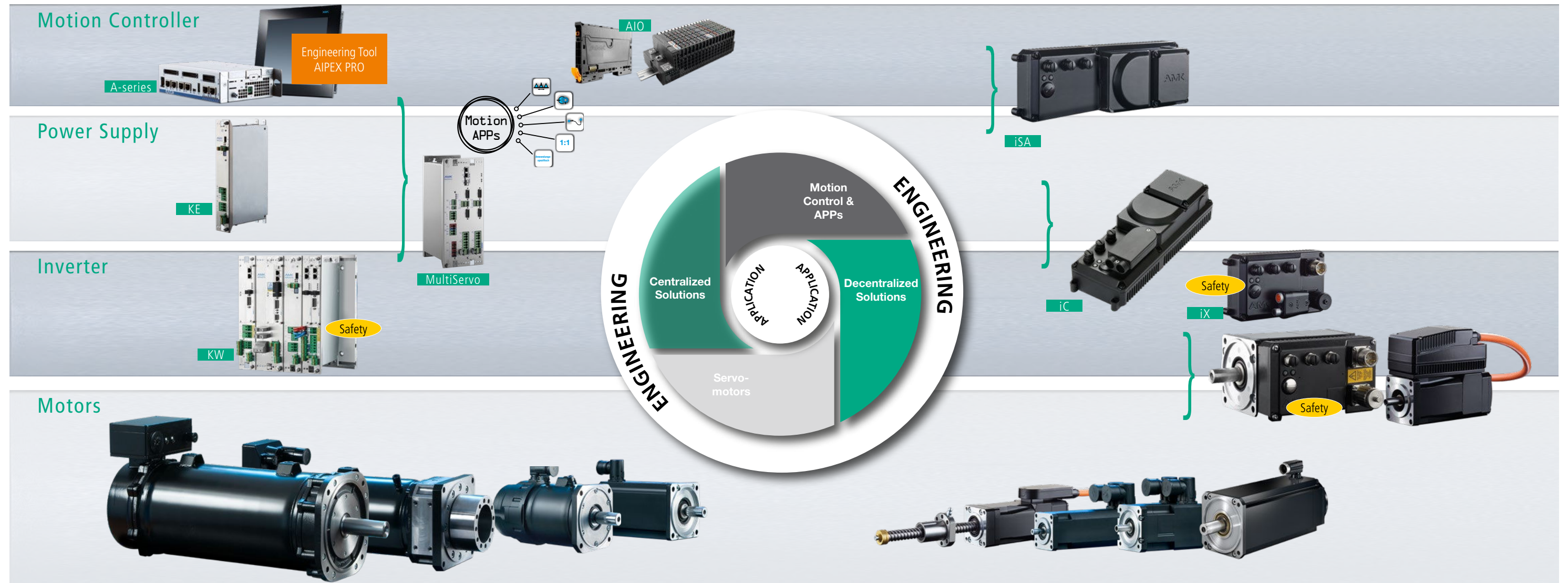
### Service

Comprehensive service is natural to us. Whenever you need support our specialists will be there for you – from planning and design to installation and start-up. Including programming and operation of a machine or retrofitting systems.

The range extends from basic training to expert workshop. By request we also offer project-optimized individual training.

## Centralized

## Decentralized





## Central Drive Solutions



A-series motion controller

The **A-series motion controllers** are available as compact control cabinet motion controllers and as complete units with touch display.

In each case they have programming in CODESYS, visualization and motion control rolled into one. With the A-series, a highly accurate synchronization of servo axes – even across multiple levels – is guaranteed.



KE/KW compact power supply & inverter

The **compact KE supplies** generate the DC link and, depending on the design (KES), can feed energy back to the supply system sinusoidally.

The DC link supplies the modular **KW inverters**. The KW series is available in a power range of 1 kVA to 200 kVA. With scalable controller cards, they provide just the right performance and if needed also functional safety for all applications in machine building.



MultiServo

The **MultiServo** is a multi-axes inverter with power supply and motion control in one compact housing. On the hardware level, power of the axes can be a combination of 1, 2, and 4 kVA. There are units that consist of a scalable power supply and 2, 4 or more axes.

Motion control can be integrated through **motion apps**, which allows it to work independently from a higher-level controller. Connection is made via fieldbus interface.



Servo motors up to 150kW

The **synchronous servo motors** are impressive due to their extremely high power density with efficient cooling methods in forced-ventilation, convection-cooled, and liquid-cooled designs. The different motor series offer motors of various kinds in terms of stall torque, continuous stall torque, and acceleration.

The **SKT hollow shaft motors** are used with a screw-nut system as linear drives. Like the ready-for-installation **SEZ electric cylinders**, they are ideal for linear applications with high forces and high positioning accuracy.

## Decentral Drive Solutions

The decentralized drive solutions can be operated in a hybrid manner in connection to a centralized control cabinet or as stand-alone units without a control cabinet:

The decentralized **iSA motion controller** performs the complete control of a machine segment. Furthermore the iSA can be used as a gateway to higher-level controllers. For automation completely free of control cabinets, it has an integrated incoming supply that generates the DC voltage for connected servo axes.

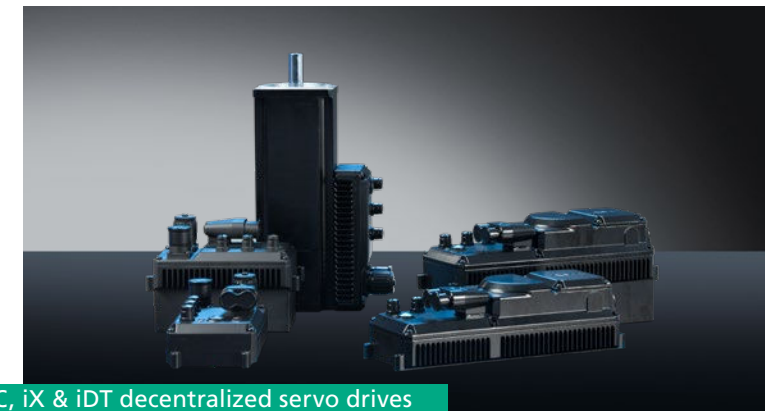


iSA decentralized motion controller

The decentralized **iC converter** powers an axis up to 5KVA. Additionally, it provides a DC-Link for further axis and 24V.

The **iX** is a decentralized **inverter** for installation directly at the motor. It can be supplied with the DC voltage in a decentralized manner or from the central control cabinet.

In the case of the **iDT**, the motor and the inverter are a compact unit. Feedback and motor cable are saved.



iC, iX & iDT decentralized servo drives

The **inverter-integrated ihXT servo motors** are the newest member of the decentralized product family. They are equipped with a hybrid cable that combines the DC bus, real-time Ethernet communication, STO, and 24 V.

With the convenient looping through and an innovative plug-in terminal system (in IP 65), up to 40 axes can be connected in series. Thereby the cost for installation can be reduced by up to 90%.



ihXT decentralized servo drive

For the decentralized drive technology, **synchronous servo motors** are available from AMK's large range of motors in the suitable power range of 150 W to 5 KW.



Servo motors up to 150 kW

### Centralized Automation

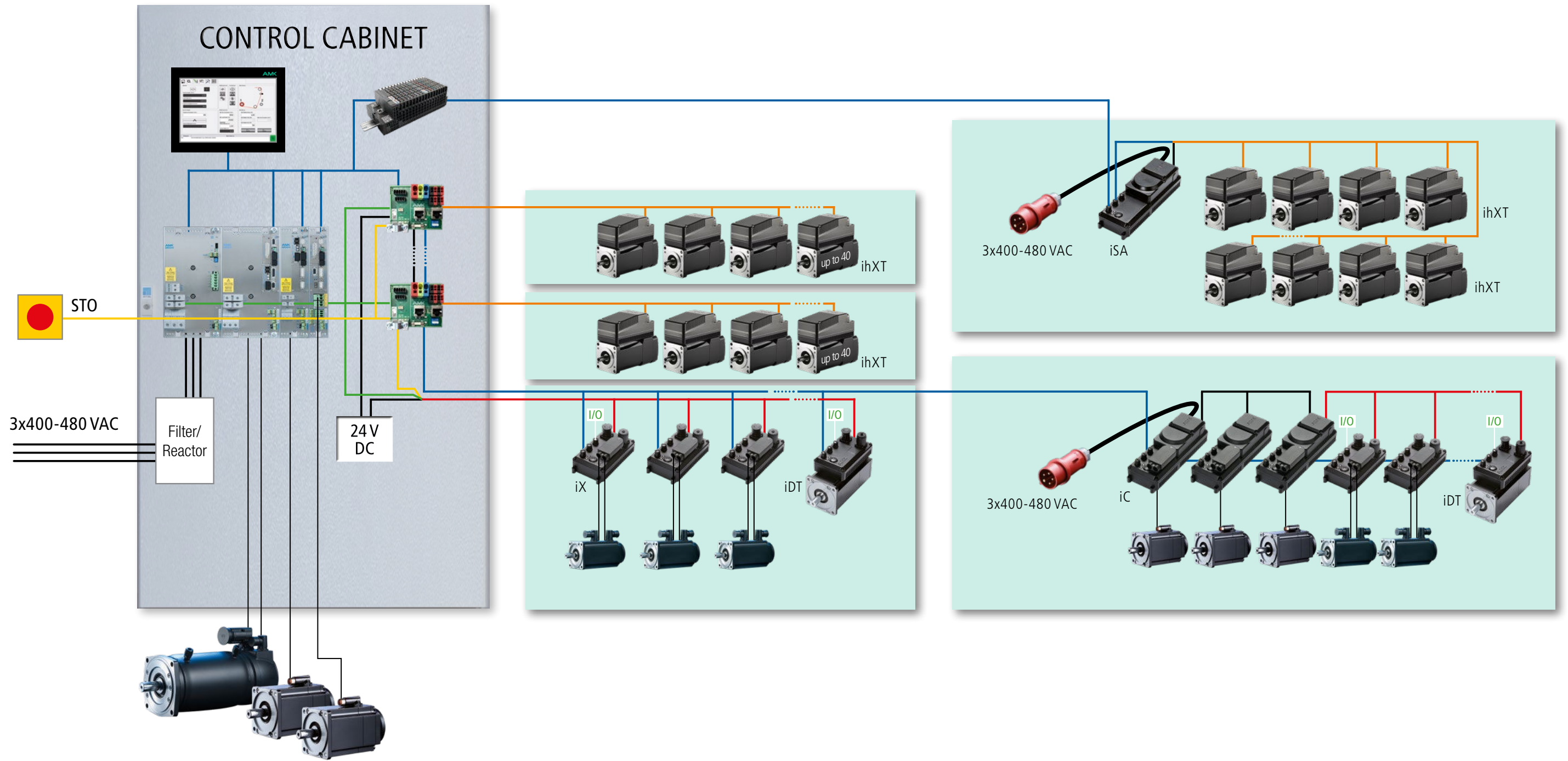
- Centralized power supply
- Centralized motion controller
- Centralized inverter

### Hybrid Automation Solution

- Centralized power supply
- Centralized motion controller
- Decentralized inverter

### Dezentralized Automation

- Decentralized power supply
- Decentralized motion controller
- Decentralized inverter



— Real-time Ethernet (EtherCAT, VARAN, Sercos III) as gateway (Ethernet, Profibus, Ethernet/IP)

— Decentralized power supply (DC bus, 24VDC, STO)

— DC bus

— Hybrid cable (DC bus, Real-time Ethernet, 24 VDC, STO)

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