ENERGY EFFICIENT DRIVES

KeDrive D3 Smart DC Systems

Optimal energy management for the "green footprint" of your machine.

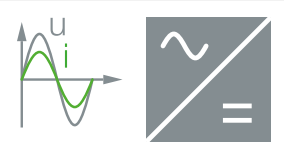
The energy transition and rising energy costs require sustainable and efficient solutions for machines and factories. Electric drives account for 70% of the energy demand in factory automation. A considerable potential for saving operating and installation costs.

Are you looking for a partner who will work with you to develop and implement economical and environmentally conscious drive solutions? What drives you as a machine builder or plant operator and what are your challenges?
Use the KEBA expertise from research and application as well as the KeDrive D3 drive platform with active power supply and energy storage systems for your tailor-made Smart DC system.

// Controlled DC link voltage for easier international drive sizing
// Independence from worldwide mains voltages
// Optimized energy storage in the DC link
// Reduction of mains distortion (THD) and reactive power caused by passive rectification
// Savings in grid connection costs by limiting peak power consumption from the mains
// Controlled energy storage for dynamic applications
// Research on open multi-vendor DC grid in one machine or manufacturing cell

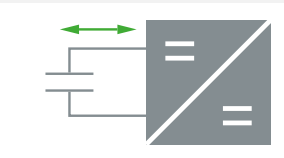
Active power supply units

- **Energy recovery** of regenerative energy into the AC grid
- **Controlled DC link voltage** for best drive utilization and mains independence
- Limitation of the **mains input power**
- Reduced mains current distortion (THD) due to **sinusoidal mains currents**



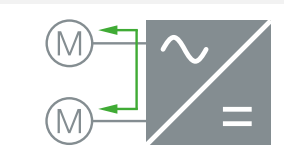
Controlled energy storage systems

- **Temporary storage** for regenerative energy
- Peak power reduction through **"peak shaving"**
- Bridging of mains failures (short time **UPS** for DC link)

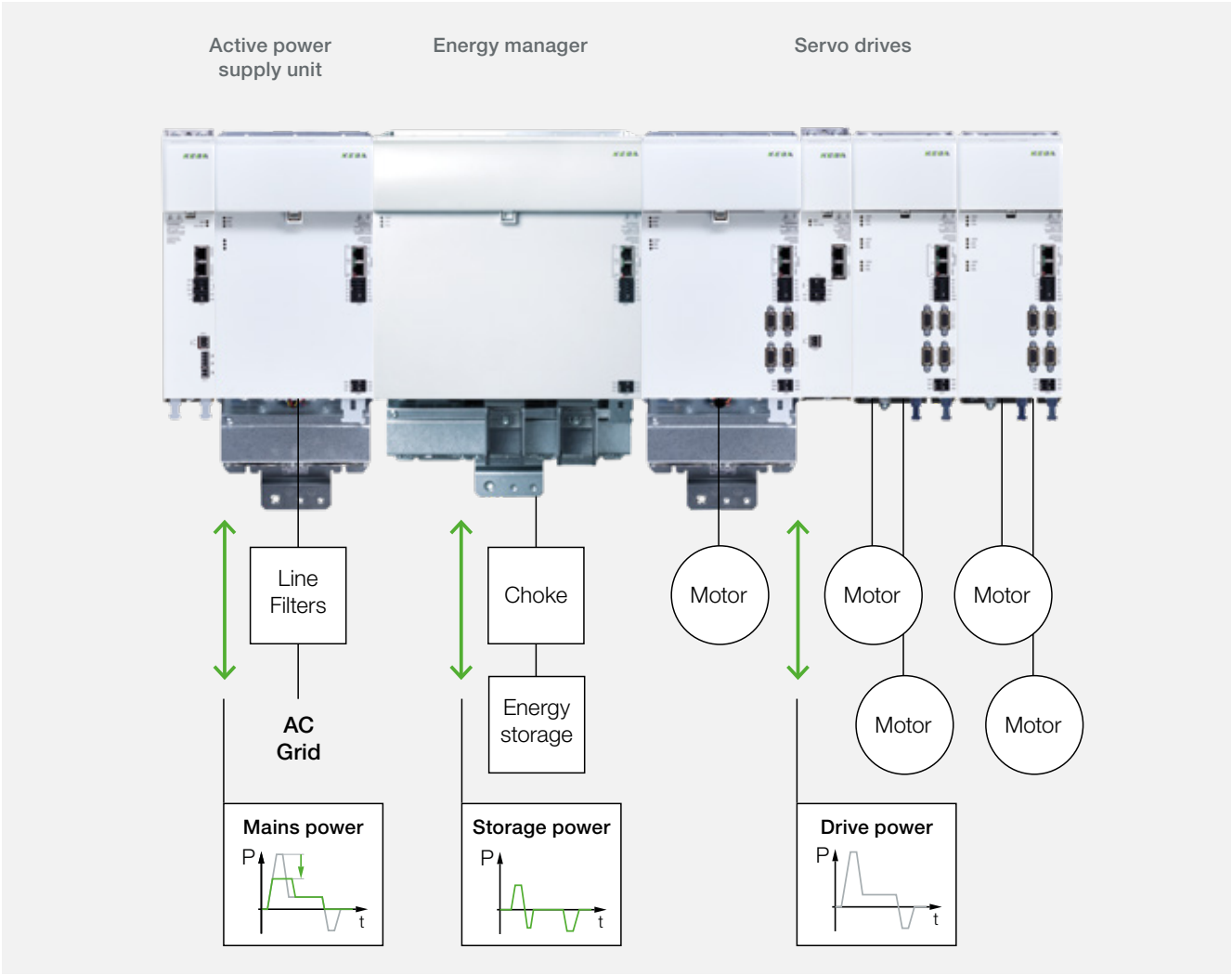


Modular drive system

- **Optimal integration** into the KeDrive D3 drive system
- **Energy efficiency** due to energy exchange in the DC link
- **Capacity expansion** for storing short-term regenerative peaks
- Different **cooling concepts**



System solution
with active power supply unit and energy storage system



Technical data – extract from the KEBA drive portfolio

Active power supply units			Controlled energy storage systems			
			Energy manager		Energy storage	
						
Rated power	30 kW	55 kW	Rated power	63*/75** kW	Capacitance	110 mF
Peak power	60 kW (10 s)	110 kW (10 s)	Peak power	94/*118** kW (0,2 s)	Voltage range	100-390 V
Max. DC capacitance	40 mF		Maximum power	202*/240** kW	Max. energy	7,8 kJ
Chopper power	6 kW (115 kW peak)		Values at 300 V storage voltage			
Supply unit consisting of charging module D3-DL 300 and supply module D3-DP 310 Accessories: Line filter, LC filter D3-LC			Accessories: DC choke D3-EL * air-cooled ** liquid-cooled			