



E°Darc DCB – Capacitor module for energy-efficient machines

Store braking energy. Smooth out load peaks.





Plug & Play Energy storage solution

Ready-to-connect capacitor module for the DC link – ready to connect, maintenance-free, and immediately ready for use:

- Quickly integrated into existing systems
- Flexible case sizes from XS to L
- Range of storage variants from 14 to 131 mF
- Peak shaving – reduces peak loads through targeted pre-charging option
- High resilience and long-term stability for continuous industrial operation
- Can be connected in series for larger total storage capacities
- Ideal for series applications and retrofit solutions

**Robust, compact, and designed for the control cabinet –
your efficient solution for intelligent energy management.**



Valuable for your machines – more success in competition

As a machine manufacturer, you face the challenge of offering solutions that are not only powerful, but also economically and sustainably convincing. The E°Darc DCB makes exactly that possible:

Through targeted energy management, you increase the attractiveness of your machines, reduce operating costs for your customers, and gain a measurable competitive advantage.

Many manufacturers already use capacitors for peak shaving or energy recovery. The E°Darc DCB offers the decisive added value here: a fully integrated, tested, and certified plug-and-play solution with UL and CE marking that can be quickly and easily replaced in its entirety in case of maintenance.

Whether through peak shaving or energy recovery, the E°Darc DCB takes your machines to a new level of efficiency.

Avoid peak loads – save costs

- Reduces temporary load peaks in the grid
- Enables the construction of machines with lower connected loads
- Enables more compact design of power supplies, cables & transformers
- Saves end customers energy costs and grid capacity fees
- Offers OEMs a strong selling point and a unique selling point



Making good use of braking energy – instead of wasting it

- Recovery of braking energy instead of waste heat via resistors
- Reduces energy consumption and CO₂ emissions of the machine
- OEMs position their machines as particularly energy-efficient
- Offers tangible savings potential for end customers
- Supports sustainable machine positioning on the market

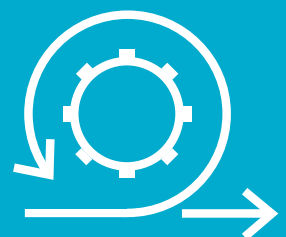




Would you like to know how the E°Darc DCB can be optimally integrated into your machine?

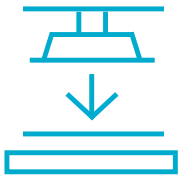
We support you in design, dimensioning, and ROI calculation – with tried-and-tested tools and our experience.

Phone: +49 5221 966-0
vertrieb-fcs@eckelmann.de



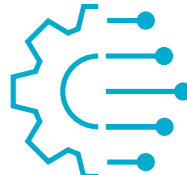
Ideal for machines and systems with dynamic movements

The E°Darc DCB can fully demonstrate its advantages wherever drives regularly brake and accelerate. Whether in series machines, special systems, or modernization projects, the capacitor module increases energy efficiency, reduces grid loads, and protects your components.



Servo presses & Punching machines

High braking performance with short cycle times



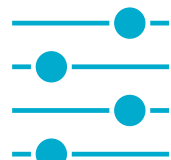
Machining centers with multiple axes

DC link energy storage protects the grid and hardware



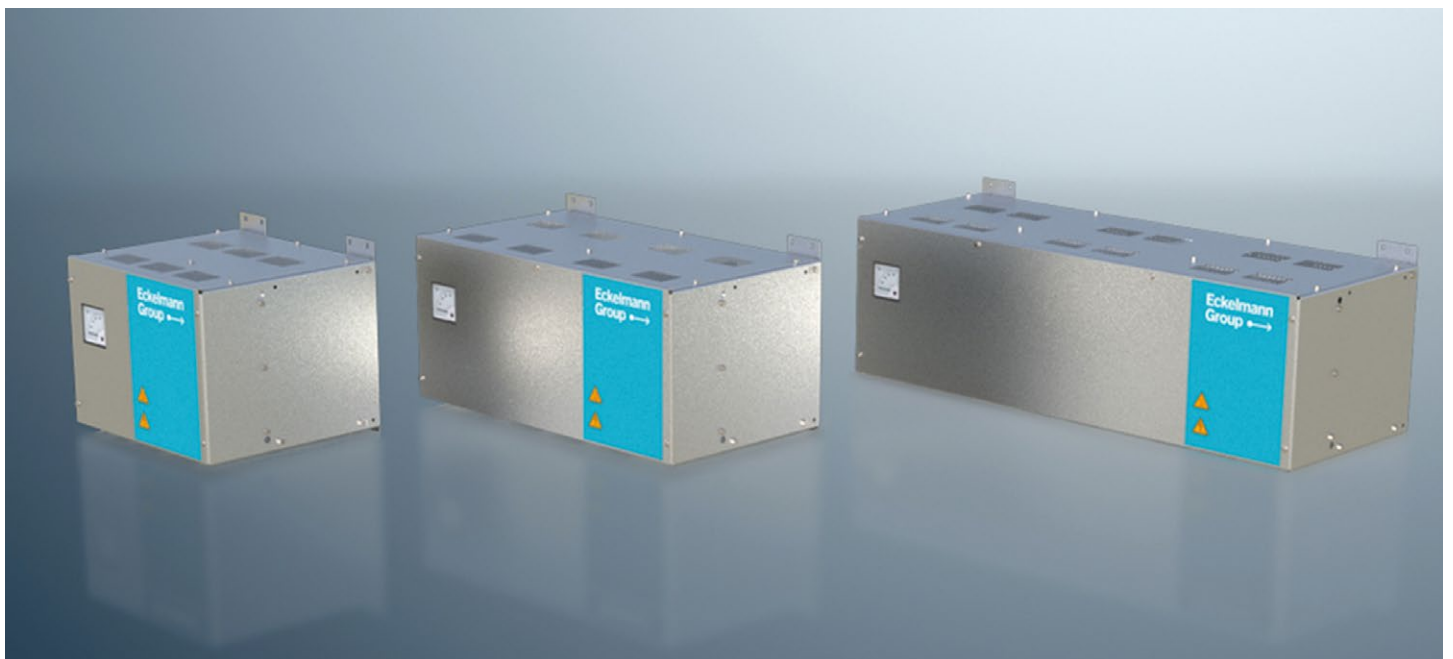
X-ray machines

Medical technology, safety engineering, material and material testing

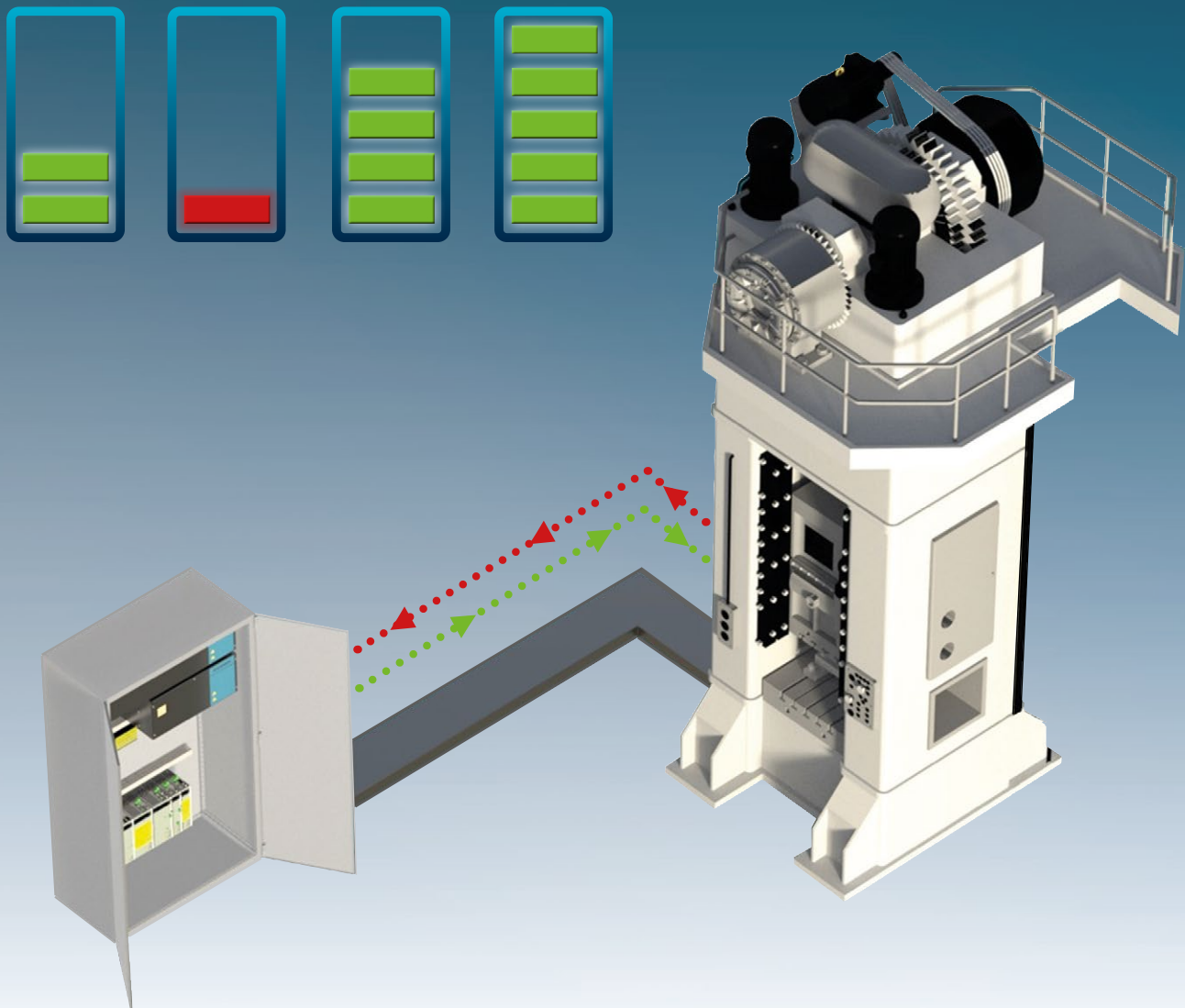


Assembly machines & Conveyor technology/ Intralogistics

Synchronized movements with great savings potential



Energy Recovery



Easy to integrate

Feature

DC link voltage

Rated current

System power

Energy content

Temperature range

Protection class

Certifications

Design

Value / Description

Up to 900 V DC

Up to 300 A_{eff}

Suitable for converters up to approx. 250 kW

Depending on module variant (e.g., 500–1000 Ws)

0°C to +55°C

IP10B

CE, UL compliant

Compact, suitable for control cabinets, maintenance-free

E°Darc DCB – the energy saver

DC link voltage up to 900 V, plug-and-play for easy integration, reliable in series applications, long-term stability, and designed for maximum load. Higher capacities can be achieved by connecting several devices in parallel if required. For all except the 1XS: Integrated precharge/discharge circuit, voltage display, optional ISO 50001 data.

E°Darc DCB015-1XS

The compact solution for axes with short load peaks

Capacity: 14-16 mF

Ideal for single axes & pick-and-place systems



E°Darc DCBxxx-1S

Standard size for smaller machines

Capacity: 44-58 mF

Ideal for small lines & modular machines



E°Darc DCBxxx-1M

The mid-range segment for productive applications

Capacity: 73-87 mF

For machines with 50-150 kW power



E°Darc DCBxxx-1L

Maximum buffer capacity for high-performance machines

Capacity: 116-131 mF

For very high power applications such as presses and machining centers



About us

Eckelmann is your system partner for precise solutions in the field of automation and digitization. As a strategic partner in digital transformation, Eckelmann leverages the opportunities of digitization and secures sustainable competitive advantages for its customers by creating suitable solutions in machine automation.



Sites & partnerships – national & international
480 + employees



Contact us.

Eckelmann AG
Berliner Strasse 161
65205 Wiesbaden
Germany
Phone: +49 611 7103-0
maavertrieb@eckelmann.de
www.eckelmann.de

Eckelmann FCS GmbH
Bodelschwinghstrasse 20
32049 Herford
Germany
Phone: +49 5221 966-0
vertrieb-fcs@eckelmann.de
www.eckelmann.de

REX Automatisierungstechnik GmbH
Fichtenweg 36
99098 Erfurt
Germany
Phone: +49 36203 9591-0
vertrieb@rex-at.de
www.rex-at.de



www.eckelmann.de/en