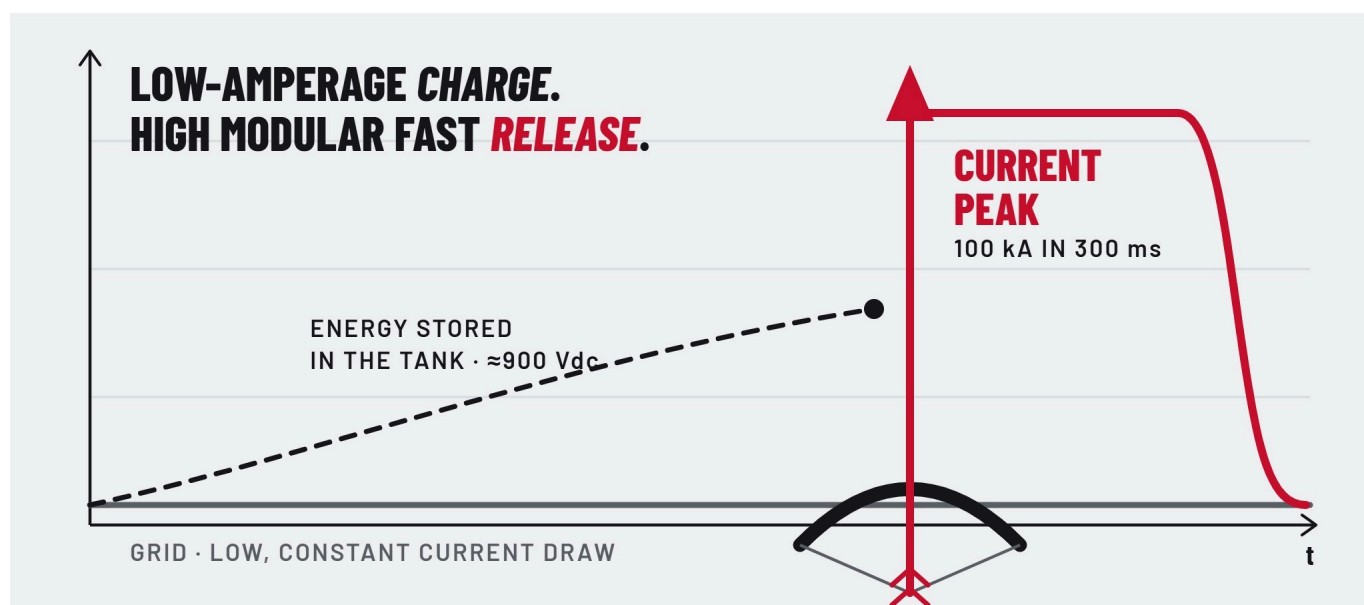


• ENERGY STORAGE TECHNOLOGY · CAPACITIVE STORAGE + INVERTER

ENERGY TANK

High-voltage capacitive energy storage that delivers pulsed power the grid alone cannot supply.



LIGHT ON THE *GRID*

Low, steady current drawn from the mains; the peak of energy comes from the capacitor bank. Standard connection, no oversized lines.

PULSED *POWER*

The high-voltage DC bus gives an extremely fast current rise and high secondary voltage for projection and heavy-duty welds.

INVERTER *CONTROL*

Unlike conventional capacitor discharge, the weld curve is fully programmable: ramps, multi-pulse, adaptive control.

$\approx 900 \text{ V}_{dc}$
STORAGE BUS

100 kA
PEAK CURRENT

32 A
MAINS FUSES

4.0
INDUSTRY READY

HOW IT WORKS

STORED *ENERGY*, SHAPED *CURRENT*

Energy Tank combines a high-voltage capacitor bank (≈ 900 Vdc) with a medium-frequency inverter. Standard charging modules draw a low, controlled current from the mains; the stored energy is then released in very high-power pulses, shaped with the precision of an inverter welding control.



PLC

Supervises the whole system: charging management, bank state of charge, safety and discharge, communication with the machine and the line.

KEY ADVANTAGES *MORE POWER, LESS GRID*

GRID

LOW MAINS DRAW

- Peaks covered by stored energy
- Standard fuses and cable sections
- Balanced load on the line
- Active PFC

PERFORMANCE

HIGH-VOLTAGE DC

- ≈ 900 Vdc storage bus
- High secondary voltage
- Weld current reach in very short time

PROCESS

PROGRAMMABLE CURRENT SHAPE

- Up to [500] weld programs
- Ramps, multi-pulse
- Constant current, adaptive control

ARCHITECTURE

MODULAR CHARGING

- Standard charging modules
- Scalable charging power
- Simplified spares and service

CONTROL

PLC AND INDUSTRY 4.0

- Real-time state of charge
- Diagnostics, alarms, logging
- Profinet, EtherCAT, Ethernet IP, Modbus TCP

SAFETY

ENERGY UNDER CONTROL

- Controlled bank discharge
- Voltage and temperature monitoring
- Wired into the machine e-stop

APPLICATIONS

PROJECTION WELDING

Nuts, Annular, Ring with reduced HAZ due to the fast current rise

LIMITED POWER CAPABILITY

New investment is not limited by reached limit of power

LONG DISTANCE CABLES

No big cost for cables in case of complex long automatic lines