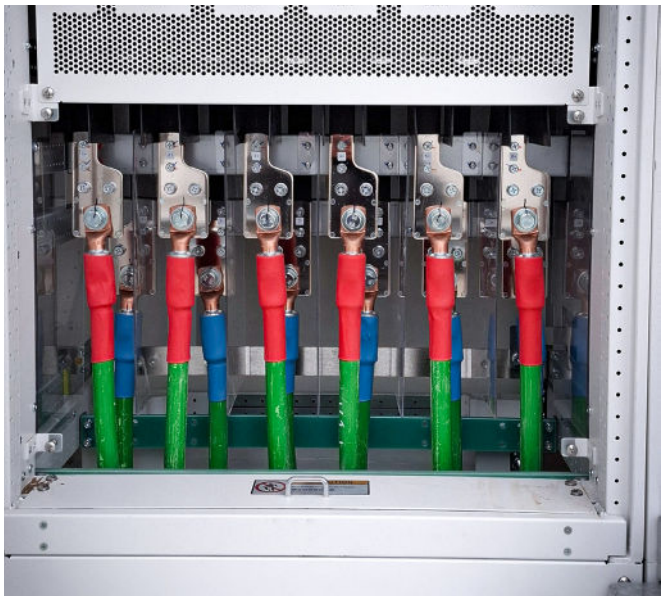
BESS: Key technology in the green transition – but not without challenges

With the increasing share of renewable energy in the electricity grid, the need for flexible storage solutions is growing.
Battery Energy Storage Systems (BESS) are one of the solutions – but the technology places demand on design, installation and operation.



Elpress solutions chosen for precision and durability

Eltel has completed a number of BESS projects in Denmark and has chosen Elpress as its supplier of cable lugs (AKK series) and crimping tools (PVX1300). The choice was made on the basis of documented quality and high contact resistance reliability.
"We focus on long-term operational reliability and low energy loss. Elpress' indent crimping system for aluminium has proven to provide the most stable connection between conductor and terminal," says Michael Mezöfi.

Flexibility in an unstable energy system

Solar and wind energy are produced when the weather permits – not necessarily when demand is highest. This has long been a challenge for the green transition. Large amounts of green electricity are wasted, while fossil fuel power plants have to fill the gaps.
This is where Battery Energy Storage Systems (BESS) become essential for the future energy landscape. By storing excess electricity and releasing it during peak periods, BESS increases security of supply, utilises green electricity and contributes to lower CO_2 emissions.

The technology can also even out electricity prices and reduce the need for grid reinforcement from fossil fuels – provided that the solution is correctly dimensioned and integrated.

Technical structure – from solar cell to electricity grid

A typical BESS plant consists of battery modules installed in 20-foot containers, connected to inverters and transformers. The plant is often connected to a solar cell plant that produces direct current (DC). This electricity is stored directly in the batteries and converted as needed into alternating current (AC), which is fed into the electricity grid via an inverter and transformer.
Proper control of this conversion is essential for an efficient and stable electricity grid.

Not only in Denmark – but throughout Europe

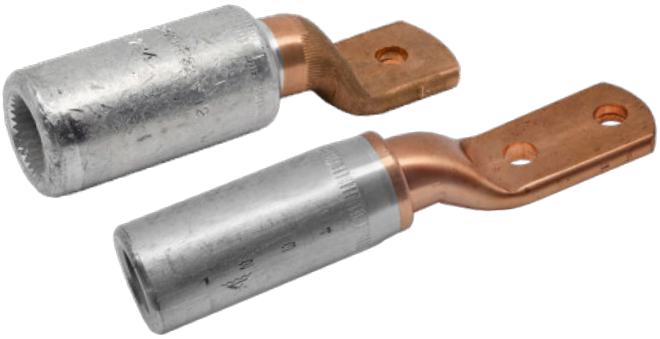
The market for BESS is growing explosively. According to the International Energy Agency (IEA), global storage capacity is expected to quadruple by 2030.
In Denmark, we are seeing growing interest from players with large buildings, warehouses, production facilities, agricultural buildings and logistics centres, where the combination of solar cells and BESS systems is both technically and economically attractive for businesses and consumers, and not least for the environment.

ELPRESS

Elpress in BESS-systems

Safe and secure connections for BESS Systems.

Al/Cu Terminals



Cu Terminals

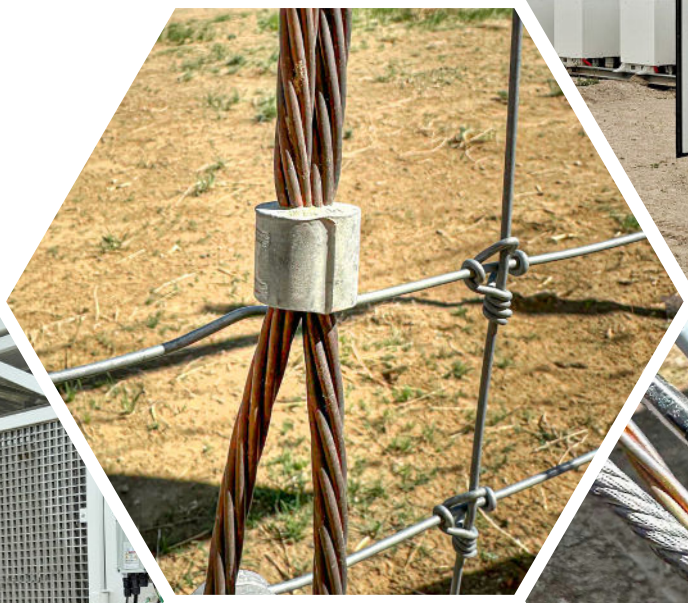
Crimping Tools

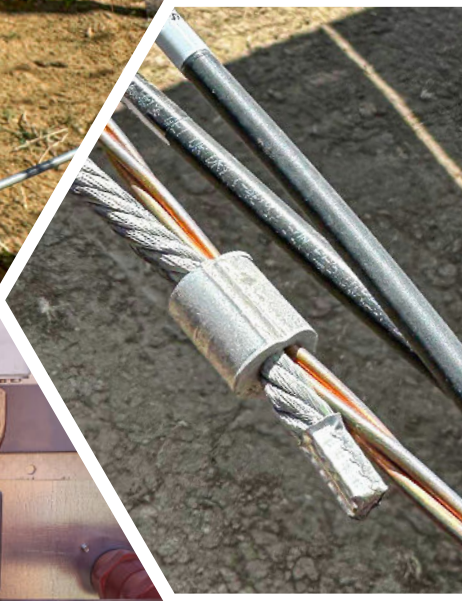
C-Sleeves

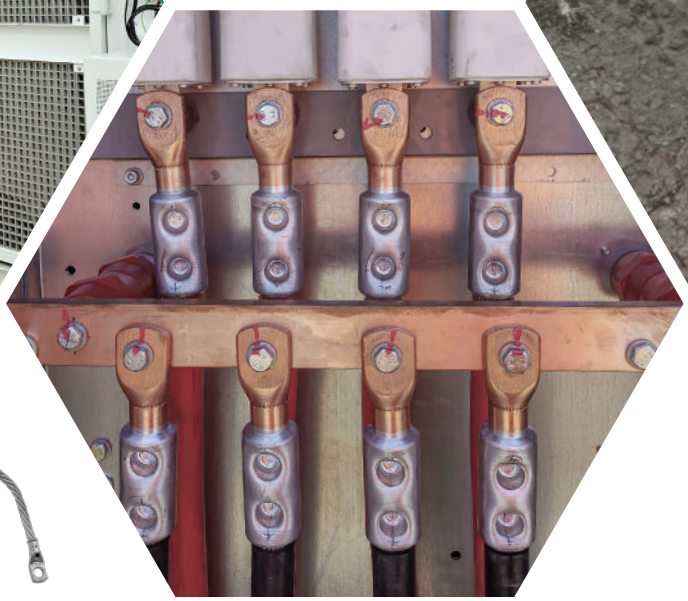
Cable Clamps

Earthing

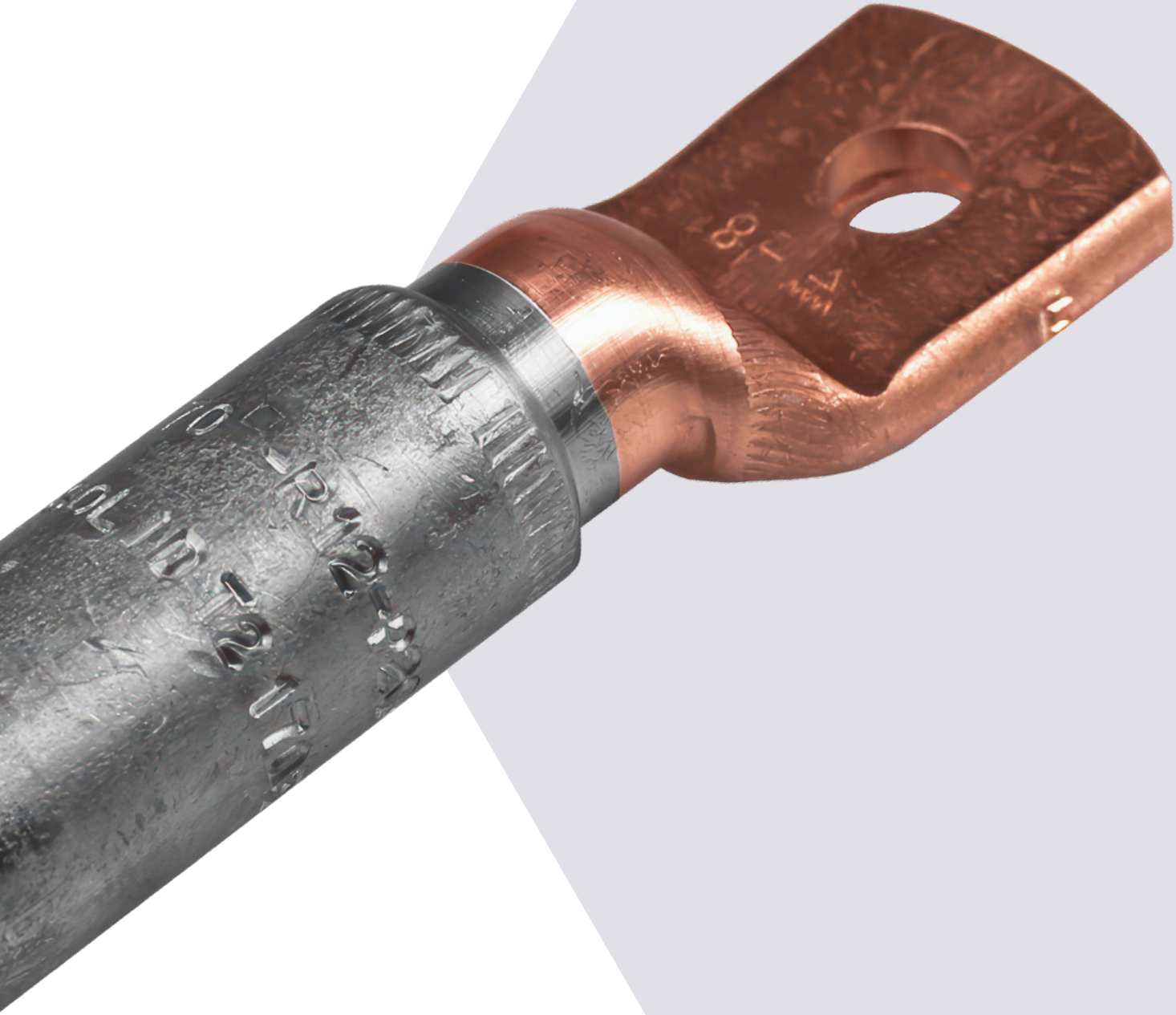
Cutting Tools







Earthing Conductors



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