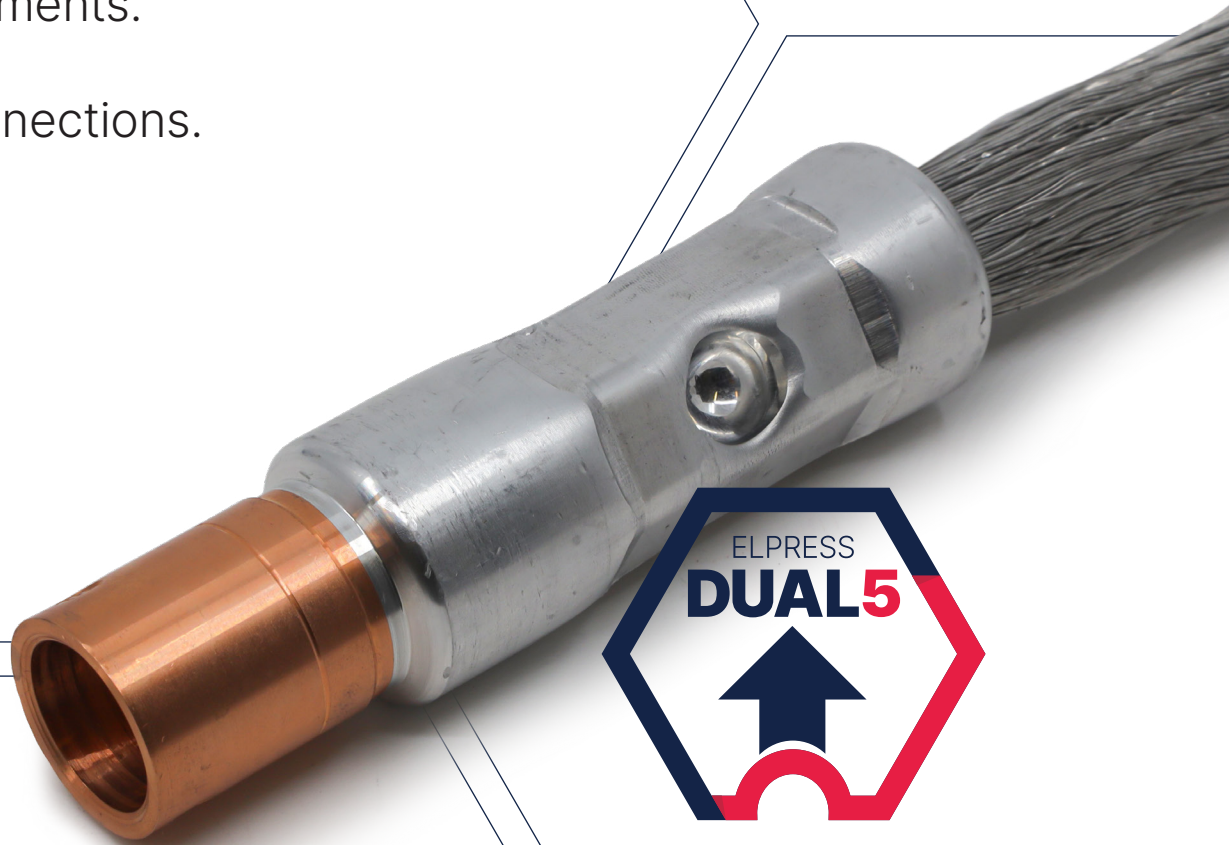


DUAL5 is a **concept solution**, which means ongoing adaptations of the program and project-oriented development of the technology according to the customer's wishes and requirements.

Secure Connections.



ELPRESS

TESTING & DEVELOPMENT

Elpress has been developing new solutions for electrical terminals for decades. Development, validation and testing take place at Elpress in cross-functional teams with high goals regarding functionality, durability, sustainability, repeatability and user-friendliness.

Our experience of high demands, in various purposes for electrical terminals, contributes to us developing solutions that meet both the prevailing international standards and the industry requirements in, among other things, wind and solar power plants, distribution and transmission networks and transformer, generator and vehicle manufacturing.



CONTACT CRIMPING SPECIALISTS

Elpress is constantly developing its solutions to meet the changes in conductor materials and their structure, as well as the changing industrial requirements of various segments.

With the patented DUAL crimping technology, Elpress is the first in the world to introduce a technology as simple as comparable traditional crimping techniques, adapted and further developed for highly flexible copper conductors. Repeatability and user-friendliness have been as much in focus as the functional requirements.

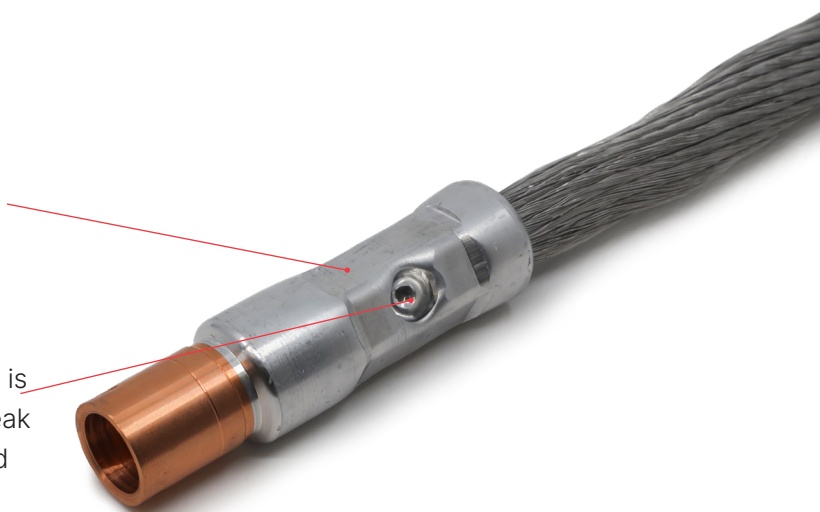
The development of the crimping technology for flexible aluminium has had a heavy focus on customer value and focused primarily on further development of the tool systems, rather than adaptation of the terminals.



THE CHALLENGE?

Aluminium wires in flexible conductors show much lower mechanical stress resistance. In order not to damage the wires, you must perform a "soft" and "even" crimp.

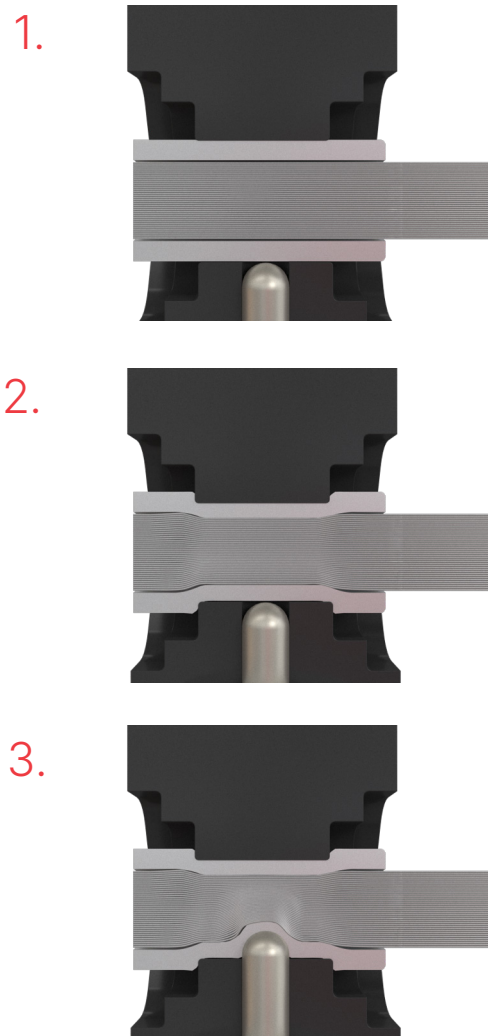
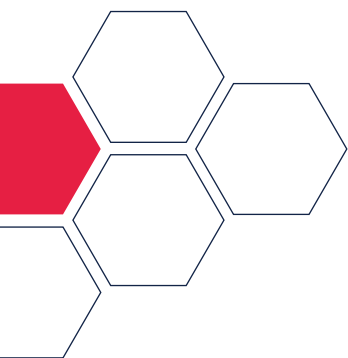
An oxide layer, which has good insulating properties, is immediately formed on the conductors' wires. To break the oxide layer an "aggressive" crimp must be carried out.



THE SOLUTION!

A combination of hexagonal and indented crimping that meets both challenges, combined in one and the same crimping.

1. The die pairs are adapted to the external diameter of the sleeve, which means that the same die pair can be used for several nominal sizes.
2. For optimal mechanical durability, a hexagonal crimp is made, which compresses the conductors' wires in a gentle way without damaging them.
3. The indented crimping then stretches the wires and breaks the oxide layer, which provides optimal and stable conductivity.



EIPRESS

DUAL5 is based on further developed crimping technology and new tools, but is based on the same reliable terminals that have been used for many decades. This gives us and the customer security and incredible flexibility, because flexible aluminium conductors can now be easily combined with other conductor materials on the market.



COMBINE

flexible aluminium with

AS
Aluminium



Class 1 - Al

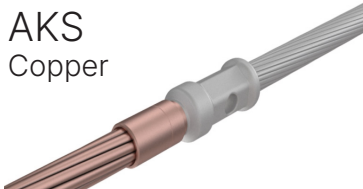


Class 2- Al

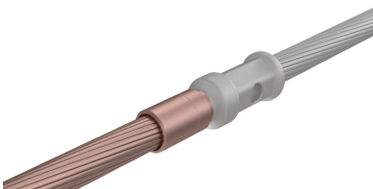


Class 5- Al

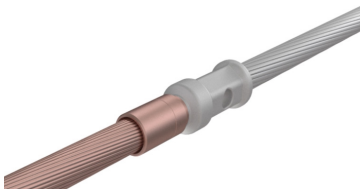
AKS
Copper



Class 2 - Cu



Class 5- Cu



Class 6- Cu

TERMINALS

Article	mm ² (Class 2)	mm ² (Class 5)	Die number	Tool
AS70*	70	50	20	DV250
AS95*	95	70	25	DV250
AS120*	120	95	25	DV250
AS150*	150	120	25	DV250
AS185*	185	150	32	DV350
AS240*	240	185	32	DV350
AS300*	300	240	37	DV350
AS400*	400	300	40	DV350
AS500B*	500	400	52	DV350

9 sizes can be crimped with 6 die pairs in 2 tools with 1 crimping

* AS is a product example, the same applies to the sizes in the AK/AKS/AKK product programs.



The concept solution for an optimal terminal with flexible aluminium conductors (similar to IEC 60228 class 5) has been tested with very good operating properties during electric thermal cycling according to IEC 61238.

Further development of the concept involves tests and validations with different cable types from different manufacturers in project form. Contact your nearest Elpress representative for more information.

DUAL5 is tested according to IEC 61238-1-1: 2018 (Compression and mechanical connectors for power cables) for stable conductivity under electrical load. In addition to this fundamental type test, DUAL5 is also tested for environmental stress in the form of corrosion and vibration.

The connection is thus certified for the corrosion withstand requirements according to DIN V 40 046-37 and the vibration and withstand requirements according to IEC 61373: 2010.

Bimetallic terminals of the AKK/AKS/AKP types are manufactured in Sweden with precise processes to ensure the best quality for the final application. This includes checks of raw materials as well as continuous checks of processes, results and documentation.

Elpress' high demands for quality are self-evident - we never compromise on quality. "We check each individual bimetallic terminal by performing a stress test and an inspection. We indicate the quality check to the customer through the small 'E' stamped in the copper part of the terminal, something we will obviously continue to do," Torbjörn Norell assures us. (Elpress NEWS edition 2-2020 page 6).



Concept solution will be able to meet the requirements in all Key Industries.

RENEWABLE ENERGY

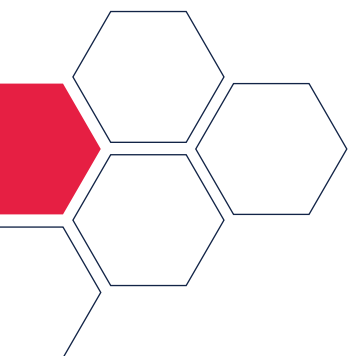
For flexible aluminium in the nacelle and a safe transition to transmission lines in the tower, but also for photovoltaic systems and the connections to converters and transformers.

RAILWAY

Weight reduction measure with flexible aluminium. With DUAL5 it is possible to combine copper and aluminium for maximum flexibility. IEC 61373: 2010 tested for railway applications.

AUTOMOTIVE

Vehicles of various types, including EV vehicles, will be able to benefit from flexible aluminium solutions in the future.



ELPRESS

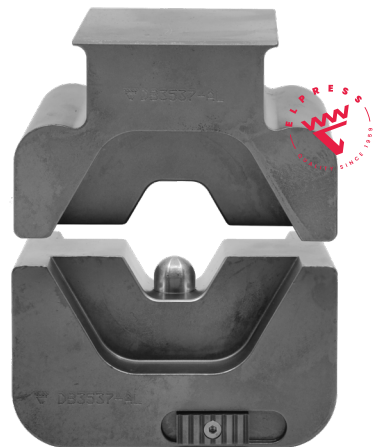
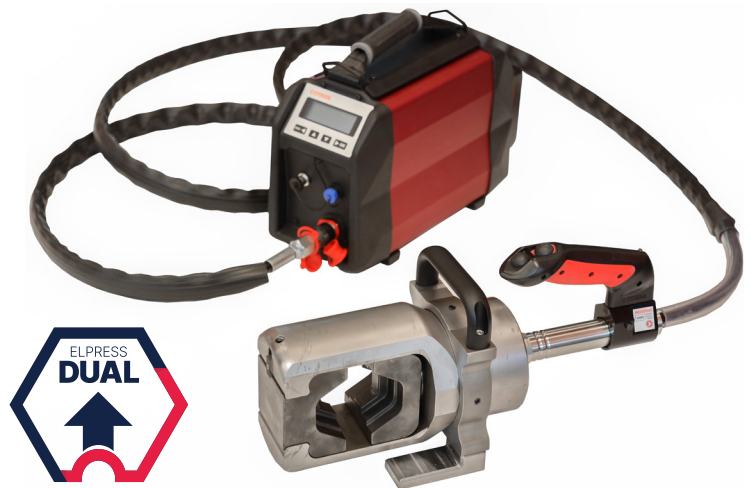


DV350

Powerful and efficient crimp head with as much as 35 tons of crimping force. The crimp head is used together with electrically driven pump PS710 (PS710E is also available with battery operation) or foot pump P4000, which makes the DV350 excellent for both mobile and stationary work.

TECHNICAL DATA:

- Working pressure 63 MPa (630 bar)
- Crimp force 350 kN (35 tonnes)
- Large crimp area, 240-1000 mm²
 - Can crimp aluminium and copper up to 1000 mm²
 - DUAL crimp dies for crimping copper up to 400 mm² (recommended for cl. 5 and 6)
 - Crimp dies for crimping copper up to 1000 mm²
 - Matrices and punch for crimping aluminium 300-1000 mm²
 - DUAL crimp dies for crimping flexible aluminium up to 400 mm²
- The crimp head is delivered equipped with a stand and handle
- Weight 16.6 kg



DB3537-AL





DV250

The crimping head is used in conjunction with the electrically powered pump PS710 (PS710E is also available in a battery powered version) or foot pump P4000.

TECHNICAL DATA:

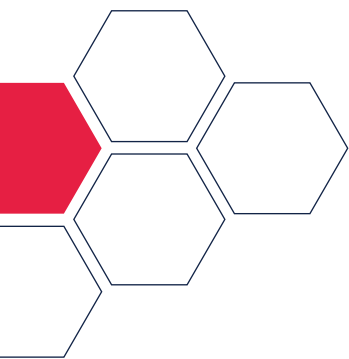
- Working pressure 63 MPa (630 bar)
- Crimp force 250 kN (25 tonnes)
- Large crimp area, 10-800 mm²
 - Can crimp copper up to 800 mm² and aluminium up to 630 mm²
 - DUAL crimp dies for crimping copper 120-400 mm² (recommended for cl. 2, 5 and 6)
 - B-crimp dies for crimping copper 10-800 mm²
 - Matrices and punch for crimping aluminium (cl. 1 and 2) 16-630 mm²
 - DUAL crimp dies for crimping flexible aluminium 16-120 mm²
- Weight 4.8 kg



PS710



DB2525-AL



ELPRESS



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