

## Elpress System



Product brochure

## Elpress Wind Power Catalogue

Reliable Results





## Environment policy

Within ELPRESS AB we shall always work with ongoing improvements reducing our influence on the environment. This shall be achieved by using resources in an environment promoting way and by reducing the amount of emissions and waste. We shall meet the legal requirements with a good margin. Our products shall be designed to minimise environmental influence related to

- Manufacture
- Use, and
- Final disposal

All ingredients, materials and components with a negative environment influence shall gradually be exchanged. Our processes as well as our places and methods of work shall be designed and adapted in order to minimise environmental influence and to avoid injury and health hazard to persons.

Information and training shall constitute normal activities in the company to stimulate interest in environment issues with all ELPRESS' employees and to support personal development and participation in the environment work of the company.

Our suppliers and commissioned partners shall be chosen and influenced in such a way that they can add to our fulfilment of the environment policy.

Our customers shall be informed of our environment work and form co-operation partners to spread knowledge and advice to the parties of the distribution chain, all in order to safeguard the proper use, stocking and final disposal of our products.

We shall continuously evaluate the results of the environment work.

We shall demonstrate openness concerning information on our work and our effect on the environment.

## Quality

Good quality forms the basis for development with high productivity and competitiveness. Our quality concept addresses our customers, our suppliers and ourselves. With quality we understand our ability to meet internal as well as external customer requirements and expectations regarding the use of our products and services.

### Quality declaration

Our overall quality target shall be to surpass the quality in products and services offered to the market by our competitors. Our attitude shall be characterized by ongoing improvements, with the ambition also to be regarded a natural partner in relevant quality work. Each and every employee of Elpress AB shall give priority the responsibility for quality in his/her daily work. All work regarding quality improvements is supported by the company management.

As a means to fulfil this quality declaration, the requirements of the quality standard ISO 9001 shall be applied as a general standard for the quality work within Elpress AB.





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# SYSTEM ELPRESS

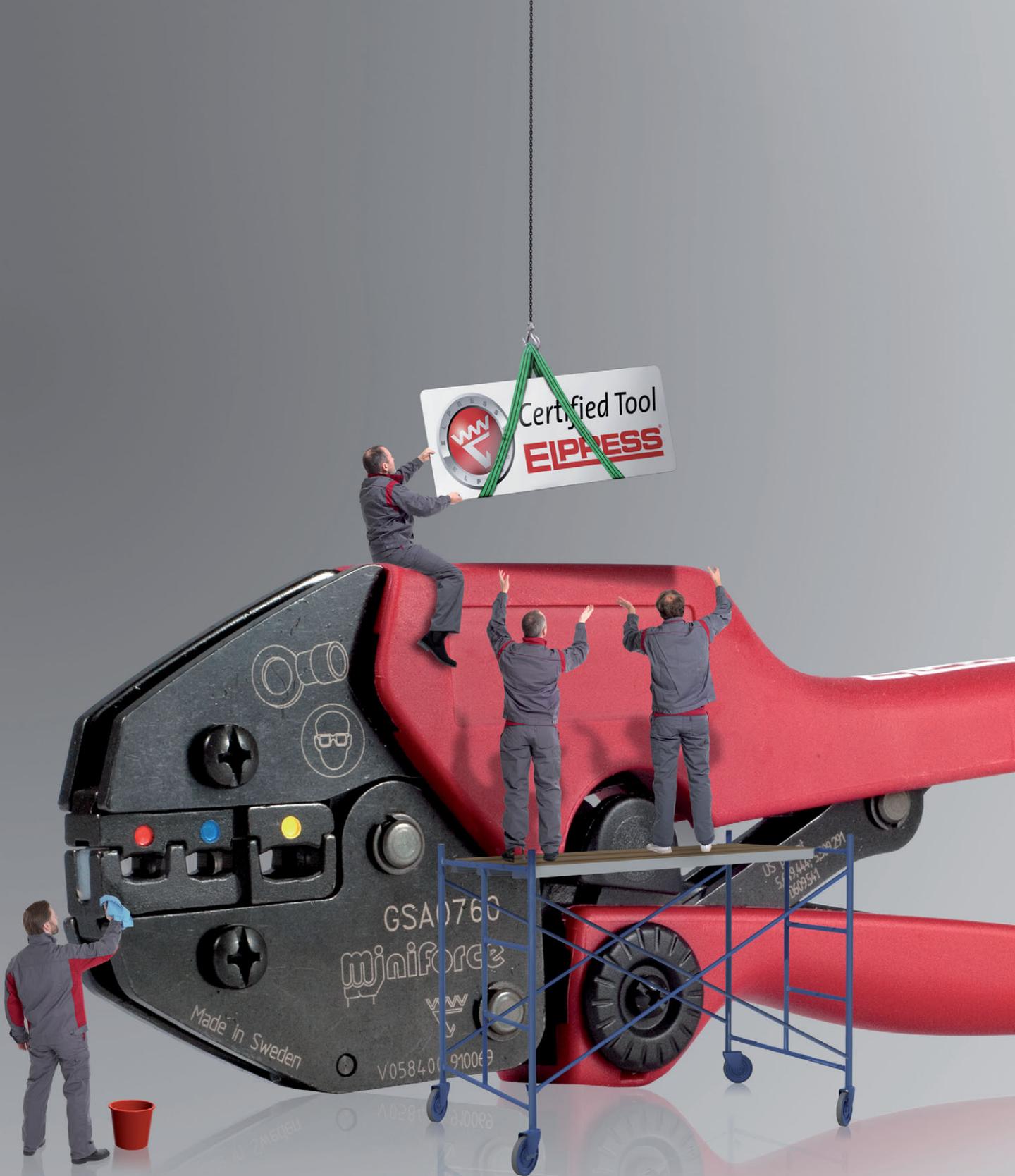
**System Elpress** symbolizes our **cornerstones** – safety and quality. In order to achieve a secure connection we offer **certified solutions** of the combination cable, terminal and tool.

For the installation to be accurate, the installer should undergo training in crimping technology at **Elpress Academy**.



For non-standard solutions you can **consult** us and let our own production and laboratory verify your solution. A preventive **service** maintenance of the tool is the base for the system to work.

**Certification, Academy, Consulting and Service is System Elpress – your secure connection!**



Certified Tool  
**ELPRESS**

GSA0760  
wijniforce  
Made in Sweden  
V058400910069

*We manufacture tested systems for electrical connectors  
and their tools. You get a secure connection*

# SYSTEM ELPRESS CERTIFICATION



**We offer:**

Tool delivered with a certificate

Verified and tested combination of cable, terminal and tool

Certified solutions for customized product development

Product approval in accordance with UL, DNV and CSA

Third part quality and environment certification in accordance with ISO9001 and ISO14001



In order to achieve a secure connection we offer certified solutions of the combination cable, terminal and tool.

This is so that you as customer can feel secure when you use our system and be sure that a safe connection will be made when our products are used correctly.

## FOR YOUR SAFETY

### The System includes:

- Terminal, connector
- Crimping tool
- Correct cable
- Trained and skilled operator

The system is developed and tested in accordance with existing norms and standards, for example IEC.

### Product development

- Customized solutions
- Specialized segment solutions
- Leading technology in our industry
- Innovative products





**Quality & environment certified and approved according to**

- ISO 14001
- ISO 9001
- DNV
- UL





*We have the necessary resources for you  
to maintain the highest quality*

# SYSTEM ELPRESS CONSULTING



**We offer:**

Tests in laboratory  
Problem solving

Technical and customer support  
Customized terminals and tools  
Audits and validations at your premises



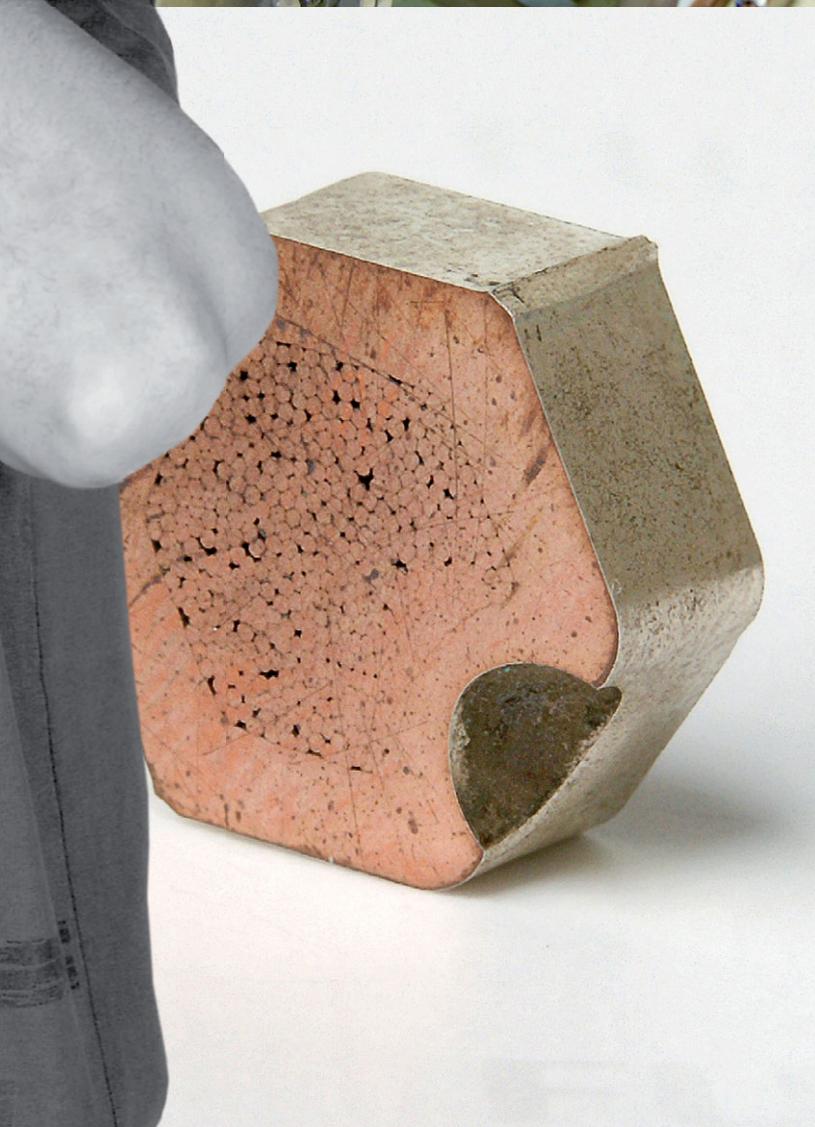
We have been developing, manufacturing and marketing complete cable crimping systems for electrical connectors with more than 50 years of experience. We have therefore the best knowledge and equipment for your requirements and demands.

**You will have access to:**

- Our technical department that develops constructions according to your needs.
- Our production who can manufacture unique solutions.
- Our laboratory who can supply for example
  - Electrical tests
  - Mechanical tests
  - Corrosion- and environmental tests

*Contact us and let us assist you.*







*Your educated personnel ensures the final quality of products and services.  
Our Academy certificate is a quality document between you and your customer*

# SYSTEM ELPRESS ACADEMY



**We focus on the following four areas:**

- Utility sector and installers
- Transformer manufacturers
- Traction/Train manufacturers
- Wind Power manufacturers



# WHO AND HOW DO WE EDUCATE?

## Utility and installation personnel

### Level 1

General training for all staff. Provides a general knowledge of crimping in all areas;

- Crimping in general
- Terminals below 10 mm<sup>2</sup>
- Cu-connectors over 10 mm<sup>2</sup>
- Al-connectors from 16 mm<sup>2</sup>
- Cu-branching
- Bolt connections
- Deep earthing
- Standards and requirement
- Safety and maintenance

The program combines theory and practice and concludes with a written test. Course participants will receive certificate after completed education.

### Level 2

Education aimed primarily at supervisors, engineers, designers and quality departments. Provides a deeper knowledge of the crimping and maintenance routines. After completed training, the competence is indicated with a certificate.

### Documentation

After completed training each participant receives a certificate of the fulfilled education.

### Time and place

A complete training seminar level 1 takes 2 days and you can decide whether the training should be at your premises or held in Elpress' training facility. Training level 2 takes approximately 1 day depending on scope.

### Price

Base-price seminar level 1 EUR350/person.

Seminar level 2 EUR500/person.

Price can vary depending on the scope and number of participants. Maximum number of participants per seminar is 15. Travel expenses for the training officer are additional costs.

## Transformer manufacturers

### Level 1

For operators who work daily in the production. The aim is to train personnel in the special conditions applying in the transformer manufacturing. The education concerns;

- Crimping in general
- Management of tools
- Calculations and preparation for crimping
- Work procedure
- Quality inspection
- Safety in use
- Preventive maintenance in daily production

The training consists of a theoretical and a practical part and ends with a written test. Course participants will receive certificate after completed education.

### Level 2

Education aimed primarily at supervisors, designers and quality departments. Provides a thorough knowledge of calculations, tool selection and management, problems and solutions and quality assessment. Completed training gives a certified authorization in the field.

### Documentation

Course participants will receive Elpress Work Manual for transformer manufacture and a certificate of the fulfilled education.

### Time and place

A complete training seminar level 1 takes 1 day and the training takes place in your facilities. Training level 2 takes approximately 1 day depending on scope.

### Price

Base-price seminar level 1 EUR250/person.

Seminar level 2 EUR500/person.

Price can vary depending on the number of participants. For efficiency the maximum number of participants per seminar is 10. Travel expenses for the training officer are additional costs.

*A follow-up of the certificates is necessary*



*Each training has two levels: a basic education for all staff, and a training targeted at designers, supervisors and quality controllers. It is also possible to adjust the training so the content fits the needs of the company. You can also decide whether the training should be at your premises or held in Elpress' training facility.*

## Traction/Train manufacturers

### Level 1

Educate staff in the special demands and external conditions that apply in the manufacture of rail traffic. The education concerns;

- Crimping in general
- Management of tools
- Work procedure
- Elpress Dual-technology
- Quality control
- Safety in use
- Preventive maintenance in daily production

The training consists of a theoretical and a practical part and ends with a written test. Course participants will receive certificate after completed education.

### Level 2

Education aimed primarily at supervisors, designers and quality departments. Provides a thorough knowledge of the selection of tools and management, problems and solutions and quality assessment. Completed training gives a certified authorization in the field.

### Documentation

After completed training each participant receives a certificate of the fulfilled education.

### Time and place

A complete training seminar level 1 takes 1 day and you can decide whether the training should be at your premises or held in Elpress' training facility. Training level 2 takes approximately 1 day depending on scope.

### Price

Base-price seminar level 1 EUR250/person.

Seminar level 2 EUR500/person

Price can vary depending on the number of participants. For efficiency the maximum number of participants per seminar is 15. Travel expenses for the training officer are additional costs.

## Wind Power manufacturers

### Level 1

Educate staff in the special demands and external conditions that apply in the manufacture of wind turbines. The education concerns;

- Crimping in general
- Management of tools
- Work procedure
- Elpress Dual-technology
- Quality inspection
- Safety in use
- Preventive maintenance in daily production

The training consists of a theoretical and a practical part and ends with a written test. Course participants will receive certificate after completed education.

### Level 2

Education aimed primarily at supervisors, engineers and designers and quality departments. Provides a thorough knowledge of the selection of tools and management, problems and solutions and quality assessment. Completed training gives a certified authorization in the field.

### Documentation

After completed training each participant receives a certificate, showing the scope of the education, together with a compendium about crimping.

### Time and place

A complete training seminar level 1 takes 1 day and you can decide whether the training should be at your premises or held in Elpress' training facility. Training level 2 takes approximately 1 day depending on scope.

### Price

Base-price seminar level 1, EUR250/person.

Seminar level 2 EUR500/person

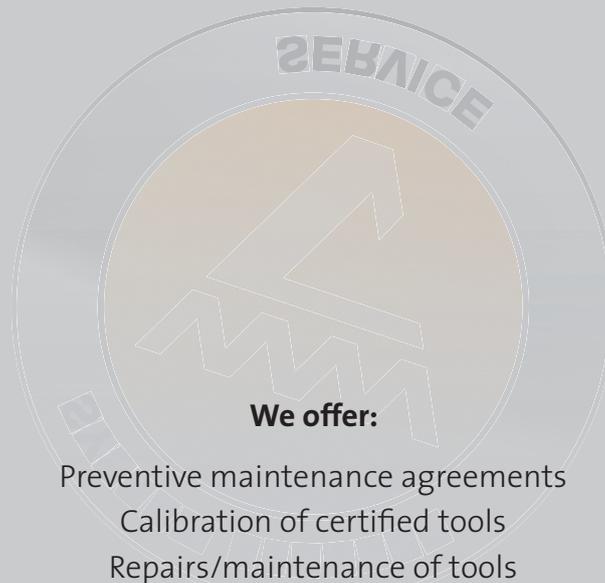
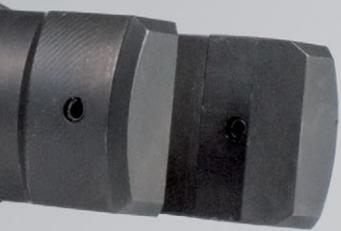
Price can vary depending on the number of participants. For efficiency the maximum number of participants per seminar is 15. Travel expenses for the training officer are additional costs.

*A follow-up of the certificates is necessary*



*Preventive maintenance agreements  
secure the quality of your connection*

# SYSTEM ELPRESS SERVICE



**We offer:**

- Preventive maintenance agreements
- Calibration of certified tools
- Repairs/maintenance of tools
- Crimping systems for rent
- Sales of spare parts



# WHAT IS THE BEST SOLUTION FOR YOU?

## Preventive maintenance agreements

Our Service offers you a flexible solution for enhanced security, with rapid service and high availability:

- Planned and preventive maintenance guarantees high performance for your equipment.
  - Regular service intervals minimize the risk of unforeseen stoppages by indicating any safety or functional defects and by recommending measures to avoid such problems.
  - Regular service intervals are normally implemented every 12 months at a fixed price.
  - The price is based on the service level solution and equipment.
  - A certificate is issued after the equipment has complied with calibration requirements.
- The maintenance can be performed at your premisses.

## Elpress Basic

Elpress Basic service agreement includes following points:

- Preventive maintenance, calibration with certification.
- General inspection of the tool
- Safety aspects in accordance with declaration of conformity (Compliance with Machine Safety Directive, Low Voltage Directive, EMC Directive)
- Function test
- Checking of accessories, e.g. crimp dies etc.
- Issue of Certificate

The inspection follows Elpress final inspection and acceptance inspection requirements.

## Elpress Advance

Elpress Advance service agreement includes following points:

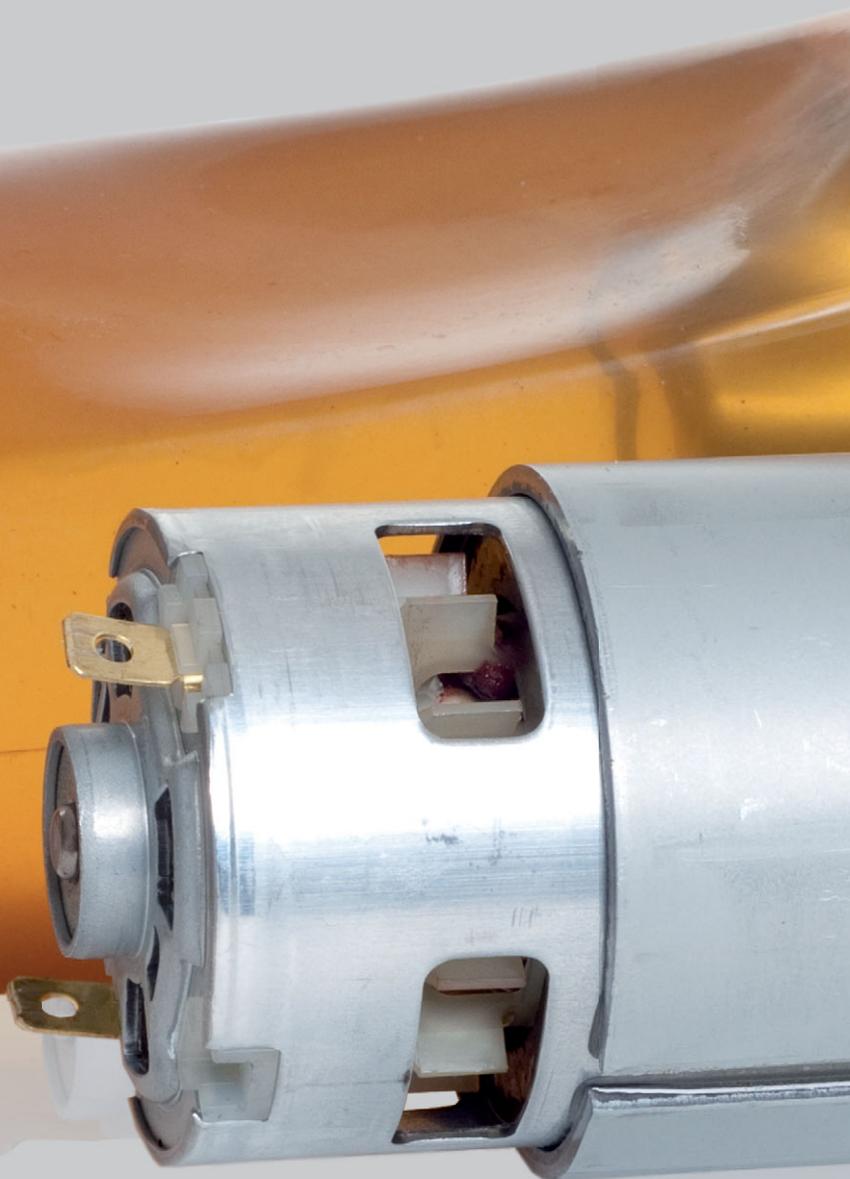
- Elpress Basic + corrective maintenance
- Includes the Calibration/certification and wear & tear repairs at a fixed price.

## Calibration of certified tools

The calibration follows the same inspection points and requirements as Elpress Basic, but it is the customer's responsibility to send the tool for calibration.

## Purchased a new product?

Send the Product registration form to Elpress and Elpress Basic is included for free the first year.





## What's special with Wind applications?

During several years Elpress has had contact with manufacturers of demanding applications like trains and windpower manufacturers, or with their sub-suppliers of cable assemblies. In these contacts it has been more and more apparent that there is quite a spectrum of different requirements that is regarded highly relevant to the use in these applications.

- First of all comes of course the requirements of **electrical** properties and mainly the current carrying capacity. These requirements must be seen in the light of high currents and current peaks in lowest possible conductor areas and the requirements of flexible conductors.
- Wind applications may include tough **corrosion** resistance requirements.
- **Vibrations** as well as **static** loads may occur and be of the most different types. The connection must stand these loads.

Elpress has gone through which tests that may be used to verify that our terminals and connectors together with our crimp systems meet the Wind application requirements. Together with customers the following test standards have been regarded relevant:

- Electrical properties - **IEC61238-1, Class A**. This is a relatively new standard corresponding to or in many cases superceding most earlier European standards.
- Environmental requirements - **DIN V 40 046, part 37**. The choosen part of this German standard states a very tough test where hydrogen sulphide is used as the aggressive substance.
- Static loads normally form part of established electrical tests and this is the case also in the IEC-Standard referred to above. The load limits are often rather low but in the Swedish Standard **SEN 245010** relatively high load limits are given and these are therefore used here.
- Vibration tests are hard to carry through in a representative manner. This is due to the very different load patterns that every build-in case may give. A European test for railway applications - **EN 50155** - has been used in applicable parts.



***Crimping is a System Technology. This means that it is the combination of a choosen terminal or connector and a matching crimp tool, all determined by the specific conductor that will result in the desired connection properties.***

Elpress Group make reservations for misprints, misinformation and changes.

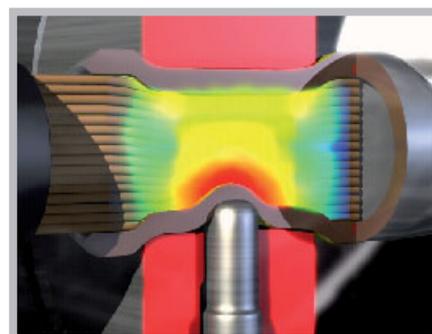
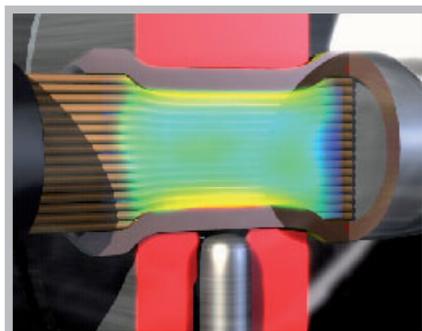
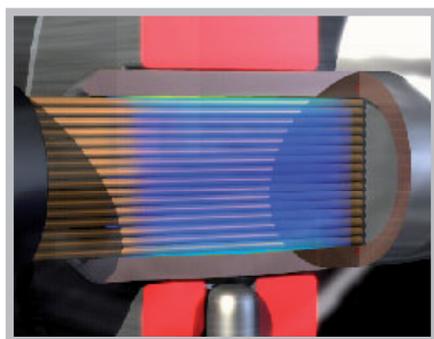


## Crimping with the DUAL System

This System has been developed to meet the hard combined requirements from manufacturers with tough applications with the best result.

The DUAL technology combines the desired properties from an optimal hexagonal crimp with those of a limited indent crimp.

This results in tight contact surfaces without damage to the conductor strands.



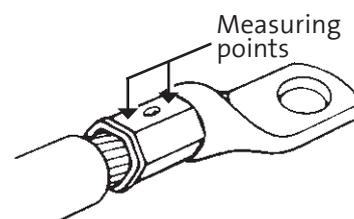
We call this technology, which is patented, the **Elpress DUAL System** where the name points at split crimp sequence that starts with a hexagonal crimp and, without separation of the dies, is finished by an additional indent crimp.

The DUAL Crimp is performed by crimp tool **PVL1300DUAL**, crimp heads **DV1300**, **DV1300C** or **DV250** using the crimp dies DBxx available from 10 to 400 mm<sup>2</sup>. The crimp heads are powered by the normal Elpress hydraulic pumps **P4000** (foot pump), **PS710** (mains and battery operated hydraulic pump) or **P1000** (mains powered pump).

### Check measures

An effective way to check correct crimps during work is to perform measurements of achieved crimp heights, N-measures below, regularly or as first and last piece inspection.

Area mm <sup>2</sup>	Die id. no.			N <sub>max</sub> -measure mm
	DV1300 PVL1300DUAL	DV1300C	DV250	
10	13DB8	13DCB8	-	6,7
16	13DB9	13 DCB9	-	7,7
25	13DB11	13 DCB11	-	9,2
35	13DB13	13DCB13	-	10,8
50	13DB14,5	13DCB14,5	-	11,8
70	13DB17	13DCB17	-	13,8
95	13DB20	13DCB20	-	16,0
120	13DB22	13DCB22	DB2522	17,9
150	13DB25	13DCB25	DB2525	20,3
185	13DB27	13DCB27	DB2527	21,9
240	13DB30	13DCB30	DB2530	24,1
300	13DB32	13DCB32	DB2532	25,9
400	-	-	DB2538	30,4





# General information about Elpress Cu-terminals

## Cu-connections

Elpress Cu-connections are produced from electrolytic 99.9% copper. Terminals and through connectors exist in a large variety of types for stranded as well as for flexible conductors. If a standard type is not suitable, we produce tailor made designs specific to the application.

**KR/KRF** terminals and **KS/KSF** connectors may be used for both stranded and flexible conductors.

By crimping Elpress terminals and connectors with Elpress crimp tools, connections are achieved that meet the requirements of SEN 245010, BS 4579:1, VDE 0220:1, EN-IEC 61238:1 whichever is applicable.

## UL approved terminals



UL is an American standard which is also internationally accepted. Elpress standard Cu-terminals of types **KRF/KSF** are UL approved according to no. E205350. Cu-terminals of types **KR/KS, KRF/KSF** are for stranded and flexible copper wires, classes 2 and 5 according to IEC 60228, and have a working area of 1-500 mm<sup>2</sup>.

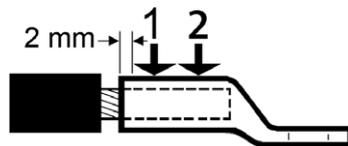


## DNV approved terminals

Elpress **KRF/KSF, KRT/KST** terminals comply with DNV's rules for the classification of ships and Det Norske Veritas' Offshore Standards. The terminals are approved for installations on ships and mobile offshore units.

## Number of crimps

Normally only one crimp per conductor end is needed up to and including 150 mm<sup>2</sup> and two crimps for larger areas. If possible multiple crimps should be positioned with a few mm distance from each other and from the neck end. In many cases however, overlapping crimps have to be made for space reasons.



*Crimp sequence with two adjacent crimps.*

## Markings on Cu-connections

Elpress marking system for Cu-connectors shows logotype, conductor area and ID-number for crimp die to be used. This system enables final inspection of proper die use as the die number is automatically imprinted by the die on the crimped barrel.

Marking of tube terminals
<b>32</b> (on the terminal neck)
ID-no. for the hexagonal die
<b>(Elpress logo) 300-16F</b> (on the palm)
300 = Cu-conductor area, mm <sup>2</sup>
16 = hole for screw M16
F = KRF

Marking of connectors
<b>(Elpress logo) 27</b>
ID-no. for hexagonal die
<b>185 F</b> (possible screen area and an earth-sign)
185 = Cu-conductor area, mm <sup>2</sup>
F = KSF



## Customized products

A customized product is an important part of our work. It is a special challenge to solve problems for customers while producing products profitably. In this way, we also have our knowledge of cus-

tomers needs. Among these connectors include different models of T-connectors where you can connect three conductors of the same size by using only one connection. These are used for example in transformer manufacturing. Other connections in the transformer manufactur-

ing is the terminal for tap chargers. In summary, all connections are designed to be an easy way to ensure a high quality crimped connection even in advanced applications.

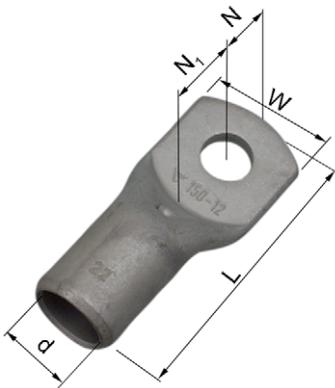


## Tube terminals 16 - 300 mm<sup>2</sup>, KRF

- Data: electrolytic copper, tin plated.
- Cable inspection hole, for flexible and stranded, round, compressed Cu-conductors.
- UL-approved and DNV-approved.

Marking example KRF: 70 10F (Elpress logotype included)

70 = mm<sup>2</sup>    10 = palm hole for M10    F = type KRF, for stranded and flexible conductors



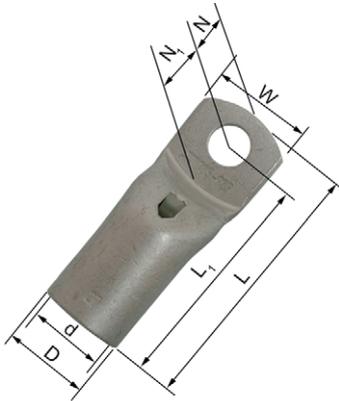
AWG	Cat. no. mm <sup>2</sup> - bolt hole M	mm W	d	N	N <sub>1</sub>	L	Pcs/ pack	Die no.	Rec. System
6	KRF16-6	13,0	6,0	8,0	9,0	34	100	9	V1300
6	KRF16-8	13,0	6,0	8,0	9,0	34	100	9	V1300
6	KRF16-10	16,0	6,0	10,0	11,0	38	100	9	V1300
6	KRF16-12	22	6,0	12,0	13,0	47	100	9	V1300
4	KRF25-6	16,0	8,0	8,0	10,0	39	100	11	V1300
4	KRF25-8	16,0	8,0	8,0	10,0	39	100	11	V1300
4	KRF25-10	17,0	8,0	10,0	11,0	42	100	11	V1300
4	KRF25-12	22	8,0	12,0	13,0	47	100	11	V1300
2	KRF35-6	18,0	9,0	10,0	11,0	47	100	13	V1300
2	KRF35-8	18,0	9,0	10,0	11,0	47	100	13	V1300
2	KRF35-10	18,0	9,0	10,0	11,0	47	100	13	V1300
2	KRF35-12	22	9,0	12,0	14,0	52	100	13	V1300
1/0	KRF50-6	21	11,0	11,0	12,0	50	100	14,5	V1300
1/0	KRF50-8	21	11,0	11,0	12,0	50	100	14,5	V1300
1/0	KRF50-10	21	11,0	11,0	12,0	50	100	14,5	V1300
1/0	KRF50-12	21	11,0	12,0	14,0	53	100	14,5	V1300
1/0	KRF50-16	27	11,0	15,0	17,0	59	100	14,5	V1300
2/0	KRF70-6	25	13,0	11,0	12,0	55	50	17	V1300
2/0	KRF70-8	25	13,0	11,0	12,0	55	50	17	V1300
2/0	KRF70-10	25	13,0	11,0	12,0	55	50	17	V1300
2/0	KRF70-12	25	13,0	12,0	14,0	58	50	17	V1300
2/0	KRF70-16	28	13,0	15,0	17,0	64	50	17	V1300
4/0	KRF95-8	29	15,0	15,0	17,0	69	50	20	V1300
4/0	KRF95-10	29	15,0	15,0	17,0	69	50	20	V1300
4/0	KRF95-12	29	15,0	15,0	17,0	69	50	20	V1300
4/0	KRF95-16	29	15,0	15,0	17,0	69	50	20	V1300
250	KRF120-10	32	17,0	15,0	17,0	73	25	22	V1300, V250
250	KRF120-12	32	17,0	15,0	17,0	73	25	22	V1300, V250
250	KRF120-16	32	17,0	15,0	17,0	73	25	22	V1300, V250
300	KRF150-10	36	19,0	15,0	16,0	80	25	25	V1300, V250
300	KRF150-12	36	19,0	15,0	16,0	80	25	25	V1300, V250
300	KRF150-16	36	19,0	15,0	16,0	80	25	25	V1300, V250
300	KRF150-20	36	19,0	19,0	19,0	87	25	25	V1300, V250
350	KRF185-10	39	21	15,0	16,0	86	20	27	V1300, V250
350	KRF185-12	39	21	15,0	16,0	86	20	27	V1300, V250
350	KRF185-16	39	21	15,0	16,0	86	20	27	V1300, V250
350	KRF185-20	39	21	19,0	19	93	20	27	V1300, V250
500	KRF240A-10	42	22,5	19	20	96	10	30	V1300, V250
500	KRF240A-12	42	22,5	19	20	96	10	30	V1300, V250
500	KRF240A-16	42	22,5	19	20	96	10	30	V1300, V250
500	KRF240A-20	42	22,5	19	20	96	10	30	V1300, V250
600	KRF300A-10	46	24,5	15	19	93	10	32	V1300, V250
600	KRF300A-12	46	24,5	15	19	93	10	32	V1300, V250
600	KRF300A-16	46	24,5	20	20	99	10	32	V1300, V250
600	KRF300A-20	46	24,5	20	20	99	10	32	V1300, V250
600	KRF300A-24	46	24,5	23	25	107	10	32	V1300, V250

\*\* total palm length



## Cu-terminals 50 - 240 mm<sup>2</sup>, KRFN, with narrow palm

- Data: electrolytic copper, tin plated.
- Cable inspection hole, for flexible and stranded Cu-conductors, class 2 and class 5.
- Easy to mount through conduits, enables pre-assembly.



Marking example KRF: 70 10F (Elpress logotype included)

70 = mm<sup>2</sup>    10 = palm hole for M10    F = type KRF, for stranded and flexible conductors



KRFN terminals suitable for narrow spaces.



Easy to mount through conduits.

Cat. no. mm <sup>2</sup> , Bolt	mm W	d	D	N	N <sub>1</sub>	L <sub>1</sub>	L	Pcs/Pack	Die no.	Rec. System
KRFN50-6	18	11	14,5	11	11	40	51	100	14,5	V1300
KRFN50-8	18	11	14,5	11	11,5	40	51	100	14,5	V1300
KRFN50-10	18	11	14,5	11	11,5	40	51	100	14,5	V1300
KRFN70-6	20	13,0	17,0	11	11,5	45	56	50	17	V1300
KRFN70-8	20	13,0	17,0	11	11,5	45	56	50	17	V1300
KRFN70-10	20	13,0	17,0	11	11,5	45	56	50	17	V1300
KRFN95-8	24	15,0	20,0	11	12	50	61	50	20	V1300
KRFN95-10	24	15,0	20,0	11	13	51	62	50	20	V1300
KRFN95-12	24	15,0	20,0	12	14	52	64	50	20	V1300
KRFN120-8	26	17,0	22,0	11	12	54	65	50	22	V1300, V250
KRFN120-10	26	17,0	22,0	11	13	55	66	50	22	V1300, V250
KRFN120-12	26	17,0	22,0	12	14	56	68	50	22	V1300, V250
KRFN150-10	30	19,0	25,0	11	13	62	73	50	25	V1300, V250
KRFN150-12	30	19,0	25,0	12	14	63	75	50	25	V1300, V250
KRFN185-10	32	21,0	27,0	11	14	69	80	20	27	V1300, V250
KRFN185-12	32	21,0	27,0	12	15	70	82	20	27	V1300, V250
KRFN185-16	32	21,0	27,0	15	16	71	86	20	27	V1300, V250
KRFN240A-10	38	22,5	29,0	11	16	73	84	10	30	V1300, V250
KRFN240A-12	38	22,5	29,0	12	15	72	84	10	30	V1300, V250
KRFN240A-16	38	22,5	29,0	15	18	75	90	10	30	V1300, V250

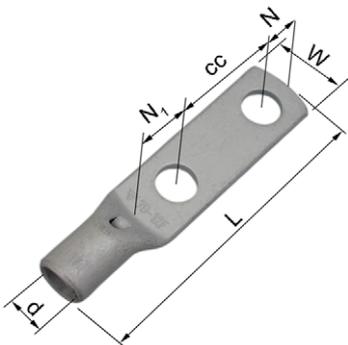


## Tube terminals with two stud holes 70 - 300 mm<sup>2</sup>, KRF

- Data: electrolytic copper, tin plated.
- Cable inspection hole, for flexible and stranded, round, compressed Cu-conductors.
- UL-approved. DNV-approved (marked with \*).

Marking example KRF: 70 10F (Elpress logotype included)

70 = mm<sup>2</sup> 10 = palm hole for M10 F = type KRF, for flexible and stranded conductors



AWG	Cat. no. mm <sup>2</sup> , bolt hole, cc-measure	mm W	d	N	N <sub>1</sub>	L	Pcs/ pack	Die no.	Rec. System
2	KRF35-10X2-24-26	18,5	9	11	16	78	100	13	V1300
1/0	KRF50-10X2-24-26	20,5	11	11	16	82	100	14,5	V1300
2/0	KRF70-10x2-24-26	25	13,0	11	17	86	50	17	V1300
2/0	KRF70-12X2-40*	25	13,0	12	18	103	25	17	V1300
4/0	KRF95-10X2-24-26	29	15,0	11	19	93	25	20	V1300
4/0	KRF95-12X2-40*	29	15,0	12	18	109	25	20	V1300
250	KRF120-10X2-24-26	32	17,0	11	19	97	25	22	V1300, V250
250	KRF120-12X2-40*	32	17,0	12	19	113	25	22	V1300, V250
300	KRF150-10X2-24-26	36	19,0	11	19	104	25	25	V1300, V250
300	KRF150-12X2-40*	36	19,0	12	19	120	20	25	V1300, V250
350	KRF185-10X2-24-26	39	21	13	19	111	20	27	V1300, V250
350	KRF185-12X2-40*	39	21	12	20	126	20	27	V1300, V250
500	KRF240A-10X2-24-26	42	22,5	11	22	115	10	30	V1300, V250
500	KRF240A-12X2-40*	42	22,5	12	21	130	10	30	V1300, V250
600	KRF300A-12X2-40*	46	24,5	12	22	133	5	32	V1300, V250



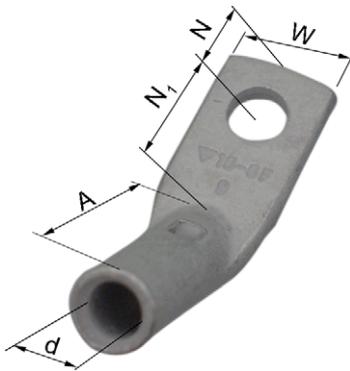
## Tube terminals 45°, 10 - 150 mm<sup>2</sup>, KRF

■ Data: electrolytic copper, tin plated.

- Cable inspection hole, for flexible and stranded, round, compressed Cu-conductors. UL-approved (KRF 35-150 mm<sup>2</sup>). DNV-approved (16-150 mm<sup>2</sup>).

Marking example KRF: 70 10F (Elpress logotype included)

70 = mm<sup>2</sup> 10 = palm hole for M10 F = type KRF, for stranded and flexible conductors



AWG	Cat. no. mm <sup>2</sup> , Bolt, 45°	mm W	d	N	N <sub>1</sub>	A	Pcs/ pack	Die no.	Rec. System
8	KR10-6-45GR	13,0	5,0	6,5	11,5	19	100	8	V600, V1300
8	KR10-8-45GR	13,5	5,0	8,5	12,0	19	100	8	V600, V1300
6	KRF16-6-45GR	13,0	6,0	6,5	11,5	23	100	9	V600, V1300
6	KRF16-8-45GR	13,0	6,0	8,5	12,0	23	100	9	V600, V1300
4	KRF25-6-45GR	16,0	8,0	6,5	11,5	24	100	11	V600, V1300
4	KRF25-8-45GR	16,0	8,0	8,5	12,0	24	100	11	V600, V1300
4	KRF25-10-45GR	17,0	8,0	11,5	13,5	24	100	11	V600, V1300
2	KRF35-6-45GR	18,0	9,0	6,5	11,5	30	100	13	V600, V1300
2	KRF35-8-45GR	18,0	9,0	8,5	12,0	30	100	13	V600, V1300
2	KRF35-10-45GR	18,0	9,0	11,5	13,5	30	100	13	V600, V1300
1/0	KRF50-8-45GR	21	11,0	8,5	17,5	31	100	14,5	V600, V1300
1/0	KRF50-10-45GR	21	11,0	11,5	18,5	31	100	14,5	V600, V1300
1/0	KRF50-12-45GR	21	11,0	12,5	19,5	31	100	14,5	V600, V1300
2/0	KRF70-8-45GR	24,0	13,0	8,5	17,5	35	50	17	V600, V1300
2/0	KRF70-10-45GR	24,0	13,0	11,5	18,5	35	50	17	V600, V1300
2/0	KRF70-12-45GR	24,0	13,0	12,5	19,5	35	50	17	V600, V1300
4/0	KRF95-10-45GR	28,0	15,0	11,5	18,5	40	50	20	V600, V1300
4/0	KRF95-12-45GR	28,0	15,0	12,5	19,5	40	50	20	V600, V1300
4/0	KRF95-16-45GR	29	15,0	15,5	20,5	40	50	20	V600, V1300
250	KRF120-10-45GR	32	17,0	11,5	18,5	43	25	22	V1300, V250
250	KRF120-12-45GR	32	17,0	12,5	19,5	43	25	22	V1300, V250
250	KRF120-16-45GR	32	17,0	15,5	20,4	43	25	22	V1300, V250
300	KRF150-10-45GR	36	19,0	11,5	18,5	49	25	25	V1300, V250
300	KRF150-12-45GR	36	19,0	12,5	19,5	49	25	25	V1300, V250
300	KRF150-16-45GR	36	19,0	15,5	20,5	49	25	25	V1300, V250



## Tube terminals 90° degrees 10 - 150 mm<sup>2</sup>, KRF

■ Data: electrolytic copper, tin plated.

- Cable inspection hole, for flexible and stranded, round, compressed Cu-conductors. UL-approved (35-150 mm<sup>2</sup>). DNV-approved (16-150 mm<sup>2</sup>).

Marking example KRF: 70 10F (Elpress logotype included)

70 = mm<sup>2</sup> 10 = palm hole for M10 F = type KRF, for stranded and flexible conductors



AWG	Cat. no. mm <sup>2</sup> , Bolt	mm W	d	N	N <sub>1</sub>	A	Pcs/ pack	Rec. System
8	KR10-6-90GR	13,0	5,0	6,5	11,5	15	100	V600, V1300
8	KR10-8-90GR	13,5	5,0	8,5	12,0	15	100	V600, V1300
6	KRF16-6-90GR	13,0	6,0	6,5	11,5	16,5	100	V600, V1300
6	KRF16-8-90GR	13,0	6,0	8,5	12,0	16,5	100	V600, V1300
4	KRF25-6-90GR	16,0	8,0	6,5	11,5	18,5	100	V600, V1300
4	KRF25-8-90GR	16,0	8,0	8,5	12,0	18,5	100	V600, V1300
4	KRF25-10-90GR	17,0	8,0	11,5	13,5	18,5	100	V600, V1300
2	KRF35-6-90GR	18,0	9,0	6,5	11,5	22,5	100	V600, V1300
2	KRF35-8-90GR	18,0	9,0	8,5	12,0	22,5	100	V600, V1300
2	KRF35-10-90GR	18,0	9,0	11,5	13,5	22,5	100	V600, V1300
1/0	KRF50-8-90GR	21	11,0	8,5	17,5	30,5	100	V600, V1300
1/0	KRF50-10-90GR	21	11,0	11,5	18,5	30,5	100	V600, V1300
1/0	KRF50-12-90GR	21	11,0	12,5	19,5	30,5	100	V600, V1300
2/0	KRF70-8-90GR	24,0	13,0	8,5	17,5	31,5	50	V600, V1300
2/0	KRF70-10-90GR	24,0	13,0	11,5	18,5	31,5	50	V600, V1300
2/0	KRF70-12-90GR	24,0	13,0	12,5	19,5	31,5	50	V600, V1300
4/0	KRF95-10-90GR	28,0	15,0	11,5	18,5	32,5	50	V600, V1300
4/0	KRF95-12-90GR	28,0	15,0	12,5	19,5	32,5	50	V600, V1300
4/0	KRF95-16-90GR	29	15,0	15,5	20,5	32,5	50	V600, V1300
250	KRF120-10-90GR	32	17,0	11,5	18,5	34,5	25	V1300, V250
250	KRF120-12-90GR	32	17,0	12,5	19,5	34,5	25	V1300, V250
250	KRF120-16-90GR	32	17,0	15,5	20,5	34,5	25	V1300, V250
300	KRF150-10-90GR	36	19,0	11,5	18,5	37,5	25	V1300, V250
300	KRF150-12-90GR	36	19,0	12,5	19,5	37,5	25	V1300, V250
300	KRF150-16-90GR	36	19,0	15,5	20,5	37,5	25	V1300, V250



## Through connectors 10 - 300 mm<sup>2</sup>, KS/KSF

■ Data: electrolytic copper, tin plated.

■ Cable inspection hole and cable stop, for flexible and stranded, round, compressed Cu-conductors. UL-approved. DNV-approved (16-300 mm<sup>2</sup>).

Marking example: 20 95F 111 (earth-sign) Elpress logotype included

20 = die no. 95 = mm<sup>2</sup> F = type KSF, stranded and flexible conductors

111 = screen, mm<sup>2</sup>



AWG	Cat. no. mm <sup>2</sup>	Screen cross section	mm d	D	L	Pcs/ pack	Die no.	Rec. System
8	KS10		5,0	8,0	30	100	8	V1300
6	KSF16	15	6,0	9,0	35	100	9	V1300
4	KSF25	21-29	8,0	11,0	35	100	11	V1300
2	KSF35	41	9,0	13,0	35	100	13	V1300
1/0	KSF50	57	11,0	14,5	45	50	14,5	V1300
2/0	KSF70	72-88	13,0	17,0	45	50	17	V1300
4/0	KSF95	111	15,0	20	45	50	20	V1300
250	KSF120		17,0	22	55	50	22	V1300, V250
300	KSF150		19,0	25	65	25	25	V1300, V250
350	KSF185		21	27	70	25	27	V1300, V250
500	KSF240A		22,5	29	70	25	30	V1300, V250
600	KSF300A		24	31,5	75	10	32	V1300, V250

## Through connectors with partition 10 - 300 mm<sup>2</sup>

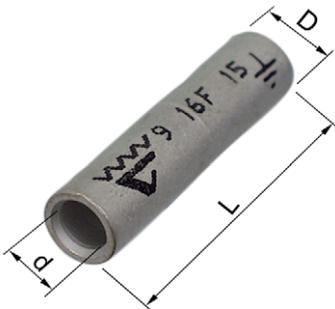
■ Data: electrolytic copper, tin plated.

■ With partition to prevent oil-leakage, for flexible and stranded, round, compressed Cu-conductors.

Marking example: 20 95F 111 (earth-sign) Elpress logotype included

20 = die no. 95 = mm<sup>2</sup> F = type KSF, stranded and flexible conductors

111 = screen, mm<sup>2</sup>



Cat.no. mm <sup>2</sup>	Screen cond. area	mm d	D	L	Pcs/ pack	Die no.	Rec. System
KS10M		5,0	8,0	36	100	8	V1300
KSF16M	15	6,0	9,0	37	100	9	V1300
KSF25M	21-29	8,0	11,0	38	100	11	V1300
KSF35M	41	9,0	13,0	41	100	13	V1300
KSF50M	57	11,0	14,5	48	50	14,5	V1300
KSF70M	72-88	13,0	17,0	49	50	17	V1300
KSF95M	111	15,0	20	56	50	20	V1300
KSF120M		17,0	22	63	50	22	V1300, V250
KSF150M		19,0	25	64	25	25	V1300, V250
KSF185M		21	27	74	25	27	V1300, V250
KSF240AM		22,5	29	76	1	30	V1300, V250
KSF300AM		24,5	31,5	88	1	32	V1300, V250



# General information about Elpress Al- and Al-/Cu-terminals

## Al-terminals

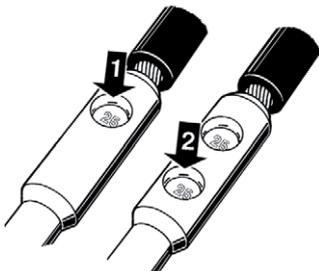
Elpress terminals and connectors are made from pure aluminium 99.7%. We manufacture Al-terminals type AK and AS. The standard range size is 16 to 1200 mm<sup>2</sup> but a variety of customer specified types also exists.



Al terminals type AK are mainly used for connection to Al bus bars, apparatus terminals or such.



Al connectors type AS are used to connect two Al conductors, also of different sizes.



*Crimp sequence when making indent crimping on aluminium.*

## Al or AlCu types

Elpress AlCu terminals and connectors for Al cable is made from solid materials with friction welding. This method means that the aluminum joined with copper. This occurs when aluminum is rotated against copper under pressure and is the method that provides the best connection between Al and Cu.



Bi-metal terminals type AKK are mainly used for connection to Cu busbars, apparatus terminals or such.



Bi-metal connectors type AKS are used to connect an Al and a Cu conductor also of different sizes.



Bi-metal pin connectors type AKP are used to connect Al conductors to mechanical clamp type connections for round Cu pins.

## Marking of Al- and Al-/Cu-terminals

Elpress System for marking of Al and AlCu terminals and connectors shows the stranded and solid metric conductor size and reference to the id-numbers of the appropriate Elpress pre-rounding and crimp tools. Do not use other crimp tools! The T2-mark is a reference to an earlier Finnish standard. On bi-metal connectors there is also a tool id-reference to the hexagonal die to be used for the Cu-crimp.

### TERMINALS:

#### Markings on Al and AlCu terminals

**Barrel marking, example:**  
ALU185-R18-P32 (Elpress logotype) T2  
SOLID 240

ALU185 = Al-conductor, mm<sup>2</sup>

R18 = id-no. for punch and matrix for pre-rounding

P32 = id-no. for punch and matrix for crimping

T2 = Finnish temperature class

SOLID 240 = suitable size on solid conductor

**Palm marking:**  
(Elpress logotype) 16 = M-screw size

### THROUGH CONNECTORS:

#### Markings on Al and AlCu connectors

**Copper side of AlCu type**  
Example: Cu240 - 30 (Elpress logotype)

Cu240 = Cu conductor, mm<sup>2</sup>

30 = id-no. for hexagonal crimp die

**Al connector or Al side of AlCu connector**  
Example: ALU300-R21-P36 (Elpress logotype) T2

ALU300 = Al conductor, mm<sup>2</sup>

R21 = id-no. of punch and matrix for pre-rounding

P36 = id-no. of punch and matrix for crimping

T2 = Finnish temperature class



## Al terminals 16 - 1200 mm<sup>2</sup>

- used to terminate Al-conductors to Al busbars
- two adjacent crimps are necessary - crimp sequence see picture



Crimp sequence.

Cat.no. stranded, mm <sup>2</sup>	Solid	mm W	d	N	N <sub>1</sub>	L	Pcs/pack	Note	Rec. System
AK16-6	25(16)	16,0	5,9	8,5	9,0	57	48		V1300
AK16-8	25 (16)	16,0	5,9	8,5	9,0	57	48		V1300
AK25-6	35	16,0	6,8	8,5	9,0	57	48		V1300
AK25-8	35	16,0	6,8	8,5	9,0	57	48		V1300
AK35-6	50	22	8,5	11,0	14,0	85	24		V1300
AK35-8	50	22	8,5	11,0	14,0	85	24		V1300
AK50-8	70	22	9,6	11,0	14,0	85	24		V1300
AK50-10	70	22	9,6	11,0	14,0	85	24		V1300
AK50-12	70	27	9,6	14,0	15,0	90	24		V1300
AK70-8	95	22	11,3	11,0	14,0	85	24		V1300
AK70-10	95	22	11,3	11,0	14,0	85	24		V1300
AK70-12	95	27	11,3	14,0	15,0	90	24		V1300
AK95-8	120	27	12,5	14,0	15,0	104	24		V1300
AK95-10	120	27	12,5	14,0	15,0	104	24		V1300
AK95-12	120	27	12,5	14,0	15,0	104	24		V1300
AK120-10	150	27	14,0	14,0	15,0	104	24		V1300
AK120-12	150	27	14,0	14,0	15,0	104	24		V1300
AK150-10	185	27	15,8	14,0	15,0	104	24		V1300
AK150-12	185	27	15,8	14,0	15,0	104	24		V1300
AK150-16	185	35	15,8	21	23	119	12		V1300
AK185-10	240	35	17,6	16,0	19,0	112	12		V1300
AK185-12	240	35	17,6	16,0	19,0	112	12		V1300
AK185-16	240	35	17,6	16,0	19,0	112	12		V1300
AK240-12		35	19,8	16,0	19,0	112	12		V1300, V250
AK240-16		35	19,8	16,0	19,0	112	12		V1300, V250
AK300-12SOLID		41	20	18,0	25	155	6	3	V250
AK300-16SOLID		41	20	18,0	25	155	6	3	V250
AK300-12		41	22	18,0	25	155	6		V250
AK300-16		41	22	18,0	25	155	6		V250
AK300-20		41	22	20	23	155	6		V250
AK400-12		41	25	18,0	25	155	6		V250
AK400-16		41	25	18,0	25	155	6		V250
AK400-20		41	25	20	23	155	6		V250
AK500A-16		55	28	26	29	225	1	4	V250
AK500A-20		55	28	26	29	225	3	4	V250
AK500A-1		38	28	80*		232	3	2,4	V250
AK500A-2		70	28	80*		250	3	2,4	V250
AK500B-16		44	28	22	22	174	3	5	V250
AK500B-20		44	28	22	22	174	3	5	V250
AK500B-1		44	28	80*		210	3	2,5	V250
AK500B-2		70	28	80*		210	3	2,5	V250
AK630A-1		55	32	80*		250	3	1,2	V250
AK630A-2		70	32	80*		250	3	1,2	V250
AK800-1		60	36	80*		267	1	1,2	V1470
AK800-2		75	36	80		275	1	1,2	V1470
AK1000-1		60	40	80*		267	1	1,2	V1470
AK1000-2		75	40	80*		375	1	1,2	V1470
AK1200		75	44	80*		291	1	1,2	V1470

\* corresponds to the full palm length.

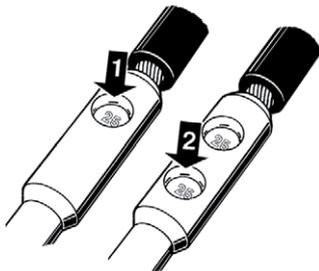
### Note

- 1 Stranded, compacted conductor
- 2 Unholed palm
- 3 For solid conductors only
- 4 Outer barrel diam. 52 mm.
- 5 Outer barrel diam. 44 mm.



## Through connectors with partition 16 - 1200 mm<sup>2</sup>

- used mainly for connecting two Al-conductors of the same size to each other
- two crimps on each side are necessary, crimp sequence see picture
- partition in the middle to prevent fluid flow



Crimp sequence.

Cat.no. stranded, mm <sup>2</sup>	Solid mm <sup>2</sup>	mm d	D	L	Pcs/ pack	Rec. System	Note
AS16	25 (+16)	5,9	13,0	67	48	V1300	
AS25	35	6,8	13,0	67	48	V1300	
AS35	50	8,5	20	100	24	V1300	
AS50	70	9,6	20	100	24	V1300	
AS70	95	11,3	20	100	24	V1300	
AS95	120	12,5	25	130	12	V1300	
AS120	150	14,0	25	130	12	V1300	
AS150	185	15,8	25	130	12	V1300	
AS185	240	17,6	32	131	9	V1300	
AS240		19,8	32	131	9	V1300, V250	
AS300SOLID	300	20	36	179	6	V250	3
AS300		22	36	179	3	V250	
AS400		25	40	179	3	V250	
AS500A		28	52	250	3	V250	4
AS500B		28	44	184	3	V250	5
AS630A-1		32	52	250		V250	1
AS630-1		32	60	288		V250	1
AS800-1		36	60	288		V1470	1
AS1000-1		40	60	288		V1470	1
AS1200		44	70	320		V1470	1

If other combinations are needed, contact Elpress.

### Note

- |                                 |                             |
|---------------------------------|-----------------------------|
| 1 Stranded, compacted conductor | 4 Outer barrel diam. 52 mm. |
| 2 Unholed palm                  | 5 Outer barrel diam. 44 mm. |
| 3 For solid conductors only     |                             |

## Other designs of Al and AlCu terminals and connectors

In cases where other hole patterns, palm sizes, assembly angles, etc. are needed, a broad variety of customer specified items may be produced.

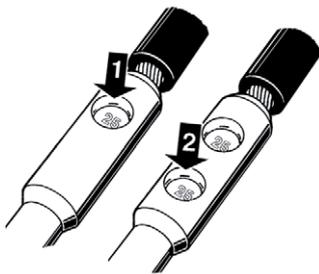
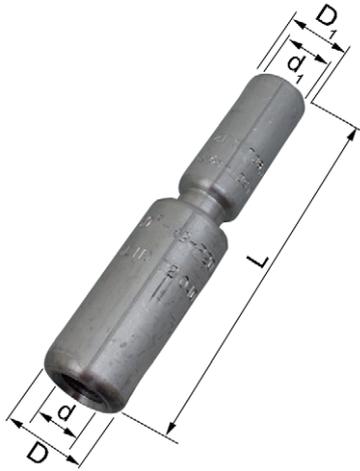
Some examples are indicated here: AKK500A/2-16-12x4-35 resp. AK185-14x2-40.





## Through connectors with partition and for different areas 16 - 400 mm<sup>2</sup>

- used mainly for connecting two Al-conductors of different sizes to each other
- two crimps on each side are necessary, crimp sequence see picture
- partition in the middle to prevent fluid flow



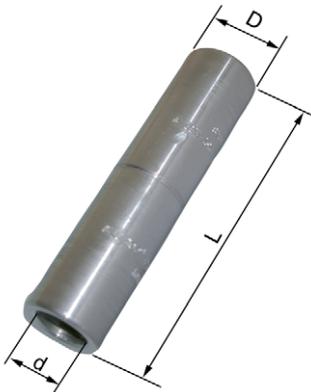
Crimp sequence.

Cat. no. stranded, mm <sup>2</sup>	Solid mm <sup>2</sup>	mm L	d <sub>1</sub>	D <sub>1</sub>	d	D	Pcs/pack	Rec. System
AS25-16	35-25	67	5,9	13,0	6,8	13,0	48	V1300
AS35-25	50-35	85	6,8	13,0	8,5	20	24	V1300
AS50-25	70-35	85	6,8	13,0	9,6	20	24	V1300
AS50-35	70-50	100	8,5	20	9,6	20	24	V1300
AS70-50	95-70	100	9,6	20	11,3	20	24	V1300
AS95-25	120-35	101	6,8	13,0	12,5	25	24	V1300
AS95-35	120-50	116	8,5	20	12,5	25	24	V1300
AS95-50	120-70	116	9,6	20	12,5	25	24	V1300
AS95-70	120-95	116	11,3	20	12,5	25	24	V1300
AS120-95	150-120	130	12,5	25	14	25	12	V1300
AS150-50	185-70	116	9,6	20	15,8	25	12	V1300
AS150-70	185-95	116	11,3	20	15,8	25	24	V1300
AS150-95	185-120	130	12,5	25	15,8	25	12	V1300
AS150-120	185-150	130	14,0	25	15,8	25	12	V1300
AS185-95	240-120	132	12,5	25	17,6	32	12	V1300
AS185-150	240-185	132	15,8	25	17,6	32	12	V1300
AS240-95	-120	132	12,5	25	19,8	32	12	V1300, V250
AS240-120	-150	132	14,0	25	19,8	32	12	V1300, V250
AS240-150	-185	132	15,8	25	19,8	32	12	V1300, V250
AS240-185	-240	131	17,6	32	19,8	32	12	V1300, V250
AS300-240		156	19,8	32	22	36	6	V250
AS400-300		179	22	36	25	40	3	V250

Other measures, see corresponding connector on previous pages.  
If other combinations are needed, contact Elpress.

## Through connectors without partition 300 - 400 mm<sup>2</sup>

- used mainly for connecting two Al-conductors of same sizes to each other
- two crimps on each side are necessary, crimp sequence see picture
- use special matrix 13P37M and special punch 13P37D, no matrix holder necessary



Cat. no. mm <sup>2</sup>	mm D	d	L	Rec. tool
AS300B	37	22,3	150	PVL1300DUAL
AS400B	37	25	150	PVL1300DUAL



## AICu, bi-metal terminals 16 - 1200 mm<sup>2</sup>

- used primarily to terminate Al-conductors to Cu bus bars, etc.
- two adjacent crimps are necessary - crimp sequence, see picture



Crimp sequence.

Cat. no. stranded, mm <sup>2</sup>	Solid	mm W	d	N	N <sub>1</sub>	L	Pcs/ pack	Rec. System	Note
AKK16-8	25 (16)	16,0	5,9	8,5	10,0	66	48	V1300	
AKK25-8	35	16,0	6,8	8,5	10,0	66	48	V1300	
AKK25-12	35	22	6,8	11,5	15,5	75	24	V1300	
AKK35-8	50	25	8,5	12,5	12,5	89	24	V1300	
AKK50-8	70	25	9,6	12,5	12,5	89	24	V1300	
AKK50-10	70	25	9,6	12,5	12,5	89	24	V1300	
AKK50-12	70	25	9,6	12,5	12,5	89	24	V1300	
AKK70-8	95	25	11,3	12,5	12,5	89	24	V1300	
AKK70-10	95	25	11,3	12,5	12,5	89	24	V1300	
AKK70-12	95	25	11,3	12,5	12,5	89	24	V1300	
AKK95-8	120	25	12,5	12,5	12,5	108	12	V1300	
AKK95-10	120	25	12,5	12,5	12,5	108	12	V1300	
AKK95-12	120	25	12,5	12,5	12,5	108	12	V1300	
AKK95-16	120	30	12,5	15,0	15,0	115	12	V1300	
AKK120-10	150	25	14,0	12,5	12,5	108	12	V1300	
AKK120-12	150	25	14,0	12,5	12,5	108	12	V1300	
AKK120-16	150	30	14,0	15,0	15,0	115	12	V1300	
AKK150-10	185	25	15,8	12,5	12,5	108	12	V1300	
AKK150-12	185	25	15,8	12,5	12,5	108	12	V1300	
AKK150-16	185	30	15,8	15,0	15,0	115	12	V1300	
AKK185-10	240	30	17,6	15,0	15,0	116	12	V1300	
AKK185-12	240	30	17,6	15,0	15,0	116	12	V1300	
AKK185-16	240	30	17,6	15,0	15,0	116	12	V1300	
AKK240-10		30	19,8	15,0	15,0	116	12	V1300, V250	
AKK240-12		30	19,8	15,0	15,0	116	12	V1300, V250	
AKK240-16		30	19,8	15,0	15,0	116	12	V1300, V250	
AKK300-12		37	22	18,5	18,5	154	6	V250	
AKK300-16		37	22	18,5	18,5	154	6	V250	
AKK300-20		37	22	18,5	18,5	154	6	V250	
AKK300-12SOLID		37	20	18,5	18,5	154	6	V250	
AKK300-16SOLID		37	20	18,5	18,5	154	6	V250	
AKK300-20SOLID		37	20	18,5	18,5	155	6	V250	
AKK400-12		37	25	18,5	18,5	155	6	V250	
AKK400-16		37	25	18,5	18,5	155	6	V250	
AKK400-20		37	25	18,5	18,5	155	6	V250	
AKK500A-16		48	28	18,5	18,5	222	3	V250	4
AKK500A-20		48	28	26	29	222	3	V250	4
AKK500A-1		48	28	70*		237		V250	2
AKK500A-2		70	28	70*		239		V250	2
AKK500B-16		42	28	21	21	174	3	V250	5
AKK500B-20		42	28	21	21	174	3	V250	5
AKK500B-1		42	28	70*		202	3	V250	2
AKK500B-2		70	28	70*		211		V250	2
AKK630A-1		48	32	70*		237	3	V250	1,2
AKK630A-2		70	32	70*		239		V250	1,2
AKK800-1		62	36	70*		263		V1470	1,2
AKK800-2		75	36	75*		275		V1470	1,2
AKK1000-1		62	40	70*		263		V1470	1,2
AKK1000-2		75	40	75*		275		V1470	1,2
AKK1200		75	44	75*		310		V1470	1,2

\* the full palm length

### Note

- 1 Stranded, compacted conductor
- 2 Unholed palm
- 3 For solid conductors only
- 4 Outer barrel diam. 52 mm.
- 5 Outer barrel diam. 44 mm.



## AICu, bi-metallic terminals 300 - 400 mm<sup>2</sup>

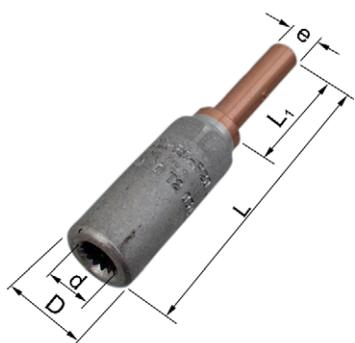
- used primarily to terminate Al-conductors to Cu bus bars, etc.
- two adjacent crimps are necessary - crimp sequence, see pictures
- when crimping Al-part, use special matrix 13P37M and special punch 13P37D, no matrix holder necessary, see page 41
- when crimping Cu-part, use special dies 13B30, no die holder necessary



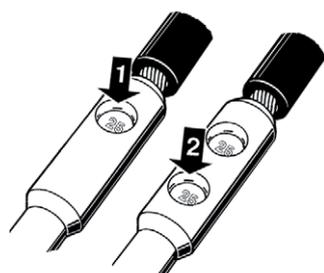
Cat. no. mm <sup>2</sup>	mm W	D	d	N	N <sub>1</sub>	L	Rec. tool
AKK300B-12	37	37	22,3	18,5	18,5	139	PVL1300DUAL
AKK300B-16	37	37	22,3	18,5	18,5	139	PVL1300DUAL
AKK400B-16	37	37	25	18,5	18,5	139	PVL1300DUAL
AKK400B-12	37	37	25	18,5	18,5	139	PVL1300DUAL

## AICu pin terminals, bi-metal 16 - 300 mm<sup>2</sup>

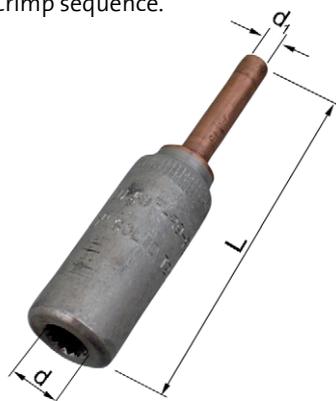
- used to connect Al conductors to mechanical clamp type connections for round Cu pins.
- two adjacent crimps are necessary - crimp sequence, see picture



Cat. no. stranded, mm <sup>2</sup>	Solid mm <sup>2</sup>	mm e	d	D	L <sub>1</sub>	L	Pcs/ pack	Rec. System
AKP16	25 (16)	6,0	5,9	13,0	25	56	48	V1300
AKP25	35	6,0	6,8	13,0	25	56	48	V1300
AKP35	50	9,0	8,5	20	25	78	24	V1300
AKP50	70	9,0	9,6	20	35	88	24	V1300
AKP70	95	9,0	11,3	20	35	88	24	V1300
AKP95	120	12,0	12,5	25	35	103	24	V1300
AKP120	150	12,0	14,0	25	40	108	24	V1300
AKP150	185	12,0	15,8	25	40	108	24	V1300
AKP185	240	14,0	17,6	32	45	113	12	V1300
AKP240		14,0	19,8	32	45	113	12	V1300, V250
AKP300		16,0	22	36	50	143	9	V250



Crimp sequence.



## Transition connectors for Al conductors 16 - 95 mm<sup>2</sup> to Cu solid conductors 10 mm<sup>2</sup>

- adapter connector from stranded Al-conductor to solid Cu-conductor 10 mm<sup>2</sup> (e.g. Excel, Excelett)
- two crimps are necessary for both Al and Cu, crimp sequence see picture (equal order for Cu)

Cat. no., mm <sup>2</sup> , Al-Cu	Solid Al mm <sup>2</sup>	mm d	d <sub>1</sub>	L	Pcs/ pack	Rec. System	Note
AKS16-10S	25 (16)	5,9	4,5	64	48	V1300	1
AKS25-10S	35	6,8	4,5	64	48	V1300	1
AKS35-10S	50	8,5	4,5	86	48	V1300	1
AKS50-10S	70	9,6	4,5	86	24	V1300	1
AKS70-10S	95	11,3	4,5	86	24	V1300	1
AKS95-10S	120	12,5	4,5	101	24	V1300	1

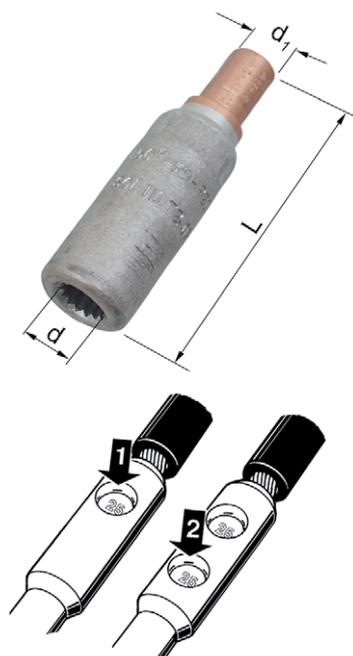
### Note

1. Make two crimps also on the Cu-side.



## AlCu bimetal through connectors 16 - 400 mm<sup>2</sup>

- connect Al-conductors to Cu-conductors
- stranded/solid Al-conductors, stranded/flexible Cu conductor
- two adjacent crimps for Al, see picture; normally one for Cu
- when crimping the Cu-part, place the dies between the marked circular groove on the Cu-barrel and the edge



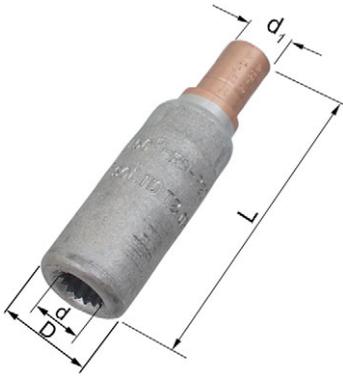
Crimp sequence.

Cat. no., mm <sup>2</sup> , Al-Cu	Solid Al mm <sup>2</sup>	mm d	d <sub>1</sub>	L	Pcs/ pack	Rec. System
AKS16-10	25 (16)	5,9	5,0	46	48	V1300
AKS25-10	35	6,8	5,0	46	48	V1300
AKS25-16	35	6,8	6,0	46	48	V1300
AKS35-10	50	8,5	5,0	66	24	V1300
AKS35-16	50	8,5	6,0	66	24	V1300
AKS35-25	50	8,5	8,0	69	24	V1300
AKS50-10	70	9,6	5,0	66	24	V1300
AKS50-16	70	9,6	6,0	66	24	V1300
AKS50-25	70	9,6	8,0	69	24	V1300
AKS50-35	70	9,6	9,0	71	24	V1300
AKS50-50	70	9,6	11,0	76	24	V1300
AKS70-35	95	11,3	9,0	71	24	V1300
AKS70-50	95	11,3	11,0	76	24	V1300
AKS70-70	95	11,3	13,0	78	24	V1300
AKS95-10	120	12,5	5,0	81	24	V1300
AKS95-16	120	12,5	6,0	81	24	V1300
AKS95-25	120	12,5	8,0	84	24	V1300
AKS95-35	120	12,5	9,0	86	24	V1300
AKS95-50	120	12,5	11,0	91	24	V1300
AKS95-70	120	12,5	13,0	93	24	V1300
AKS95-95	120	12,5	15,0	94	24	V1300
AKS120-50	150	14,0	11,0	91	24	V1300
AKS120-70	150	14,0	13,0	93	24	V1300
AKS120-95	150	14,0	15,0	94	24	V1300
AKS120-120	150	14,0	17,0	98	24	V1300
AKS150-25	185	15,8	8,0	84	24	V1300
AKS150-35	185	15,8	9,0	86	24	V1300
AKS150-50	185	15,8	11,0	91	24	V1300
AKS150-70	185	15,8	13,0	93	24	V1300
AKS150-95	185	15,8	15,0	94	24	V1300
AKS150-120	185	15,8	17,0	99	24	V1300
AKS150-150	185	15,8	19,0	99	24	V1300
AKS185-95	240	17,6	15,0	94	12	V1300
AKS185-120	240	17,6	17,0	99	12	V1300
AKS185-150	240	17,6	19,0	100	12	V1300
AKS185-185	240	17,6	21	100	12	V1300
AKS240-35		19,8	9,0	87	12	V1300, V250
AKS240-50		19,8	11,0	91	12	V1300, V250
AKS240-70		19,8	13,0	94	12	V1300, V250
AKS240-95		19,8	15,0	94	12	V1300, V250
AKS240-120		19,8	17,0	99	12	V1300, V250
AKS240-150		19,8	19,0	100	12	V1300, V250
AKS240-185		19,8	21	100	12	V1300, V250
AKS240-240A		19,8	22,5	100	12	V1300, V250
AKS300-150		22	19,0	124	9	V250
AKS300-185		22	21	124	9	V250
AKS300-240A		22	22,5	125	9	V250
AKS400-150		25	19,0	124	6	V250
AKS400-185		25	21	124	6	V250
AKS400-240A		25	22,5	124	6	V250
AKS400-300A		25	24,5	125	6	V250

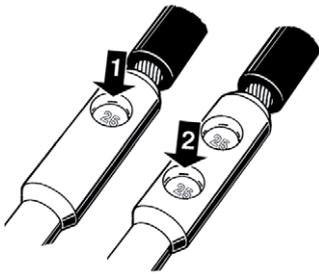


## AlCu bimetallic through connectors 300 - 400 mm<sup>2</sup>

- connect Al-conductors to Cu-conductors
- stranded/solid Al-conductors, stranded/flexible Cu conductor
- two adjacent crimps are necessary - crimp sequence, see pictures
- when crimping Al-part, use special matrix 13P37M and special punch 13P37D, no matrix holder necessary, see page 41
- when crimping Cu-part, use special dies 13B30, no die holder necessary
- when crimping the Cu-part, place the dies between the marked circular groove on the Cu-barrel and the edge



Cat. no., mm <sup>2</sup> , Al-Cu	mm D	d	d <sub>1</sub>	L	Rec. tool
AKS300B-240A	37	22,3	29	111	PVL1300DUAL
AKS400B-240A	37	25	29	111	PVL1300DUAL



Crimp sequence.



# Patented DUAL System for crimping flexible conductors in KRF/KSF-connectors for demanding applications, 10 - 400 mm<sup>2</sup>

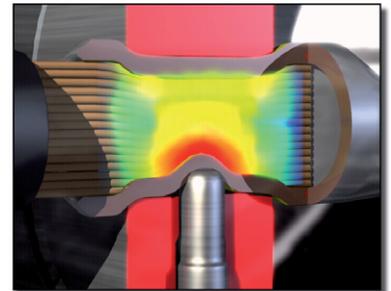
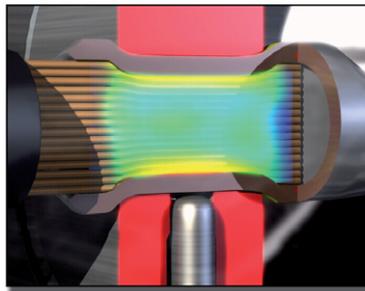


## Particulars:

- patented crimp technique
- for crimping of flexible Cu-terminals according to IEC60228, type class 5
- crimps terminals type KRF and through connectors type KSF
- for extra tough environments like cars and train, where the connections except electrical properties also are exposed to such as corrosion, mechanical strength and vibration
- meet the requirements in IEC/EN 61238:1
- meet the requirements of corrosion according to DIN V 40 046, part 37
- meet the requirements for vibration according to EN 50 155
- meet the requirements of mechanical strength according to SEN 24 50 10

## Crimp sequence

The crimp starts with an optimized hexagonal crimp and then makes a small indent in the same crimp cycle to further improve gas tightness as well as electrical and mechanical properties.



PVL1300DUAL



Crimp types



DUAL+regular crimps

## PVL1300DUAL

Battery powered crimp tool for crimping of type KRF/KSF 10–300 mm<sup>2</sup>, and Al-terminals 16-240 mm<sup>2</sup> (without DUAL function) in demanding applications.

## Particulars:

- ergonomic design that optimizes the balance of the tool in the users hand
- buzzing signal and flashing light if right pressure is not achieved
- LED lightning for work in dark environments
- possibility to document each crimp for unique service control
- crimp force 124 kN (13 ton)
- crimps/charge: 60-120 depending on size and temperature
- crimp time: 4-12 s depending on size
- working temperature -20°C to +40°C
- environmental friendly battery, Li-Ion Makita, 3.0 Ah, 18V
- battery charger Li-Ion Makita, charging time 22 min
- LED indication of charge status
- supplied with robust plastic case, battery, charger and instruction
- PVL1300DB, supplied with 2 batteries
- weight 5.4 kg, (incl battery)



DV1300



Crimp geometries



DUAL+regular crimps

## DV1300

Crimp head for crimping of type KRF/KSF 10-300 mm<sup>2</sup>. Used with footpump P4000 or battery / mains powered pump PS710.

### Particulars:

- crimp head with the patented DUAL CRIMP technique which starts with an optimized hexagonal crimp and then makes a small indent in the same crimp cycle to further improve gas tightness as well as electrical and mechanical properties
- DUAL dies are available for 10 - 300 mm<sup>2</sup>
- crimps terminals type KRF and through connectors type KSF
- conventional accessories as shown for V1300 can be used (without DUAL-function)
- DV1300 can also be used with regular crimp dies for the 1300-system
- no die holders are necessary when using DUAL dies
- weight 3.4 kg

## DV1300C

C-fork type crimp head, open to one side, for crimping of type KRF/KSF 10-300 mm<sup>2</sup>. Used with footpump P4000 or battery / mains powered pump PS710.

### Particulars:

- Crimp head with the patented DUAL CRIMP technique which starts with an optimized hexagonal crimp and then makes a small indent in the same crimp cycle to further improve gas tightness as well as electrical and mechanical properties
- DUAL dies are available for 10 - 300 mm<sup>2</sup>
- crimps terminals type KRF and through connectors type KSF
- conventional dies as for V1300C can be used (without DUAL-function)
- DV1300C can also be used with regular crimp dies for the 1300C-system  
no die holders are necessary when using DUAL-dies
- weight 4.9 kg

DV1300C



Crimp geometries



DUAL + regular crimps

## DV250

DV250 crimping head for use with foot pump P4000 or battery and mains powered pump PS710.

### Particulars:

- crimping head with the patented DUAL technology that provides optimised contact crimping in two integrated steps
- integrated dies 120-400 mm<sup>2</sup>, used without die holder
- for crimping of Cu terminals type KRF and through connectors type KSF with Cu conductors, IEC60228 classes 2 and 5
- saves time, only one crimp for large areas
- crimp force 250 kN (at 630 bar)
- standard dies for copper can be used (without DUAL function), 10 - 800 mm<sup>2</sup>
- very small dimensions Ø 111 mm x 280 mm
- light weight, only 4.8 kg
- crimping head can also be used for aluminium, 16 - 630 mm<sup>2</sup>

DV250



Crimp geometries



DUAL + regular crimps



# Accessories for crimping flexible Cu-conductors in the DUAL Crimp system DV1300, DV1300C, PVL1300DUAL and DV250



Die pair 13DB20.



Die pair 13DCB20.



Die pair DB2522.

## DUAL crimp dies

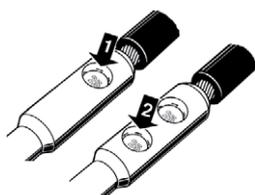
Supplied in pairs.

For crimping of flexible Cu conductors in terminals type KRF or connectors type KSF.

No die holders necessary.

mm <sup>2</sup>	Dies for DV1300 and PVL1300DUAL	Dies for DV1300C	No. of crimps	Dies for DV250	No. of crimps
10	13DB8	13DCB8	1	-	-
16	13DB9	13DCB9	1	-	-
25	13DB11	13DCB11	1	-	-
35	13DB13	13DCB13	1	-	-
50	13DB14,5	13DCB14,5	1	-	-
70	13DB17	13DCB17	1	-	-
95	13DB20	13DCB20	1	-	-
120	13DB22	13DCB22	2	DB2522	1
150	13DB25	13DCB25	2	DB2525	1
185	13DB27	13DCB27	2	DB2527	1
240	13DB30	13DCB30	2	DB2530	1
300	13DB32	13DCB32	2	DB2532	1
400	-	-	-	DB2538	2

## Accessories for crimping Al with PVL1300



Crimp sequence.

For indent crimping of Al terminals type AKKxxxB/AKSxxxB and connectors type ASxxxB.

Stranded mm <sup>2</sup>	Matrix	Punch
300	13P37M*	13P37D
400	13P37M*	13P37D

\* Used without matrix holder.

Always make two crimps, see picture.



# Crimp station for industrial crimping needs, KRF/KSF-terminals 10 - 300 mm<sup>2</sup>

## CS2500

Crimp station CS2500 offers effective production with highest operator safety. Advanced intelligent features combined with simplicity make the product unique.



Crimp station CS2500.



Analyzer, crimp station CS2500 and pump PS710D.

### Particulars:

- designed for continuous production of Cu tubeterminals, 10-300 mm<sup>2</sup>
- fast locking and unlocking of terminals, with low force, makes the total crimp cycle short
- constructed to give high personal safety
- high crimping force up to 250 kN, self- adjusting for optimal durability of tool and accessories
- one crimpcycle regardless crimp size
- Elpress patented DUAL System is used
- Elpress Hydraulic pump unit, of type PS710 with foot pedal and with advanced control and supervision is attached
- CE-approved, fulfilling machine safety regulations
- PC- software for crimp analysis is available
- to be used with mains powered pump PS710D
- weight 60 kg
- dimensions 200 x 350 x 350 mm

### Dies

Supplied in pairs.

For crimping of Cu-terminals and connectors, KRF/KSF.

Used without die holders.

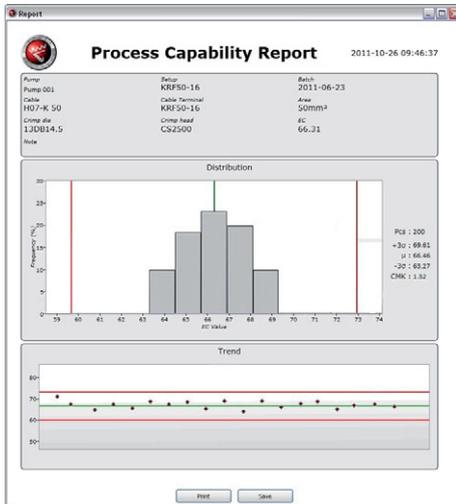


Dies 13DCB20.

mm <sup>2</sup>	Dies	No. of crimps
10	13DCB8	1
16	13DCB9	1
25	13DCB11	1
35	13DCB13	1
50	13DCB14,5	1
70	13DCB17	1
95	13DCB20	1
120	20DCB22	1
150	20DCB25	1
185	20DCB27	1
240	20DCB30	1
300	20DCB32	1



# Analyzer, software for analysis of crimps and system calibration



Analyzer, monitors and measure all crimps.



The Analyzer computer software is used for quality assurance of crimping work.

The Analyzer computer software is used for quality assurance of crimping work. In a simple way all crimps can be examined in a PC. This unique SPC-tool, Statistic Process Control, give the opportunity to look upon crimping as a measurable process. By definition, process control is a statistical program for systematic studies of variations in operational performance. Import and export of information to customers or just internal can now be realized, as well as printing reports. Analyzer should be used together with Elpress pump PS710D and crimpstation CS2500 or Elpress pump PS710E together with system V1300 or V250.

## Particulars:

- Elpress Analyzer improves total quality
- helps the operator
- provides a tool for process improvement
- monitors and measure all crimps
- supports preventive maintenance of equipment
- creates traceability and documents
- makes communication easy
- increases user competence
- eliminates defective crimps
- delivered with instructions for use



# Light weight and handy pump designed according to customer request

PS710 POWERMAN



## PS710

PS710 is a hydraulic battery / mains powered pump for crimping with advanced control and supervision of the crimp procedure. It is equipped with a flexible system for almost all crimp applications where high performance and reliability is required. The pump is suitable as well in cable harness manufacturing as for electrician work in the installation field. PS710 has power source for every kind of crimping work.

### Technical data:

- Possible to use different working pressures, 0 to 700 Bar.
- PC software, Analyzer, for crimp analysis and quality process integration
- Can be used with a PC in a data network with a printer
- Small dimensions 370x250x160 mm
- Weight approx. 11 kg
- Mains power 100-240 VAC 50-60 Hz
- Li-ion battery 28,8 V

The pump system consists of three basic versions, all with customizing possibilities;

## PS710D

For the cable harness manufacturer.

### Technical data:

- unique electronic system together with a special PC-software
- process control and analysis, SPC – each crimp can be traced
- communication to PC in real-time, immediate quality check
- integrated communication through CAN with Elpress CS2500 unit
- high flow hydraulic pump for fastest crimping movement
- can be used with a PC in a data-network with a printer
- to be used with crimp station CS2500

PS710D



PS710E



## PS710E

For the installer working in the distribution network or in the industry.

### Technical data:

- small size and low weight make it easy to use in every situation
- highest performance both with Li-ion battery 28.8 V and mains power
- display with keypad for full pump status information to operator
- possibility to have crimps stored in control system
- PC communication with USB

PS710R



## PS710R

For the user asking for standard solutions (without need of crimp traceability).

### Technical data:

- pump control without electronic system, relayed controlled
- easy equipped without data communication
- without battery
- new Elpress ergonomic handle for hydraulic crimp heads, ERGO, with wired communication is supplied together with PS710R



## Hydraulic foot pump

### P4000

Elpress hydraulic footpump.

P4000



#### Particulars:

- unique design in high tensile aluminium alloy
- low weight, 8.6 kg, incl. 2.2 m hose
- standard setting 630 bar (max setting to 700 bar)
- safety valve for relief at all pressures
- a pressure gauge can be attached to indicate working pressure
- ergonomic design
- high finish anodised surface - easy to keep clean
- high efficiency two-step oil flow
- simple foot operated off-loading (piston return) after automatic stop at full pressure
- robust and stable to work with
- practical storage position for hose

## Mains powered pump for industrial use

*The pump operates all Elpress crimp heads.*

### P1000

P1000 is a secure, lean produced 2-step pump as an economical alternative for industrial use where simplicity and reliability is required. The pump is supplied with Elpress safety hose with quick coupling. The robust although light weight-ed design allows intensive use in most cases. The pump is CE-approved.

P1000

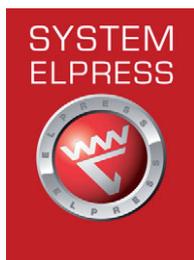


#### Particulars:

- function Self holding pressure during crimp cycle, automatic return after completed crimp
- hydraulic pressure: Working range 0-63 (70) MPa, adjustable
- hydraulic flow: Low pressure (up to 1.5 MPa) approx. 0.8 l/min, High pressure (more than 1,5 MPa) 0.2 l/min
- oil volume 2 l (usable 1,8 l)
- oil hydraulic oil ISOVG32
- measures, w x d x h approx. 250 x 150 x 384 mm (excl. hose)
- weight 15 kg (incl. hose)
- mains connection 230 V AC 50/60 Hz
- allowable voltage fluctuation: Rated voltage  $\pm$  5%
- electric motor 0.25 kW, Class E insulation, open type commutated motor 230 V, 50/60 Hz single-phase, Max. current: 2.8 A (5 min.)
- protection class IP20
- environment temperatures 0 - 40°C
- CE-approved: Machine safety 98/37/CE, LVD 73/23/EEC
- hydraulic hose 2.4 m, quick coupling, manoeuvre handle 12 V AC
- mains cord 1.5 m earth plug



# Pre-insulated terminals



## System Elpress

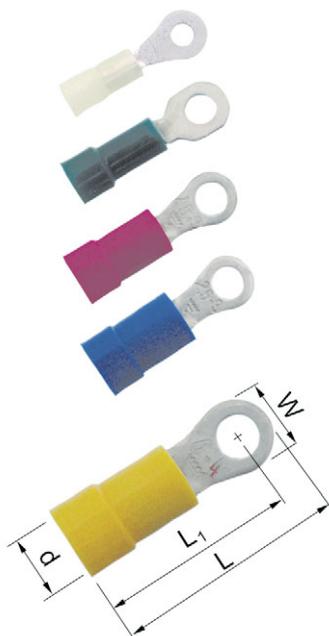
System Elpress consists of connections and tools tested together for optimum fitting. This is so that you as customer can feel secure when you use our system and be sure that a safe connection will be made when our products are used correctly.

## Pre-insulated terminals

Elpress ring, fork and pin terminals are manufactured from high grade copper and receptacles from brass or tin-bronze. All terminals are electrolytically tin plated to achieve good corrosion protection. The necks of the terminals are brazed and annealed to allow crimping in any direction around the neck. The metal in the receptacles neck is double folded for excellent mechanical strength and electrical conductivity.

## Insulation

Elpress insulation sleeves are moulded in polycarbonate which has excellent deformation characteristics and maintains its vibration support up to high temperatures, well over 100°C. Caution must be taken at alkalic exposure.



## Ring terminals 0.1 - 6 mm<sup>2</sup>

■ Data: Cu 99.95%, tin plated, brazed necks.

■ PC sleeves have EasyEntry, PC and PA sleeves are halogen free.

	mm <sup>2</sup>	Cat. no.	Screw	mm W	d	t	L <sub>1</sub>	L	s	Rec. tool	Pcs/pack	Insulation
Yellow	0,1-0,5	A0522R	M2,5	5,4	2,0	0,5	14,0	16,0	6	DSA0115	100	PA*
		A0532R	M3	5,4	2,0	0,5	14,0	16,0	6	DSA0115	100	PA*
		A0543R	M4	7,0	2,0	0,5	16,0	19,0	6	DSA0115	100	PA*
		A0553R	M5	8,0	2,0	0,5	15,0	19,0	6	DSA0115	100	PA*
Green	0,25-0,75	A0832R	M3	5,5	3,2	0,5	15,0	18,0	7	DSA0115	100	PC
		A0837R	M3,5	6,2	3,2	0,5	17,5	21	7	DSA0115	100	PC
		A0843R	M4	7,5	3,2	0,5	17,5	21	7	DSA0115	100	PC
		A0853R	M5	9	3,2	0,5	17,5	22	7	DSA0115	100	PC
Red	0,5-1,5	A1532R	M3	5,5	4,0	0,7	16,0	19,0	7	GSA0760	100	PC
		A1537R	M3,5	6,0	4,0	0,7	16	19	7	GSA0760	100	PC
		A1543R	M4	7,0	4,0	0,7	17	20,5	7	GSA0760	100	PC
		A1553R	M5	9,0	4,0	0,7	18	22,5	7	GSA0760	100	PC
		A1565R	M6	11,0	4,0	0,7	20,5	26	7	GSA0760	100	PC
		A1585R	M8	14,0	4,0	0,7	20	27,5	7	GSA0760	100	PC
		A1510R	M10	16,5	4,0	0,7	22	30,5	7	GSA0760	100	PC
Blue	1,5-2,5	A2532R	M3	5,5	4,5	0,8	16,3	19	8	GSA0760	100	PC
		A2537R	M3,5	6,0	4,5	0,8	16	19	8	GSA0760	100	PC
		A2543R	M4	7,0	4,5	0,8	17,5	21	8	GSA0760	100	PC
		A2553R	M5	9,0	4,5	0,8	18,5	23	8	GSA0760	100	PC
		A2565R	M6	11,0	4,5	0,8	20,5	26	8	GSA0760	100	PC
		A2585R	M8	14,0	4,5	0,8	20	27,5	8	GSA0760	100	PC
		A2510R	M10	16,5	4,5	0,75	22	30,5	8	GSA0760	100	PC
		A2513R	M12	19,0	4,5	0,75	25	34	8	GSA0760	100	PA
Orange	4-6	A4643R	M4	7,8	6,4	1,0	20,5	24,5	9	GSA0760	100	PC
		A4653R	M5	9,0	6,4	1,0	20,5	25	9	GSA0760	100	PC
		A4665R	M6	11,0	6,4	1,0	23	28,5	9	GSA0760	100	PC
		A4685R	M8	14,0	6,4	1,0	23,8	30,8	9	GSA0760	100	PC
		A4610R	M10	17,0	6,4	1,0	25,5	34	9	GSA0760	50	PC
		A4613R	M12	19,2	6,8	1,0	31	40	9	GSA0760	50	PVC**

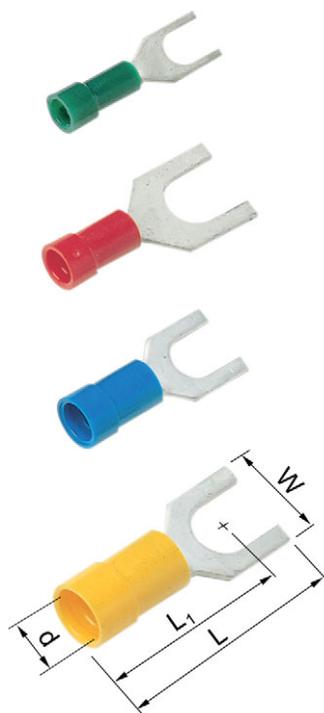
t = palm thickness s = strip length \* no EasyEntry



## Fork terminals 0.1 - 6 mm<sup>2</sup>

■ Data: Cu 99.95%, tin plated, brazed necks.

■ PC sleeves have EasyEntry, PC and PA sleeves are halogen free.



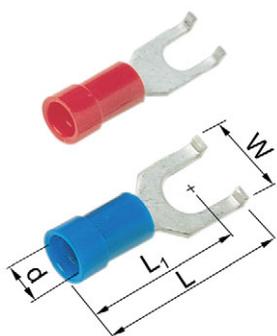
	mm <sup>2</sup>	Cat. no.	Screw	mm W	d	t	L <sub>1</sub>	L	s	Rec. tool	Pcs/ pack	Insulation
	0,1-0,5	A0532G	M3	5,0	2,0	0,5	14,0	16,0	6	DSA0115	100	PA*
	0,25-0,75	A0832G	M3	5,5	3,2	0,5	15,0	18,0	7	DSA0115	100	PC
		A0837G	M3,5	6,2	3,2	0,5	17,5	21	7	DSA0115	100	PC
		A0843G	M4	6,2	3,2	0,5	17,5	21	7	DSA0115	100	PC
	0,5-1,5	A1532G	M3	5,5	4,0	0,7	16	19	7	GSA0760	100	PC
		A1537G	M3,5	6,2	4,0	0,7	17,5	21	7	GSA0760	100	PC
		A1537GS	M3,5	5,5	4,0	0,7	17	21,2	7	GSA0760	100	PC
		A1543G	M4	7,0	4,0	0,7	17,5	21	7	GSA0760	100	PC
		A1553G	M5	9,0	4,0	0,7	18	22,5	7	GSA0760	100	PC
		A1565G	M6	11,0	4,0	0,7	21	26,5	7	GSA0760	100	PC
	1,5-2,5	A2532G	M3	5,5	4,5	0,8	15,0	18,0	8	GSA0760	100	PC
		A2537G	M3,5	6,2	4,5	0,8	17,5	21	8	GSA0760	100	PC
		A2537GS	M3,5	5,5	4,5	0,8	17	21,2	8	GSA0760	100	PC
		A2543G	M4	7,0	4,5	0,8	17,5	21	8	GSA0760	100	PC
		A2553G	M5	9,0	4,5	0,8	18	23	8	GSA0760	100	PC
		A2565G	M6	11,0	4,5	0,8	19,5	25	8	GSA0760	100	PC
	4-6	A4643G	M4	7,8	6,4	1,0	20	24	9	GSA0760	100	PC
		A4653G	M5	9,0	6,4	1,0	20,5	25	9	GSA0760	100	PC
		A4665G	M6	11,0	6,4	1,0	21,5	27	9	GSA0760	100	PC
		A4685G	M8	14,0	6,4	1,0	23	30	9	GSA0760	100	PC
		A4610G	M10	18,0	6,4	1,0	27	36	9	GSA0760	100	PA

t = palm thickness s = strip length \* no EasyEntry

## Flanged fork terminals 0.5 - 2.5 mm<sup>2</sup>

■ Data: Cu 99.95%, tin plated, brazed necks.

■ PC sleeves have EasyEntry, PC and PA sleeves are halogen free.



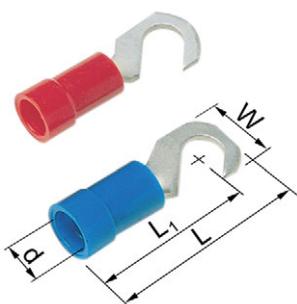
	mm <sup>2</sup>	Cat. no.	Screw	mm W	d	t	L <sub>1</sub>	L	s	Rec. tool	Pcs/ pack	Insulation
	0,5-1,5	A1537GB	M3,5	6,2	4,0	0,7	17,5	21	7	GSA0760	100	PC
		A1543GB	M4	6,2	4,0	0,7	17,5	21	7	GSA0760	100	PC
	1,5-2,5	A2543GB	M4	6,2	4,5	0,8	17,5	21	7	GSA0760	100	PC
		A2553GB	M5	9,0	4,5	0,8	17,5	22,5	7	GSA0760	100	PC

t = palm thickness s = strip length

## Hook terminals 0.5 - 2.5 mm<sup>2</sup>

■ Data: Cu 99.95%, tin plated, brazed necks.

■ PC sleeves have EasyEntry, PC and PA sleeves are halogen free.



	mm <sup>2</sup>	Cat. no.	Screw	mm W	d	t	L <sub>1</sub>	L	s	Rec. tool	Pcs/ pack	Insulation
	0,5-1,5	A1543K	M4	7	4,0	0,8	17	20,5	7	GSA0760	100	PC
	1,5-2,5	A2543K	M4	7,5	4,5	0,8	17	21	8	GSA0760	100	PC

t = palm thickness s = strip length



# End terminals

Elpress end terminals are manufactured from tin plated, electrolytic 99.95% copper tubes. The end terminals have dimensions in accordance with DIN 46228. Elpress end terminals are used when a perfect connection is required, for example, to a screw terminal block. The strands are kept together and connecting screws will not damage the strands. Long lasting contact forces are easier to achieve.

## Pre-insulated end terminals 0.14 - 50 mm<sup>2</sup> ET, standard colour

■ Data: Cu 99.95%, tin plated. CSA approved.

■ Insulation polypropylene, dimensions according to DIN 46228, colour code W.



	AWG	mm <sup>2</sup>	Cat. no.	mm d	L <sub>1</sub>	L	s	Rec. tool	Pcs/ pack
Grey	26	0,14	A0,14-6ET*	2,0	6	10,5	8	EEB0160	500
	26		A0,14-8ET*	2,0	8	12,5	10	EEB0160	500
Light Blue	24	0,25	A0,25-6ET*	2,0	6	10,5	8	EEB0160	100
	24		A0,25-8ET*	2,0	8	12,5	10	EEB0160	500
Light Green	24	0,34	A0,34-6ET*	2,0	6	10,5	8	EEB0160	100
	24		A0,34-8ET*	2,0	8	12,5	10	EEB0160	100
Orange	20	0,5	A0,5-6ET	2,5	6	11,5	8	EEB0160	100
	20		A0,5-8ET	2,5	8	13,5	10	EEB0160	100
	20		A0,5-10ET	2,5	10	15,5	12	EEB0160	100
White	20	0,75	A0,75-6ET	2,8	6	12,0	8	EEB0160	100
	20		A0,75-8ET	2,8	8	14,0	10	EEB0160	100
	20		A0,75-10ET	2,8	10	16,0	12	EEB0160	100
	20		A0,75-12ET	2,8	12	18,0	14	EEB0160	100
Yellow	18	1	A1-6ET	3,0	6	12,5	8	EEB0160	100
	18		A1-8ET	3,0	8	14,5	10	EEB0160	100
	18		A1-10ET	3,0	10	16,5	12	EEB0160	100
	18		A1-12ET	3,0	12	18,5	14	EEB0160	100
Red	16	1,5	A1,5-6ET*	3,4	6	12,5	8	EEB0160	100
	16		A1,5-8ET	3,4	8	14,5	10	EEB0160	100
	16		A1,5-10ET	3,4	10	16,5	12	EEB0160	100
	16		A1,5-12ET	3,4	12	18,5	14	EEB0160	100
	16		A1,5-18ET	3,4	18	24,5	20	EEB0160	100
Yellow	14	2,08	A2,08-8ET*	3,6	8	14,5	10	EEB0160	100
Light Blue	14	2,5	A2,5-8ET	4,2	8	15,0	10	EEB0160	100
	14		A2,5-10ET	4,2	10	17,0	12	EEB0160	100
	14		A2,5-12ET	4,2	12	19,0	14	EEB0160	100
	14		A2,5-18ET	4,2	18	25,0	20	EEB0160	100
Grey	12	4	A4-10ET	4,8	10	18	12	EEB0160	100
	12		A4-12ET	4,8	12	20,0	14	EEB0160	100
	12		A4-18ET	4,8	18	26,0	20	EEB0160	100
Black	10	6	A6-12ET	6,2	12	20	14	EEB0160	100
	10		A6-18ET	6,2	18	26	20	EEB0160	100
Light Green	8	10	A10-12ET	7,5	12	21	14	GEB1025	100
	8		A10-18ET	7,5	18	27	20	GEB1025	100
Light Green	6	16	A16-12ET	8,8	12	23	14	GEB1025	100
	6		A16-18ET	8,8	18	29	20	GEB1025	100
Brown	4	25	A25-16ET	11,0	16	29	18	GEB1025	50
	4		A25-18ET	11,0	18	31,0	20	GEB1025	50
	4		A25-22ET	11,0	22	35	24	GEB1025	50
Yellow	2	35	A35-16ET	12,5	16	30	18	GEB3550	50
	2		A35-18ET	12,5	18	32,0	20	GEB3550	50
	2		A35-25ET	12,5	25	39	27	GEB3550	50
Black	1/0	50	A50-20ET	15,0	20	36,0	22	GEB3550	50
	1/0		A50-25ET	15,0	25	41,0	27	GEB3550	50

\* does not conform to DIN 46228

s = strip length

For larger areas than 50 mm<sup>2</sup>, contact Elpress.



# Certified tools for pre-insulated terminals and end terminals

GSA0760



## Crimp range 0.5 - 6 mm<sup>2</sup>

### GSA0760 and GSA0760C

Elpress Miniforce crimp tools for symmetrical crimping of pre-insulated terminals 0,5 - 6 mm<sup>2</sup>.

- locator to hold the terminal in the right position when crimping which simplifies the installation
- die calibration is easily performed with the gauge ESAQ0760
- die nests leave imprints on terminal insulation sleeve after crimp to show nest size and Elpress logotype for system identification

Area	Cat. no.	Crimp types	Weight	Length x Width
0.5-6 mm <sup>2</sup>	GSA0760	oval, symmetrical	0.433 kg	203 x 76 mm
0.5-6 mm <sup>2</sup>	GSA0760C	oval, symmetrical	0.493 kg	256 x 80 mm

DSA0115



## Crimp range 0.14 - 1.5 mm<sup>2</sup>

### DSA0115

Elpress crimp tool for symmetrical crimping of pre-insulated terminals.

Area	Cat. no.	Crimp type	Weight	Length x Width
0.14-1.5 mm <sup>2</sup>	DSA0115	oval, symmetrical	0.445 kg	192 x 66 mm

EEB0160



## Self setting crimp range 0.1 - 6 mm<sup>2</sup>

### EEB0160

Miniforce self-setting tool for crimping pre-insulated and un-insulated end terminals 0.1 - 6 mm<sup>2</sup> and pre-insulated TWIN end terminals 2x0.5 - 2x4 mm<sup>2</sup>.

- only one crimp nest, which automatically sets to the appropriate size for the end terminal crimped
- front feed
- accepts crimp lengths up to 20 mm

Area	Cat. no.	Crimp type	Weight	Length x Width
0.1-6 mm <sup>2</sup>	EEB0160	trapezoid	0.551 kg	220 x 72 mm

GEB1025



## Crimp range 10 - 25 mm<sup>2</sup>

### GEB1025 and GEB1025C

Miniforce crimp tool for crimping pre-insulated and un-insulated end terminals.

Area	Cat. no.	Crimp type	Weight	Length x Width
10-25 mm <sup>2</sup>	GEB1025	trapezoid	0.443 kg	203 x 76 mm
10-25 mm <sup>2</sup>	GEB1025C	trapezoid	0.503 kg	256 x 80 mm

GEB3550



## Crimp range 35 - 50 mm<sup>2</sup>

### GEB3550 and GEB3550C

Miniforce crimp tool for crimping pre-insulated and un-insulated end terminals.

Area	Cat. no.	Crimp type	Weight	Length x Width
35-50 mm <sup>2</sup>	GEB3550	trapezoid	0.438 kg	203 x 76 mm
35-50 mm <sup>2</sup>	GEB3550C	trapezoid	0.691 kg	256 x 80 mm



## Battery powered cable cutter

### PKL54

Electric cable cutter for copper and aluminium cable; easy and safe to operate.

PKL54



#### Particulars:

- electric cable cutter for copper and aluminium cable
- not intended for cutting steel
- max cutting diameter 54 mm;  
equivalent to 1 kV Cu type FKKJ 4 x 95 mm<sup>2</sup>  
Al type AKKJ 4 x 240 mm<sup>2</sup>  
Al type SE-N1XV 4G x 240 mm<sup>2</sup>  
equivalent to 12 kV Al type AXLJ 3 x 150 mm<sup>2</sup>
- charger 7.2-24V, charging time for battery approx. 60 min
- the tool has a scissor action when cutting, which produces a good cut
- integrated fuse as overvoltage protection
- protective cap for perfect safety, CE approved
- delivered with case and double batteries, 14.4V NiMH

Area	Cat. no.	Weight	Dimensions
Ø 54 mm	PKL54	3,5 kg (incl battery)	450x105x120 mm

# Cable Clamps

ELPRESS  
ADDED  
PRODUCTS



ELPRESS ADDED PRODUCTS - products with new possibilities

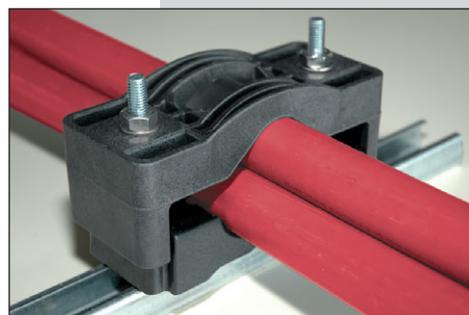
## Cable Clamps for 3-conductor, Ø 27 - 69 mm

- for fastening single and multi conductor,  
low and high voltage cables

Cable Clamps for fastening a wide range of single and multi conductor low and high voltage cables in a triangular formation. The installation is designed to provide superior mechanical strength. The width of the clamping area provides a controlled pressure on the cable and avoids damage to the insulation.

- Constructed for a mechanical strength up to 65500 Nm
- Temperature range -40 – +120 C° (shortly +225 C°)
- Material strength of more than 50 year
- UL tested
- Space saving
- For low and high voltage cables
- Halogen free
- Easy to mount
- Stackable

To mount next clamp above the first, i.e. a mounting of 6 cables, you preferable use 1 pcs TRIPLE 27-38 KIT, 1 pcs TRIPLE 27-38 and 1 pcs fastening material M10x120.

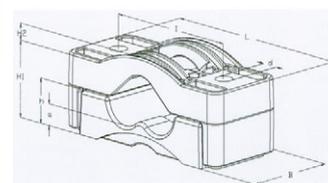


### Cable clamp and mounting material

3-conductor x Ø, mm	Type	Mounting material (screw, nut, washer)	Rail	Fastening torque
3x27-38	TRIPLE 27-38 KIT	Galvanized steel, 2xM10x120, 4xM10	300	20 Nm
3x38-51	TRIPLE 38-51 KIT	Galvanized steel, 2xM10,140, 4xM10	300	20 Nm
3x51-69	TRIPLE 51-69 KIT	Galvanized steel, 2xM10x180, 4xM10	300	20 Nm
3x69-90	TRIPLE 69-90 KIT	Galvanized steel, 2xM10x180, 4xM10	300	20 Nm
3x90-118	TRIPLE 90-118 KIT	Galvanized steel, 2xM10x180, 4xM10	300	20 Nm

### Cable clamp

3-conductor x Ø, mm	Type	mm							
		L	B	l	d	H1	H2	h	a
3x27-38	TRIPLE 27-38	180	75	125	15.5	63	12	35	16.5
3x38-51	TRIPLE 38-51	195	80	145	15.5	84	16	45	20
3x51-69	TRIPLE 51-69	220	85	170	15.5	109	21	58	26
3x69-90	TRIPLE 69-90	252	90	215	15.5	134	29	72	30
3x90-118	TRIPLE 90-118	321	100	270	15.5	180	27	89	33



### Accessories

Type	Description
M10x120	Fastening material, 2 threaded rods M10x120, 4 x M10 nuts and washers, 2 bushes.



# Cable Clamps

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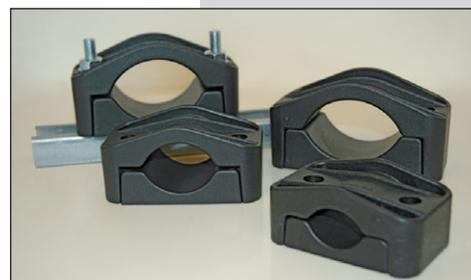


## Cable Clamps for 1-conductor, Ø 26-135 mm

- for fastening single and multi conductor,  
low and high voltage cables

Cable Clamps for fastening a wide range of single and multi conductor low and high voltage cables. The installation is designed to provide superior mechanical strength. The width of the clamping area provides a controlled pressure on the cable and avoids damage to the insulation.

- Constructed for a mechanical strength of up to 68 Nm
- Temperature range -40 - +120 C° (shortly +225 C°)
- Material strength of more than 50 year
- Tested by the Prof. Ir. Damstra Laboratory
- UL tested
- For low and high voltage cables
- Halogen free

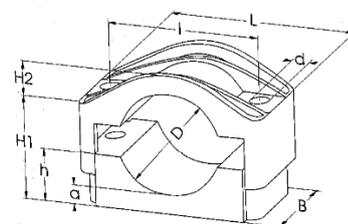


### Cable Clamp and mounting material

1-conductor x Ø, mm	Type	Mounting material (screw, nut, washer)	Rail	Fastening torque
1x26-38	SE 26-38 KIT	Galvanized steel, 2xM10x80, 4xM10	200	5 Nm
1x36-52	SE 36-52 KIT	Galvanized steel, 2xM10x100, 4xM10	200	5 Nm
1x50-75	SE 50-75 KIT	Galvanized steel, 2xM10x100, 4xM10	200	5 Nm
1x75-100	SE 75-100 KIT	Galvanized steel, 2xM10x120, 4xM10	300	5 Nm
1x100-135	SE 100-135 KIT	Galvanized steel, 2xM10x180, 4xM10	300	5 Nm

### Cable clamp

1-conductor x Ø, mm	Type	mm							
		L	B	l	d	H1	H2	h	a
1x26-38	SE 26-38	92	60	60	12	33-49	7	18	7
1x36-52	SE 36-52	105	60	75	12	39-55	15	23	8
1x50-75	SE 50-75	126	60	95	12	46-71	22	30	9
1x75-100	SE 75-100	200	80	150	15	70-95	32	45	10
1x100-135	SE 100-135	225	85	175	15	85-120	43	58	10



# Cable Blocks



## Cable Blocks for 4-conductor, Ø 12-32 mm and 32-48 mm

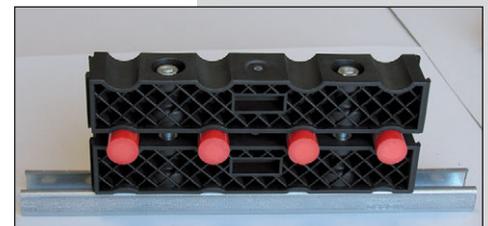
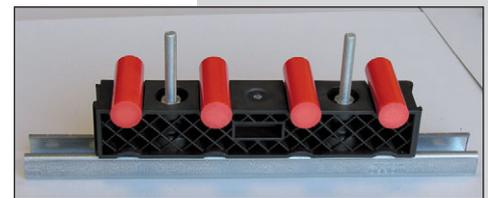
- for fastening of 4 cables in a block along side each other

Cable Blocks are suitable for fastening cables with a diameter 12 mm (0.45 inch) up to 32 mm (1.26 inch) and a diameter of 32 mm up to 48 mm. By means of 2 block parts, 4 cables can be fastening along side each other. On the basis of the number of cables to be fastened, the number of block parts is decided. 2 block parts for 4 cables, 3 block parts for 8 cables and so on. The blocks can also be fastened along side each other by the clever dovetail connection.

- Constructed for a mechanical strength of 29500 Nm
- Temperature range -40 – + 120 C° (shortly +225 C°)
- Material strength of more than 50 year
- UL tested
- For low and high voltage cables
- Supplied in 2 blocks (for 4 cables)
- Halogen free
- Stackable (max 6 blocks)

### Example:

To mount 8 cables above each other you preferable use 1 pcs UNIFIX IM12-32, 1 pcs UNIFIX IM12-32 and 1 pcs mounting material M10x120.



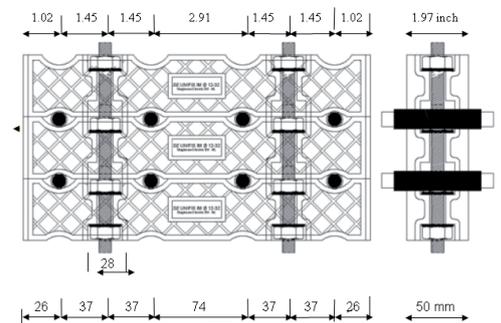
### Cable clamp and mounting material

4-conductor x Ø, mm	Type	Mounting material (screw, nut, washer)	Rail	Fastening torque
4x12-32	UNIFIX IM12-32 KIT	Galvanized steel, 2xM10x140, 4xM10	400	20 Nm
4x32-48	UNIFIX IM32-48 KIT	Galvanized steel, 2xM10x140, 4xM10	400	20 Nm

Two clamps, rail, mounting material as above picture.

### Cable clamp

4-conductor x Ø, mm	Type
4x12-32	UNIFIX IM 12-32
4x32-48	UNIFIX IM 32-48
Two clamps	



### Accessories

Type	Description
Mounting material M10x120	2 threaded rods M10x120, 4 M10 nuts and washers, 2 bushes Galvanized steel

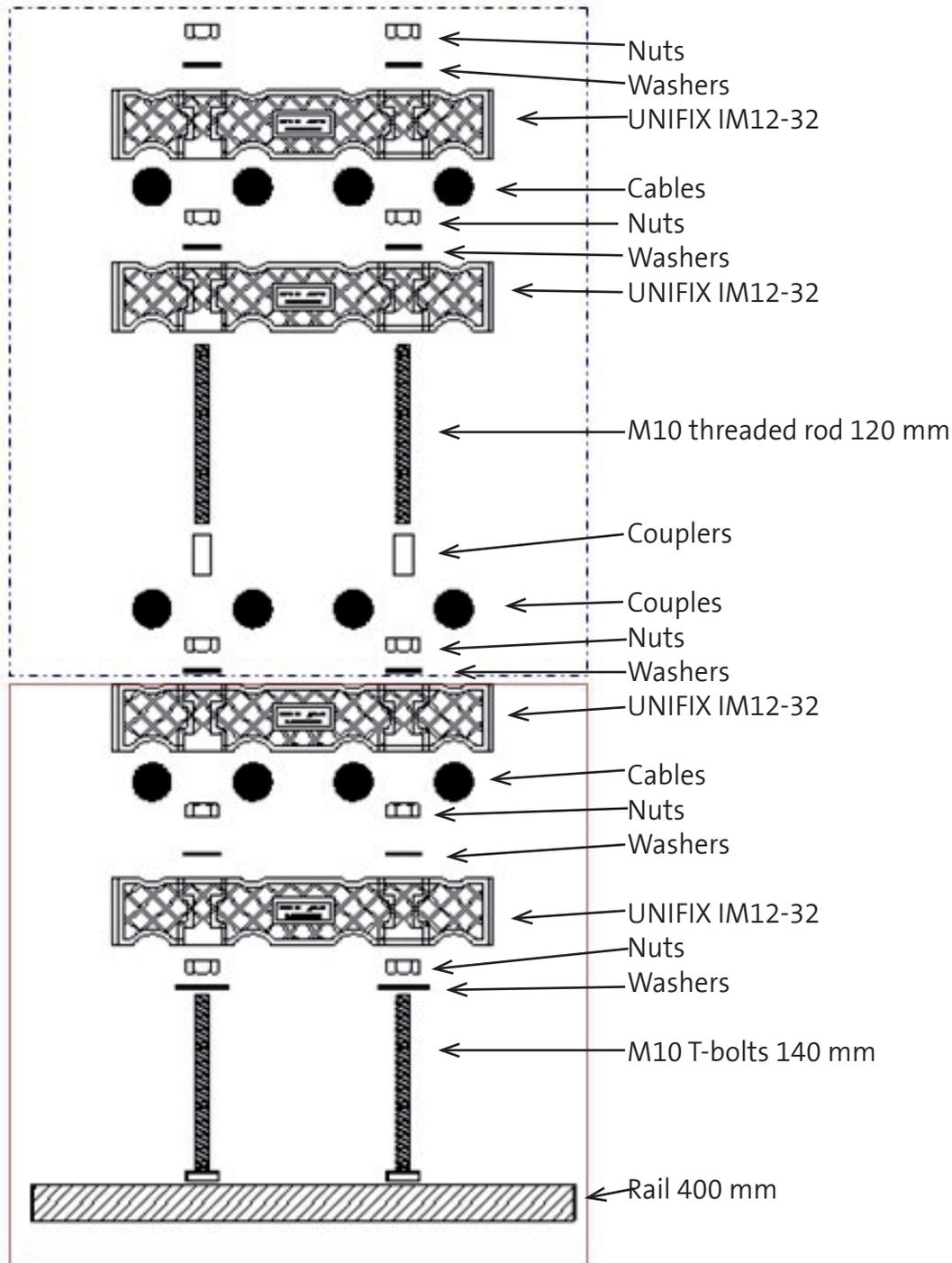


# Cable Blocks

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## Mounting example



□ UNIFIX IM12-32 KIT. This includes: 2 pcs UNIFIX IM12-32, 1 pcs rail, 2 pcs M10 T-bolts, 4 pcs nuts, 4 pcs washers.

□ UNIFIX IM12-32 + mounting material. One Kit can be completed with UNIFIX 12-32 and mounting material to mount next block on each other.

# Flexible connectors Earthing bus bars

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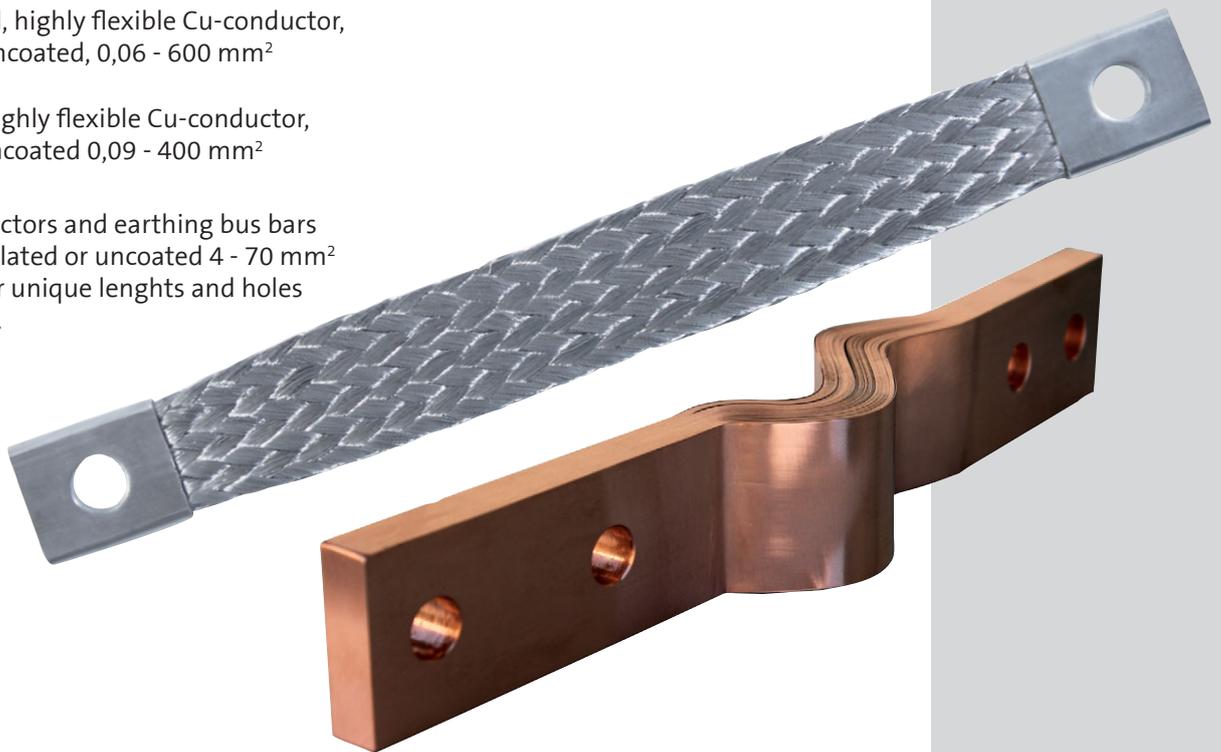
**ELPRESS ADDED PRODUCTS** - products with new possibilities

## Highly flexible connectors and earthing bus bars

Elpress supply a broad range of flexible and highly flexible connectors and earthing bus bars. The flexible solutions which is demanded of this type of connectors is often customer unique and Elpress can also supply earthing bus bars in other material such as stainless steel, aluminum and insulated connectors.

### Product Overview

- Round, twined, highly flexible Cu-conductor, tinned or uncoated, 0,06 - 600 mm<sup>2</sup>
- Flat, twined, highly flexible Cu-conductor, tinned or uncoated 0,09 - 400 mm<sup>2</sup>
- Flexible connectors and earthing bus bars in copper, tinned or uncoated 4 - 70 mm<sup>2</sup> with customer unique lengths and holes size and place.



*Stainless steel, aluminum and insulated connectors can also be supplied after your demand.*



# Elpress

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