Connection and tooling solutions

Railway rolling stock and infrastructure

sicame GROUP

About us

sicame GROUP

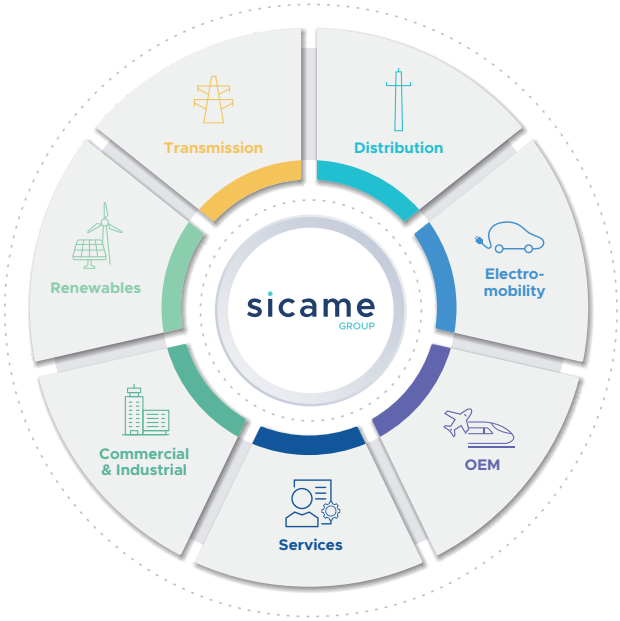
Sicame Group is one of the key players in the electrical equipment business worldwide. It has been able to adapt and develop to support the continuous evolution of electricity infrastructure in France and around the world, and become the largest independent entity in its sector.

A true player in the energy transition, it offers its customers new products and services to improve energy efficiency, deal with environmental risks and support the development of electric vehicle and solar power plant markets.

+65
years of worldwide success

567 M€
2023 turnover

3.600
employees



Our fields of activity

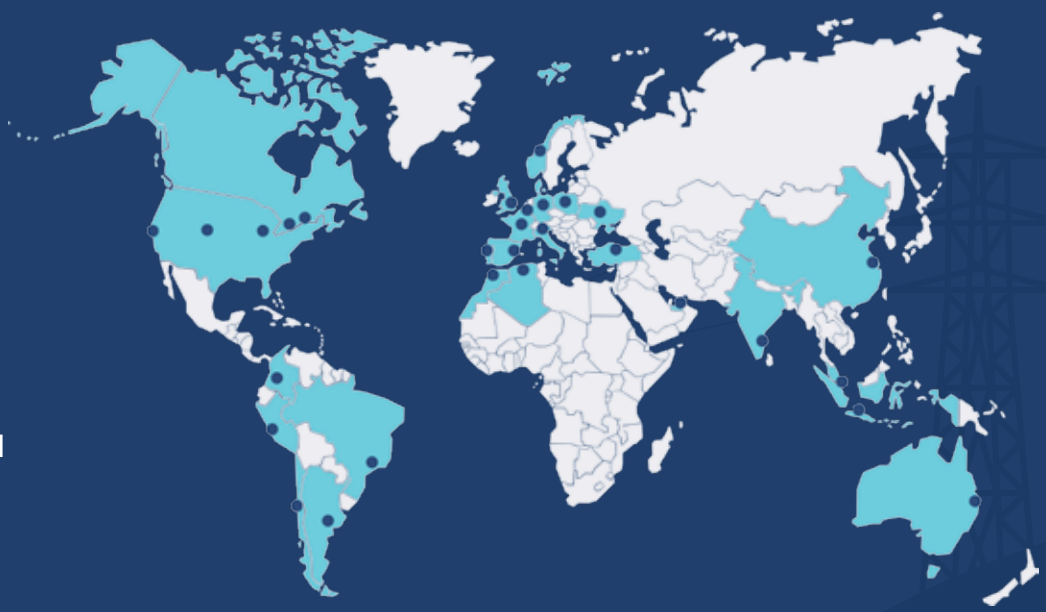
Sicame Group is specialised in **products and services** related to transmission and distribution of **electrical energy**, renewables, electro-mobility. safety equipment and industrial applications.

5 continents

26 countries

50 companies around the world

Products distributed in **157** countries



SUMMARY

Mecatraction product summary

References index

References index

Ref.

Services for railway solutions

TENSILE TESTING
Checks and verifications on crimped specimens:
- Visual inspection of crimping indentations.
- Pull-out tests.
- A report on crimped samples is issued.

MACROGRAPHIC SECTION
Sections and checks on crimped specimens:
- Visual inspection of crimping indentations as per RCCE-E4000.
- Filling coefficient as per RCCE-E4000.

MAINTENANCE AND INSPECTION OF DIES
- Visual inspection.
- Dimensional inspection.
- Polishing.
- Production of a test piece.
- An inspection report will be issued.

INSPECTION AND MAINTENANCE SERVICE
We provide inspection and maintenance services for tools, either in the factory or on the customer's site.

TOOLING
- Crimping tools inspection and maintenance.
- Cable cutters.
- Shears and hydraulics.
- Cable preparation tools for LV equipment.

MTR
Sicame Group

TRAINING

Training courses tailored to your needs:
- Railway connectors, tooling and crimping.
- Electrical safety.

SITE AUDIT AND INVESTIGATIVE TESTING

For further information about our services:

Mr Alexandre Porte
Railway OEM Market Development Manager & Product technical Support Manager
alexandre.porte@mecatraction.com

Ms. Solène Mestre
Services Portfolio Manager
smestre@sicamegroup.com

01

Introduction to connection solutions

MTR
Sicame Group

Solutions connections

A dynamic company

Founded in 1981. MECATRACTION has enjoyed rapid growth in France and abroad. Based in POMPADOUR, in the Corrèze region of France, on a site of over 8.100 m^2. MECATRACTION designs, develops and manufactures a complete range of industrial electrical connections, wiring accessories and a wide range of installation tools.

MECATRACTION is a subsidiary of the SICAME GROUP

The SICAME GROUP specializes in accessories for the transport and the transmission of electrical power.

Your best partner in the high-tech sector

MECATRACTION has forged a position for itself in many sectors of industry that demand know-how, precision and efficiency through the quality of our products and our capacity for innovation.

These sectors include the rail, automotive, aeronautic, space, nuclear, renewable energies, shipping and defence industries.

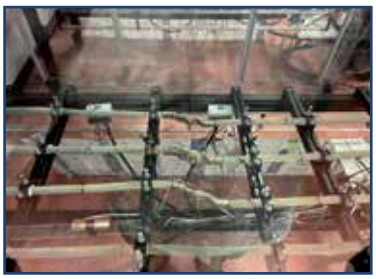
High means of production

The manufacturing of components for electrical connections requires a production apparatus both modern and extremely flexible.

Research & Development

Our Research and Development department is composed of multi-disciplinary teams who combine creativity and reactivity.

Working closely with our customers, this organization offers innovative co-developed solutions. These products are prototyped and qualified in our test laboratory.



Our design office is equipped with state-of-the-art CAD tools (Pro/Engineer - Pro-Mechanica - Visy-Progress...).

Quality and Environment

afaq ISO 9001 Quality AFNOR CERTIFICATION

afaq ISO/TS 16949 Automotive AFNOR CERTIFICATION

afaq EN/AS/JISQ 9100 Aerospace AFNOR CERTIFICATION

afaq ISO 14001 Environment AFNOR CERTIFICATION

afaq ISO 45001 Occupational Health and Safety AFNOR CERTIFICATION

Customized products

For any information on special ranges and customized manufacturing: please contact us.

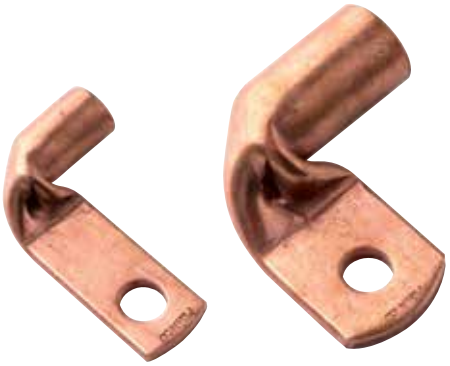
Automotive electrical connections

Aeronautics electrical connections

Expanded copper tubular lugs for crimping on core and insulation

Customized electrical connections

Tubular lugs bent right or left



Key rules for crimping

The 4 key elements:

- An electrical connection must be electrically and mechanically sound. A complete system (terminal block. electric motor, automation. lighting...) depends upon the quality of this connection.

- In order to ensure the integrity of the final assembly (5), the product, the preparation, and the crimping operations should be implemented according to the key rules and by taking into account the first 4 essential key elements:

1. A quality crimp termination suited to the application.

2. An electric cable correctly stripped and matched to the application.

3. A quality crimping tool matched to both termination and conductor.

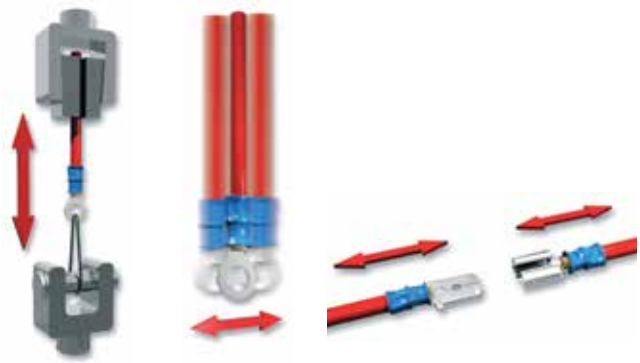
4. An operator with experience in crimping techniques.

General features of a crimped electrical connection:
A crimped electrical connection provides the link between a cable and the electrical equipment.

The main features of these connections are:
- **Excellent conductivity**
- **Good tensile strength**
- **Good corrosive resistance**
- **Good resistance to vibration**
- **No voltage drop or rise in temperature**

Qualification of a crimped termination:

- Mechanical tests.



Tensile strength

Vibration resistance

Insertion extraction For disconnects and tabs

- Electrical tests.

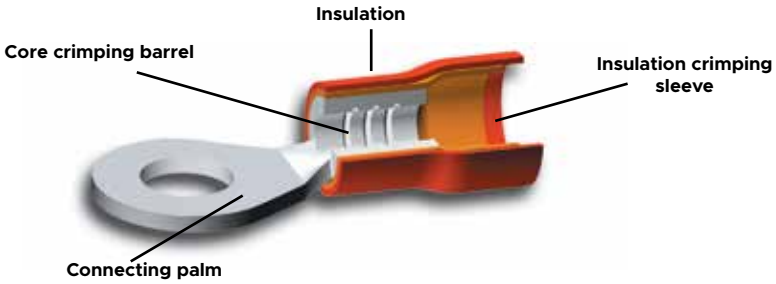
Voltage drop

Voltage strength For pre-insulated terminals

Increase in temperature

Crimping of pre-insulated terminals

Types of pre-insulated terminals “single crimp” and “double crimp”. “Double crimp” type is particularly suited to electrical connections suffering stress or vibrating stress.



Cables

Cable correctly stripped:

✗ Insulation poorly stripped

✗ Cable strands damaged or cut

✗ Cable strands not twisted

✗ Cable strands over twisted

✗ Insulation particles on cable core

✗ Cable insulation damaged

Crimping

Terminal correctly crimped:

✗ Conductor insufficiently stripped

✗ Crimped off centre

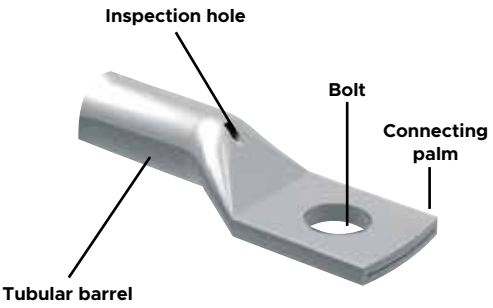
✗ Crimped too far forward

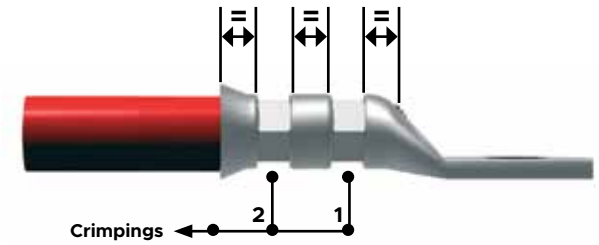
✗ Tool presented incorrectly

✗ Cable over stripped. difficult to assemble on the tab

Key rules for crimpings

Crimping of copper tubular lugs:





Cables

Cable correctly stripped:

- ✗ Insulation poorly stripped
- ✗ Cable strands damaged or cut
- ✗ Cable strands not twisted
- ✗ Cable strands over twisted
- ✗ Insulation particles on cable core
- ✗ Cable insulation damaged

Crimping

Terminal correctly crimped:

1. Cable strands viewed through inspection hole.
2. Cable correctly stripped and sufficiently introduced into the barrel.
3. Crimping mark correctly centred on the barrel.

- ✗ Cable not fully inserted
- ✗ Crimped off center
- ✗ Crimped off centre
- ✗ Incorrect or damaged die. handles appear
- ✗ Crimps incorrectly positioned

Technical support for tooling

MTR
Sicame Group

Our technical and commercial department can provide you with technical support services adapted to your needs

Demonstration

-

Maintenance / repair

-

Commissioning

-

Control / verification
on site or in our factory

-

Training on crimping techniques

Please feel free to contact us by e-mail:
service.technico@mecatraction.com
www.mecatraction.com

Blue stopper.
The controlled crimping!

These mobile stoppers compatible with TN railway lugs from 25 to 120 mm².

These accessories fit our ESU137 and VF210 tools and ensure the crimp is positioned in the middle of the terminal. Our new solution guarantees productivity and repeatability.

- **Reduces the time taken to crimp in series by up to 50%**
- **Reduced scrap**
- **Assurance of quality crimping**
- **Relief for the operator**

Scan to see the presentation video

02

I Terminals for rolling stock

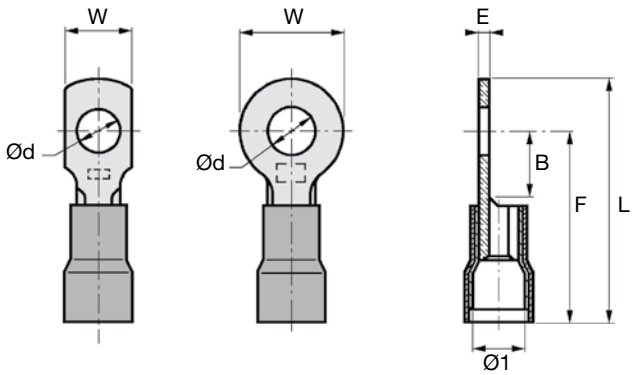
Pre-insulated terminals from 0.34 to 6 mm²

- Material: tin-plated copper.
- Insulation according to EN 45545.
- Suitable for copper cables according NFF or EN standards.
- SNCF drawing: 10-5050-309 / 10-5206-826.
- RATP drawing: MR-3-52964.

For packaging by 100, add C100- before the reference.

Standards:

NFF 00363



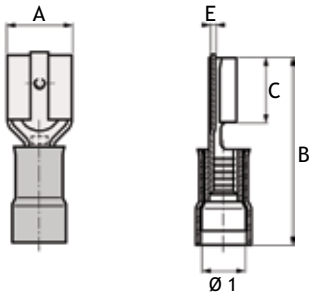
Cross section (mm²)	Ref.	W	L	E	Ø d	F	B	Ø 1	SNCF code	Crimping tool
0.34 - 1.5 ●	**51143-2**	5.6	17.3	0.80	3.2	14.5	3.5	3.6	7-847-4839	TH1 or TH1S
	51153-2	8	21	0.80	3.2	17	6	3.6	7-847-5643	
	51153R-2	6.5	20.5	0.80	3.2	16.5	5.5	3.6	7-847-5603	
	51154-2	8	21	0.80	4.2	17	6	3.6	7-847-5028	
	51154R-2	6.5	20.5	0.80	4.2	16.5	5.5	3.6	7-847-4654	
	51155-2	8	21	0.80	5.2	17	6	3.6	7-847-1112	
	51134-2	12.5	27	0.80	4.2	20.7	6.5	3.6		
	51135-2	12.5	27	0.80	5.2	20.7	6.5	3.6	7-847-4586	
	51136-2	12.5	27	0.80	6.3	20.7	6.5	3.6	7-847-4251	
	51138-2	12.5	27	0.80	8.4	20.7	6.5	3.6		
1 - 2.5 ●	**51183-2**	8.6	21	0.80	3.2	16.7	6	4.8	7-847-5237	TH2 or TH2S
	51184-2	8.6	21	0.80	4.2	16.7	6	4.8	7-847-5532	
	51185-2	8.6	21	0.80	5.2	16.7	6	4.8	7-847-5483	
	51174-2	12.5	27	0.80	4.2	20.7	6	4.8		
	51175-2	12.5	27	0.80	5.2	20.7	6	4.8	7-847-5602	
	51176-2	12.5	27	0.80	6.3	20.7	6	4.8	7-847-5484	
	51178-2	12.5	27	0.80	8.4	20.7	6	4.8	7-847-4678	
	51183R-2	6.4	20.5	0.80	3.2	16.5	5.5	4.8	7-847-4426	
	51184R-2	6.4	20.5	0.80	4.2	16.5	5.5	4.8	7-847-4250	
									Note: part number with "R" suffix are square terminals.	
2.6 - 6 ●	**STC2-8-4J**	13.8	32.5	1	8.3	25.5	8	6.8	7-847-4215	TH3
	STC2-10-4J	13.8	32.5	1	10.3	25.5	8	6.8	7-847-4485	
2.6 - 6 ●	**STC2-8-2JN**	13.8	35	1	8.3	28	8	8.8	7-847-4363	TH3-2
	STC2-10-2JN	13.8	35	1	10.3	28	8	8.8	7-847-5390	
									Unless otherwise stated. all dimensions are in milimeters.	

Pre-insulated cable terminals for thin-wire conductors according to NFF 63808

Standards:
NFF 00363

- Material for disconnects: tin-plated phophorous bronze.
- Material for pin and blade terminals: tin-plated copper.
- Insulation according to EN 45545.
- Suitable for copper cables according NFF or EN standards.
- SNCF drawing: 10-5050-310.
- RATP drawing: MR-3-52965.

For packaging by 100, add C100- before the reference. .

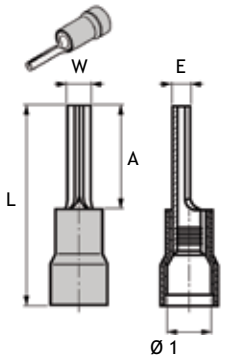


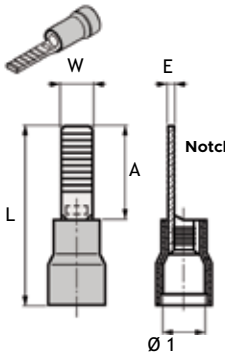
Pre-insulated reinforced disconnets

Pre-insulated disconnets: 2.8 - 5 and 6.35 mm

Cross section (mm²)	Ref.	For tabs (l x e)	A	B	C	Ø 1	E	SNCF code	Crimping tool
0.34 - 1.5 ●	**51031-2**	2.8 x 0.5	3.7	18.5	6.5	3.6	0.25	7-847-1903	TH1 ou TH1S
	51081-2	5 x 0.8	6.4	21	7.7	3.6	0.5	7-847-4728	
	51181-2	6.35 x 0.8	7.7	21	7.7	3.6	0.5	7-847-4700	
1 - 2.5 ●	**51131-2**	5 x 0.8	6.4	21	7.7	4.8	0.5	7-847-4999	TH2 ou TH2S
●	**51231-2**	6.35 x 0.8	7.7	20.2	7.7	4.8	0.5	7-847-4797	
○	**51161-4BC**	5 x 0.8	6.4	25	7.7	6.8	0.5	7-847-4994	TH3
●	**51161-2NR**	5 x 0.8	6.4	27.5	7.7	8.8	0.5		TH3-2
○	**51261-4BC**	6.35 x 0.8	7.7	25	7.7	6.8	0.5	7-847-5070	TH3
●	**51261-2NR**	6.35 x 0.8	7.7	27.5	7.7	8.8	0.5	7-847-6798	TH3-2
2.6 - 6 ●	**51661-4J**	6.35 x 0.8	7.7	25	7.7	6.8	0.5		TH3
●	**51661-2JN**	6.35 x 0.8	7.7	25	7.7	8.8	0.5	7-847-5237	TH3-2

Pin
Fig. 1





Notched blade terminals
Fig. 2

Pre-insulated reinforced end caps

Pre-insulated cable pins and blade terminals

Cross section (mm²)	Ref.		W	A	L	Ø 1	E	SNCF code	Crimping tool
0.34 - 1.5 ●	**51220-2**	Fig. 1	1.6	12	22.5	3.6	1.9	7-847-5051	TH1 or TH1S
	51225-2	Fig. 2	2.9	11.3	21	3.6	0.8	7-847-5556	
1 - 2.5 ●	**51222-2**	Fig. 1	1.8	12	22	4.8	1.8	7-847-5002	TH2 or TH2S
	51226-2	Fig. 2	3.9	12	22	4.8	0.8	7-847-5555	
2.6 - 6 ●	**51223-4J**	Fig. 1	2.5	14	28	6.8	2.5	7-847-5003	TH3
	51227-4J	Fig. 2	3.9	13	26.5	6.8	1.0	7-847-5561	
2.6 - 6 ●	**51223-2JN**	Fig. 1	2.5	14	28	8.8	2.5	7-847-5393	TH3-2
	51227-2JN	Fig. 2	3.9	13	30.5	8.8	1.0	7-847-5370	

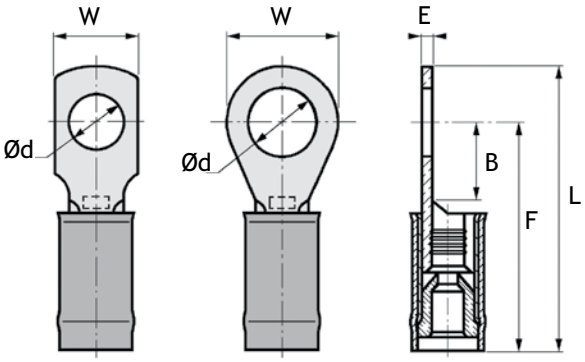
Unless otherwise stated. all dimensions are in milimeters.

Pre-insulated terminals for thin insulating conductors according to EN 50306

Standards:
NFF 00363

- Material: tin-plated copper.
- Insulation according to EN 45545.
- SNCF drawing: 10-5297-405.

For packaging by 100, add C100- before the reference.



Cross section (mm²)	Ref.	max. wire Ø	Insulation Ø		Ø d	W	E	L	F	Reducer colour	Crimping tool
			mini	maxi							
0.5 ●	**451143**	1.04	1.15	2	3.2	5.6	0.8	17.3	14.5		TH1 or TH1S
	451153				3.2	8	0.8	21.5	17.5		
	451153R				3.2	6.5	0.8	21	17		
	451154				4.2	8	0.8	21.5	17.5		
	451154R				4.2	6.5	0.8	21	17		
	451155				5.2	8	0.8	21.5	17.5		
	451134				4.2	12.5	0.8	27	20.7		
	451135				5.2	12.5	0.8	27	20.7		
	451136				6.3	12.5	0.8	27	20.7		
	451138				8.4	12.5	0.8	27	20.7		
0.75 ●	**551143**	1.15	1.30	2	3.2	5.6	0.8	17.3	14.5		TH1 or TH1S
	551153				3.2	8	0.8	21.5	17.5		
	551153R				3.2	6.5	0.8	21	17		
	551154				4.2	8	0.8	21.5	17.5		
	551154R				4.2	6.5	0.8	21	17		
	551155				5.2	8	0.8	21.5	17.5		
	551134				4.2	12.5	0.8	27	20.7		
	551135				5.2	12.5	0.8	27	20.7		
	551136				6.3	12.5	0.8	27	20.7		
	551138				8.4	12.5	0.8	27	20.7		
1 ●	**351143**	1.30	1.45	2	3.2	5.6	0.8	17.3	14.5		TH1 or TH1S
	351153				3.2	8	0.8	21.5	17.5		
	351153R				3.2	6.5	0.8	21	17		
	351154				4.2	8	0.8	21.5	17.5		
	351154R				4.2	6.5	0.8	21	17		
	351155				5.2	8	0.8	21.5	17.5		
	351134				4.2	12.5	0.8	27	20.7		
	351135				5.2	12.5	0.8	27	20.7		
	351136				6.3	12.5	0.8	27	20.7		
	351138				8.4	12.5	0.8	27	20.7		

Note: part number with "R" suffix are square terminals.

Unless otherwise stated. all dimensions are in milimeters.

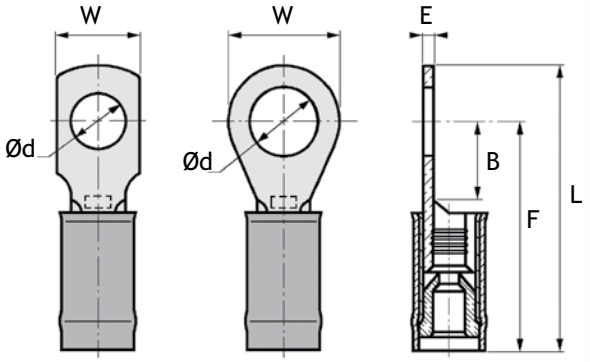
Pre-insulated terminals for thin insulating conductors according to EN 50306

- Material: tin-plated copper.
- Insulation according to EN 45545.
- SNCF drawing: 10-5297-405.

For packaging by 100, add C100- before the reference.

Standards:

NFF 00363



Cross section (mm²)	Ref.	max. wire Ø	Insulation Ø		Ø d	W	E	L	F	B	Reducer colour	Crimping tool
			mini	maxi								
	451183				3.2	8.6	0.8	21.5	17.2	6		
	451183R				3.2	6.5	0.8	21	17	5.5		
	451184				4.2	8.6	0.8	21.5	17.2	6		
	451184R				4.2	6.5	0.8	21	17	5.5		
1.5 ●	**451185**	1.65	1.80	2.70	5.2	8.6	0.8	21.5	17.2	6		TH2 or TH2S
	451174				4.2	12.5	0.8	27	20.7	6		
	451175				5.2	12.5	0.8	27	20.7	6		
	451176				6.3	12.5	0.8	27	20.7	6		
	451178				8.4	12.5	0.8	27	20.7	6		
	551183				3.2	8.6	0.8	21.5	17.2	6		
	551183R				3.2	6.5	0.8	21	17	5.5		
	551184				4.2	8.6	0.8	21.5	17.2	6		
	551184R				4.2	6.5	0.8	21	17	5.5		
2.5 ●	**551185**	2.15	2.30	2.90	5.2	8.6	0.8	21.5	17.2	6		TH2 or TH2S
	551174				4.2	12.5	0.8	27	20.7	6		
	551175				5.2	12.5	0.8	27	20.7	6		
	551176				6.3	12.5	0.8	27	20.7	6		
	551178				8.4	12.5	0.8	27	20.7	6		

Note : part number with "R" suffix are square terminals.

Unless otherwise stated. all dimensions are in milimeters.

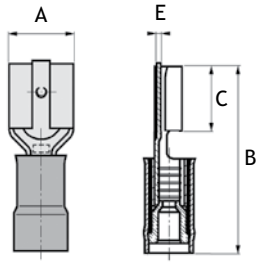
Pre-insulated disconnects and pins terminals for thin insulating conductors according to EN 50306

Standards:
NFF 00363

Pre-insulated disconnects : tin-plated phosphorous bronze
- Insulation according to EN 45545.
- SNCF drawing: 10-5050-310.

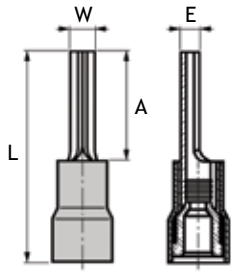
Pre-insulated pins terminals ; tined-plated copper
- Insulation according to EN 45545.
- SNCF drawing: 10-5297-407.

For packaging by 100, add C100- before the reference.



Pre-insulated disconnects for thin insulating conductors according to EN 50306

Cross section (mm²)	Ref.	For tabs (l x e)	max. wire Ø	Insulation Ø		A	B	C	E	Reducer colour	Crimping tool
				mini	maxi						
0.5 ●	**451031**	2.8 x 0.5	1.04	1.15	2	3.7	18.5	6.5	0.25		TH1 or TH1S
	451081	5 x 0.8				6.4	21.5	7.7	0.5		
	451181	6.35 x 0.8				7.7	21.5	7.7	0.5		
0.75 ●	**551031**	2.8 x 0.5	1.15	1.30	2	3.7	18.5	6.5	0.25		TH1 or TH1S
	551081	5 x 0.8				6.4	21.5	7.7	0.5		
	551181	6.35 x 0.8				7.7	21.5	7.7	0.5		
1 ●	**51033**	2.8 x 0.5	1.30	1.45	2	3.7	18.5	6.5	0.25		TH1 or TH1S
	51083	5 x 0.8				6.4	21.5	7.7	0.5		
	51183	6.35 x 0.8				7.7	21.5	7.7	0.5		
1.5 ●	**451131**	5 x 0.8	1.80	1.80	2.70	6.4	21.5	7.7	0.5		TH2 or TH2S
	451231	6.35 x 0.8				7.7	21.5	7.7	0.5		
2.5 ●	**551131**	5 x 0.8	2.15	2.30	2.90	6.4	21.5	7.7	0.5		TH2 or TH2S
	551231	6.35 x 0.8				7.7	21.5	7.7	0.5		



Pre-insulated pins terminals for thin insulating conductors according to EN 50306

Cross section (mm²)	Ref.	max. wire Ø	Insulation Ø		A	B	C	E	Reducer colour	Crimping tool
			mini	maxi						
0.5 ●	**451220**	1.04	1.15	2.0	1.6	12	22.5	1.9		TH1 or TH1S
0.75 ●	**551220**	1.15	1.30	2.0	1.6	12	22.5	1.9		
1 ●	**351220**	1.30	1.45	2.0	1.6	12	22.5	1.9		

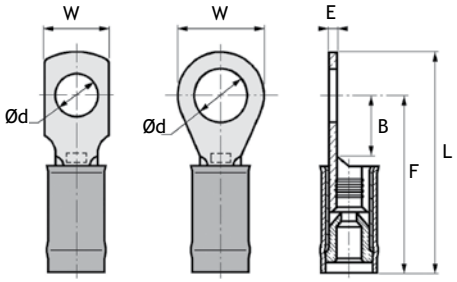
Unless otherwise stated. all dimensions are in milimeters.

Pre-insulated terminals for thin insulating conductors according to NFF 63808

Standards:

NFF 00363

Material: tin-plated copper.
Insulation according to EN 45545.
SNCF drawing: 10-5091-965.
RATP drawing: MR-3-53173.
For packaging by 100, add C100- before the reference.



Cross section (mm²)	Ref.	Pckg	max. wire Ø	Insulation Ø		Ø d	W	E	L	F	B	Reducer colour	SNCF code	Crimping tool
				mini	maxi									
	251153					3.2	8	0.8	21.5	17.5	6			
	251153R					3.2	6.5	0.8	21	17	5.5			
	251154					4.2	8	0.8	21.5	17.5	6			
	251154R					4.2	6.5	0.8	21	17	5.5		7-847-7325	
0.6	**251155**	1000	1.04	1.2	2	5.2	8	0.8	21.5	17.5	6			TH1 or TH1S
	251134					4.2	12.5	0.8	27	20.7	6.5			
	251135					5.2	12.5	0.8	27	20.7	6.5			
	251136					6.3	12.5	0.8	27	20.7	6.5			
	251138					8.4	12.5	0.8	27	20.7	6.5			
	351153					3.2	8	0.8	21.5	17.5	6			
	351153R					3.2	6.5	0.8	21	17	5.5		7-847-1234	
	351154					4.2	8	0.8	21.5	17.5	6			
	351154R					4.2	6.5	0.8	21	17	5.5			
0.93	**351155**	1000	1.3	1.4	2	5.2	8	0.8	21.5	17.5	6			TH1 or TH1S
	351134					4.2	12.5	0.8	27	20.7	6.5			
	351135					5.2	12.5	0.8	27	20.7	6.5			
	351136					6.3	12.5	0.8	27	20.7	6.5			
	351138					8.4	12.5	0.8	27	20.7	6.5			
	251183					3.2	8.6	0.8	21.5	17.2	6			
	251183R					3.2	6.5	0.8	21	17	5.5			
	251184					4.2	8.6	0.8	21.5	17.2	6			
	251184R					4.2	6.5	0.8	21	17	5.5			
1.34	**251185**	1000	1.5	1.6	2.6	5.2	8.6	0.8	21.5	17.2	6			TH2 or TH2S
	251174					4.2	12.5	0.8	27	20.7	6			
	251175					5.2	12.5	0.8	27	20.7	6			
	251176					6.3	12.5	0.8	27	20.7	6			
	251178					8.4	12.5	0.8	27	20.7	6			
	351183					3.2	8.6	0.8	21.5	17.2	6			
	351183R					3.2	6.5	0.8	21	17	5.5			
	351184					4.2	8.6	0.8	21.5	17.2	6		7-847-7038	
	351184R					4.2	6.5	0.8	21	17	5.5			
1.82	**351185**	1000	1.73	1.73	1.9	5.2	8.6	0.8	21.5	17.2	6			TH2 or TH2S
	351174					4.2	12.5	0.8	27	20.7	6			
	351175					5.2	12.5	0.8	27	20.7	6			
	351176					6.3	12.5	0.8	27	20.7	6			
	351178					8.4	12.5	0.8	27	20.7	6			

Note: part number with "R" suffix are square terminals.

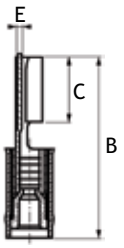
Unless otherwise stated. all dimensions are in milimeters.

Pre-insulated disconnects 2.8 - 5 and 6.35 and pins terminals for thin insulating conductors according to NFF 63808

Standards:
NFF 00363

- Material: tin-plated phosphorous bronze.
- Insulation according to EN 45545.
- SNCF drawing: 10-5091-966.
- RATP drawing: MR-3-53172.

For packaging by 100, add C100- before the reference.

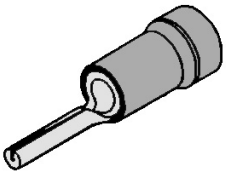


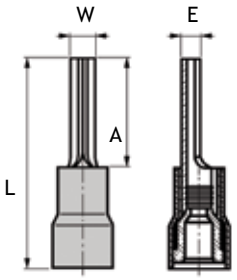
Pre-insulated disconnects for thin insulating conductors

Pre-insulated disconnects 2.8 - 5 and 6.35 for thin insulating conductors according to NFF 63808

Cross section (mm²)	Ref.	For tabs (l x e)	max. wire Ø	Insulation Ø		A	B	C	E	Reducer colour	SNCF code	Crimping tool
				mini	maxi.							
0.6 ●	**51032**	2.8 x 0.5	1.04	1.2	2	3.7	18.5	6.5	0.25			TH1 or TH1S
	51082	5 x 0.8		1.2	2	6.4	21.5	7.7	0.5		0-847-6041	
	51182	6.3 x 0.8		1.2	2	7.7	21.5	7.7	0.5		0-847-6042	
0.93 ●	**51033**	2.8 x 0.5	1.3	1.4	2	3.7	18.5	6.5	0.25			TH1 or TH1S
	51083	5 x 0.8		1.4	2	6.4	21.5	7.7	0.5		0-847-6036	
	51183	6.3 x 0.8		1.4	2	7.7	21.5	7.7	0.5		0-847-6038	
1.34 ●	**51132**	5 x 0.8	1.5	1.6	2.6	6.4	21.5	7.7	0.5			TH2 or TH2S
	51232	6.3 x 0.8		1.6	2.6	7.7	21.5	7.7	0.5		0-847-6043	
1.82 ●	**51133**	5 x 0.8	2.6	1.9	2.6	6.4	21.5	7.7	0.5		0-847-6039	TH2 or TH2S
	51233	6.3 x 0.8		1.9	2.6	7.7	21.5	7.7	0.5		0-847-6040	

- Material: tin-plated copper
- Insulation according to EN 45545
- SNCF drawing: 10-5100-991
- RATP drawing: MR-3-53170





Pins terminals for thin insulating conductors

Pins terminals for thin insulating conductors according to NFF 63808

Cross section (mm²)	Ref.	max. wire Ø	Insulation Ø		W	A	L	E	Reducer colour	Crimping tool
			mini	maxi.						
0.6 ●	**251220**	1.04	1.2	2	1.6	12	22.5	1.9		TH1 or TH1S
0.93 ●	**351220**	1.3	1.4	2	1.6	12	22.5	1.9		

Unless otherwise stated. all dimensions are in milimeters.

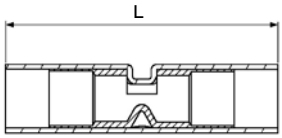
Pre-insulated butt connectors with inspection window

- Material: tin-plated copper.
- Insulation according to EN 45545.
- SNCF drawing: 10-5194-221.
- RATP drawing: MR-3-53171.

For packaging by 100, add C100- before the reference.

Standards:

NFF 00363



Cross section (mm^2)	Ref.	Insulation Ø	L	SNCF code	Crimping tool
0.34 - 1.5 ●	**51391**	3.6	32	7-847-4323	TH1 + stopper HF20 or TH1S
1 - 2.5 ●	**51402**	4	32	7-847-4344	TH2 + stopper HF20 or TH2S
2.6 - 6 ●	**51413**	5.5	41.5	7-847-4120	TH3

Unless otherwise stated. all dimensions are in milimeters

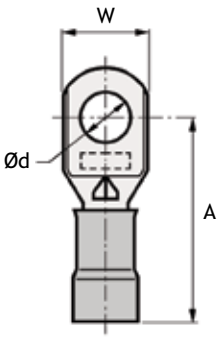
Low power pre-insulated copper tubular lugs

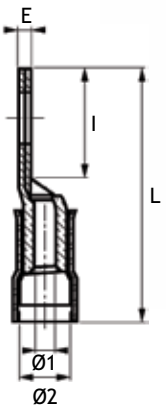
- Material: tin-plated copper.
- Insulation according to EN 45545.
- Suitable for copper cables according NFF or EN standards.
- SNCF drawing: 10-5102-962.
- RATP drawing: MR-3-52970.

For packaging by 100, add C100- before the reference.

Standards:

NFF 00363





51190+ series

Cross section (mm²)		Ref.	W	L	E	Ø d	A	I	Ø 1	Ø 2	SNCF code	Crimping tool
		51193-4BC	11	32	1.6	3.2	25.8	13.6			7-847-7033	
		51193R4BC	8.5	32	2.2	3.2	25.8	13.6			7-847-4628	
		51193RR4BC	8.5	29	2.2	3.2	23.5	10				
		511944BC	11	32	1.6	4.2	25.8	13.6			7-847-7031	
		51194R4BC	8.5	32	2.2	4.2	25.8	13.6			7-847-5040	
		51194RR4BC	8.5	29	2.2	4.2	23.5	10				
1 - 2.5	○	**51195-4BC**	11	32	1.6	5.2	25.8	13.6	2.8	6.8	7-847-4837	TH3
		51195R4BC	8.5	32	2.2	5.2	25.8	13.6			7-847-4540	
		51195RR4BC	8.5	29	2.2	5.2	23.5	10				
		51196-4BC	11	32	1.6	6.4	25.8	13.6			7-847-7032	
		51198-4BC	12.5	32	1.5	8.4	25.8	14			7-847-5605	
		51193RRS4BC	7.5	32	2.2	3.2	27.8	13.5				
		51194RRS4BC	7.5	32	2.2	4.2	27.8	13.5				
		51193-2NR	11	34	1.6	3.2	27.8	13.6				
		51193R2NR	8.5	34	2.2	3.2	27.8	13.6			7-847-5366	
		51193RR2NR	8.5	31	2.2	3.2	25.5	10				
		51194-2NR	11	34	1.6	4.2	27.8	13.6				
		51194R2NR	8.5	34	2.2	4.2	27.8	13.6			7-847-5365	
1 - 2.5	●	**51194RR2NR**	8.5	31	2.2	4.2	25.5	10	2.8	8.8		TH3-2
		51195-2NR	11	34	1.6	5.2	27.8	13.6			7-847-7034	
		51195R2NR	8.5	34	2.2	5.2	27.8	13.6			7-847-5363	
		51195RR2NR	8.5	31	2.2	5.2	25.5	10				
		51196-2NR	11	34	1.6	6.4	27.8	13.6			7-847-5362	
		51198-2NR	12.5	34	1.0	8.4	27.8	14			7-847-5364	

Unless otherwise stated. all dimensions are in milimeters.

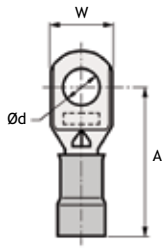
Low power pre-insulated copper tubular lugs

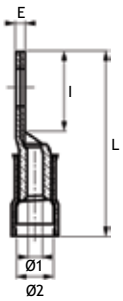
- Material: tin-plated copper.
- Insulation according to EN 45545.
- Suitable for copper cables according NFF or EN standards.
- SNCF drawing: 10-5102-963.
- RATP drawing: MR-3-52969.

For packaging by 100, add C100- before the reference.

Standards:

NFF 00363





C3P+ series

Cross section (mm²)	Ref.	W	L	E	Ø d	A	I	Ø 1	Ø 2	SNCF code	Crimping tool
	C3P40-4J	11	32	1.2	4.2	25.8	13.6			7-847-4955	
	C3P40R4J	8.5	32	1.5	4.2	25.8	13.6				
	C3P40RR4J	8.5	28	1.5	4.2	24	10				
	C3P40RRS4J	7.5	32	1.9	4.2	27.8	14				
2.6 - 6	**C3P50-4J**	11	32	1.2	5.2	25.8	13.6	3.5	6.8	7-847-4956	TH3
	C3P50R4J	8.5	32	1.5	5.2	25.8	13.6				
	C3P50RR4J	8.5	28	1.5	5.2	22.8	10				
	C3P60-4J	11	32	1.2	6.4	25.8	13.6			7-847-4957	
	C3P80-4J	12.5	32	1.2	8.4	25.8	13.6				
	C3P40-2JN	11	34	1.2	4.2	27.8	13.6			7-847-5485	
	C3P40R2JN	8.5	34	1.5	4.2	27.8	13.6				
	C3P40RR2JN	8.5	28	1.5	4.2	24	10				
	C3P50-2JN	11	34	1.2	5.2	27.8	13.6			7-847-5486	
2.6 - 6	**C3P50R2JN**	8.5	34	1.5	5.2	27.8	13.6	3.5	8.8		TH3-2
	C3P50RR2JN	8.5	28	1.5	5.2	22.8	10				
	C3P60-2JN	11	34	1.2	6.4	27.8	13.6			7-847-5487	
	C3P80-2JN	12.5	34	1.2	8.4	27.8	13.6				

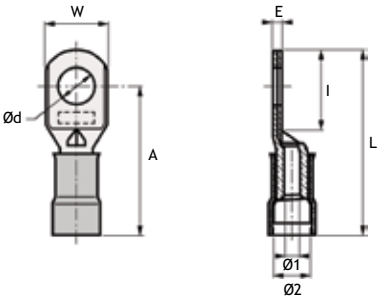
Unless otherwise stated. all dimensions are in milimeters.

Medium power pre-insulated copper tubular lugs

- Material: tin-plated copper.
- Insulation according to EN 45545.
- Suitable for copper cables according NFF or EN standards.
- SNCF drawing: 10-5050-317.
- RATP drawing: MR-3-52971.

Standards:

NFF 00363



ELP series **FLP series** **NP series**

Cross section (mm²)	Ref.	W	L	E	Ø d	A	I	Ø 1	Ø 2	SNCF code
10 ●	**ELP40**	14	42	2.5	4.2	34	17	5	11.2	7-847-5044
	ELP50	14	42	2.5	5.2	34	17	5	11.2	7-847-4963
	ELP60	14	42	2.5	6.3	34	17	5	11.2	7-847-4964
	ELP80	14	42	2.5	8.3	34	17	5	11.2	7-847-4965
	ELP100	16.5	44	2.0	10.3	36	20	5	11.2	7-847-4966
	ELP120	16.5	44	2.0	12.8	36	20	5	11.2	
	ELPU40	10	42	3.3	4.2	32	17	5	11.2	
	ELPU50	10	42	3.3	5.2	32	17	5	11.2	
	ESPU50	13	42	2.3	5.2	34	17	5	11.2	
16 ●	**FLP50**	15	46	2.5	5.2	38	20	6	13	7-847-5734
	FLP60	15	46	2.5	6.3	38	20	6	13	7-847-4969
	FLP80	15	46	2.5	8.3	38	20	6	13	7-847-4970
	FLP100	18	46	2	10.3	38	21	6	13	7-847-4971
	FLP120	18	46	2	12.6	38	21	6	13	
	FLPU50	12.5	46	3.0	5.2	38	20	6	13	
25 ●	**NP50**	15	53	2.5	5.2	43	23	7.7	13.8	7-847-5491
	NP60	15	53	2.5	6.3	43	23	7.7	13.8	7-847-4974
	NP80	15	53	2.5	8.3	43	23	7.7	13.8	7-847-4975
	NP100	17.5	53	2.2	10.3	43	23	7.7	13.8	7-847-5589
	NP120	17.5	53	2.2	12.8	43	23	7.7	13.8	7-847-7034

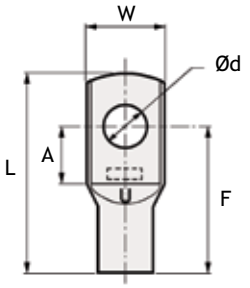
Unless otherwise stated. all dimensions are in milimeters.

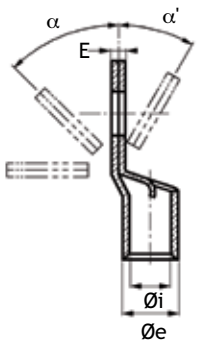
Copper tubular lugs

- Material: tin-plated copper.
- Suitable for copper cables according NFF and EN standard.
- For bent terminals. specify α or α' (α max. 90° - α' maxi 45°).
- SNCF drawing: 10-5050-311.
- RATP drawing: MR-3-52966.

Standards:

NFF 00363
BS 4579 pt2
RSE/STD/024/pt7
IEC61238-1-3





ELS, FLS and C3P...NUE series

Cross section (mm²)	Ref.	Pckg.	W	L	E	Ø d	A	F	Ø i	Ø e	SNCF code
2.5 à 6	**C100C3P40NUE**	100	10.8	26	1.35	4.2	7.4	19.8	3.5	5.5	
	C100C3P50NUE	100	10.8	26	1.35	5.2	7.4	19.8	3.5	5.5	
	C100C3P60NUE	100	10.8	26	1.35	6.4	7.4	19.8	3.5	5.5	
	C100C3P80NUE	100	11.8	26	1.3	8.4	8.8	19.8	3.5	5.5	
10	**ELS40**	1000	14	34	2.5	4.2	9	26	5	8	7-847-7211
	ELS50	1000	14	34	2.5	5.2	9	26	5	8	7-847-7212
	ELS60	1000	14	34	2.5	6.4	9	26	5	8	7-847-7213
	ELS80	1000	14	34	2.5	8.3	9	26	5	8	7-847-7214
	ELS100	1000	16.5	36	2	10.3	12	28	5	8	7-847-7215
	ELS120	1000	16.5	36	2	12.8	12	28	5	8	7-847-7216
	ELSU40	1000	10	34	3.3	4.2	12	25	5	8	
	ELSU50	1000	10	34	3.3	4.2	12	25	5	8	
16	**FLS50**	500	15	37	2.5	5.2	12	29	6	9	
	FLS60	500	15	37	2.5	6.4	12	29	6	9	7-847-7217
	FLS80	500	15	37	2.5	8.3	12	29	6	9	7-847-7218
	FLS100	500	17	38	2	10.3	13	30	6	9	7-847-7219
	FLS120	500	17	38	2	12.8	13	30	6	9	7-847-7220
	FLSU50	500	12.5	37	3	5.2	13	29	6	9	7-847-5486

Unless otherwise stated. all dimensions are in milimeters.

Copper tubular lugs

- Material: tin-plated copper or nickel plated
- Suitable for copper cables according NFF and EN standard
- For bent terminals, specify α or α' (α max. 90° - α' maxi 45°)
- For the number of crimps, refer to the table on page 75.
- SNCF drawing: 10-5050-311
- RATP drawing: MR-3-52966

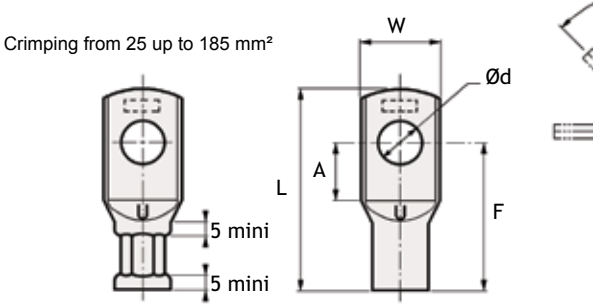
Standards:

NFF 00363

BS 4579 pt2

RSE/STD/024/pt7

IEC61238-1-3



TN series

Cross section (mm²)	Ref.	Pckg.	W	L	E	Ø d	A	F	Ø i	Ø e	SNCF code
25	**TN25-5**	500	15	45	2.5	5.2	13	35	7.7	10.5	7-847-5853
	TN25-6	500	15	45	2.5	6.4	13	35	7.7	10.5	7-847-5854
	TN25-8	500	15	45	2.5	8.3	13	35	7.7	10.5	7-847-5855
	TN25-10	250	17.5	45	2.2	10.3	13	35	7.7	10.5	7-847-4147
	TN25-14	200	21.5	53.5	2	14.5	14.5	39	7.7	10.5	
35	**TN35-6**	250	18	50	3.0	6.4	13	39	9.0	12	7-847-7222
	TN35-8	250	18	50	3.0	8.3	13	39	9.0	12	7-847-7223
	TN35-10	250	18	50	3.0	10.3	13	39	9.0	12	7-847-7224
50	**TN50-6**	200	21	58	3.0	6.4	14	46	10.8	14	7-847-5860
	TN50-8	200	21	58	3.0	8.3	14	46	10.8	14	7-847-5861
	TN50-10	200	21	58	3.0	10.3	14	46	10.8	14	7-847-5862
	TN50-12	100	21	58	3.0	12.8	14	46	10.8	14	7-847-5863
	TN50-14	200	21	58	3.0	14.5	14	46	10.8	14	
60	**TN60-6**	100	22	60	3.2	6.4	14	42	11.8	15	
	TN60-8	100	22	60	3.2	8.3	14	42	11.8	15	
	TN60-10	100	22	60	3.2	10.3	14	42	11.8	15	
	TN60-12	100	22	60	3.2	12.8	14	42	11.8	15	
70	**TN70-6**	100	23	66	3.5	6.4	17	51	12.5	16	
	TN70-8	100	23	66	3.5	8.3	17	51	12.5	16	7-847-5864
	TN70-10	100	23	66	3.5	10.3	17	51	12.5	16	7-847-5865
	TN70-12	100	23	66	3.5	12.8	17	51	12.5	16	7-847-5866
	TN70-14	200	23	66	3.5	14.5	17	51	12.5	16	
	TN70-16	200	23	66	3.5	16	17	51	12.5	16	
95	**TN95-6**	100	27	73	4.0	10.3	18	56.5	14.5	18.5	
	TN95-8	100	27	73	4.0	12.8	18	56.5	14.5	18.5	
	TN95-10	100	27	73	4.0	10.3	18	56.5	14.5	18.5	7-847-5868
	TN95-12	100	27	73	4.0	12.8	18	56.5	14.5	18.5	7-847-5869
	TN95-14	100	27	73	4.0	14.5	18	56.5	14.5	18.5	7-847-5870
	TN95-16	100	27	73	4.0	12.8	18	56.5	14.5	18.5	

Unless otherwise stated, all dimensions are in milimeters.

Copper tubular lugs

- Material: tin-plated copper or nickel plated
- Suitable for copper cables according NFF and EN standard
- For bent terminals, specify α or α' (α max. 90° - α' maxi 45°)
- For the number of crimps, refer to the table on page 75.
- SNCF drawing: 10-5050-311
- RATP drawing: MR-3-52966.

Standards:

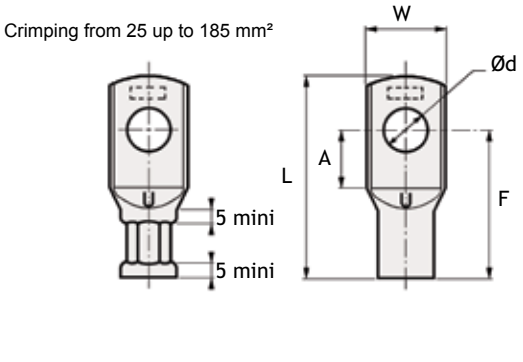
NFF 00363

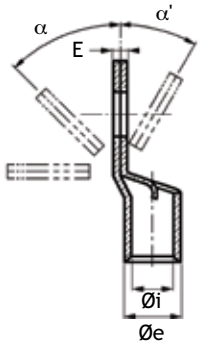
BS 4579 pt2

RSE/STD/024/pt7

IEC61238-1-3

Crimping from 25 up to 185 mm²





TN series

Cross section (mm²)	Ref.	Pckg.	W	L	E	Ø d	A	F	Ø i	Ø e	SNCF code
120	**TN120-8**	50	30	83.5	4.5	8.3	21	65.5	16.5	21	
	TN120-10	50	30	83.5	4.5	10.3	21	66	16.5	21	
	TN120-12	50	30	83.5	4.5	12.8	21	66	16.5	21	7-847-5871
	TN120-14	50	30	83.5	4.5	14.5	21	66	16.5	21	7-847-5872
	TN120-16	50	30	83.5	4.5	16.5	21	66	16.5	21	7-847-5873
150	**TN150-8**	50	32	90	4.5	8.3	23	71	18	23	
	TN150-10	50	32	90	4.5	10.3	23	71	18	23	
	TN150-12	50	32	90	4.5	12.8	23	71	18	23	7-847-5620
	TN150-14	50	32	90	4.5	14.5	23	71	18	23	7-847-5874
	TN150-16	50	32	90	4.5	16.5	23	71	18	23	7-847-5875
	TN150-18	50	32	90	4.5	18.8	23	71	18	23	7-847-5876
185	**TN185-10**	25	38	102	5.5	10.3	23	78	20.5	26	
	TN185-12	25	38	102	5.5	12.8	23	78	20.5	26	7-847-5877
	TN185-14	25	38	102	5.5	14.5	23	78	20.5	26	7-847-5878
	TN185-16	25	38	102	5.5	16.5	23	78	20.5	26	7-847-5879
	TN185-18	25	38	102	5.5	18.8	23	78	20.5	26	7-847-5880
240	**TN240-10**	25	42	110	6	10.3	28	86	23	29	
	TN240-12	25	42	110	6	12.8	28	86	23	29	
	TN240-14	25	42	110	6	14.5	28	86	23	29	7-847-5881
	TN240-16	25	42	110	6	16.5	28	86	23	29	7-847-5882
	TN240-18	25	42	110	6	18.8	28	86	23	29	7-847-5883
	TN240-20	25	42	110	6	21	28	86	23	29	
300	**TN300-16**	25	48	123	7	16.5	32	97	26	33	7-847-4146
	TN300-18	25	48	123	7	18.8	32	97	26	33	7-847-5884
	TN300-20	25	48	123	7	21	32	97	26	33	
	TN300-22	25	48	123	7	22.9	32	97	26	33	7-847-5885

Unless otherwise stated, all dimensions are in milimeters.

Copper tubular lugs

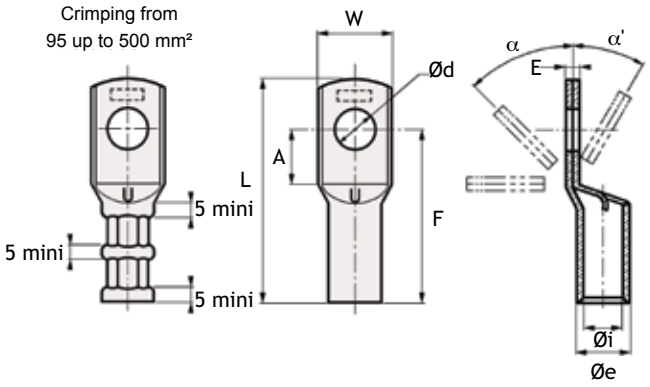
- Material: tin-plated copper.
- Suitable for copper cables according NFF and EN standard.
- For bent terminals, specify α or α' (α max. 90° - α' maxi 45°).
- For the number of crimps, refer to the table on page 75.
- SNCF drawing: 10-5050-312.
- RATP drawing: MR-3-52966.

Standards:

NFF 00363

BS 4579 pt2

RSE/STD/024/pt7



TR series

Cross section (mm²)	Ref.	Pckg.	W	L	E	Ø d	A	F	Ø i	Ø e
95	**TR95-10**	50	30.5	80	6	10.3	18.3	64	15.5	21.5
	TR95-12	50	30.5	80	6	12.8	18.3	64	15.5	21.5
	TR95-14	50	30.5	80	6	14.5	18.3	64	15.5	21.5
	TR95-16	50	30.5	80	6	16.5	18.3	64	15.5	21.5
	TR95-18	50	30.5	80	6	18.8	18.3	64	15.5	21.5
120	**TR120-10**	25	34	88.5	6.6	10.3	24	70.5	17.6	24.5
	TR120-12	25	34	88.5	6.6	12.8	24	70.5	17.6	24.5
	TR120-14	25	34	88.5	6.6	14.5	24	70.5	17.6	24.5
	TR120-16	25	34	88.5	6.6	16.5	24	70.5	17.6	24.5
	TR120-18	25	34	88.5	6.6	18.8	24	70.5	17.6	24.5
150	**TR150-10**	25	37	96	7	10.3	21	75	19	26
	TR150-12	25	37	96	7	12.8	21	75	19	26
	TR150-14	25	37	96	7	14.5	21	75	19	26
	TR150-16	25	37	96	7	16.5	21	75	19	26
	TR150-18	25	37	96	7	18.8	21	75	19	26
	TR150-20	25	37	96	7	21	21	75	19	26
185	**TR185-12**	20	40	104.5	7	12.8	27	82.5	21	28
	TR185-14	20	40	104.5	7	14.5	27	82.5	21	28
	TR185-16	20	40	104.5	7	16.5	27	82.5	21	28
	TR185-18	20	40	104.5	7	18.8	27	82.5	21	28
	TR185-20	20	40	104.5	7	21	27	82.5	21	28
	TR185-22	20	40	104.5	7	22.9	27	82.5	21	28
240	**TR240-16**	20	44	112	7	16.5	27	88	24	31
	TR240-18	20	44	112	7	18.8	27	88	24	31
	TR240-20	20	44	112	7	21	27	88	24	31
	TR240-22	20	44	112	7	22.9	27	88	24	31
300	**TR300-16**	10	50	130	8.5	16.5	28	103	26.5	35
	TR300-18	10	50	130	8.5	18.8	28	103	26.5	35
	TR300-20	10	50	130	8.5	21	28	103	26.5	35
	TR300-22	10	50	130	8.5	22.9	28	103	26.5	35
	TR300-24	10	50	130	8.5	25	28	103	26.5	35
400	**TR400-24**	10	60.5	130	9	24.9	28	100	33	42
500	**TR500-30**	10	72	140	10	30.9	32	110	40	50

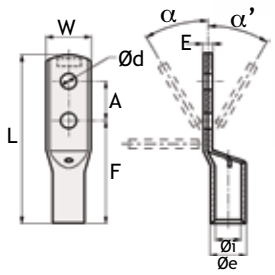
Unless otherwise stated, all dimensions are in milimeters.

Two hole copper tubular lugs

- Material: tin-plated copper.
- Suitable for copper cables according NFF and EN standard.
- For bent terminals, specify α or α' (α max. 90° - α' maxi 45°).
- For the number of crimps, please refer to the table on page 75.
- SNCF drawing: 10-5050-312.
- RATP drawing: MR-3-52966.

Standards:

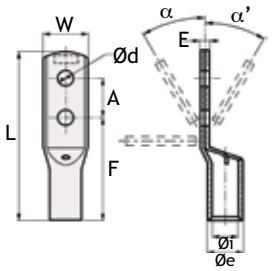
NFF 00363



Two hole and narrow palm terminale

TRS series

Cross section (mm²)	Ref.	Pckg.	W	L	E	Ø d	A	F	Ø i	Ø e
150	**TRS150-12**	25	34	135	4.5	12.8	40		17.5	22.9
185	**TRS185**	25	34.5	151	7	12.8	40	90	21.8	28.5
240	**TRS240**	20	34.5	150	7	12.8	40	90	24	30.6
400	**TRS400**	10	49.5	180	9	14.8	50	105	26.5	35



Two hole foolproofing lugs for motor terminal box

TN series

Cross section (mm²)	Ref.	Pckg.	W	L	E	Ø d	A	F	Ø i	Ø e
50	**TN50-10-24**	50	20	86	3	10.3	24	47	10.8	14
	TN50-10-29	50	20	91	3	10.3	29	47	10.8	14
	TN50-10-34	50	20	96	3	10.3	34	47	10.8	14
70	**TN70-10-24**	50	23	87	3.5	10.3	24	51	12.5	16
	TN70-10-29	50	23	94	3.5	10.3	29	51	12.5	16
	TN70-10-34	50	23	99	3.5	10.3	34	51	12.5	16
95	**TN95-10-24**	50	27.5	93	4	10.3	24	56.5	14.5	18.5
	TN95-10-29	50	27.5	98	4	10.3	29	56.5	14.5	18.5
	TN95-10-34	50	27.5	103	4	10.3	34	56.5	14.5	18.5
120	**TN120-10-24**	50	30	105	4.5	10.3	24	68	16.5	21
	TN120-10-29	50	30	105	4.5	10.3	29	63	16.5	21
	TN120-10-34	50	30	105	4.5	10.3	34	58	16.5	21

Two hole terminals - NEMA space (25.4 mm)

Cross section (mm²)	Ref.	Pckg.	W	L	E	Ø d	A	F	Ø i	Ø e
70	**TN70-10-25.4**	50	23	87	3.5	10.3	25.4	49.5	12.5	16
95	**TN95-10-25.4**	50	26.5	94	4	10.3	25.4	53.5	14.5	18.5
120	**TN120-10-25.4**	50	30	102	4.5	10.3	25.4	61.5	16.5	21
150	**TN150-10-25.4**	50	33	109	5	10.3	25.4	67.5	18	23
240	**TN240-10-25.4**	20	42	113.5	6	10.3	25.4	73	23	29

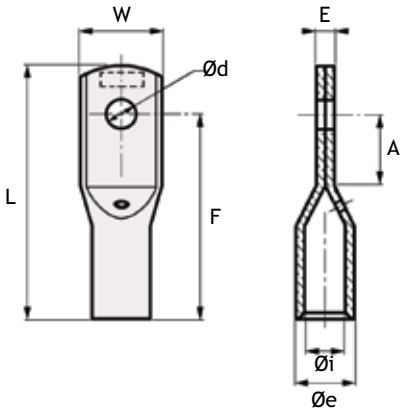
Unless otherwise stated, all dimensions are in milimeters.

Copper tubular lugs with axial and narrow palm, especially suitable to go through cable glands

- Material: tin-plated copper.
- SNCF drawing: 10-5050-313.
- RATP drawing: MR-3-52968.
- Note: two hexagonal crimping from 185 mm².

Standards:

NFF 00363



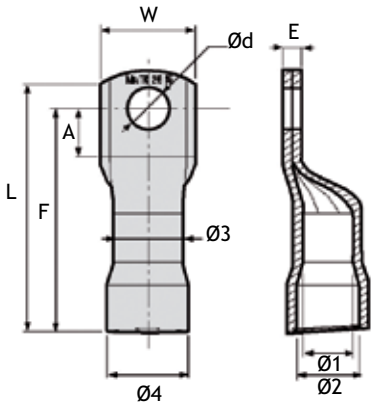
TRS series

Cross section (mm²)	Ref.	Pckg.	W	L	E	Ø d	A	F	Ø i	Ø e	SNCF code	Comments
95	**TRS95-10**	50	24	82	6	10.3	30	67	15.5	21.5		Narrow palm
	TRS95-12	50	24	82	6	12.8	30	67	15.5	21.5		
120	**TRS446-10**	50	23	73	6	10.3	18	56	16.5	22.5		Narrow palm
	TRS446-12	50	23	73	6	12.8	18	56	16.5	22.5	0-847-6109	
	TRS446-14	50	23	73	6	14.5	18	56	16.5	22.5	0-847-6107	
	TRS448-10	50	23	86	6	10.3	28	67	16.5	22.5		
	TRS448-12	50	23	86	6	12.8	28	67	16.5	22.5		
	TRS448-14	50	23	86	6	14.5	28	67	16.5	22.5		
150	**TRS450**	50	30	90	6	12.8	27	71	18.5	24.5		Narrow palm
	TRS450-14	50	30	90	6	14.5	27	71	18.5	24.5		
185	**TRS452-12**	25	32	107	7	12.8	40	87	21	27		
	TRS452	25	32	107	7	14.5	40	87	21	27		
	TRS452-16	25	32	107	7	16.5	40	87	21	27		
	TRS452OBL	25	32	107	7	17/19	40	87	21	27		Ø oblong hole
240	**TRS455**	20	32	107	8	14.5	28	86	23	29		Machining lug drawing 10-5091834
	TRS455-12PE	50	29.5	107	8	12.8	28	86	23	29		Machining lug with narrow palm

Unless otherwise stated, all dimensions are in milimeters.

Copper tubular lugs for flexible copper cables with insulation crimping

- Tin plated copper.
- "B" crimp one wire.
- Hexagonal crimping for insulation.

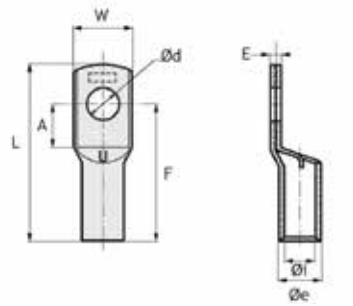


Cross section (mm²)	Ref.	Pckg.	W	L	E	Ø d	A	F	Ø 1	Ø 2	Ø 3	Ø 4	Dies	
													Wire crimping	Insulation crimping
35	**TRS243-8**	50	20	71	3.8	8.3	10	61	10	13.5	14	17.5	C12TRS-243BS	C12TRS-243FH
	TRS243-10	50	20	71	3.8	10.3	10	61	10	13.5	14	17.5		
	TRS243-8EXP	50	20	70	3.8	8.3	10	60	10	14.5	14	18.5		C12TR-S243EXPFH
	TRS243-10EXP	50	20	70	3.8	10.3	10	60	10	14.5	14	18.5		
50	**TRS244-10**	50	23	79	6	10.3	13	67	11	16	17	22	C12TRS-244BS	C12TRS-244FH
	TRS244-12	50	23	79	6	12.3	13	67	11	16	17	22		
	TRS244-10EXP	50	23	78	6	10.3	13	66	11	17	17	23		C12TR-S244EXPFH
	TRS244-12EXP	50	23	78	6	12.3	13	66	11	17	17	23		
70	**TRS245-10**	50	26	82	4.4	10.3	13	70	13.5	17.5	18	22	C12TRS-245BS	C12TRS-245FH
	TRS245-12	50	26	82	4.4	12.8	13	70	13.5	17.5	18	22		
	TRS245-10EXP	50	26	81	4.4	10.3	13	69	13.5	18.5	18	23		C12TR-S245EXPFH
	TRS245-12EXP	50	26	81	4.4	12.8	13	69	13.5	18.5	18	23		
95	**TRS246-10**	50	30	82	6	10.3	15	70	15.5	19.5	21.5	25.5	C12TRS-246BS	C12TRS-246FH
	TRS246	50	30	82	6	12.8	15	70	15.5	19.5	21.5	25.5		
	TRS246-10EXP	50	30	81.5	6	10.3	15	69.5	15.5	20.5	21.5	26.5		C12TR-S246EXPFH
	TRS246EXP	50	30	81.5	6	12.8	15	69.5	15.5	20.5	21.5	26.5		

Unless otherwise stated, all dimensions are in milimeters.

Special copper tubular lugs

Material: tin plated copper.



Standards:

NFF 00363

Narrow palm lugs

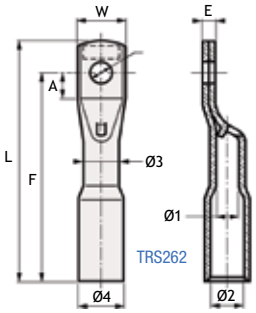
Cross section (mm²)	Ref.	Pckg.	W	L	E	Ø d	A	F	Ø 1	Ø 2	Comments
185	**TRS185-1B**	25	34.5	111	7	12.8	20.5	92	21.8	28.5	Die TRS185, 2 crimps
240	**TRS240-1B**	25	34.5	110	7	12.8	21.5	90.5	24	30.6	Die TRS240, 2 crimps
	TRS242-12	25	38	110	6	12.8	28	86	23	30	Die TRS258, 2 crimps

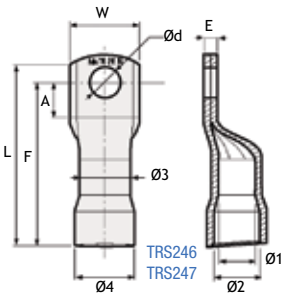
Back traction copper lugs with insulation crimping

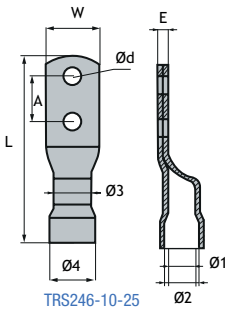
TRS 262: SNCF code 7-847-7035

(SNCF drawing: 10-5050-314

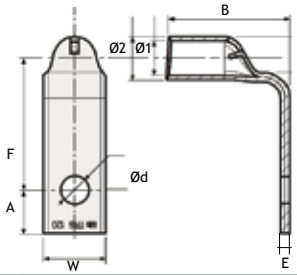
RATP drawing: MR-3-53174)







Cross section (mm²)	Ref.	Pckg.	W	L	E	Ø d	A	F	Ø 1	Ø 2	Ø 3	Ø 4	Com-ments
50	**TRS262**	25	23.3	23.3	23.3	23.3	23.3	23.3	23.3	23.3	17	21.5	
95	**TRS246**	50	30	30	30	30	30	30	30	30	21.5	25.5	1 wire crimping + 1 insulation crimping
	TRS246-10-25	50	30	30	30	30	30	30	30	30	21.5	25.5	
120	**TRS247**	50	30	30	30	30	30	30	30	30	24.5	29.3	



Specific bent lugs

Cross section (mm²)	Ref.	Pckg.	W	L	E	Ø d	A	F	Ø 1	Ø 2	Comments
95	**TRS95-12-90E**	50	26.5	44	3.6	12.8	16	76	14.5	18.5	Die TN95, 1 crimping
	TRS95-16-90E	50	18.5	44	3.6	16.5	16	76	14.5	18.5	
120	**TRS120-12-90E**	25	30.2	60	4.5	12.8	16	65	16.5	21	Die TN120, 1 crimping
150	**TRS150-12-90E**	25	33	60	5	12.8	19	65	18	23	Die TN150, 1 crimping
	TRS150-16-90E	25	33	60	5	16.5	16	65	18	23	
185	**TRS185-12-90E**	25	37.5	76	5.5	12.8	24	70	20.6	26	Die TN185, 1 crimping
240	**TRS240-16-90E**	20	42	81	6	16.5	24	75	23	29	Die TN240, 2 crimps

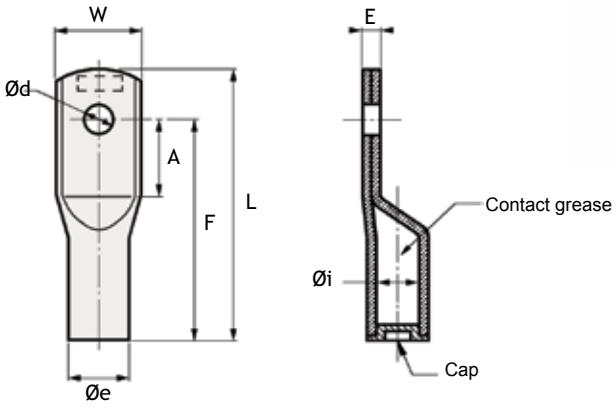
Unless otherwise stated, all dimensions are in milimeters.

Aluminium tubular lugs

- Material: tin plated aluminium.
- SNCF drawing: 10-5089-290.
- RATP drawing: MR-3-53175.
- Note: from 50 up to 150 mm²: two hexagonal crimping.

Standards:

NFF 00363



Cross section (mm²)	Ref.	Pckg.	W	L	E	Ø d	A	F	Ø i	Ø e	SNCF code
50	**AL50-6**	100	20.6	65	5	6.4	17	52	10.8	15.8	
	AL50-8	100	20.6	65	5	8.3	17	52	10.8	15.8	
	AL50-10	100	20.6	65	5	10.3	17	52	10.8	15.8	
	AL50-12	100	20.6	65	5	12.8	17	52	10.8	15.8	
60	**AL60-8**	100	20.6	69	5	8.3	20	56	11.6	16.3	
	AL60-10	100	20.6	69	5	10.3	20	56	11.6	16.3	7-847-4595
	AL60-12	100	21.5	69	5	12.8	20	56	11.6	16.3	
70	**AL70-8**	100	21	82	4.6	8.3	22.5	65	12.5	17	
	AL70-10	100	21	82	4.6	10.3	22.5	65	12.5	17	
	AL70-12	100	21	82	4.6	12.8	22.5	65	12.5	17	
95	**AL95-8**	50	28	87	6	8.3	24.5	70.5	14	20	
	AL95-10	50	28	87	6	10.3	24.5	70.5	14	20	
	AL95-12	50	28	87	6	12.8	24.5	70.5	14	20	
	AL95-14	50	28	87	6	14.5	24.5	70.5	14	20	
120	**AL120-10**	50	28	87	6	10.3	24.5	70.5	16.5	22	
	AL120-12	50	28	87	6	12.8	24.5	70.5	16.5	22	
	AL120-14	50	28	87	6	14.5	24.5	70.5	16.5	22	
150	**AL150-10**	50	28.5	95	6	10.3	28	82	18.5	24	
	AL150-12	50	28.5	95	6	12.8	28	82	18.5	24	
	AL150-14	50	28.5	95	6	14.5	28	82	18.5	24	
	AL150-16	50	28.5	95	6	16.5	28	82	18.5	24	
	AL150 B-14	50	28.5	110	6	14.5	25.5	90	18.5	24	7-847-8251
	AL150 B-16	50	28.5	110	6	16.5	25.5	90	18.5	24	
	AL150 B-18	50	28.5	110	6	18.8	25.5	90	18.5	24	

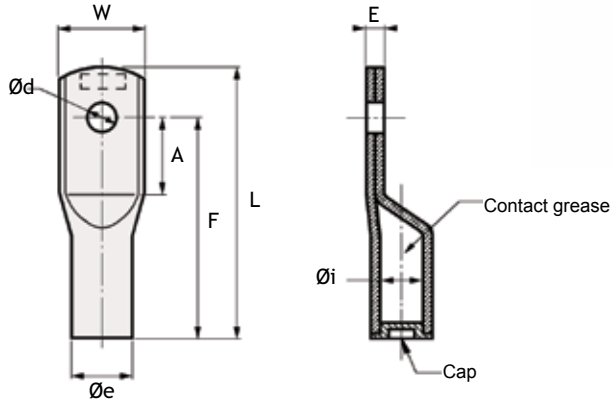
Unless otherwise stated, all dimensions are in milimeters.

Aluminium tubular lugs

- Material: tin plated aluminium.
- SNCF drawing: 10-5089-290.
- RATP drawing: MR-3-53175.
- Note: from 185 up to 460 mm² : two hexagonal crimping.

Standards:

NFF 00363



Cross section (mm²)	Ref.	Pckg.	W	L	E	Ø d	A	F	Ø i	Ø e	SNCF code
185	**AL185-10**	25	34	130	6	10.3	25.5	110	21	27	
	AL185-12	25	34	130	6	12.8	25.5	110	21	27	
	AL185-14	25	34	130	6	14.5	25.5	110	21	27	
	AL185-16	25	34	130	6	16.5	25.5	110	21	27	
240	**AL240-10**	25	41	130	6,5	10,4	28	110	23	30	
	AL240-12	25	41	130	6.5	12.8	28	110	23	30	
	AL240-14	25	41	130	6.5	14.5	28	110	23	30	7-847-7355
	AL240-16	25	41	130	6.5	16.5	28	110	23	30	
	AL240-18	25	41	130	6.5	18.8	28	110	23	30	
	AL240-20	25	41	130	6.5	21	28	110	23	30	
260	**AL260-14**	20	38.5	114	6.5	14.5	29	94	25.5	32	
	AL260-16	20	38.5	114	6.5	16.5	29	94	25.5	32	
	AL260-18	20	38.5	114	6.5	18.8	29	94	25.5	32	
300	**AL300-14**	20	46	136	8.8	14.5	30	113	27	34.6	
	AL300-16	20	46	136	8.8	16.5	30	113	27	34.6	
	AL300-18	20	46	136	8.8	18.8	30	113	27	34.6	
	AL300-20	20	46	136	8.8	21	30	113	27	34.6	
460	**AL460-16**	10	52	150	10	16.5	35	125	32.5	42	
	AL460-18	10	52	150	10	18.8	35	125	32.5	42	
	AL460-20	10	52	150	10	21	35	125	32.5	42	
	AL460-22	10	52	150	10	23	35	125	32.5	42	
	AL460-24	10	52	150	10	25	35	125	32.5	42	

Unless otherwise stated, all dimensions are in milimeters.

A range of nickel plated lugs, TN copper series,

A solution for use above 110 degrees.


ET300
MTR

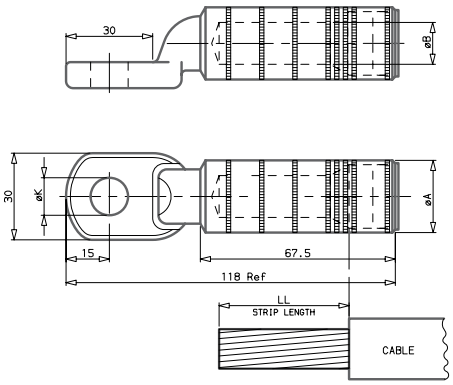
03

I Railway infrastructure

Forged lugs for aluminium cables

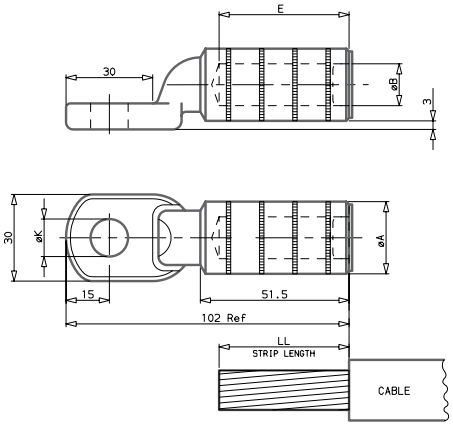
- Material: Aluminium 99.5%.
- Tin-plated : 15 µm.
- Crimping position.
- Short cut current :
* 75 mm² = 25 KA ms.
* 110 mm² = 40 KA 100 ms.
- Tightening torque tested to 80 Nm which guarantee a perfect installation same with high vibration level.

DEUTSCHE BANN APPROUVED



Long barrel terminal for rail connection with wire and insulation crimping

Cross section (mm²)	Ref.	Ø K	Ø A	Ø B	Insula-tion Ø	Type of cables	Die
110/100	**Y4CA110A22M12HTN15**	13	25	14.5	22	(N)AYY-0 1x110 RM 0.6/1KV ALMG (N)A(ST)YY-0 1x110 RM 0.6/1KV ALMGST (N)A(ST)YY-0 1x100 RM 0.6/1KV ALMGST	U215BGE5T (3 crimps) with 60 KN tool
	Y4CA110A22M16HTN15	17	25	14.5	22		
75	**Y4CA075A22M12HTN15**	13	25	12	20	(N)A(ST)YY-0 1x75 RM 0.6/1KV ALMGST	
	Y4CA075A22M16HTN15	17	25	12	20		



Short barrel terminal for noise protection wall grounding

Cross section (mm²)	Ref.	Ø K	Ø A	Insulation Ø	Type of cables	Matrice
110/100	**Y4CA110A22M12TN15**	13	25	14.5	(N)AYY-0 1x110 RM 0.6/1KV ALMG (N)A(ST)YY-0 1x110 RM 0.6/1KV ALMGST (N)A(ST)YY-0 1x100 RM 0.6/1KV ALMGST	U215BGE5T (3 crimps) with 60 KN tool
	Y4CA110A22M16TN15	17	25	14.5		
75	**Y4CA075A22M12TN15**	13	25	12	(N)A(ST)YY-0 1x75 RM 0.6/1KV ALMGST	
	Y4CA075A22M16TN15	17	25	12		

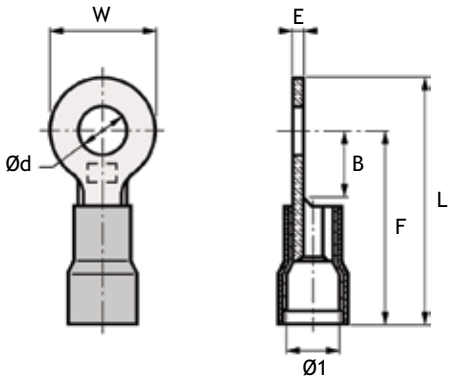
Unless otherwise stated, all dimensions are in milimeters.

04

I Signalling and stationary equipment products

Pre-insulated ring terminals

- Material: tin-plated copper.
- Insulation according to EN 45545.
- SNCF drawing: 10-5050-309.
- RATP drawing: MR-3-52964.



Standards:

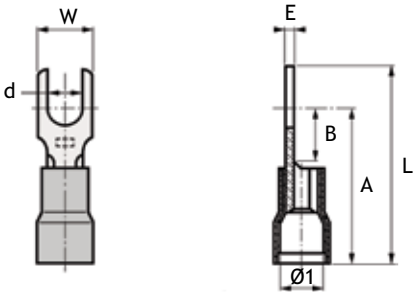
NFF 00363

Cross section (mm²)	Ref.	Ref. SNCF	W	L	E	Ø d	F	B	Ø 1	SNCF code	Crimping tool
0.34 - 1.5 ●	**51143-2**	7-847-4839	5.6	17.3	0.8	3.2	14.5	3.5	3.6	0-391-6840	TH1S
	51154-2	7-847-5028	8	21	0.8	4.2	17	6	3.6		
	51155-2	7-847-1112	8	21	0.8	5.2	17	6	3.6		
	51136-2	7-847-4251	12.5	27	0.8	6.3	20.7	6.5	3.6		
0.34 - 1.5 ○	**51143-2BC**	7-847-5369	5.6	17.3	0.8	3.2	14.5	3.5	3.6	0-391-6840	TH1S
	51154-2BC	7-847-5368	8	21	0.8	4.2	17	6	3.6		
	51135-2BC	7-847-4984	12.5	27	0.8	5.2	20.7	6.5	3.6		
	51136-2BC	7-847-5367	12.5	27	0.8	6.3	20.7	6.5	3.6		
1 - 2.5 ●	**51183-2**	7-847-5237	8.6	21	0.8	3.2	16.7	6	4.8	7-847-7141	TH2S
	51184-2	7-847-5532	8.6	21	0.8	4.2	16.7	6	4.8		
	51185-2	7-847-5483	8.6	21	0.8	5.2	16.7	6	4.8		
	51176-2	7-847-5484	12.5	27	0.8	6.3	20.7	6	4.8		
	51178-2	7-847-4678	12.5	27	0.8	8.4	20.7	6	4.8		
2.6 - 6 ●	**STC 1-4-2JN**	7-847-5389	9.6	29.5	1	4.2	24.7	7	8.8	0-391-6837	TH3-2
	STC 1-5-2JN	7-847-4679	9.6	29.5	1	5.2	24.7	7	8.8		
	STC 1-6-2JN	7-847-4216	9.6	29.5	1	6.3	24.7	7	8.8		
	STC 2-8-2JN	7-847-4363	13.8	35	1	8.4	28.1	8	8.8		
	STC 2-10-2JN	7-847-5390	13.8	35	1	10.3	28.1	8	8.8		
	STC 2-12-2JN	7-847-4886	19	42	1	12.8	32.5	14	8.8		

Unless otherwise stated, all dimensions are in milimeters.

Pre-insulated fork terminals

- Material: tin-plated copper.
- Insulation according to EN 45545.
- SNCF drawing: VZA 17692/000002.



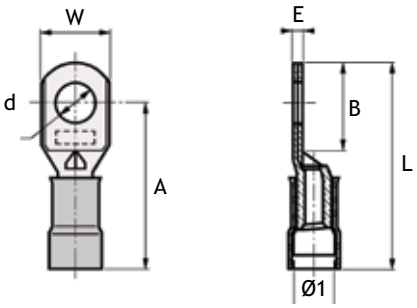
Standards:

NFF 00363

Cross section (mm²)	Ref.	Ref. SNCF	W	L	E	Ø d	A	B	Ø 1	SNCF code	Crimping tool
	STRGFA1-3-2	7-847-5750	5.5	20	0.8	3.2	16.3	6	3.6		
0.34 - 1.5 ●	**STRGFA2-4-2**	7-847-5006	8	20	0.8	4.2	16.4	6	3.6	0-391-6840	TH1S
	STRGFA2-5-2	7-847-5007	8	20	0.8	5.3	16.4	6	3.6		
0.34 - 1.5 ○	**STRGFA2-4-2BC**	7-847-5005	8	20	0.8	4.2	16.4	6	3.6	0-391-6840	TH1S
	STRGFB1-3-2	7-847-4682	7.9	20.5	0.8	3.2	16.5	6	4.8		
1 - 2.5 ●	**STRGFB1-4-2**	7-847-4683	7.9	20.5	0.8	4.2	16.5	6	4.8	7-847-7141	TH2S
	STRGFB2-5-2	7-847-4684	9.5	23	0.8	5.3	18.8	8	4.8		
	STRGFC1-4-2JN	7-847-5391	9.5	29	1	4.2	24.2	4.5	8.8		
2.6 - 6 ●	**STRGFC1-5-2JN**	7-847-5392	9.5	29	1	5.2	24.2	4.5	8.8	0-391-6837	TH3-2
	STRGFC1-6-2JN	7-847-5119	9.5	29	1	6.2	24.2	4.5	8.8		

Pre-insulated tubular lugs

- Material: tin-plated copper.
- Insulation according to EN 45545.
- SNCF drawing: VZA 17692/000008.



Cross section (mm²)	Ref.	Ref. SNCF	W	L	E	Ø d	A	B	Ø 1	SNCF code	Crimping tool
	51193R-2NR	7-847-5366	8.1	34	2.2	3.2	27.8	7.4	8.8		
	51194R-2NR	7-847-5365	8.1	34	2.2	4.2	27.8	7.4	8.8		
1 - 3.18 ●	**51195R-2NR**	7-847-5363	8.1	34	2.2	5.2	27.8	7.4	8.8	0-391-6837	TH3-2
	51196-2NR	7-847-5362	10.6	34	1.6	6.4	27.8	7.4	8.8		
	51198-2NR	7-847-5364	11.6	34	1	8.4	27.8	7.4	8.8		
7.42 ●	**C4P60-2G**	7-847-5361	10.6	34	1.2	6.4	25.8	7.4	8.8	0-391-6837	TH3-2
	C4P80-2G	7-847-5661	11.6	34	1.2	8.4	22.8	7.4	8.8		

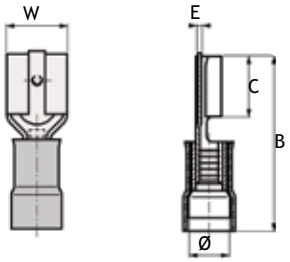
Unless otherwise stated, all dimensions are in milimeters.

Pre-insulated disconnects 2.8 - 5 - 6.35 mm

- Material: tin plated phophorous bronze.
- Insulation according to EN 45545.
- SNCF drawing: VZA 17692/000001.

Standards:

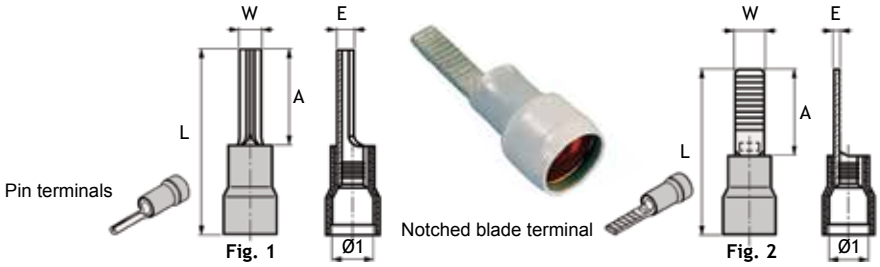
NFF 00363



Cross section (mm²)	Ref.	Ref. SNCF	Coating	For tabs	W	B	C	E	Ø	SNCF code	Crim-ping tool
0.34 - 1.5 ●	**51027**	7-847-1902	Gold	2.8 x 0.5	3.8	19.5	6.5	0.25	3.6	0-391-6844	TH1-90
	51081-2	7-847-4728	Tin	5 x 0.8	6.4	21	7.7	0.5	3.6	0-391-6840	TH1S
	51181-2	7-847-4700	Tin	6.35 x 0.8	7.7	21	7.7	0.5	3.6		
0.34 - 1.5 ○	**51328**	7-847-1900	Gold	2.8 x 0.3	3.8	19.5	6.5	0.25	3.6	0-391-6844	TH1-90
	51028	7-847-1901	Gold	2.8 x 0.5	3.8	19.5	6.5	0.25	3.6		
1 - 2.5 ●	**51131-2**	7-847-4999	Tin	5 x 0.8	7.7	21	7.7	0.5	4.8	7-847-7141	TH2-S
	51231-2	7-847-4797	Tin	6.35 x 0.8	7.7	20.2	7.7	0.5	4.8	7-847-7141	TH1-S
1 - 3.18 ●	**51261-2NR**	7-847-6798	Tin	6.35 x 0.8	7.7	27.5	7.7	0.5	8.8	0-391-6837	TH3-2

Pre-insulated blade and pins terminals

- Material: tin-plated copper
- Insulation according to EN 45545
- SNCF Drawing: VZA 17692/000003.



Cross section (mm²)	Ref.	Ref. SNCF		W	A	L	Ø 1	E	SNCF code	Crimping tool
0.34 - 1.5 ●	**51220-2**	7-847-5051	Fig. 1	1.9	10	22.5	3.6	1.9	0-391-6840	TH1S
	51225-2	7-847-5556	Fig. 2	2.9	10.2	21	3.6	0.8		TH1S*
0.34 - 1.5 ○	**51220-2 BC**	7-847-5359	Fig. 1	1.9	10	22.5	3.6	1.9	0-391-6840	TH1S
	51225-2 BC	7-847-5890	Fig. 2	2.9	10.2	21	3.6	0.8		TH1S*
1 - 2.5 ●	**51222-2**	7-847-5002	Fig. 1	1.8	10	22	4.8	1.8	7-847-7141	TH2S
	51226-2	7-847-5555	Fig. 2	3.9	11.5	22	4.8	0.8		
1 - 3.18 ●	**53226-2 R**	7-847-6038	Fig. 2	3.9	14	30	8.8	0.9	0-391-6837	TH3-2
1 - 3.18 ●	**53226-2 NR**	7-847-6037	Fig. 2	3.9	14	30	8.8	0.9	0-391-6837	TH3-2
2.6 - 6 ●	**51223-2 JN**	7-847-5393	Fig. 1	2.5	12	28	8.8	2.5	0-391-6837	TH3-2
	51227-2 JN	7-847-5370	Fig. 2	3.9	12	30.5	8.8	1.0		
7.42 ●	**51227-2G**	7-847-6352	Fig. 2	3.9	16	32	8.8	1.2	0-391-6837	TH3-2

For on edge crimping, use TH1-90 tool (SNCF code :0-391-6844).

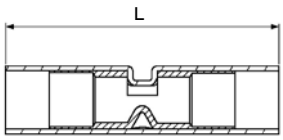
Unless otherwise stated, all dimensions are in milimeters.

Pre-insulated butt connectors with inspection window

- Material: tin-plated copper.
- Insulation according EN 45545.
- SNCF drawing: VZA 17692/000004.

Standards:

NFF 00363

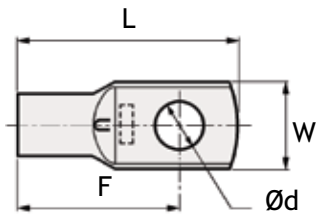


Cross section (mm^2)	Ref.	Ref. SNCF	L	Ø	SNCF code	Crimping tool
0.34 - 1.5	**51391**	7-847-4323	32	3.6	0-391-6840	TH1S
1 - 2.5	**51402**	7-847-4344	32	4	7-847-7141	TH2S
2.6 - 6	**51413**	7-847-4120	41.5	5.5	0-391-6837	TH3-2

Unless otherwise stated, all dimensions are in milimeters.

Copper tubular lugs

- Material: tin-plated copper.
- SNCF drawing: VZA 17692/000006.



Standards:

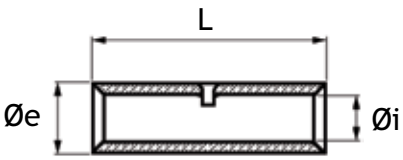
NFF 00363

Cross section (mm²)	Ref.	Pckg.	Ref. SNCF	W	L	Ø d	F	SNCF code Tools
6.6 - 10	**ELS40**	1000	7-847-7211	14	34	4.2	26	0-391-6832 or 0-391-6850 + 0-391-6851
	ELS50	1000	7-847-7212	14	34	5.2	26	
	ELS60	1000	7-847-7213	14	34	6.4	26	
	ELS80	1000	7-847-7214	14	34	8.3	26	
	ELS100	1000	7-847-7215	16.5	36	10.3	28	
	ELS120	1000	7-847-7216	16.5	36	12.8	28	
16	**FLS60**	500	7-847-7217	15	37	6.4	29	0-391-6832 or 0-391-6850 + 0-391-6852
	FLS80	500	7-847-7218	15	37	8.3	29	
	FLS100	500	7-847-7219	17	38	10.3	30	
	FLS120	500	7-847-7220	17	38	12.8	30	
25	**TN25-5**	500	7-847-5853	14.3	45	5.2	35	0-391-6832 or 0-391-6850 + 0-391-6853
	TN25-6	500	7-847-5854	14.3	45	6.4	35	
	TN25-8	500	7-847-5855	14.3	45	8.3	35	
	TN25-10	500	7-847-4147	17	45	10.3	35	
	TN25-12	500	7-847-7221	17	45	12.8	35	
	TN25-14	200		21.5	53.5	14.5	39	
35	**TN35-6**	250	7-847-7222	18	50	6.4	39	0-391-6832 or 0-391-6850 + 0-391-6851
	TN35-8	250	7-847-7223	18	50	8.3	39	
	TN35-10	250	7-847-7224	18	50	10.3	39	
	TN35-12	250	7-847-7225	18	50	12.8	39	
50	**TN50-6**	200	7-847-5860	19	58	6.4	46	0-391-6850 + 0-391-6852
	TN50-8	200	7-847-5861	19	58	8.3	46	
	TN50-10	200	7-847-5862	19	58	10.3	46	
	TN50-12	200	7-847-5863	19	58	12.8	46	
	TN50-14	200		19	58	14.5	46	
60	**TN60-6**	100		22	60	6.4	46	
70	**TN70-6**	100		22	66	6.4	51	0-391-6850 + 0-391-6853
	TN70-8	100	7-847-5864	22	66	8.3	51	
	TN70-10	100	7-847-5865	22	66	10.3	51	
	TN70-12	100	7-847-5866	22	66	12.8	51	
	TN70-14	200		22	66	14.5	51	
	TN70-16	200		22	66	16.5	51	

Unless otherwise stated, all dimensions are in milimeters.

Copper butt connectors

- Material: tin -plated copper.
- SNCF drawing: VZA 17692/000005.



Standards:

NFF 00363

Cross section (mm^2)	Ref.	Ref. SNCF	Pckg.	L	Ø i	Ø e	SNCF code Tools
0.3 - 1.5	**MJ1.5**	7-847-4598	100	14.5	1.7	3.2	7-931-0114
1 - 2.5	**MJ2.5**	7-847-5358	100	14.5	2.2	3.9	7-931-0114
2.6 - 6	**MJ3S**	7-847-5357	100	14.5	3.2	4.9	7-931-0114
6.6 - 10	**MJ10SH**	7-847-7200	100	30	4.7	8	0-391-6832 ou 0-391-6850 + 0-391-6851
16	**MJ16SH**	7-847-7201	100	35	5.6	9	0-391-6832 ou 0-391-6850 + 0-391-6852
25	**MJ25SH**	7-847-7202	100	35	7.4	10.4	0-391-6832 ou 0-391-6850 + 0-391-6853
35	**MJ35SH**	7-847-7203	100	35	8.6	11.9	0-391-6832 ou 0-391-6850 + 0-391-6851
50	**MJ50SH**	7-847-7204	50	45	10.4	13.9	0-391-6850 + 0-391-6852
70	**MJ70SH**	7-847-7205	50	50	12.1	15.9	0-391-6850 + 0-391-6853
95	**MJTN95**		25	55	14.5	18.5	
120	**MJTN120**		50	56	16.5	21	
150	**MJTN150**		10	70	18	23	
185	**MJTN185**		25	80	20.6	26	
240	**MJTN240**		25	90	23	29	
300	**MJTN300**		25	95	26	33	

Unless otherwise stated, all dimensions are in milimeters.

BLUE ADVANCED

The future of crimping!

- Qualified to NFF 00363 standard.
- Mobile & ergonomic tool.
- High crimping performance.

made in france

Ref. : ET300

05

I Tooling

Selection table

Hand crimping tools and electro hydraulic crimping tool

	Hand crimping tools					
	Hand crimping tools					Electro hydraulic crimping tool
	TH1-TH1S	TH1-90	TH2-TH2S	TH3	TH3-2	ET300
						
Pre-insulated products	Page 56	Page 56	Page 57	Page 57	Page 57	Page 58
Pre-insulated terminals, disconnects, pins and butt connectors with inspection window	0.34 to 1.5 mm^2		1 to 2.5 mm^2			0.34 to 6 mm^2*
Gilded disconnects 2.8 mm and blade terminals (on edge crimping)		0.34 to 1.5 mm^2				
Terminals 51190 series and white disconnects (max. insulating Ø : 6.8 mm)				1 to 2.5 mm^2		1 to 2.5 mm^2
Terminals C3P+ series and yellow disconnects (max. insulating Ø : 6.8 mm)				2.6 to 6 mm^2		2.6 to 6 mm^2
Terminals C3P+ series, pins, disconnects yellow and black (max. insulating Ø : 8.8 mm)					1 to 2.5 mm^2	1 to 2.5 mm^2
Terminals C3P+ series, pins and disconnects yellow striped black (max. insulating Ø : 8.8 mm)					2.6 to 6 mm^2	2.6 to 6 mm^2

*Except butt connectors with inspection window.

Crimping tools

Mechanical, hydraulic, electro-hydraulic and hydraulic sets.

Hydraulic pumps and sets 700 bars		
Hydraulic sets		
SPM 4095K	**PA 133 K**	**SPT21-585KCM**
		
Page 71	Page 71	Page 72

	Tooling					Hydraulic compression heads				
	Mechanical tools	Hydraulic and electrohydraulic tools								
	PMM1CF	**EID51**	**ESD50**	**ESU137**	**TR1461**	**TR1462**	**SU130K**	**VF130K**	**SU210K**	**VF210K**
										
Tubular lugs and connectors	Page 59	Page 61	Page 62	Page 64	Page 67	Page 67	Page 68	Page 68	Page 69	Page 69
Medium power pre-insulated copper tubular lugs ELP-FLP - NP series				10 to 25 mm^2	10 to 25 mm^2	10 to 25 mm^2				
Copper tubular lugs C3P...NUE-ELS-FLS-TN series	2.6 to 70 mm^2	2.6 to 70 mm^2	2.6 to 70 mm^2	10 to 240 mm^2	10 to 70 $mm2^2$	10 to 95 mm^2	10 to 150 mm^2	10 to 150 mm^2	10 to 300 mm^2	10 to 300 mm^2
Copper tubular lugs TR series									95 to 500 mm^2	95 to 500 mm2
Copper tubular lugs TRS series							95 to 120 mm^2	95 to 120 mm^2	95 to 400 mm^2	95 to 400 mm^2
Aluminium tubular lugs AL series							50 to 95 mm^2	50 to 95 mm^2	50 to 460 mm^2	50 to 460 mm^2

Tooling for pre-insulated products

Hand crimping tools for pre-insulated terminals, disconnects, pins, blades and butt connectors.

Hand crimping tool for pre-insulated products

0.34 to 1 .5 mm²

- Crimping of red pre-insulated terminals, disconnects, pins, blades and window butt connectors from 0.34 to 1.5 mm².
- Aluminium body.
- Exceptional low gearing.
- High quality crimping by linear movement of dies.
- Adjustable crimping of cable insulation by eccentric.
- Safety ratchet.
- Positioner stopper.
- Crimping dies identification reference mark: 1 dash.

Delivered in individual box with control and instruction leaflet.

- Length: 290 m.
- Weight: 0.500 kg.

TH 1 : delivered with stopper HD20 for terminals, disconnects and pins.

Ref.	SNCF
TH1	7-847-7140

TH 1 S : delivered with stopper HF20 for terminals, disconnects, pins and butt connectors.

Ref.	SNCF
TH1S	0-391-6840

Complementary accessory: PG1: Go-no-go gauge.

Hand tool for crimping on edge of pre-insulated disconnects and blades

0.34 to 1 .5 mm²

- Crimping on edge of 2.8 pre-insulated disconnects and blade from 0.34 to 1.5 mm².
- Aluminium body.
- Exceptional low gearing.
- High quality crimping by linear movement of dies.
- Adjustable crimping of cable insulation by eccentric.
- Safety ratchet.
- Positioner stopper.
- Crimping dies identification reference mark: 1 dash.

Delivered in individual box with control and instruction leaflet.

- Length: 290 mm.
- Weight: 0.500 Kg.
- Delivered with stopper HD28-90.

Ref.	SNCF
TH1-90	0-391-6844

Complementary accessory: PG1: Go-no-go gauge.

Go-no-go gauge page 76

Hand crimping tool for pre-insulated products — 1 to 2.5 mm²

- Crimping of blue pre-insulated terminals, disconnects, pins, blades and window butt connectors from 1.0 to 2.5 mm².
- Aluminium body.
- Exceptional low gearing.
- High quality crimping by linear movement of dies.
- Adjustable crimping of cable insulation by eccentric.
- Safety ratchet.
- Positioner stopper.
- Crimping dies identification reference mark: 2 dashes.

Delivered in individual box with control and instruction leaflet.

- Length: 290 mm.
- Weight: 0.500 kg.

TH2: delivered with stopper HF20 for terminals, disconnects, pins and blade terminals.

Ref.	SNCF
TH2	7-847-7141

TH2S: delivered with stopper HF20 for terminals, disconnects, pins and butt connectors.

Ref.	SNCF
TH2S	7-847-7141

Complementary accessory: PG2: Go-no-go gauge.

Hand crimping tool for pre-insulated products — 1 to 6 mm²

- Strong and practical steel tools.
- High quality crimping by linear movement of dies.
- Adjustable crimping of cable insulation by a pin.
- Safety ratchet.
- Positioner stopper ATH23.
- Crimping dies identification reference mark: 3 dots.

Delivered in individual box with control and instruction leaflet.

- Length: 330 mm - Weight: 0.905 Kg.
- Handles colour: TH3 = 1 yellow and one white - TH3-2 = one yellow and one black.

TH3: max. insulating diameter: 6.8 mm

- Crimping of white terminals 51190 series and disconnects from 1 to 2.5 mm².
- Crimping of yellow terminals C3P serties and disconnects from 2.6 to 6 mm².

Ref.	SNCF
TH3	7-847-7142

TH3 : max. insulating diameter: 8.8 mm

- Crimping of black terminals 51190 series and disconnects from 1 to 2.5 mm²
- Crimping of yellow black terminals C3P series and disconnects from 2.6 to 6 mm².

Ref.	SNCF
TH3-2	7-847-7143 ou 0-391-6837

Complementary accessory: PGH3: Go-no-go gauge.

Go-no-go gauge page 76

Electro-hydraulic crimping tool for pre-insulated lugs, clips and butt splices

Electro-hydraulic crimping tool for pre-insulated products 0.34 to 6 mm²

The ET300 has been designed with the operator's usual crimping gestures in mind, to develop a tool that is intuitive and ergonomic to use. The remote electro-hydraulic unit, powered by a MAKITA battery, is connected to the crimping hand tool by a 3 m flexible.

Kit ET300

Ref.
ET300K1BLCM

Kit composition	Ref.
Crimping tool	**ET300**
2 batteries	**BL1850B**
Charger 220V	**CLM1890HC**

Accessories:

Die	Stopper	Go-no-go gauge
ET331	ETB31 ETB31-90*	PG1
ET332	ETB32 ETB30**	PG2
ET333 **ET333-2**	ETB33	PGH3

*for on edge crimping (90°).
**specific stopper ET332 for blue disconnect.

ET331 **ET332** **ET333** **ET333-2**

Go-no-go gauge page 76

Mechanical crimping tool for non insulated lugs and splices

Hand crimping tool
PMM1CF — POWER 50 kN

- Hand crimping tool with reversible dies.
- Length: 420 mm.
- Weight: 2 Kg.

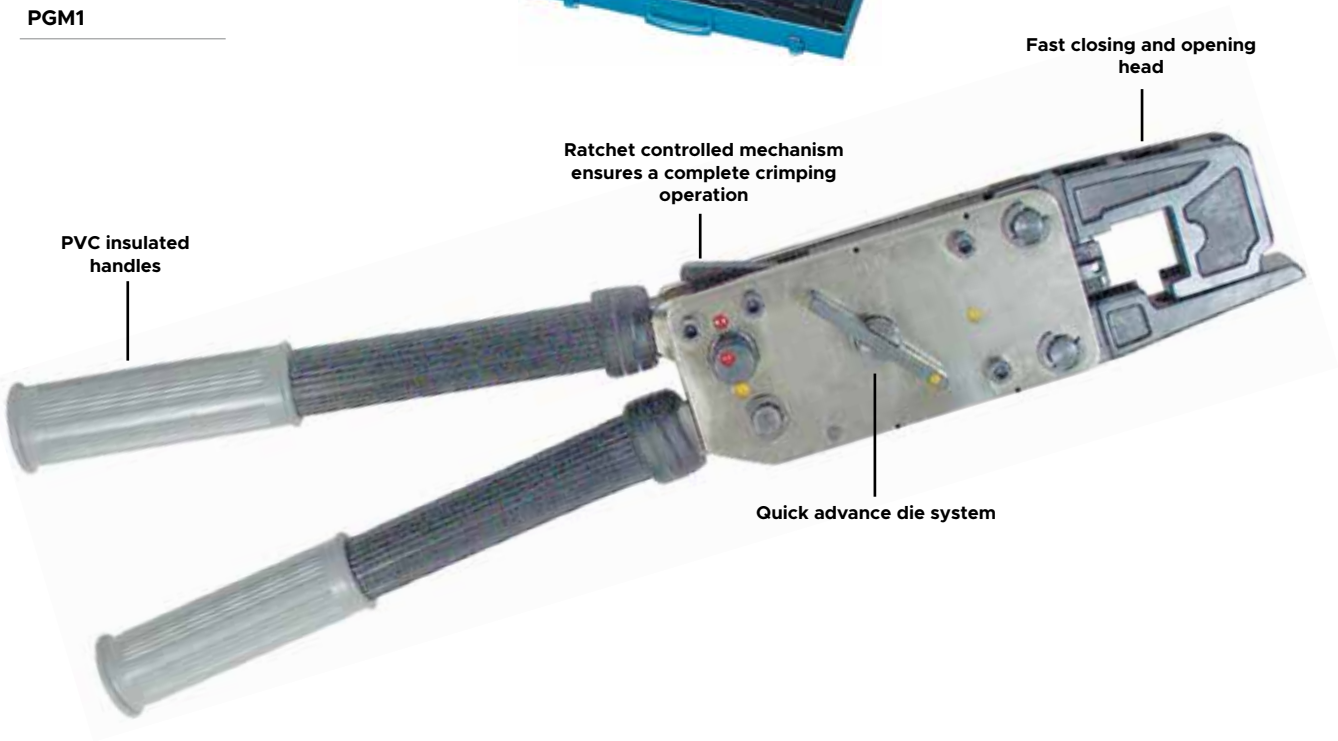
Delivered in metal boxe with working leaflet.

Ref.	SNCF
PMM1CF	7-847-7285

Complementary accessories:

- Control gauge.

Ref.
PGM1

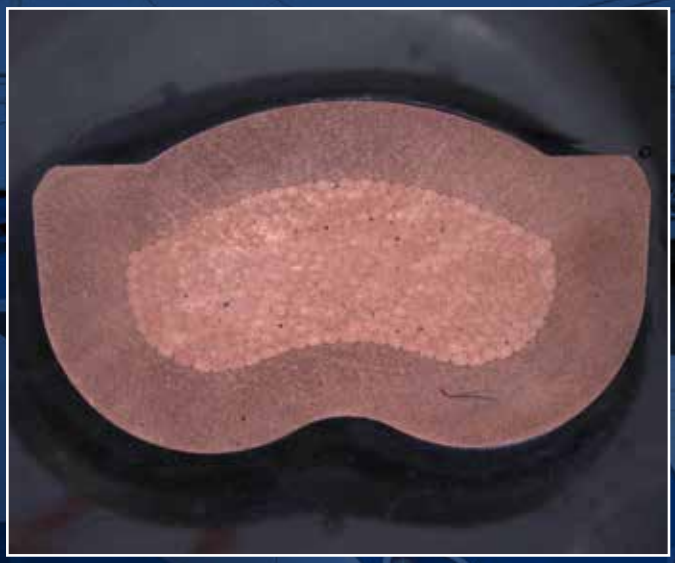


Dies	Cross section (mm²)	Terminals series	Ref.	SNCF code
	**10**	ELS	**H1-10-35F**	7.847.7286
	16	FLS	**H1-16-50F**	7.847.7287
	25	TN25	**H1-25-70F**	7.847.7288
	35	TN35	**H1-10-35F**	7.847.7286
	50	TN50	**H1-16-50F**	7.847.7287
	70	TN70	**H1-25-70F**	7.847.7288

Note: **in red**: side of die to be used.

B-Crimping

A crimping solution for railway applications that complies with IEC 61238-1-3, a new deal for power connectors on rolling stock!



With over 20 years' experience, MECATRACTION has mastered the technology of B crimping technology, particularly on flexible cables, and the optimisation of compaction and variability of sections to obtain:

- **Optimised compaction.**
- **Uniform strand compression.**
- **A crimp that prevents the formation of sharp edges, thus protecting the insulation.**

For further information, please contact us:
33 (0)5 55 73 89 80
service.technico@mecatraction.com
www.mecatraction.com

Cordless electro-hydraulic compression tool - 50 kN to crimp tubular lugs and butt connectors

Electro-hydraulic tool **10 to 70mm²**

EID51 is designed for industrial applications requiring efficiency and manoeuvrability. Its in-line shape provides excellent ergonomics and access to the tightest working areas. The 18V Li-Ion batteries provide long and reduced weight. Its USB connection provides access to operating parameters and crimping history. Reversible die type D5.

- 18V Li-Ion battery.
- In-line design.
- Nickel-plated head swivels 360.
- Quick opening head.
- USB connector with cycle memory.
- Dimensions 400 x 125 x 82 mm.
- Weight with battery: 2.380 kg.

Electro-hydraulic press kit EID51

Ref.	Item code
EID51KCM	7512176

Kit composition	Ref.
Crimping tool	**EID51**
1 batterie	**BL1820I**
Charger 220 V	**CH1830HC**
Metallic carry case	**CM3EID51**

Crimping dies:

Dies	Cross section (mm²)	Terminals series	Ref.	SNCF code
	**10**	ELS	**H1-10-35F**	7.847.7286
	16	FLS	**H1-16-50F**	7.847.7287
	**25**	TN25	**H1-25-70F**	7.847.7288
	35	TN35	**H1-10-35F**	7.847.7286
	50	TN50	**H1-16-50F**	7.847.7287
	70	TN70	**H1-25-70F**	7.847.7288

Note: **in red**: side of die to be used.

Cordless electro-hydraulic compression tool - 50 kN to crimp tubular lugs, splices and other connectors

Electro-hydraulic compression tool ESD50 — POWER 50 kN

SPEED - AUTONOMY

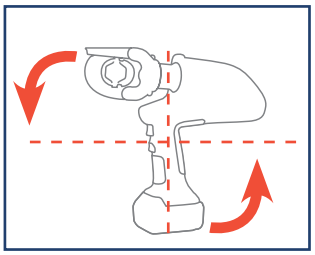
- Output force: 50 kN.
- Stroke: 13 mm.
- Autonomy: 200 to 500 crimping operations with battery 5.0 Ah.
- Cycle time: 2 to 4 s depending on the section.
- Dimensions: 350 x 310 x 72 mm.
- Weight: 4.0 kg (including the battery).

New features:

- Electronic control of the cycle.
- Return programming according to the user, either automatic or manual.
- Automatic or manual return stroke.
- Automatic stop at the end of the cycle.
- 2-stage hydraulic pump with pilot-operated valve which increases efficiency between 20 and 40%.
- Return sound signal.
- New PC software for diagnosis and analysis of data.

BE2 BLUE EXPERT 2

THE TOOL POWER 2

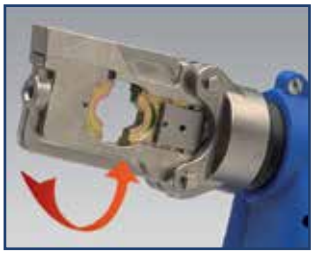


Optimum ergonomics thanks to the balance of the tool. Can be used by right or left-handed people.

Comfortable and accurate handling thanks to the shape and the materials used in the handle.

Electronic controlled function parameters, warning lights and USB interface.

Service indicator lights informing about the battery charge level and service control if necessary.



180° swiveling nickel-plated head.

Easy head opening.

With this software, it is possible to configure the tool, record the crimping data and analyze the cycles already done.

Lithium-ion 18 V battery with increased life expectancy and without any memory effect.

Electro-hydraulic compression tool kit - ESD50

Ref.
ESD50K1BLCM

Kit composition	Ref.
Crimping tool	**ESD50**
2 batteries 18 V / 5 Ah	**BL1850B**
Charger 220 V	**CLM1890HC**
Metallic carry case	**CMESD50**

Additional equipment for ESD50:

Metallic carry case
- Ideal for transport and storage.
- Adapted to each model.

Ref.
CMESD50

Fast charger
- Charger with display which identifies the state of the battery and the conditions of load.
- Charging time: 36 min.
- Weight: 0.85 Kg.
- Voltage: 220-240 V AC.
- Plug: Standard EU, others on request.

Ref.
CLM1890HC

Battery
- Li-Ion technology without memory effect.
- Voltage: 18 V.
- Capacity: 5.0 Ah.
- Weight: 0.64 Kg.

Ref.
BL1850B

BE2 support
- Support for fixing our BE2 crimping tools to a workbench.
- Compatible with our references: ESD50, ESDC60, ESDC80, ESU137.

Ref.
SUPPORT OUTIL BE2

Crimping dies:

Dies	Cross section (mm²)	Terminals series	Ref.	SNCF code
	**10**	ELS	**H1-10-35F**	7.847.7286
	16	FLS	**H1-16-50F**	7.847.7287
	**25**	TN25	**H1-25-70F**	7.847.7288
	35	TN35	**H1-10-35F**	7.847.7286
	50	TN50	**H1-16-50F**	7.847.7287
	70	TN70	**H1-25-70F**	7.847.7288

Note: **in red**: side of die to be used.

Electro-hydraulic press - 120 kN for crimping insulated and tubular lugs

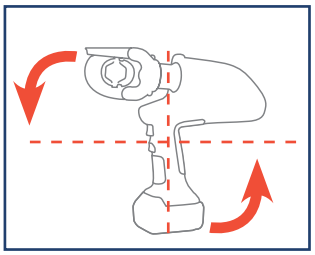
Hydraulic press with integrated electric motor ESU137 — POWER 120 KN

SPEED - AUTONOMY
- Output force: 120 kN.
- Stroke: 27 mm.
- Autonomy: 100 to 220 crimping operations with battery 5.0 Ah.
- Punching cycle time: 7 to 12 s depending on the section.
- Crimping cycle time: 5 to 8 s depending on the section.
- Dimensions: 400 x 310 x 72 mm.
- Weight: 5.9 kg (including the battery).

New features:
- Electronic control of the cycle.
- Return programming according to the user, either automatic or manual.
- Automatic or manual return stroke.
- Automatic stop at the end of the cycle.
- 2-stage hydraulic pump with pilot-operated valve which increases efficiency between 20 and 40%.
- Return sound signal.
- New PC software for diagnosis and analysis of data.

BE2 BLUE EXPERT 2

THE TOOL POWER 2



Optimum ergonomics thanks to the balance of the tool. Can be used by right or lefthanded people.

Comfortable and accurate handling thanks to the shape and the materials used in the handle.

Electronic controlled function parameters, warning lights and USB interface.

Service indicator lights informing about the battery charge level and service control if necessary.

180° swiveling nickel-plated head

With this software, it is possible to configure the tool, record the crimping data and analyze the cycles already done.

Lithium-ion 18 V battery with increased life expectancy and without any memory effect.

ESU137 electro-hydraulic tool kit

Ref.
ESU137K1BLCM

See accessories for adapters required for the dies used.

Kit composition	Ref.
Crimping tool	**ESU137**
2 batteries 18 V / 5 Ah	**BL1850B**
Charger 220 V	**CLM1890HC**
Metallic carry case	**CMES120KN**

Additional equipment for ESU137:

Metallic carry case
- Ideal for transport and storage.
- Adapted to each model.

Ref.
CMES120KN

Fast charger
- Charger with display which identifies the state of the battery and the conditions of load.
- Charging time: 36 min.
- Weight: 0.85 Kg.
- Voltage: 220-240 V AC.
- Plug: Standard EU, others on request.

Ref.
CLM1890HC

Battery
- Li-Ion technology without memory effect.
- Voltage: 18 V.
- Capacity: 5.0 Ah.
- Weight: 0.64 Kg.

Ref.
BL1850B

BE2 support
- Support for fixing our BE2 crimping tools to a workbench.
- Compatible with our references: ESD50, ESDC60, ESDC80, ESU137.

Ref.
SUPPORT OUTIL BE2

Crimping dies:

Dies	Cross section (mm^2)	Terminals series	Ref.	
			Dies	Adapters
	10	pre-insulated ELP series	**ELP460**	U137-460
	16	pre-insulated FLP series	**FLP460**	U137-460
	25	pre-insulated NP series	**NP460**	U137-460
	10	non insulated ELS series	**ELS460 ou C12 ELS**	U137-460 or U137C12
	16	non insulated FLS series	**FLS460 ou C12 FLS**	U137-460 or U137C12
	25	non insulated TN 25 series	**C12TN25**	U137C12
	35	non insulated TN35 series	**C12TN35**	U137C12
	50	non insulated TN 50 series	**C12TN50**	U137C12
	70	non insulated TN70 series	**C12TN70**	U137C12
	95	non insulated TN95 series	**C12TN95**	U137C12
	120	non insulated TN120 series	**C12TN120**	U137C12
	150	non insulated TN150 series	**C12TN150**	U137C12
	185	non insulated TN185 series	**C12TN185**	U137C12
	240	non insulated TN240 series	**C12TN240**	U137C12

Positioning stoppers

Mobiles stoppers for TN railway lugs from 25 to 120 mm²

Cross section (mm²)	Ref.	Marking	Ref. Stopper	Tools
25	**TN25-5**	MTR TN25	BSTN25	
	TN25-6			
	TN25-8			
	TN25-10			
35	**TN35-6**	MTR TN35	BSTN35	
	TN35-8			
	TN35-10			
50	**TN50-6**	MTR TN50	BSTN50	
	TN50-8			
	TN50-10			
	TN50-12			
60	**TN60-8**	MTR TN60	BSTN60	
	TN60-10			
	TN60-12			
70	**TN70-8**	MTR TN70	BSTN70	
	TN70-10			
	TN70-12			
95	**TN95-10**	MTR TN95	BSTN95	
	TN95-12			
	TN95-14			
120	**TN120-10**	MTR TN120	BSTN120	
	TN120-12			
	TN120-14			
	TN120-16			

BSH137 for ESU137 press

Support **BSH210** for VF210 cylinder

Hydraulic hand crimping tool and connectable hydraulic compression heads for terminals

Hydraulic hand crimping tool — 10 to 70 mm²

- Hand crimping tool.
- Power: 55 kN.
- Crimping from 10 to 70 mm².
- Two pressure level.
- Automatic release.
- Die lock system.
- Head tilting on 180°.

Delivered in box with working leaflet.

Ref.	SNCF
TR1461	7-847-7296

Connectable hydraulic compression head — 10 to 95 mm²

- Connectable hydraulic compression head.
- Power: 100 kN.
- Crimping from 10 to 95 mm².
- anti-corrosion coating (nickel).
- Die loching system.
- To be connected to 700 bars hydraulic pump or sets.
- Delivered with female semi-coupler p/n: RKFM38NPT.

Ref.
TR1462

Crimping dies:

Dies	Cross section (mm²)	Terminals series	Ref.	SNCF code
	**10**	pre-insulated ELP series	**ELP460**	7.847.7303
	16	pre-insulated FLP series	**FLP460**	7.847.7304
	25	pre-insulated NP series	**NP460**	7.847.7305
	10	non insulated ELS series	**ELS460**	7.847.7297
	16	non insulated FLS series	**FLS460**	7.847.7298
	25	non insulated TN 25 series	**TN25-460**	7.847.7299
	35	non insulated TN35 series	**TN35-460**	7.847.7300
	50	non insulated TN 50 series	**TN50-460**	7.847.7301
	70	non insulated TN70 series	**TN70-460**	7.847.7302
	**95***	non insulated TN95 series	**TN95-460**	

*only with TR1462 tool.

Pluggable hydraulic compression head for tubular lugs

Connectable hydraulic compression head SU130K — POWER 130 kN

- To be connected to 700 bars hydraulic pump or sets.
- Crimping of non insulated terminals from 10 to 150 mm².
- Anti-corrosion coating (nickel).
- Length: 215 mm.
- Weight: 3.200 kg.

Ref.
SU130K

Connectable hydraulic compression head VF130K with closed head — POWER 130 kN

- To be connected to 700 bars hydraulic pump or sets.
- Crimping of non insulated terminals from 10 to 150 mm².
- Anti-corrosion coating (nickel).
- Length: 220 mm.
- Weight: 3.400 kg.

Ref.
VF130K

Crimping dies:

Dies	Cross section (mm²)	Terminals series	Crimping dies SU130K/VF130K
	**For ELS / FLS series**		
	10	ELS	ELSV13
	16	FLS	FLSV13
	For TN series		
	25	TN25	TN25V13
	35	TN35	TN35V13
	50	TN50	TN50V13
	70	TN70	TN70V13
	**95**	TN95	TN95V13
	120	TN120	TN120V13
	150	TN150	TN150V13
	For TRS series		
	95	TRS95	TRS95V13
	120	TRS446	TRS446V13
	120	TRS448	TRS448V13
	For AL series		
	50	AL50	AL50V13
	60	AL60	AL60V13
	70	AL70	AL70V13
	95	AL95	AL95V13

Pluggable hydraulic compression head SU210K — POWER 200 kN

- Crimping of non insulated terminals from 10 to 150 mm².
- Anti-corrosion coating (nickel).
- To be connected to 700 bars hydraulic pump or sets.
- Delivered with female semi-coupler p/n : RKF-M38NPT.
- Length: 260 mm.
- Weight: 5.8 Kg.

Accessories

Die holder **S21**

Ref.
SU210K

Pluggable hydraulic compression head VF210K with closed head — POWER 200 kN

- Crimping of non insulated terminals from 10 to 150 mm².
- Anti-corrosion coating (nickel).
- To be connected to 700 bars hydraulic pump or sets.
- Delivered with female semi-coupler p/n : RKF-M38NPT.
- Length: 275 mm.
- Weight: 6.2 Kg.

Accessories

Die holder **S21**

Ref.
VF210K

Crimping dies:

Dies	Cross section (mm²)	Terminals series	Dies p/n SU210K/ VF210K + S21 die holder
	**ELS/FLS series**		
	10	ELS	ELSV20
	16	FLS	FLSV20
	TN serie		
	25	TN25	TN25V20
	35	TN35	TN35V20
	50	TN50	TN50V20
	70	TN70	TN70V20
	95	TN95	TN95V20
	120	TN120	TN120V20
	150	TN150	TN150V20
	185	TN185	TN185V20
	**240**	TN240	TN240V20
	300	TN300	TN300V20
	TR serie		
	95	TR95	TR95V20
	120	TR120	TR120V20
	150	TR150	TR150V20
	185	TR185	TR185V20
	240	TR240	TR240V20
	300	TR300	TR300V20
	400	TR400	TR400V20
	500	TR500	TR500V20

Cross section (mm²)	Terminals series	Dies p/n SU210K/VF210K + S21 die holder
TRS serie		
95	TRS95	TRS95V20
120	TRS446	TRS446V20
120	TRS448	TRS448V20
150	TRS450	TRS450V20
185	TRS452	TRS452V20
240	TRS455	TRS455V20
240	TRS453	TRS453V20
400	TRS456	TRS456V20
185	TRS185 - TRS185-1B	TRS185V20
240	TRS240 - TRS240-1B	TRS240V20
240	TRS242-12	TRS258V20
400	TRS400	TRS400V20
50	TRS262	TRS262V20S (sertissage sur âme)
		TRS262V20F (sertissage sur isolant)
95	TRS246	TRS246V20S
		TRS246V20F

Cross section (mm²)	Terminals series	Dies p/n SU210K/ VF210K + S21 die holder
AL serie		
50	AL50	AL50V20
60	AL60	AL60V20
70	AL70	AL70V20
95	AL95	AL95V20
120	AL120	AL120V20
150	AL150 - AL150B	AL150V20
185	AL185	AL185V20
240	AL240	AL240V20
300	AL300	AL300V20
460	AL460	AL460V20

Cycle counter for connectable hydraulic crimping tools

Cycle counter KCHTA10

- Dimensions (without couplings): H=53 x w=50 x L=80 mm. (L box alone= 50 mm).
- Weight (without coupling): 620 g.
- Communicating tool: three-color indictor/warning LED.
- Micro-USB connection for computer monitoring.
- Lifetime: 50 000 cycles.
- Battery life: 5 years.

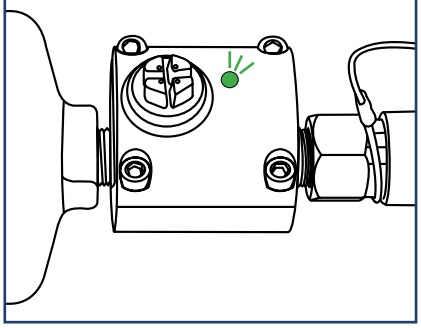
Micro-USB connection for access via the CT Diag software to the following information:
- Tool type
- Serial number.
- Commissioning date.
- Number of cycles.
- Remainng number of cycles.
- 10 last service interventions.

Item code	Ref.	Connection
7510029	**KCHTA10M38NPT**	2x3/8 NPT males

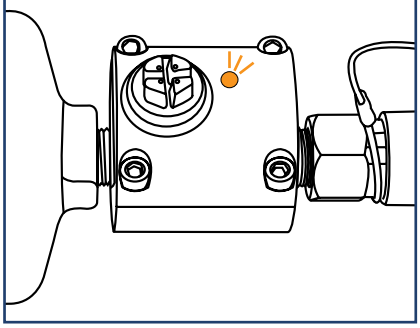
3 color LED indicator gives information about the hydraulic tool condition (flashes 3 times after each crimping operation).

- Enables monitoring and preventive maintenance during the whole lifetime of the tool.

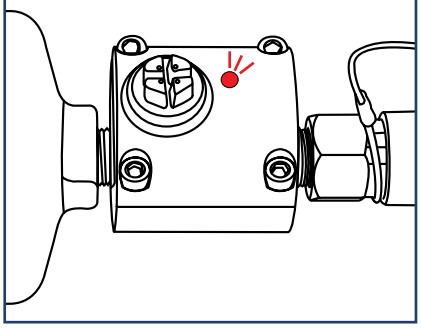
3 x GREEN = **PRODUCTION**
Remaining lifetime > 500 cycles



3 x ORANGE = **SERVICE TO PLAN:**
Remaining lifetime < 500 cycles.



3 x RED = **STOP / RISK:**
Over the lifetime.



Hydraulic Pumps

Hydraulic pump SPM4095

- Length: 700 mm.
- Weight: 12.9 kg.
- Pressure: 700 bar.
- 2-speed foot pump.
- Automatic release.
- U-shaped base offering 1 high level of stability.
- Oil tank: 1 l.
- Fitted with 3 m hydraulic hose with 1 RMKF38NP coupling.

Box on request:
VAL 22CR.

Ref.
SPM4095K

Hydraulic pump PA133

- Length: 400 mm.
- Weight: 4.900 kg.
- Pressure: 700 bar.
- Oil tank: 0.6 l.
- Fitted with 1/2 female coupling.
- Single-stage air motor pump.
- Compressed air supply: 7 bar max.
- 3-way valves maintain pressure when air supply is interrupted.
  is interrupted.
- Fitted with half female coupling (RFK-M38NPT).
- Hydraulic hoses.

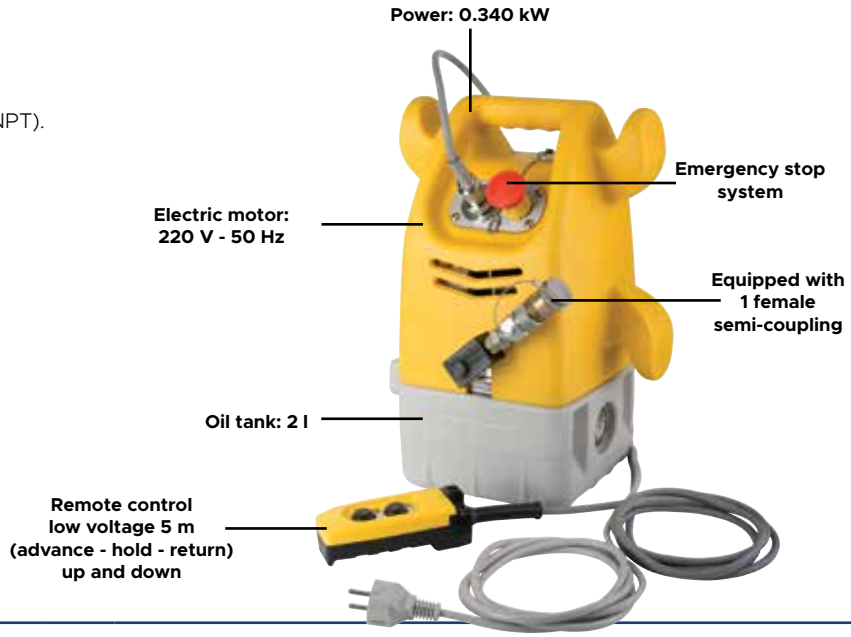
Ref.
PA133K

Electro-hydraulic Pumps

Portable and compact electro-hydraulic set SPT21-585KCM

- Dimensions: 270 x 200 x 400 mm.
- Weight: 15 kg.
- Flow rate: 0 - 20 bar: 2.60 l/min.
  20 - 700 bar: 0.32 l/mn.
- Fitted with female half-coupling (RFK-M38NPT).
- Hydraulic hoses.

Ref.
SPT21-585KCM



Hydraulic couplers

- Standard equipments for our tools.
Type of coupler when ordering.

Type	Ref.	Dimensions (Threading in “)	Description
K	**RMKF38NPT**	3/8 - 18 NPT	Male coupler, assembly through 3/8 NPT threaded hole
	RFKM38NPT	3/8 - 18 NPT	Female coupling, assembly through through 3/8 NPT threaded male socket

Hydraulic hoses with couplers 3/8

Item code	Ref.	Dimensions
7510021	**F4622K**	1.80 m
7510031	**F4623K**	3.00 m
7510041	**F4626K**	6.00 m

Hydraulic oils

Item code	Ref.	Applications	Capacity
7516220	**HF95X**	PA133 and P39	1 L
7516230	**B2XV32**	SPT21-585 and SPM4095	2 L

Cutting plier, plug-in plier, plug-out plier

Cutting plier HS6000

The HS6000 cutting plier has been designed for an easy and precised cut thanks to its blades micro-serrated and its robustness. Handles and the general form of this pliers enables excellent handling.

Cannot cut stell
- Length: 150 mm.
- Weight: 0.09 kg.

Ref.
HS6000

Plug-in plier MO-66105

The plier MO-66105 allows the easy plug in red and blue disconnects terminals of 2.8, 4.8, 5 and 6.35 mm.
- Chrome-vanadium steel body.
- Insulated handles up to 1000 V.

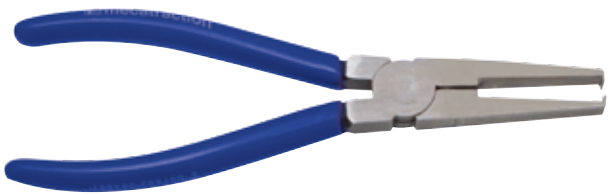
INSULATION COMPLIANT WITH IEC-60900
- Length: 210 mm.
- Weight: 0.190 Kg.

Ref.
MO-66105

Plug-out plier MO66200

The plier MO66200 allows the easy plug-out red and blue disconnects terminals of 2.8, 4.7, 5 and 6.35 mm. The specific design of the noses allows plug-out same in difficult area or limited space. It avoid all risk of damage on disconnects.
- Polished steel body.
- PVC insulated handles.
- Length: 170 mm.
- Weight: 0.150 kg.

Ref.
MO66200



Cordless Electro-mechanical Cable-cutter

ESK50 Electro-mechanical Cable-cutter

- New powerful motor with high torque offers superior performances
- New ergonomy for ease of operation during cable cutting. The new handle orientation gives a better arm position.
- New circuit board which shuts down for overloading protection.
- Cutting capacity up to Ø 50 mm:
- Cutting capacity Cu: 400 mm^2.
- Cutting capacity Al: 630 mm^2.
- Cycle time: 3 to 6 s depending on cable.
- Autonomy: 60 to 75 cuts with 5.0 Ah.

Caution: never use for cutting cables with steel strip protection or for cables with steel core

- Dimensions (battery included): 400 x 150 x 110 mm.
- Weight (battery included): 2.950 Kg.

Ref.
ESK50K1BLCP

Kit composition:
- 1 electro-mechanical cable-cutter.
- 2 batteries 18V / 5.0 Ah.
- 1 charger.
- 1 plastic box.

Additional equipment for ESK50:

Battery
- Li-Ion battery: 18V/5.0 Ah.
- Battery equipped with an integrated electronic circuit.
- Li-Ion technology without memory effect.
- Weight: 0.570 kg.

Ref.
BL1850B

Fast charger

- Charger with display which identifies the state of the battery and the conditions of load.
- Charging time: 36 min.
- Weight: 0.85 Kg.
- Voltage: 220-240 V AC.
- Plug: Standard EU, others on request.

Ref.
CLM1890HC

Number of crimps per tool

HEXAGONAL CRIMPING

	PMM1CF ESD50 EID51		TR1461		TR1462		ESU137		VF130K		VF210K	
	50 kN	Nbr*	55 kN	Nbr*	100 kN	Nbr*	120 kN	Nbr*	130 kN	Nbr*	200 kN	Nbr*
ELP			x	1	x	1	x	1				
FLP			x	1	x	1	x	1				
NP			x	1	x	1	x	1				
ELS	x	1	x	1	x	1	x	1	x	1	x	1
FLS	x	1	x	1	x	1	x	1	x	1	x	1
TN25	x	1	x	1	x	1	x	1	x	1	x	1
TN35	x	1	x	1	x	1	x	1	x	1	x	1
TN50	x	1	x	1	x	1	x	1	x	1	x	1
TN60	x	1	x	1	x	1	x	1	x	1	x	1
TN70	x	1	x	1	x	1	x	1	x	1	x	1
TN95			x	1	x	1	x	1	x	1	x	1
TN120							x	1	x	1	x	1
TN150							x	1	x	1	x	1
TN185							x	1			x	1
TN240							x	2			x	2
TN300											x	2
AL50							x	1	x	1	x	1
AL60							x	1	x	1		
AL70							x	1	x	1	x	1
AL95							x	1	x	1	x	1
AL120											x	1
AL150											x	1
AL185											x	2
AL240											x	2
AL300											x	2
AL460											x	2

*number of crimps to be made.

B CRIMPING

	ESU137		VF210K + S21	
	120 kN	Nbr*	200 kN	Nbr*
ELS	x	1		
FLS	x	1		
TN25	x	1		
TN35	x	1		
TN50	x	1		
TN60	x	1		
TN70	x	1		
TN95	x	1		
TN120	x	1		
TN150			x	2
TN185			x	2
TN240			x	2
TN300			x	2

*number of crimps to be made.

Checking your crimping dies

Go-no-go gauge

Gauges for diagnosing the wear of your crimping dies.

Gauge for tools

	Ref. of the gauge
TH1 - TH1S - TH1-90 - ET331	**PG1**
TH2 - TH2S - ET332	**PG2**
TH3 - TH3-2 - ET333 - ET333-2	**PGH3**
PMM1CF	**PGM1**

Gauge for hexagonal dies

	Ref. of the gauge
ELP	**PGP10**
FLP	**PGP16**
NP	**PGP25**
ELS	**PGN10**
FLS	**PGN16**
TN25	**PGTN25**
TN35	**PGTN35**
TN50	**PGTN50**
TN60	**PGTN60**
TN70	**PGTN70**
TN95	**PGTN95**
TN120	**PGTN125**
TN150	**PGTN150**
TN185	**PGTN185**
TN240	**PGTN240**
TN300	**PGTN300**

Notes

Notes

Our location

MECATRACTION

sicame-group.com

sicame GROUP

MECATRACTION
ZA Les Hauts de Chignac 19230 Arnac-Pompadour
Tel: +33 (0)5 55 73 89 89
E-mail : info@mecatraction.com
mecatraction.com