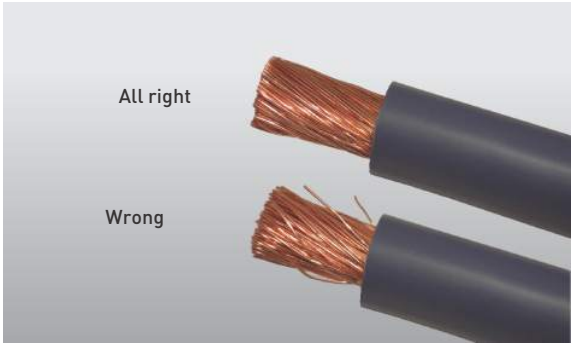
TECHNICAL INFORMATION

GENERALITIES

Within the large **family of terminals** that we produce, we establish a fundamental difference referring to their application, independent from the amount of compression that can be made or the number or size of fastener grommets it possesses. This classification refers to the tightness of terminals and consequently the use of them. Any terminal which has an inspection window should be used in facilities that lack remain in the open, such as boards of distribution. However, when the application requires a tightness condition, terminals without inspection window must be used, which can remain in the open, such as in transformer downs.

Upon compression of the terminal, so that the preparation process is the proper one, use the **appropriate peeling tool** to ensure that the filaments were not damaged or torn by defective product peeling.

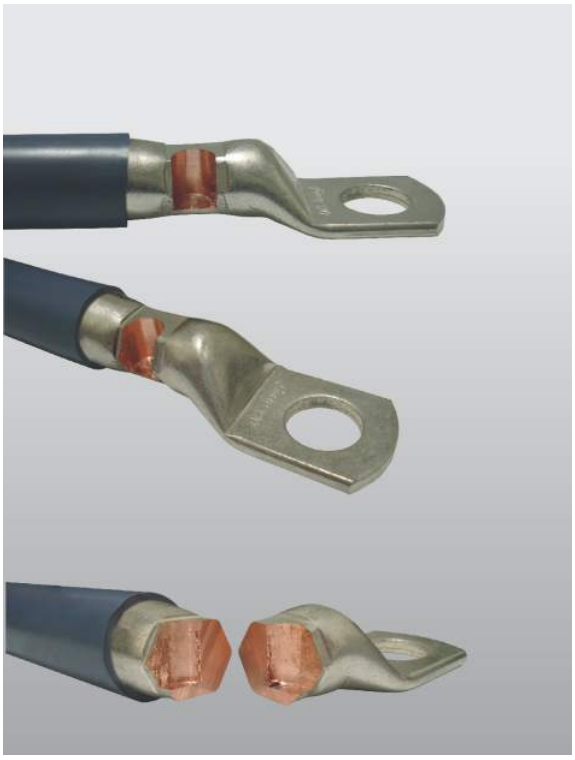


In the case of tight terminals, as they do not have inspection window, it is not possible to verify that the conductor is properly peeled. It is for this reason that, when peeling the conductor either for use in terminals with inspection window or tight terminals, it must be done respecting **the dimension L3** (see dimensional tables) **corresponding to the length of barrel**, which ensures that the conductor occupies the entire barrel, and is not peeled in excess, leaving a stretch not insulated conductor outside the terminal barrel.

It is essential at the time of compression of the terminal to consider some aspects for it to be effective and correct.

The family of terminals that have **inspection window** serves two functions. Primarily it is used to verify that the bare conductor is correctly made and that it occupies the entire barrel of the terminal and is also used to pour liquid tin after making the indentation. This latter application, relegated since the purpose of this process, was to ensure the absence of air between the walls of the terminal and conductor, a condition achieved by replacing the hexagonal compression indentation, the latter generating a solid body made by the conductor and the barrel of the terminal.

Finally, you must select the manual or hydraulic tool properly, according to the need the user has to perform a compression satisfactorily.



How to choose the proper tool?

In our ongoing quest to ensure satisfaction of the customer we list the following aspects to consider to simplify the process of selecting the right tool:

- Type of task to perform.
- Range of sections used (tooling).
- Characteristics and conditions of the workplace.
- Duty (production or sporadic).
- Characteristics and modes of the operator.

These data mentioned above allow us to properly define the tool needed to buy, thus avoiding going through setbacks as returns, breakage or wear of the tool due to bad use.

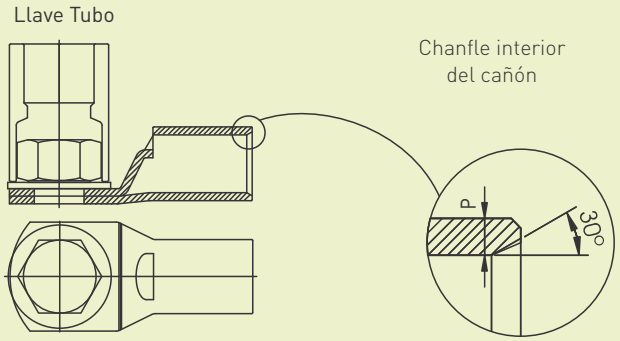
Our tool line is divided into two big groups, manual and hydraulic. They all have guarantee, which does not cover misuse of the tool. It is for this reason that we recommend to be aware of the Technical Information: How to choose the right tools to have into account the above choice points.

Remember that if you have questions when choosing the tool or require more technical features mentioned in this catalog, you can contact our sales department which is at your disposal.

TECHNICAL INFORMATION

Blade rationalization

In the search for improvement continuous quality of the product, FUSSE ® has established a concept of rationalization in the design of the tinned copper terminals, this concept reflected in: the design of blade, section, the quality of the pipe used in the transition zone and features of the canyon. For the blade design we have been based on using narrow flight washer, N type according to the rule ANSI B27, for terminal fixation through the corresponding screw.



The considerations are:

1) Getting support from the washer on the flat area of the blade to ensure correct setting.

2) Allowing placement, with no difficulty, of the pipe wrench in the hexagonal head of the fixing screw or in the nut as appropriate.

3) Establish a dimensional ration which guarantees a contact area in the base of the blade for the correct transmission of conducted energy.

It has also been studied and defined the transition zone as well as the size of the inspection window to avoid breaks in edges and create in that area, the necessary strength to withstand any vibrations or various mechanical stresses that it can receive occasionally through the canyon through the conductor.
The length of the canyon is set, according to single or double indentation or compression, taking into account the space requirements needed between the indentations or compressions of the hexagonal array.
In the design ofthe barrel it is stated: dimensional stability, the need to facilitate the entry of the conductor, the integral exploitation of its length and adequate hardness.

The dimensional stability in diameters with strict tolerances either inside or outside of the barrel, ensures the correct fixation and repeatability in the quality of the hexagonal indentation or compression, in this case, permitting the use of defined matrix. The entrance of the conductor is easier with the corresponding chamfer.
Among the requirements for achieving good contact between the canyon and the cable terminal it is essential to obtain the corresponding hardness by a controlled annealing of material which ensures correct deformation to ident or compress with little effort.
All copper terminals are protected against corrosion by surface tinned coating applied by electrodeposition in minimum thicknesses insured according to their use for which they are determined.
The terminals are supplied free of burr to prevent accidents during handling and allow placement of insulation without causing deterioration.

Example of Blade Rationalization for the same mounting hole diameter