Energy is our business

November 2018

SELECTION GUIDE

INSULATING STICKS

HOW TO CHOOSE AN INSULATING STICK ?

CATU helps you to choose the appropriate stick depending on your work environment. Thanks to our experience, and taking into account the standards in force, the types of insulating sticks (telescopic or connectable) and the quality of tubes, we propose you the following rules *:

1 – Identify the **nominal voltage of the installation or network in kV**.

2 – **Estimate the working distance between the operator and the conductor in mm** (1 m = 1 000 mm).
WARNING. This distance varies according to the operating mode (work from ground, aerial bucket, structure, etc).

> **Example** : Say the conductor is 5 m above the ground.
> The operator working from the ground will use a 3.5 m long-stick.
> Indeed, the operator raises his arms towards the conductor about 1.5 m.
> So 5 m - 1.5 m = 3.5 m stick length.

3 – **Calculate the minimum insulating distance** from the nominal voltage in kV**.**
As an approximate calculation, please make sure that the "safety distance" in cm is greater than the "nominal voltage" in kV : x kV < x cm.

> **Mnemonic way** : 10 kV = 10 cm.
> For a 10 kV voltage, stick **insulating distance**** should be a greater than 10 cm (100 mm).
> *Note : this equivalence applies to standardized tubes EN 60855-1 or EN 61235 .*

Please refer to EN 50508 table on following page.

** For any specific case, do not hesitate to contact our technical support (+33 1 42 31 46 24)*
*** Length of the insulating tube above the handguard, not considering the connecting piece(s)*

SAFETY & PROTECTION

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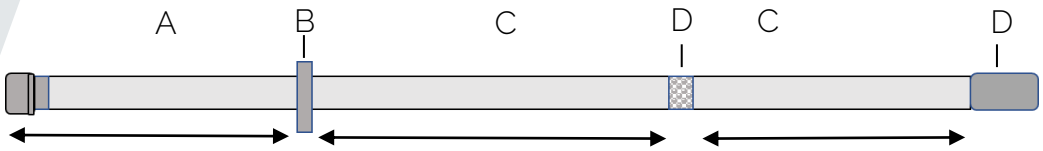
The minimum insulating distance of the insulating element (extract from standard EN 50508-2009) is shown in the following chart :

Nominal voltage of the installation U_n (kV)	Minimum insulating distance [ab] mm	Ergonomic distance [b] mm	Minimum length of insulating element mm
≤ 15	160	500	660
≤ 30	320	500	820
≤ 45	480	500	980
≤ 66	630	500	1 130
≤ 110	1 100	500	1 600
≤ 132	1 300	500	1 800
≤ 150	1 500	500	2 000
≤ 220	2 100	500	2 600
≤ 380	3 400	500	3 900
≤ 480	4 100	500	4 600
≤ 735 / 800	6 400	500	6 900

[a] According to HD 637 S1, considering operation and lightning overvoltages.
[b] The values can be changed according national regulations



Legend :
A – Ergonomic distance
B - Hand guard / Max. hand positioning
C – Minimum insulating distance
D – Non insulating pieces (connections, end-fitting)

In summary, to select your stick, choose it according to :

- Characteristic 1, rated voltage
- The most restrictive feature (the longest) between the working distance 2 and the minimum safety distance 3

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