CABLE CALCULATION, STEPS 1 AND 2: CABLE TYPE AND INSTALLATION METHOD

WHICH REFERENCE METHOD IS CABLE IN TRUNKING?

STEP 1: CABLE TYPE (TABLE 4A1)

In a dwelling we'll use **twin and earth**. It's the most versatile cable on the market. T&E isn't "domestic only". You can use it in commercial and industrial work too, and you can use singles or flex in a house. **Chapter 52** covers the do's and don'ts of wiring systems.

The route: use the **existing trunking** (there's room, and the client is happy with it). That means less lifting floorboards, chasing walls or going through ceilings. Above the cooker position, the cable comes out of the back of the trunking into a **chase** straight down.

Table 4A1 tells you whether each cable type is **permitted (P)** or **not permitted (NP)** with each installation method.

- **Non-sheathed cables** (singles: a conductor with one layer of coloured insulation) are **NP** clipped direct or on cable tray, but permitted in **conduit, trunking and ducting** and on insulators.
- **Sheathed cables** are split into **multicore** and **single-core**. A single-core sheathed cable is like a meter tail. **T&E is multicore**: line, neutral and CPC in one sheath.
- Multicore sheathed cable is permitted almost everywhere, including in **trunking**. Clipped inside the chase counts as **clipped direct**, which is also permitted.

70 °C or 90 °C? 70 °C **thermoplastic** (PVC) is fine in a house. Think about 90 °C **thermosetting** or other cables where there's an increased risk of fire, a combustible building, or flammable materials stored or processed.

OUR STATEMENT

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70 °C thermoplastic twin and earth cable.
Table 4A1 suggests this cable type is suitable for trunking,
and clipped inside the chase.
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STEP 2: INSTALLATION METHOD (TABLE 4A2)

- **In the trunking:** a multicore cable in trunking on a wooden or masonry wall (run horizontally or vertically) is **Reference Method B**.
- **In the chase:** we **assume the wall is thermally insulating**. A multicore cable in a thermally insulating wall is **Reference Method A** (at the top of Table 4A2).

> **Always design to the worst case**When a cable passes through more than one installation method, note them all. Later, when you pick the cable size, use whichever method gives the **lowest** current rating.

If the wall **isn't** thermally insulating, stick with Method B throughout. The books give little guidance for this case, and it depends on the age of the house.

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OUR STATEMENT
Installation method:
  Ref Method B  (whilst in trunking)
  Ref Method A  (whilst in chase)
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