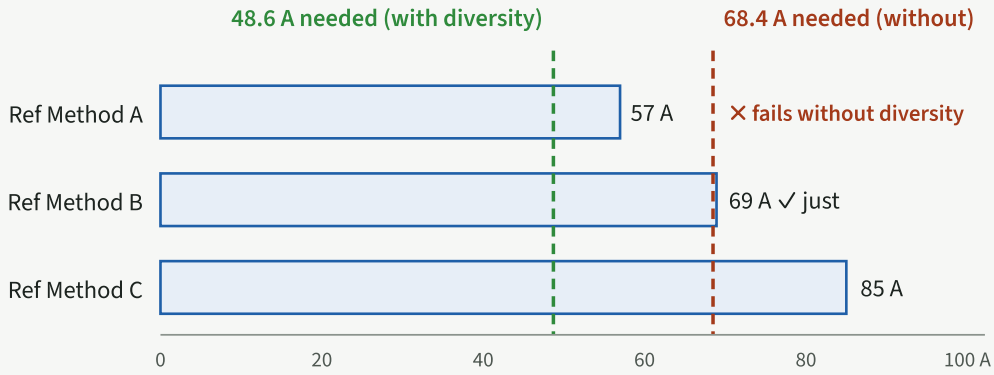
CABLE CALCULATION: THE SAME DESIGN WITHOUT DIVERSITY

WHAT HAPPENS IF YOU SKIP DIVERSITY?

Some people feel safer not applying diversity. Here's what happens. The cable type, installation methods and correction factors don't change, so it's quick.

```
WORKING: NO DIVERSITY
Ib = 41.7 A
In = 45 A    (the size used here; Table 41.3 has no 45 A row,
              so check the size is made in the range you fit)
It ≥ 45 ÷ (0.94 × 0.7) = 68.4 A

Table 4D5, 16 mm² T&E:
  Ref Method A → 57 A  ✗ can't use Method A
  Ref Method B → 69 A  ✓ only just
  Ref Method C → 85 A  ✓ but clipped on the surface
```



16 mm² T&E ratings from Table 4D5 against the two design values.

- Without diversity you **can't use Method A**. You'd have to keep the cable in **trunking** (Method B, just) or clip it on the surface (Method C). Nobody wants a surface cable down their kitchen wall.
- "Just use a bigger cable"? The next size is **25 mm²**, the kind of cable you'd use to feed a new school block. Flat T&E stops at **16 mm²**, so you'd be into **SWA or singles**, with a lot more money and work.
- With diversity, it works. And even with every ring and the oven on full, the load is only ever **41.7 A**. Sparky's tip: don't be scared to apply diversity. Only skip it when the client tells you the cooker really will be flat out for long periods.

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