

Important: Electrical Safety

1. RCD'S AND RCBO'S

Following a recent fatality in a commercial kitchen, the HSE have issued strong guidance that

1. there are instances where manufacturers' instructions to protect devices with RCD's have not been complied with
2. a risk evaluation would extend that requirement for an RCD to the majority of metal-cased (Class 1) appliances with electrical connections – practically all appliances in commercial kitchens.

There has apparently been no reported fatality from electrocution from a circuit protected by an RCD or RCBO breaker.

Note the emphasis in the following IET guidance on the risk evaluation of circuits with socket outlets:

In order for the omission of RCD protection to any socket-outlet on the basis of risk assessment to be permitted by Regulation 411.3.3, the risk assessment must determine that the RCD protection is not necessary. The risk assessment must be documented and a copy of it must be attached to the Electrical Installation Certificate or (where applicable) Minor Electrical Installation Works Certificate covering the installation of the socket-outlet.

The person who prepared the risk must be prepared to justify his or her conclusion that RCD protection was not necessary, possibly in a court of law, especially if someone was killed or injured as a result of the RCD protection being omitted.

(Source IET Guidelines, comment on BS 7671 [17th Edition]:2008+A3:2015. Note: IET 18th Edition is expected this year)

The point being that risk assessment would be to support situations where an RCD is NOT required, rather than justifying when they are required. And interpretation of this guidance is that this Risk Assessment over-rides any previously assumed latitude not to have to upgrade legacy systems.

Given the increased risk from heavier duty appliances – and their ongoing vulnerability from daily wear-and-tear and susceptibility to misuse – it is difficult to envisage successful arguments against RCD protection of circuits providing power to commercial kitchen appliances.

2. EARTH BONDING

Whilst MCFT will ensure appliances are appropriately earthed and record earth continuity readings, earth bonding of stands, tables and sinks, in accordance with CEDA guidelines below, should be carried out by the site electrical contractors; this is not a service we are equipped or qualified to offer. We will comment on whether there may be a recommendation, during our major annual service visit.

Please note : this initial alert is offered in our capacity as your contractors on kitchen equipment – not as electricians or electrical engineers. Neither are we able to offer our services to install these breakers – which would be carried out by your usual electrical contractors. (Initial experience is that this can be less than straight-forward – certain appliances eg large dishwashers require Type C Breakers and 300Ma rating rather than the recommended Type B 30Ma.)

We would be pleased to talk this through with you or your electrical contractors should you require further elaboration.

For ourselves, going forward, we will be taking the following actions

1. New Installations: we will, at the time of quoting for new equipment, bring this requirement to your attention such that you or your electrical contractors might verify that appropriate protection is in place; we will not be able to effect final electrical connection without it.
2. First (Major) Annual Service: we will be ascertaining the level of protection for all vulnerable appliances and commenting on our service reports – to allow you to evaluate and take action.

We are also taking this action as part of our duty of care to our employees who will be working on appliances in your kitchens and would be grateful if you could acknowledge receipt of this notice along with an indication of proposed action.



Mark Brooker

Managing Director

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3. CATERING EQUIPMENT DISTRIBUTORS ASSOCIATION GUIDELINES ON EARTH BONDING 2013

The belief has been that any gas catering appliance with a metal structure requires equipotential earth bonding, but this is not the case: this bonding is only required where an electrical appliance is going to be used on a metal surface and if that appliance had a fault which could introduce voltage to that metal surface a potential for electrical shock was introduced.

The above would normally be a fixed metal work surface, not a mobile table, a fixed surface of mild or stainless-steel construction. If say a slicer is going to be used on this surface, then this work surface is where bonding is required.

- There is no requirement for a purely gas cooking appliance to have any supplementary earth bonding.
- Commercial catering appliances of a metal construction are not considered "extraneous metalwork" therefore, no bonding is required. If the appliance has say electric elements or motors, then this will be supplied with a single or three-phase supply along with an earth conductor. No requirement for extra bonding.
- Any appliance that uses electricity as well as gas will already have an earth wire attached to it by way of its mains lead.
- A mobile table used for loading and unloading an appliance does not need any bonding.
- A Table between appliances used for loading and unloading does not require earth bonding.
- A fixed table that is used for the operations of electrical equipment however should be considered to have a bonding wire fitted. There is a chance that a mains lead to a portable appliance could be damaged and introduce the risk of making the metal work "live".
- If there is a fixed table that is screwed and fixed in place to a concrete floor or wall, then an earth bond should be fitted. This is because the concrete may be damp and have an earth resistance path, thus if this was the case and an earth fault occurred, it would be unlikely that the fault current would be sufficient to activate the Residual Current Device protecting the circuit. The table would be live and an electric shock potential introduced.

When any item of equipment is going to be supplied, we as suppliers or installers, should ensure the site is surveyed and the client made aware of what electrical supply is required. We should only then connect when satisfied that supply is correct.

To conclude, any supplementary earth bonding, the client believes or is led to believe is required, it is for them to arrange with a suitably qualified electrician.

**Note from the ECA web site : Earth Bonding in Commercial Kitchens .Guidance document.
August 2013**

"Supplementary bonding of metal surfaces etc. is not a specific requirement of BS7671. The designer of the electrical installation may, however, perceive there to be an increased shock risk in that particular location and specify additional earth bonding, which has to be installed by a qualified person"