



Installing combination ovens under extraction canopies

ceda Guide 035

Published May 2021. This document has been approved by the BESA Technical Committee.



Installing combination ovens under extraction canopies

Introduction

The current version of BESA publication DW/172 Specification for Kitchen Ventilation Systems requires a minimum overhang of 600mm to the inside of the internal edge of the canopy over combination ovens to cope with the steam or fumes released when the doors of the appliance are opened. Whilst DW/172 is not a regulatory document it is accepted throughout the industry as providing guidance on best practice and compliance with it is often required by bodies such as insurance companies and public authorities. The BESA DW/172 committee recommends that if the cooking equipment layout is changed, then the ventilation will need to comply to the current DW/172 and therefore the canopy and ventilation system may need to be modified or replaced.

Recently there has been some confusion due to the fact that a major manufacturer of combination ovens states in their installation instructions “The exhaust hood must protrude 300-500 mm [12 – 20 inches] over the front of the unit”. Normally the manufacturer’s instructions take precedent over any other requirements and the purpose of this document is to give guidance on best practice on this subject.

Installation of combination ovens under new extraction canopies

Irrespective of any contrary information in manufacturers’ instructions, it is best practice to size the canopy in accordance with the requirements of DW/172 which requires a minimum overhang of 600mm to the inside of the internal edge of the canopy over combination ovens. This will ensure the safe collection and extraction of both the steam and fumes and also the products of combustion in the case of gas heated ovens.



Installing combination ovens under extraction canopies continued

Installation of gas heated combination ovens under existing canopies

In common with most standards and regulations, DW/172 is not retrospective and therefore it is quite possible that an existing canopy does not have a 600mm overhang over the position where it is planned to install a combination oven.

In such circumstances, the requirements of DW/172 should be pointed out to the customer to allow them to decide if they are prepared to modify or replace the canopy. It is important that the customer is made aware of the importance of adequate capture and containment is not only for health and hygiene reasons, but also for the comfort and safety of the kitchen staff.

Assuming that the customer is unwilling to modify or replace the canopy you should carry out a risk assessment to consider the following.

- Is the kitchen ventilation design adequate to remove the products of combustion? This should be determined by an experienced kitchen ventilation engineer who should be familiar with the requirements of DW/172 Specification. If the overhang recommended in DW/172 i.e. 600mm cannot be achieved it is likely that the airflows will need to be increased.
- Is there sufficient make up air to ensure safe combustion?
- Will there be adequate clearance above the flue outlet on the combination oven?

Assuming that all the above are satisfactory, from a gas safety perspective, it is safe to install the oven, however, an advisory (see Appendix 1) should be provided to state that the canopy does not comply to the design document DW172 to allow the products of cooking to be captured when the door is fully opened but the canopy does comply with removing the products of combustion. Additionally, it should state that to avoid hot fumes and steam escaping into the work area, the oven door should be opened by a maximum of 75mm initially until the fumes and steam have been collected within the canopy.

continues on next page



Installing combination ovens under extraction canopies continued

The advisory should clearly point out that food safety and health and safety regulatory requirements place an onus on the proprietor of a 'food business' to ensure that all hazards are identified and that steps are taken to ensure that adequate safety features are in place.

Installation of electrically heated combination ovens under existing canopies

In common with most standards and regulations, DW/172 is not retrospective and therefore it is quite possible that an existing canopy does not have a 600mm overhang over the position where it is planned to install a combination oven.

In such circumstances, the requirements of DW/172 should be pointed out to the customer to allow them to decide if they are prepared to modify or replace the canopy. It is important that the customer is made aware of the importance of adequate capture and containment is not only for health and hygiene reasons, but also for the comfort and safety of the kitchen staff.

Assuming that the customer is unwilling or unable to modify or replace the canopy you should carry out a risk assessment to consider the following.

- Is the kitchen ventilation design adequate to remove the fumes and steam from cooking? This should be determined by an experienced kitchen ventilation engineer who should be familiar with the requirements of DW/172 Specification. If the Overhang recommended in DW/172 i.e. 600mm cannot be achieved it is likely that the airflows will need to be increased.

Assuming that the above is satisfactory, it is safe to install the combination oven, however, a written advisory (see Appendix 2) must be provided to state that the canopy does not comply to the current design document DW172 to allow the products of cooking to be captured when the door is fully opened.

Additionally, it should state that to avoid hot fumes and steam escaping into the work area, the oven door should be opened by a maximum of 75mm initially until the fumes and steam have been collected within the canopy.

[continues on next page](#)



Water problems due to chlorides on Direct Injection (boiler-less) combi ovens continued

The advisory should clearly point out that food safety and health and safety regulatory requirements place an onus on the proprietor of a 'food business' to ensure that all hazards are identified and that steps are taken to ensure that adequate safety features are in place.

Appendix 1: Suggested advisory notice for gas installations

Prior to installing the combination oven it was pointed out to (*insert name of operator*) that DW/ 172, the internationally recognised specification for commercial kitchen ventilation, requires an overhang of 600mm above combination ovens to ensure the collection of steam and fumes when the oven door is opened. DW/ 172 is not retrospective, however, the existing canopy only provides an overhang of 250mm (*or insert accurate dimension*) and we suggested that the canopy should be modified or replaced to provide the 600mm overhang. We were told that it was not possible to modify or replace the canopy and therefore following a risk assessment we determined that the extraction canopy safely removes the products of combustion and therefore meets the gas safety requirements, however, there is a risk of steam and cooking fumes not being captured if the door is opened fully.

We must point out that food safety and health and safety regulatory requirements place an onus on the proprietor of a 'food business' to ensure that all hazards are identified and that steps are taken to ensure that adequate safety features are in place. We strongly recommend that staff are instructed to open the oven door by a maximum of 75mm until all the steam and fumes are collected in the canopy and this is reinforced by the use of a warning notice.

continues on next page



Water problems due to chlorides on Direct Injection (boiler-less) combi ovens continued

Appendix 2:

Suggested advisory notice for electric installations

Prior to installing the combination oven it was pointed out to (*insert name of operator*) that DW/172, the internationally recognised specification for commercial kitchen ventilation, requires an overhang of 600mm above combination ovens to ensure the collection of steam and fumes when the oven door is opened. DW/172 is not retrospective, however, the existing canopy only provides an overhang of 250mm (*or insert accurate dimension*) and we suggested that the canopy should be modified or replaced to provide the 600mm overhang. We were told that it was not possible to modify or replace the canopy and therefore following a risk assessment we determined that the extraction canopy would not safely remove the steam and cooking fumes if the door is opened fully.

We must point out that food safety and health and safety regulatory requirements place an onus on the proprietor of a 'food business' to ensure that all hazards are identified and that steps are taken to ensure that adequate safety features are in place. We strongly recommend that staff are instructed to open the oven door by a maximum of 75mm until all the steam and fumes are collected in the canopy and this is reinforced by the use of a warning notice.

