

TECHNICAL BULLETIN

PRODUCT: BOSCH CE 19 NA and CE 12 NA CHP

FLUE ARRANGEMENTS AND CONDENSATE DRAINAGE

Bosch issued a revised schematic drawing for the flue arrangement during the release of the CE 19 NA2 back in May 2014. The schematic (attached) sets out a typical arrangement for the flue, incorporating the primary and secondary silencers. The drawing also sets out the specification for the type of high pressure, fully sealed flue system that is required.

For the flue to operate correctly, it is fundamental that any condensate which forms within the flue is drained away without causing restrictions. Most important for this function is the condensate drain which is shown at the base of the main flue stack (*Fig. 1*). This condensate drain removes the bulk of the condensate and should be treated as the primary drain point.

Therefore this drain point is mandatory on all CHP flue systems.

If this drain point is not in place, it is possible for large quantities of condensate to become trapped in the lower section of the flue, where there is greatest velocity of the flue gasses. Protection systems within the CHP, which guard against flue blockages, can operate, leading to nuisance lockouts.

A trap, which is fitted to the base of the flue system, must have a minimum 350mm water seal and be made from a suitable material for a flue system. The trap must be positioned immediately below the spigot rather than in line, in accordance with BS 6644-2011 6.10.4 fig 3 (example shown in *Fig. 2* opposite). The pipe work must be taken straight to drain and be open to atmosphere.

Any horizontal section of flue system must have a minimum 3° fall in the direction of the flow of flue gases, towards the condensate trap, to ensure condensate drains away effectively. This is easily achieved with a tee arrangement at the base of the flue stack, incorporating a drain point.

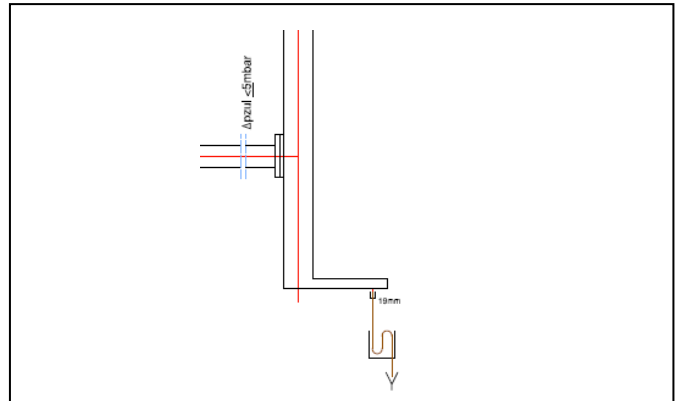


Fig. 1: Primary condensate drain and trap located at the base of the flue system

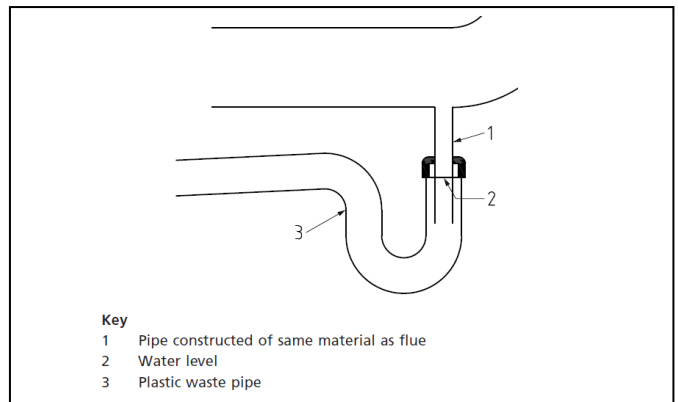


Fig.2: Detail of trap arrangement showing the trap connected immediately below the spigot from the flue system drain.

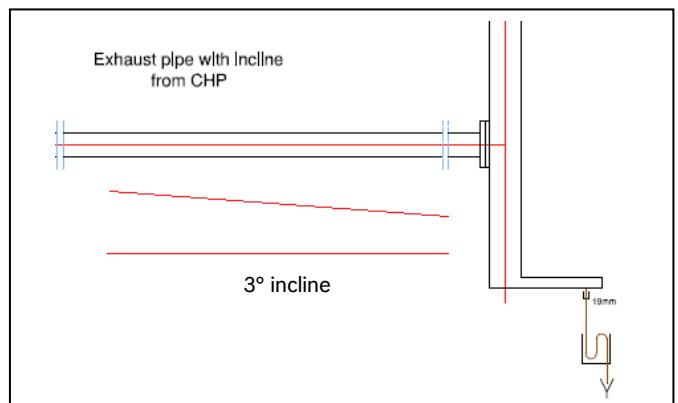


Fig.3: 3° incline towards the primary condensate drain point



