

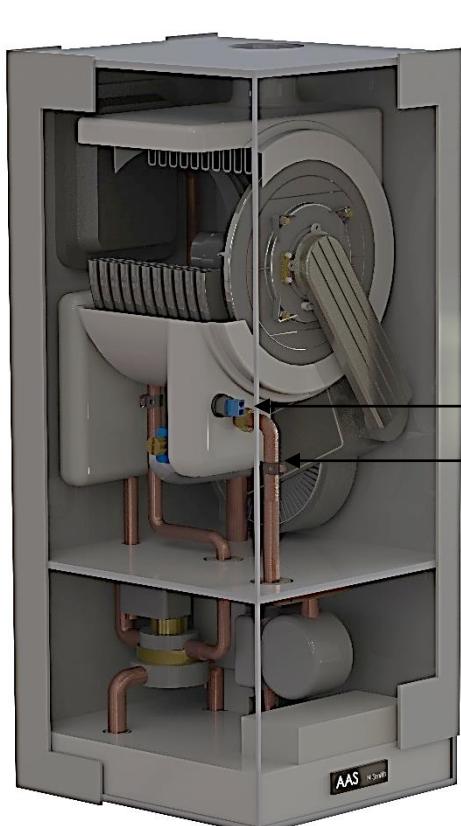


## Boiler Temperature Sensor

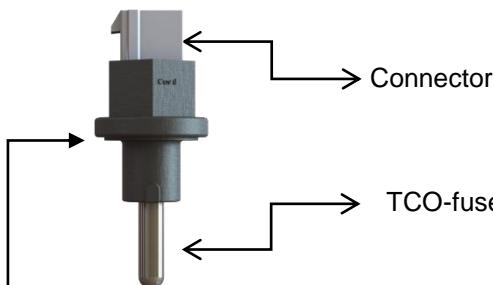
### Over-view

High efficiency, condensing, water boilers have largely replaced conventional water heating systems in Europe and are increasingly being used in the Americas and in Asia. The drive to change is due to a substantial increase in energy efficiency, typically 98% compared to 70% for the older technology; this is further backed-up by national legislation which determines high efficiency water boilers are installed for new or up-graded systems.

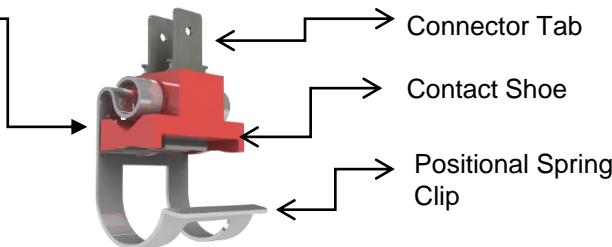
The optimal performance is, in part, determined using high precision temperature sensors, based on negative temperature sensor (NTC) thermistors which replace low precision thermal-mechanical switches. Additionally, safety is enhanced since 'dry-burn' is prevented with the use of thermal cut-off fuses (TCOs) that restrict electrical power to the boiler in the event of a malfunction.



Schematic of a condensing boiler



- Full range of TCO temperature ratings according to EN60691.
- Range of connector geometries are available.
- Custom designs can be considered.



- Non-intrusive temperature measurement, the sensor sits on the pipe.
- A large range of pipe diameter are accommodated, Ø12-24mm (0.47-1.0").
- Fast response time, < 2.0 seconds to register a thermal transient.
- High precision,  $\pm 1.0^\circ$ .
- Full range of resistance values and resistance versus temperature responses are available.