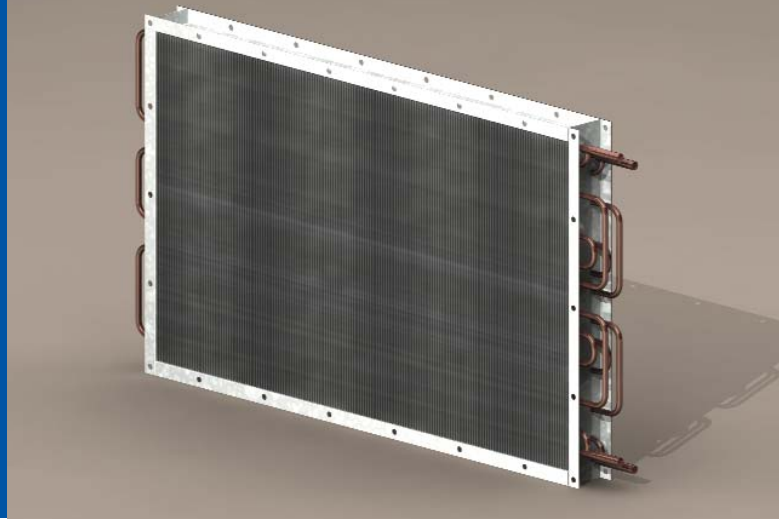


# Heating or Cooling Coil



The addition of a heating coil allows an extra degree of control to your natural ventilation system.

Although we have a year round ventilation requirement there are many days when outside air temperatures may simply be too cold for direct input. In these instance in-line heating coils can be used to temper the incoming air to allow continuous ventilation rates without compromising temperature control. Heating coils also add a wider degree of flexibility to the system however by allowing space heating to be employed within the Natural Ventilation design. When used for heating the system air movement actually results in a faster and more efficient heating process as compared to pure radiator based systems.

Type VN-H - Heating Coil

Type VN-HC - Combined Heating and Cooling Coil

A dual 4 pipe combined heating and cooling system is also optionally available to provide summer cooling should a suitable supply of chilled water be available. Since the units require relatively high chilled water temperatures, in order to avoid supply air condensing on the coil, they are particularly suitable for including in a chilled ceiling water circuit.

## Heat Up Time

Tests demonstrate that the units can provide a heat up time of between 30 and 45 minutes with the dampers closed and with no other room heat sources. This is based on an initial room temperature of 12°C and a final temperature of 20°C.

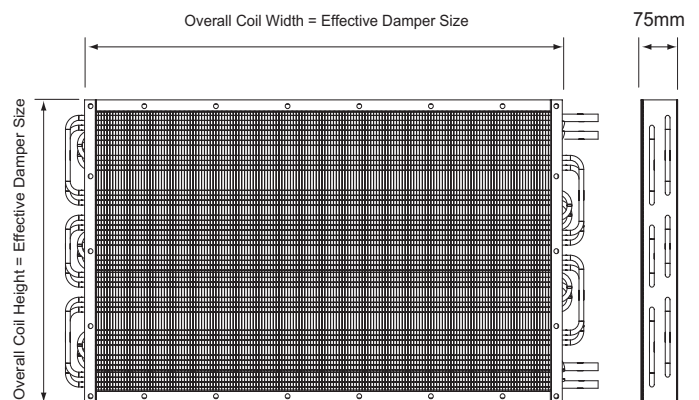
## Coil Connections

The heating coils terminate with industry standard 15mm copper connections. If combined heating/cooling coils are fitted then separate flow and return connections are provided for both the heating and cooling sections.

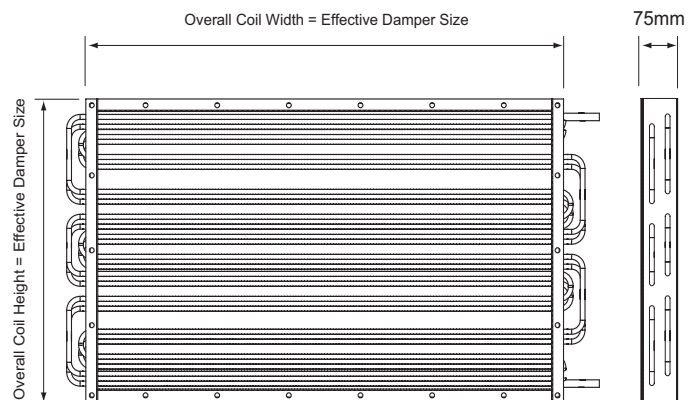
## Coil Capacities

Heating and cooling capacities can be calculated from the graphs on page 19.

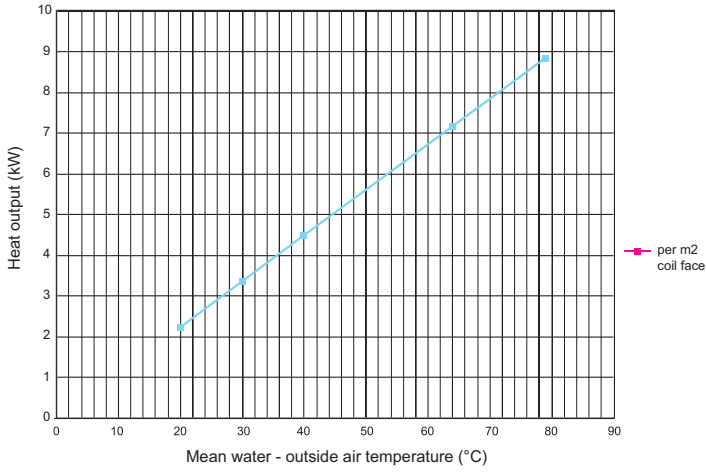
## Combined Heating and Cooling Coil



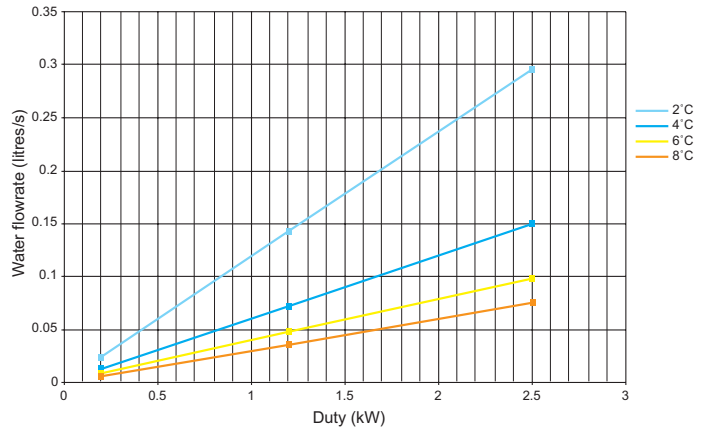
## Heating Coil (only)



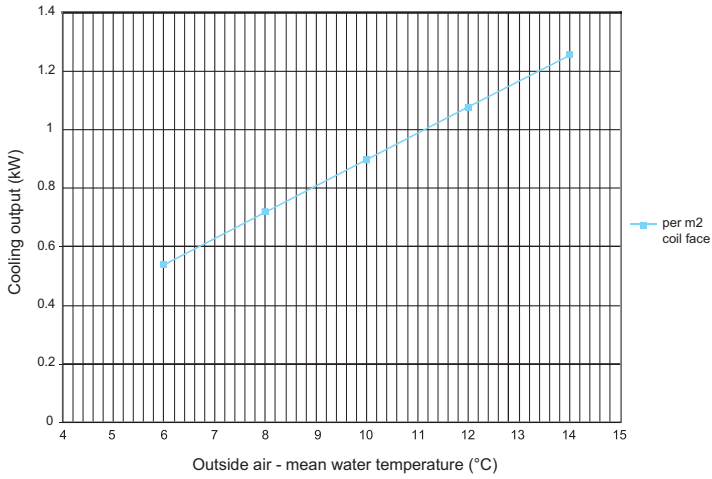
Heat output against temperature difference



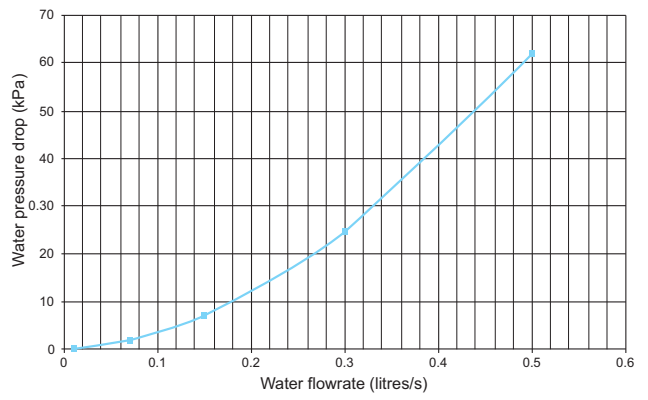
Water flowrate against water temperature rise (cooling)



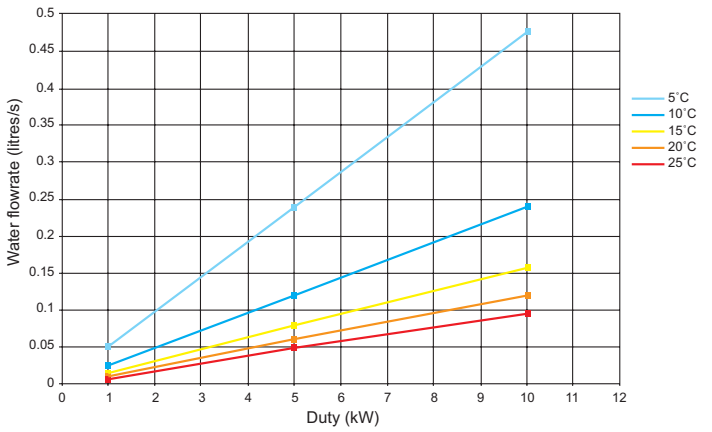
Cooling output against temperature difference



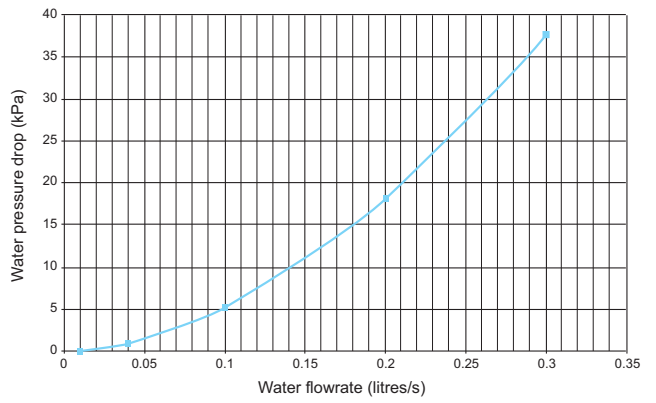
Water pressure drop against flowrate (heating)



Water flowrate against temperature drop (heating)



Water pressure drop against flowrate (cooling)



Coil airside pressure drop

