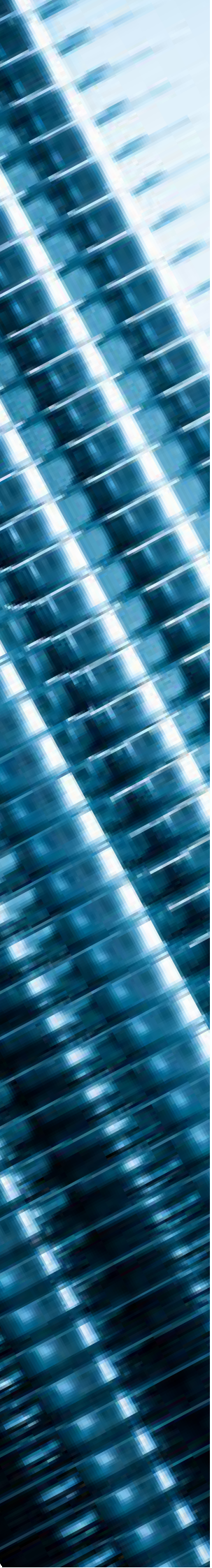
HOAVITECH
2023

COIL

STEAM COILS

CHILLED WATER COILS

DX COIL



COIL

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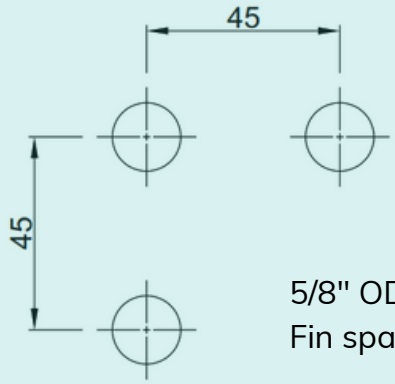
STEAM COILS

Steam Air Heating Coils for Air Conditioning and Process Heating using Dry Saturated Steam. Coils can be manufactured to suit almost any size of Ducting, Plenum or Air Handling Unit.

TUBE AND FIN CONFIGURATIONS



5/8" OD tube,
Fin spacing 4.0 to 10 mm

TUBE AND FIN CONFIGURATIONS

Coils are constructed from Copper Tube to BS2871 mechanically expanded into aluminium fins with die formed self spacing collars. Tubular copper headers are silver brazed into the tube ends. Flow and return connections are BSP(M).

The coil casing is formed from heavy gauge galvanised sheet steel to BS 2989 to make a rigid assembly. Tube end plates have die formed collared holes to allow expansion and contraction of the tubes without damage.

TESTING

All coils are pressure tested to 16 bar with dry compressed air under water.

Performance

All coils are selected individually to suit customer requirement using technically advanced computer software to give optimum performance with lowest pressure drop.

Optional features.

Copper Fins, Heresite/ Hydrophilic Coated Aluminium Fins are available to give protection in certain aggressive environments. Alternatively, Plain copper fins are available.

For Positive Pressure or High Pressure Ducted Systems Boxed Ends should be specified to enclose headers and return bends and minimise air leakage.

Stainless Steel Casings are also available.

STEAM COILS

APPLICATION & OPERATION

Steam is easily distributed throughout a building, it is therefore a convenient heat transfer medium that can be applied for a variety of tasks at different locations.

The application of steam and finned tube coils for heating air needs care and attention to ensure that coils will not be damaged by water hammer and thermal shock - the common cause of failure.

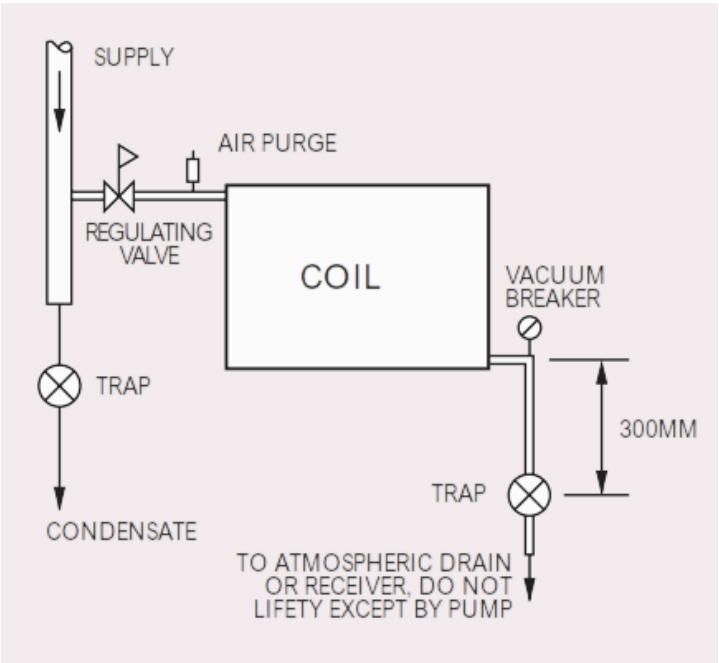
The Steam is condensed in the coil tubes, as it condenses its volume collapses dramatically and water is formed at its saturation temperature according to the pressure prevailing. Thus steam is induced (not forced) into a coil by the suction caused when it collapses into condensed water.

The problem that steam coils have is one of their regulation to balance varying heat load demands. It is important to realise that when steam condenses it releases latent heat fairly consistently regardless of pressure.

When steam flow is throttled to reduce heat output its condensing temperature rapidly falls to a balancing pressure soon below the system condensate return pressure. At this event condensed water ceases to be drained from the coil and thus flooding and subcooling take place.

Resulting constant re-adjustment by the automatic regulating valve will cause the condensate level to rise and fall. Water hammer and thermal shock will result.

INSTALLATION



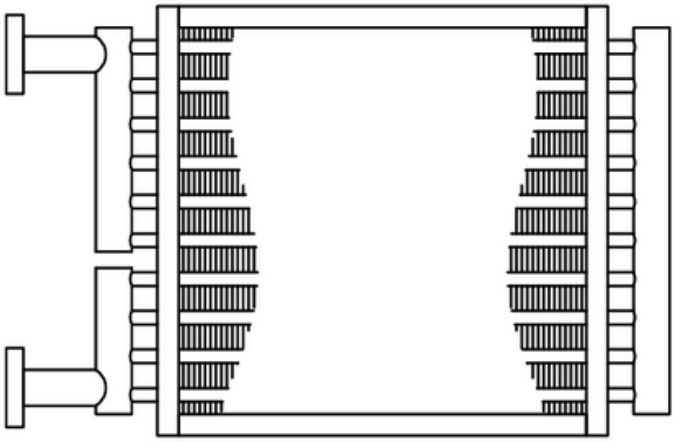
Selection

To enable us to make a selection we require the following parameters

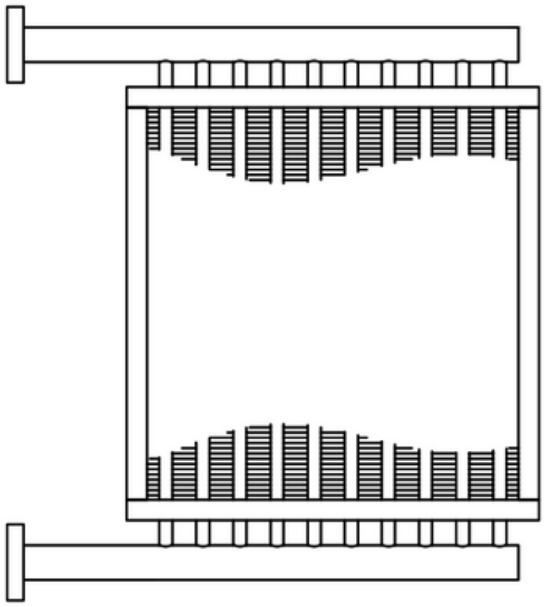
Air Side Three of the following values:
- Air Volume
- Air On Temperature
- Air Off Temperature

Steam Side One of the following values.
- Steam Pressure
- Steam Temperature
- Mass flow rate

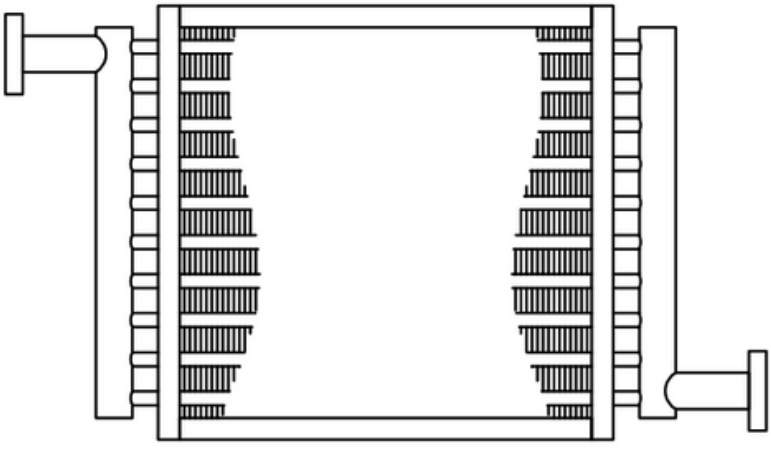
COIL ARRANGEMENTS



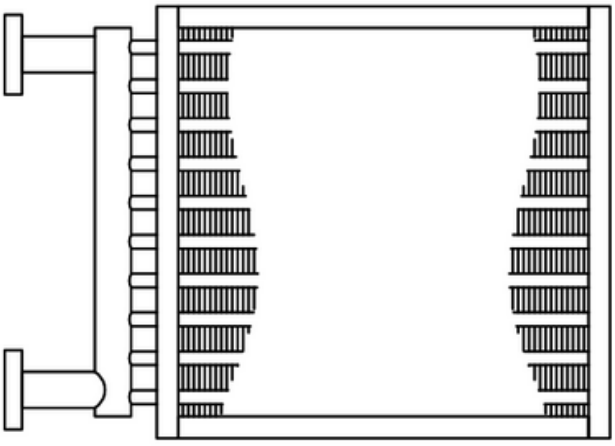
a. Same End Connectors



b. Vertical Tubes

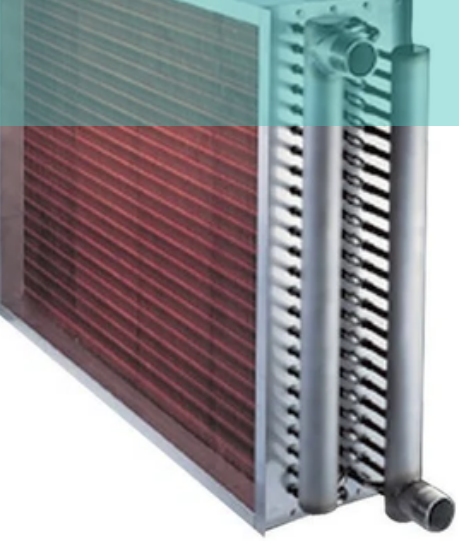


c. Opposite End Connectors



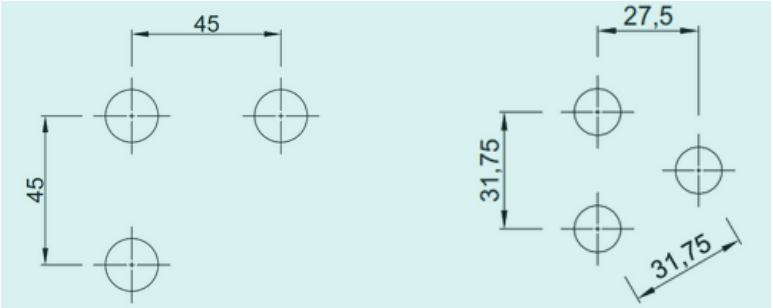
d. Horizontal Airflow

CHILLED WATER COILS



Chilled Water Air Cooling Coils for Air Conditioning and Process Cooling which can be used with ethylene or propylene glycol solutions for low temperature applications.
Two tube and fin configurations are offered which enable coils to be manufactured in almost any size to suit Ducting, Plenums and Air Handling Units.

TUBE AND FIN CONFIGURATIONS



5/8" OD tube,
Fin spacing 4.0 to 10 mm

1/2" OD tube,
Fin spacing 2.1 to 3.2mm

TUBE AND FIN CONFIGURATIONS

Coils are constructed from Copper Tube to BS2871 mechanically expanded into aluminium fins with die formed self spacing collars. Copper return bends and tubular copper headers are silver brazed into the tube ends.
Flow and return connections are BSP(M). air vents and drain sockets are provided. The coil casing is formed from heavy gauge galvanised sheet steel to make a rigid assembly. Tube end plates have die formed collared holes to allow expansion and contraction of the tubes without damage.
Drain trays are provided as standard, vee formed with an air baffle to prevent air bypass and a BSP(M) drain connection. Alternatively perforated bottom plates may be provided to allow drainage into customers own draintray.

TESTING

All coils are pressure tested to 16 bar with dry compressed air under water.

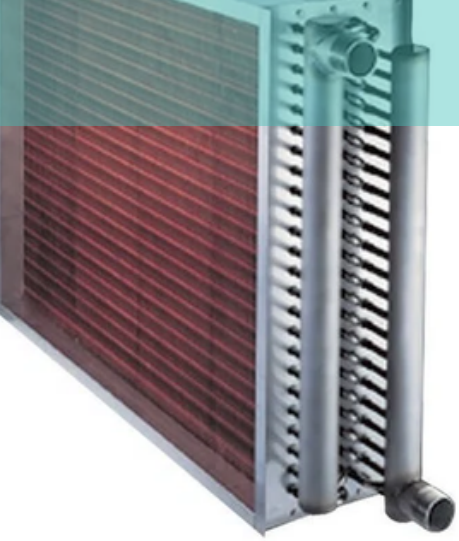
Performance
Performance
All coils are selected individually to suit customer requirement using technically advanced computer software to give optimum performance with modest refrigerant pressure drop.

Optional features.
Copper Fins, Heresite/ Hydrophilic Coated Aluminium Fins are available to give protection in certain aggressive environments. Alternatively, Plain copper fins are available.

For Positive Pressure or High Pressure Ducted Systems Boxed Ends should be specified to enclose headers and return bends and minimise air leakage.

Stainless Steel Casings are also available.

CHILLED WATER COILS



Selection
To enable us to make a selection we require the following parameters

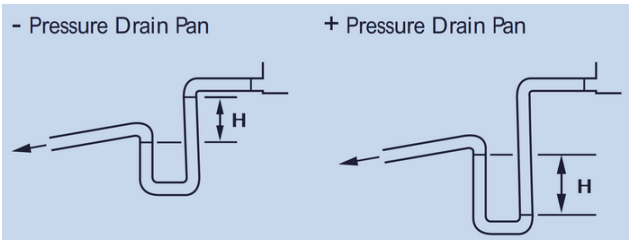
Air Side
Three of the following values:

- Air Volume
- Air On Temperature (DB, WB or RH
- Air Off Temperature

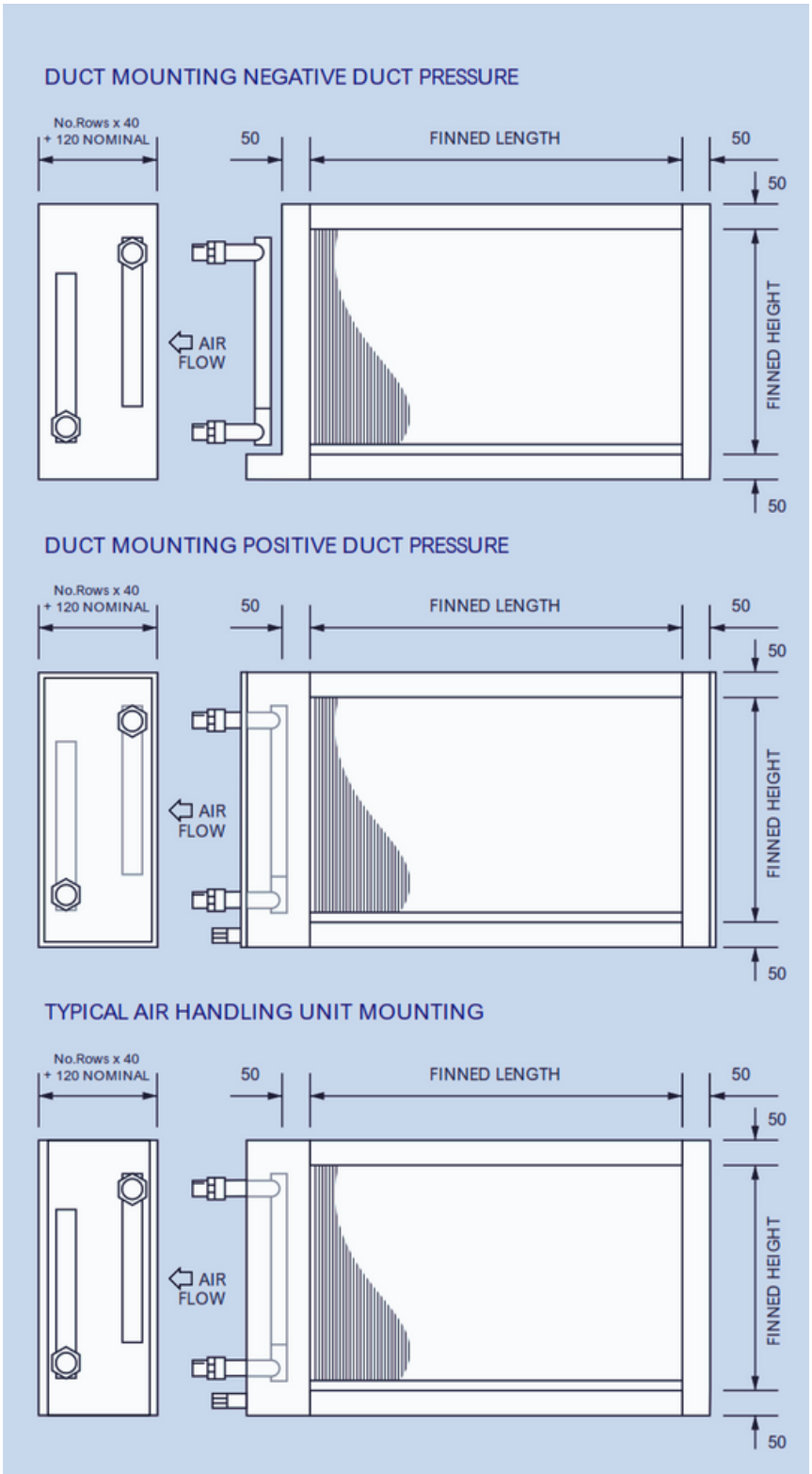
Water Side
Two of the following values.

- Water Inlet Temperature
- Water Outlet Temperature
- Water Flow Rate

Trapping
Correct trapping of the condensate drain line is essential to prevent flooding or splashing back into drain pan.



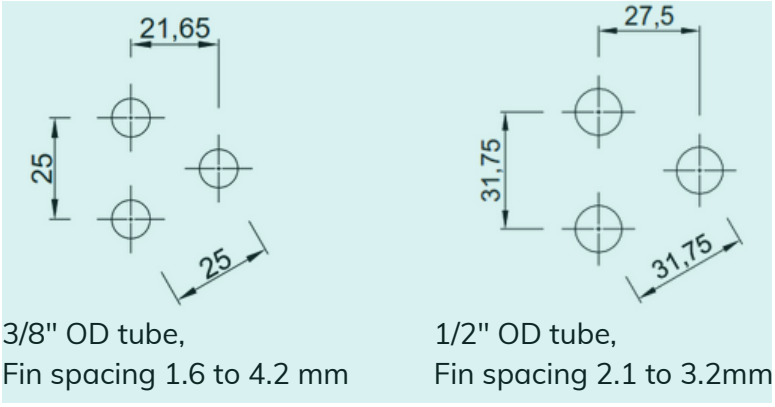
DIM H = TSP(Pa) /10 + 12mm.



DX COILS

Direct Expansion Air Cooling Coils for Air Conditioning and Process Cooling which can be used with HFC and HCFC refrigerants. Two tube and fin configurations are offered which enable coils to be manufactured in almost any size to suit Ducting, Plenums and Air Handling Units.

TUBE AND FIN CONFIGURATIONS



3/8" OD tube,
Fin spacing 1.6 to 4.2 mm

1/2" OD tube,
Fin spacing 2.1 to 3.2mm

TUBE AND FIN CONFIGURATIONS

Coils are constructed from Copper Tube to BS2871 mechanically expanded into aluminium fins with die formed self spacing collars. Copper return bends, liquid distributor and tubular copper headers are silver brazed into the tube ends. The coil casing is formed from heavy gauge galvanised sheet steel to make a rigid assembly.

Tube end plates have die formed collared holes to allow expansion and contraction of the tubes without damage. Drain trays are provided as standard, vee formed with an air baffle to prevent air bypass and a BSP(M) drain connection.

Alternatively perforated bottom plates may be provided to allow drainage into customers own draintray.

TESTING

All coils are pressure tested to 25 bar with dry compressed air under water.

Performance

Performance

All coils are selected individually to suit customer requirement using technically advanced computer software to give optimum performance with modest refrigerant pressure drop.

Optional features.

Copper Fins, Heresite/ Hydrophilic Coated Aluminium Fins are available to give protection in certain aggressive environments. Alternatively, Plain copper fins are available.

For Positive Pressure or High Pressure Ducted Systems Boxed Ends should be specified to enclose headers and return bends and minimise air leakage.

Stainless Steel Casings are also available

Defrost

For low temperature applications where frosting of the coil will occur provision for defrosting can be incorporated into the coil.

Selection

To enable us to make a selection we require the following parameters

Air Side

Three of the following values:

- Air Volume
- Air On Temperature (DB, WB or RH
- Air Off Temperature

Refrigerant

Evaporting temperature

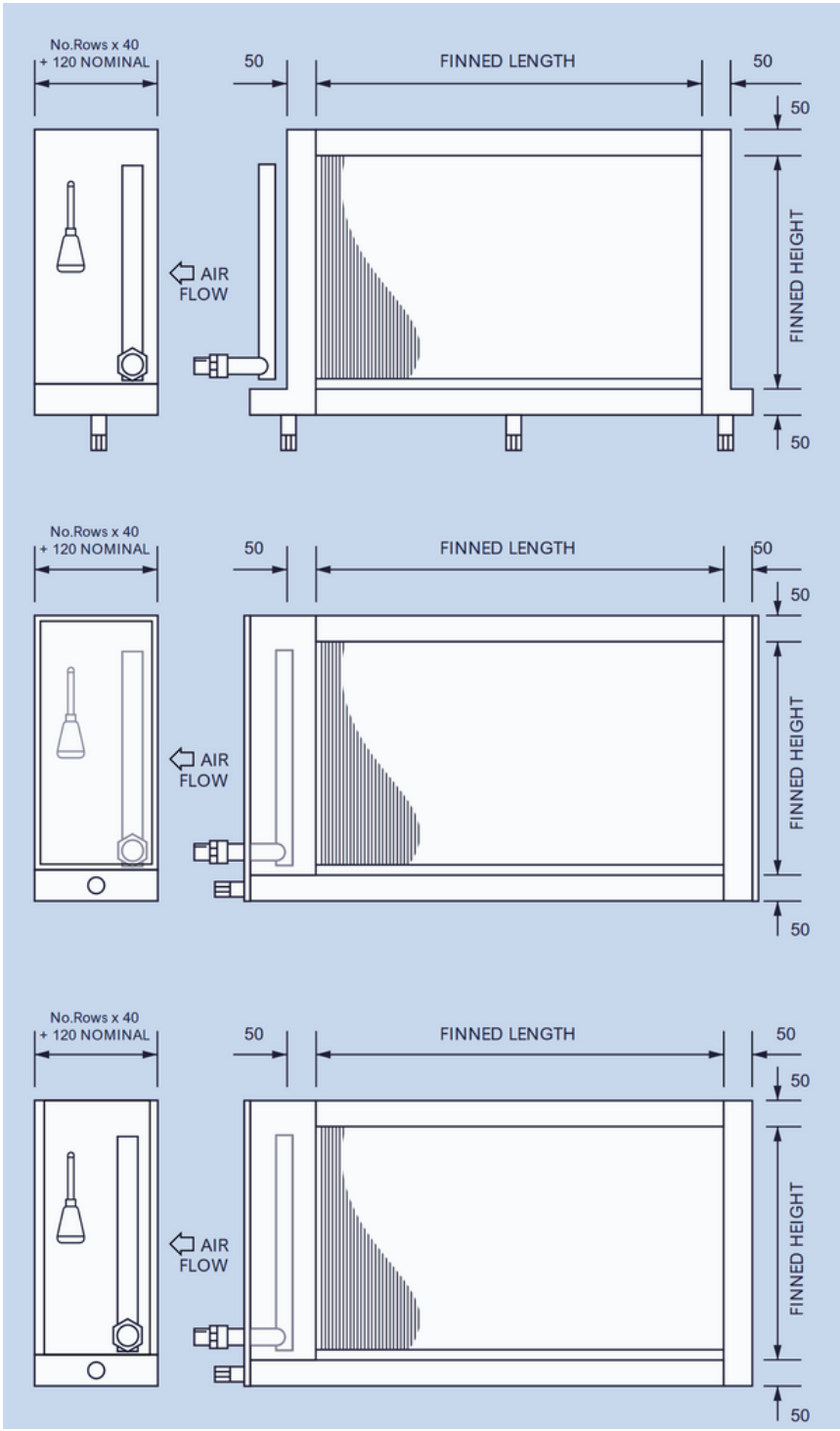
Multi Sections

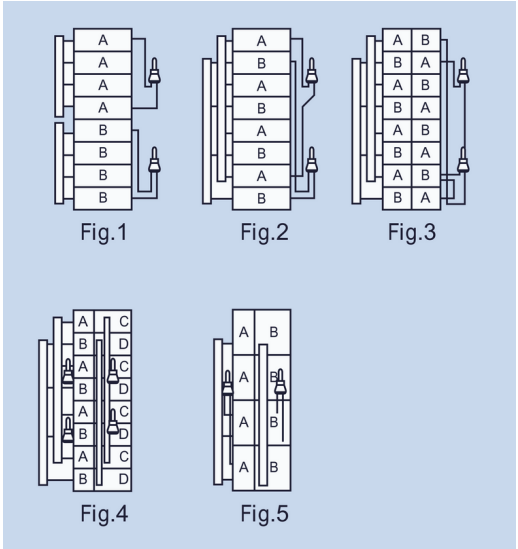
To effect capacity control it is sometimes necessary to divide the coil into independent refrigerant sections each with its own distributor and suction header.

There are a number of acceptable methods of achieving this.

Figures 1-3 are suitable for varying loads where air off temperature may rise to meet lower duty.

Figures 4 & 5 are suitable for varying loads where air off temperature is to remain constant with varying air on temperature.





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