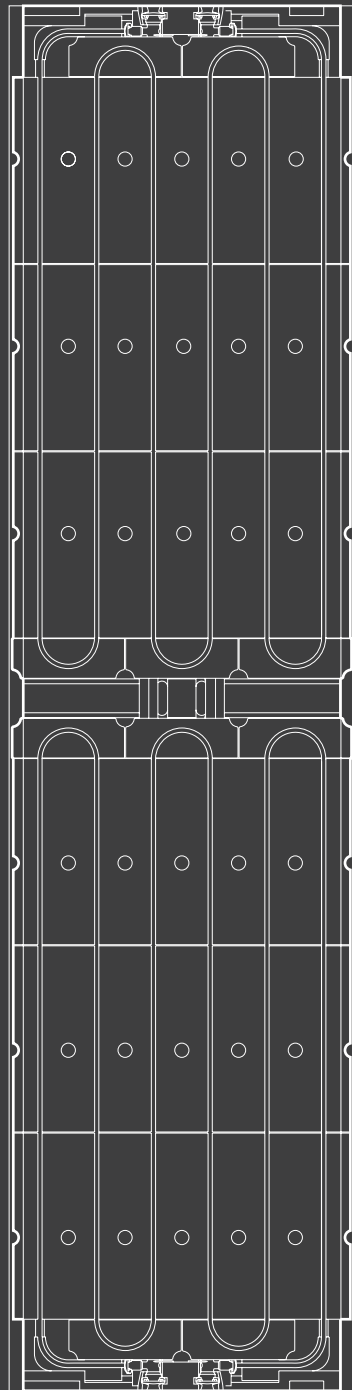


WATERWARE

HEATING & COOLING



ACTIVE CEILING QUICK GUIDE

- Introduction
- Planning
- Installation of Panels
- Installation of Fittings
- Panel Layouts
- Pressure Test
- Ceiling Materials
- Corrosion Control

QUICK GUIDE

INTRODUCTION

The following quick guide is an overview of the installation of Messina Active Ceiling.

It has been created by Waterware to provide our customers support when installing the Active Ceiling solution.

We advise that you read the full installation guide for first time installations.

This guides covers 8 steps to follow from planning to Corrosion control. Our technical team is available for any additional questions or support you may need. Phone us on 0800 Waterware.

Thanks for choosing Messina Active Ceiling.

KEY BENEFITS OF MESSANA ACTIVE CEILING



HEATING



COOLING



INVISIBLE



REDUCED AIR
MOVEMENT



LOW RUNNING
COST



SILENT

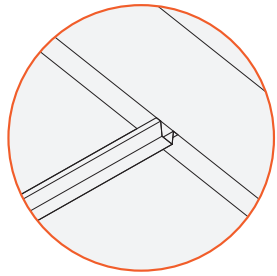


SUSTAINABLE



HYGIENIC

PLANNING



Galvanized steel hat furring channel

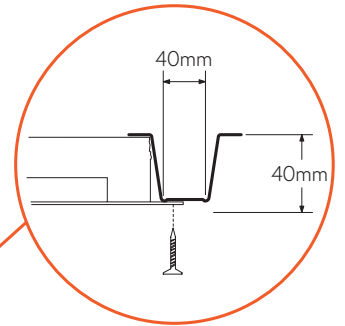
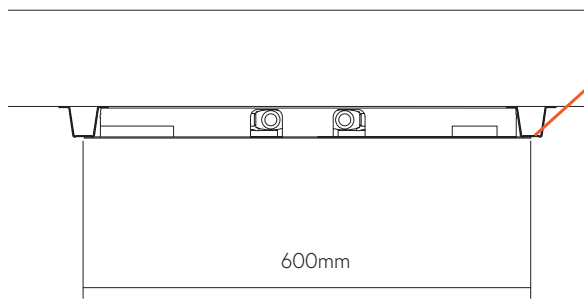
Communication with the builder during build planning is required to ensure that the site is properly prepared for Active Ceiling installation.

- In all cases, the full installation guide of the panels should be read before installation

Key points that should be discussed before the build is started are:

- Using the framing and lighting plans, a draft of the panel layout should be prepared, in order for the battens to be placed correctly when building starts
- Batten depth must be equal to 40mm. If deeper, additional packing or support may be needed to ensure the panel is compressed against the back of the GIB.

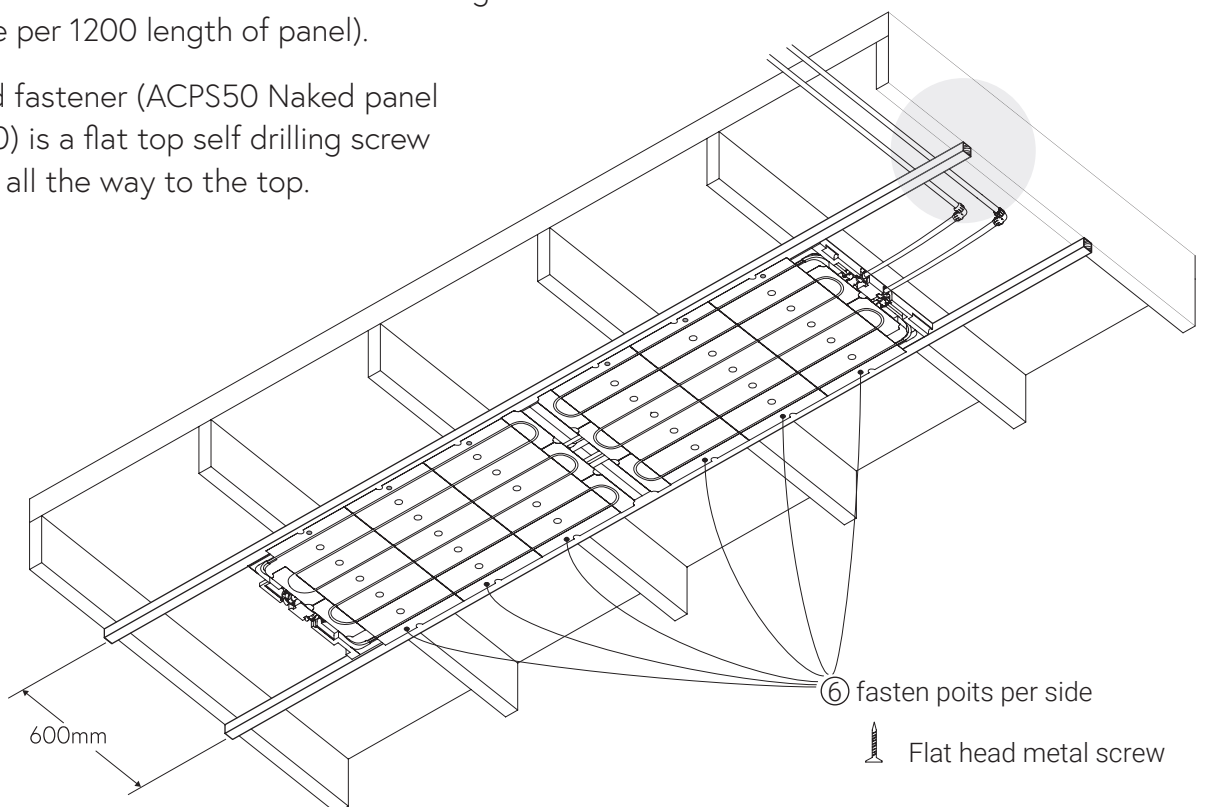
- Batten width in panel locations must be 600mm centres for full panels and 300mm centres for slim panels
- Smaller batten channels can be created where lighting is planned
- Due to difference in batten depth from a normal ceiling, adjust framing to suit if achieving a specific stud height
- We calculate heating and cooling transmission with 13mm ceiling GIB. If you are using thicker ceiling plasterboard or other materials please make sure Waterware is made aware so we can evaluate.



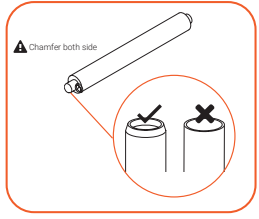
INSTALLATION OF PANELS

Active ceiling panels must be secured at all fastening points (3x per side per 1200 length of panel).

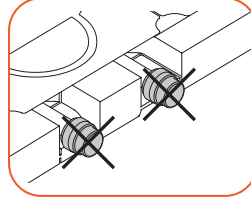
The recommended fastener (ACPS50 Naked panel screw, collated, 50) is a flat top self drilling screw which is threaded all the way to the top.



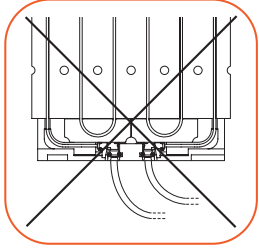
INSTALLATION OF FITTINGS



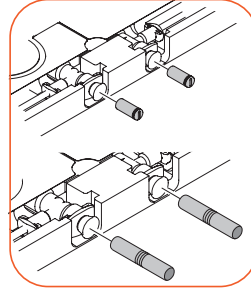
All pipe entering fittings must be reamed on the ID and OD. Once correctly prepared, push the pipe as far as it will go into the fitting.



It is not permitted to use end caps on the end of a half panel which terminates as pipe, and doesn't contain a 3 way fitting.



Ensure that there is no stress on the pipe-fitting connection caused by a near-by unsupported bend in the pipe. Either strap flow and return, or use T/elbow fittings before the panel.

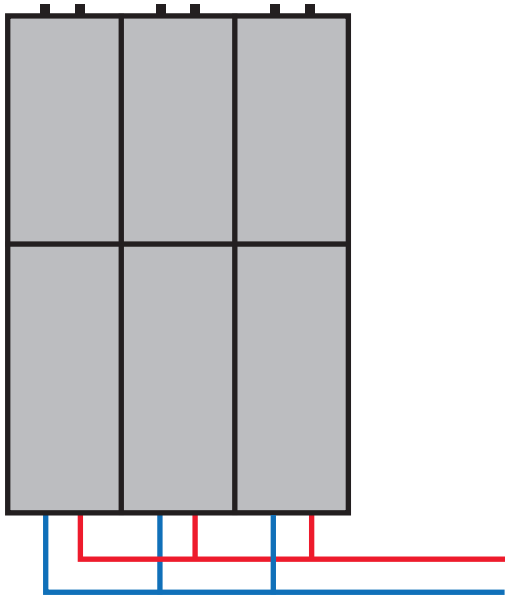


The plugs and straight connectors that come with the panels may not be connected directly into any pipe, only the three way T's on the panel ends.

See complete installation instructions for clearances between walls and other panels

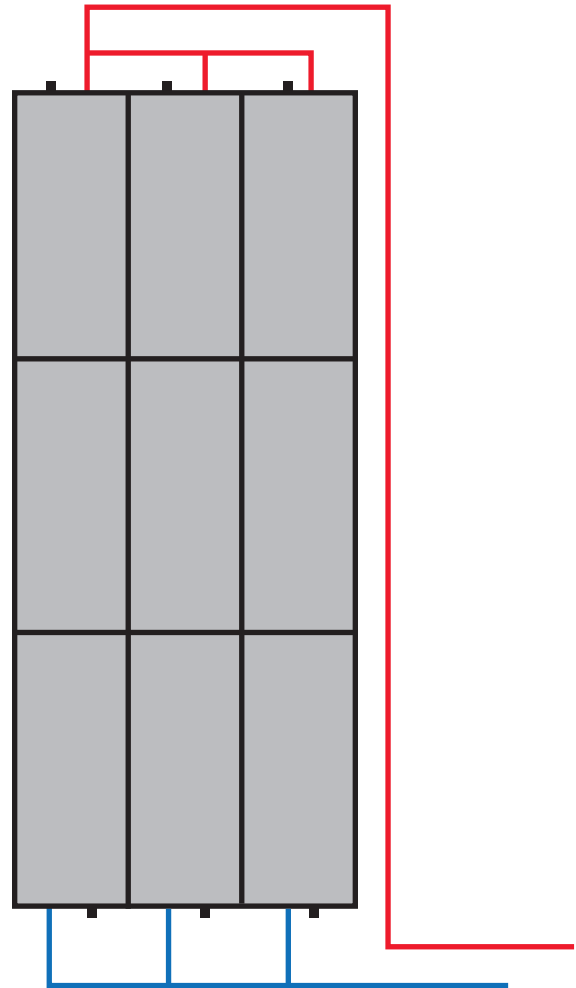
PANEL LAYOUTS

Circuits can be piped in two configurations



Standard

Best used for circuits below 8 panels. Less pipe is used but balancing flow can be more challenging.



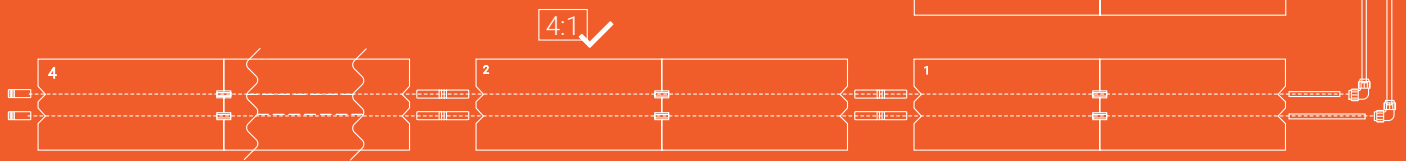
Reverse Return

Best used for circuits more than 8 panels. Uses more pipe but balancing flow across area becomes easy.

PANEL LAYOUT RESTRICTIONS

No more than 14 panels can be joined in a circuit

No more than 6 panels can be joined end to end



The most panels joined end to end in a circuit, is no more than 4 times the lowest number of panels joined end to end in the same circuit

PRESSURE TEST

Once all panels and pipework is installed, pressurise the system to 600 kPa and leave under test for the duration of the construction process to guard against accidental damage going unnoticed.

CEILING MATERIALS

The active ceiling system is designed for 10 or 13mm gypsum products with density greater than 80kg/m³

Using wooden ceiling coverings will reduce the transmission rate and potentially reduce the performance. Hard wood by up to 30% and soft wood by up to 50%

Please consult Waterware for design advice.

CORROSION CONTROL

To prevent corrosion to other metal components within the system, a corrosion inhibitor should be added to the system and replaced annually. We recommend 'EverBuild Inhibitor Concentrate'

(www.waterware.co.nz/central-heating/system-treatments/Inhibitor/everbuild-inhibitor-concentrate)

SOLUTION DESIGN & SUPPORT

Waterware's expert technical team are here to support you. Our specially trained in-house team provide a range of services which include:

- **Pre-sales: Product and system help and specification**
- **Design and quote**
- **Installation support**
- **After sales troubleshooting and performance advice**

If you are thinking about your home heating and cooling options, whether it be a renovation or a new build project, give us a call. We have a dedicated technical team who are committed to finding the best solution for every situation.

The team will guide you through the design and quoting process from start to finish, providing advice and suggestions to get the best result from your budget. From choosing whether you want radiators or underfloor, to helping weigh up choices such as fuel source. We take into consideration your preferences, compatibility of products, ongoing running cost, and initial system cost.

All of our systems offer a change to merge your heating and cooling with the production of domestic hot water. Electric hot water cylinders can cost up to four times more to run than a natural gas boiler or electric heat pump, and there is no compromise on heating system function

All we need to begin pricing after these details have been discussed, is a floor plan. We return to you a quote and a system description which contains product information, a layout of the materials on your plan, and the system schematic/design. After the initial quote, discussion continues with our technical and sales team until you are happy with everything, from the cost down to the placement of the last component inside the house.



An example of the system description document covering the complete system.

Peace of mind - systems that are designed, purchased, and installed to specification come with Waterware's performance guarantee.

Simply put, if the house doesn't heat and cool correctly then we will rectify it at our cost.

Waterware also offers its on-line Knowledge Base as a source for technical troubleshooting and advice.

Note: This is only available with a Waterware trade login

We consider ourselves experts in our field where we strive to answer any technical question you may have about any of our products.

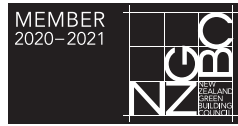
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An air to water heatpump harvests free energy from the ambient environment - it consumes 1 unit of energy to harvest up to 4 i.e. 400% efficient. The unit consumed comes from conventional electricity and over 80% of NZ's electricity comes from renewable technologies like hydro, solar and wind.

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