30a Renewable Chase
Bibra Lake WA 6163
Tel: (08) 9494 2211
Fax: (08) 9494 2202
Email: info@sipsindustries.com.au
Web: www.sipsindustries.com.au

Panel Chasing Guide

Please read before installing electrical wiring or plumbing.

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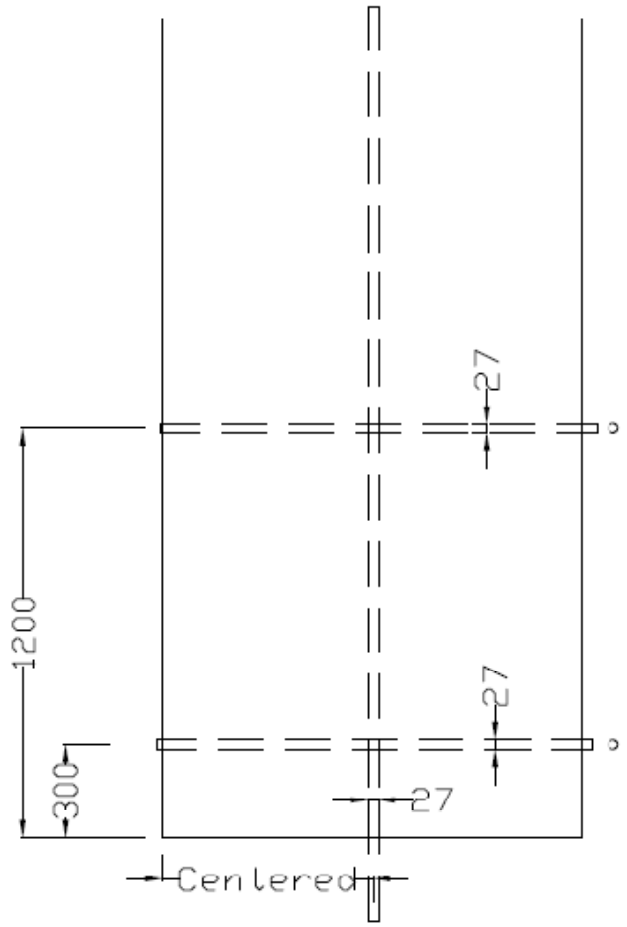
1 AUSTRALIAN ELECTRICAL AND PLUMBING STANDARDS

All wiring and plumbing must be carried out in accordance with the Australian Electrical and Plumbing Standards. SIPs panels can be supplied with or without electrical chasing. The chased panels have a series of 27mm electrical chase throughout the panel to assist with the wiring installation. These chases are for electricians only and not for any other service or trade. DO NOT CUT THE FACE OF ANY PANEL. When the shell is complete the load bearing SIPs are under a constant load so cutting through the OSB skin will compromise the strength of the SIP.

DO NOT CUT THE FACE OF ANY PANEL - CALL BEFORE YOU CUT.

1.1 HORIZONTAL & VERTICAL CHASING

SIPs panels are chased horizontally with a 27mm chasing at 300mm from the floor and 1200mm from the floor with a 27mm vertical chasing through the center of each full panel.



If the electrical services are to be pulled from the sub level, the bottom plate must be drilled out before the SIPs are lifted into position to align with the vertical chasings to allow electrical services to be installed. If the cabling is to pass through the top of the SIP then the top plate should be drilled out to align with the same vertical chase. All holes which have been drilled must be cleaned of all debris so cables being pulled are unobstructed. Typically roof panels are unchased and cables are face fixed on the inner face of the SIP or cables are run on the outside of the roof SIP under the finished roof cover. If the cables are fixed on the underside of the SIP use a timber batten fixed to the inner face of the SIP which then has Gyprock fixed over.

This basic grid allows the electrician to run all the wiring with minimal cutting and drilling the panels.

1.2 OUTLETS AND SWITCHES

The locations of all electrical devices need to be located and marked. The openings are cut into the OSB using a router, hole saw or jigsaw. If required keep the OSB core plugs which can be glued and foamed back into position. The wiring can now be pulled through the chases provided. If the layout calls for a specific location then this can be done on site by the electrician.

The custom chase is formed by using a “hot ball”. This is done by locating the position of the electrical device and the opening is then cut into the OSB as described above.

Using a spirit level, a pencil line is drawn from the new opening down to the 1200mm horizontal chasing and a second hole is cut into the OSB at that 1200mm level. The EPS must be removed to expose the factory cut chasing behind. Place a card into the lower hole to funnel the hot ball out of the panel when it has reached this location. Heat a 20mm-25mm ball bearing with a torch. You want the colour to be just under red.

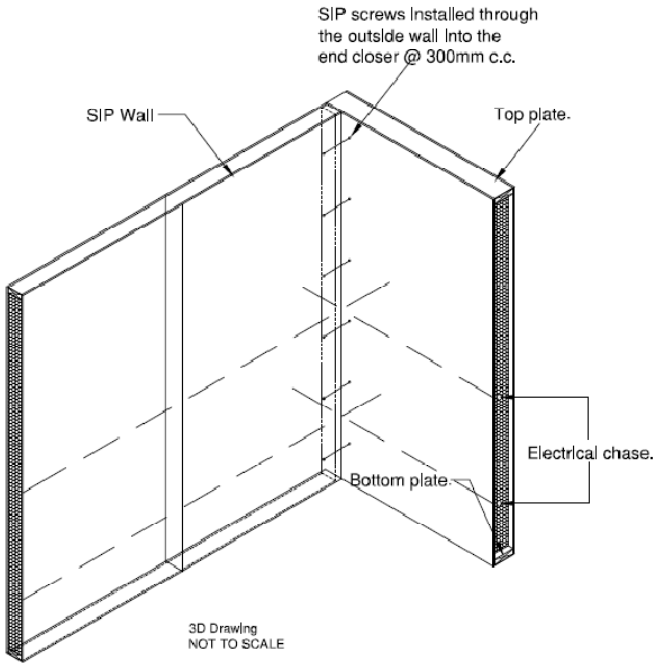
At this temperature the ball will move through the foam but not cause a flame. If it is too hot you will end up with a very large chasing.

Drop it in the top hole and watch it disappear where it will reappear at the lower hole and be funneled out by the card. Do not pick the hot ball up with your hands as it will burn you.

Other short custom chases can be made with a drill with an orger bit or a pointed piece of conduit used to bore the new chase.

1.3 CORNERS

Corners can be navigated a number of ways, the following two are the most common. The first approach involves drilling a hole in the end plates of the corner sip with an orger bit at the same level of the horizontal chasing, then drill a second hole around the corner and this will allow the electrician access to the corner to get his cables around the corner. The second way is to pull the cable up the vertical chase through the top plate and drop the cable back down the next vertical chase around the corner through a hole drilled in the top plate.



These are guidelines only, designers to ensure compliance to AS standards.

1.4 EXTERIOR CIRCUITRY & LIGHTING

This is done the same way as the internal wiring, but special care must be taken when installing all external fitting ensuring they are water proofed properly and sealed to stop any air movement between the outside and the inside of the building. The sealing of any penetrations is the responsibility of the electrician. This must be done with expanding type foam.

2 PLUMBING CONSIDERATIONS

A talk through the plans can identify and eliminate a host of potential problems later on during the project. For the most part the plumbing is kept out of the SIPS and rises through the foundation to specific locations such as baths, toilets and kitchens. Most of the time this plumbing is hidden behind the vanity units or kitchen counters. In multi storey designs the plumbing is run in the floor zone. The plumbing reaches this zone through a service riser which is typically located in the back of a cupboard, pantry or downstairs toilet. Waste water pipes can be run through the outside walls to exit the building and connect into the sewer system. Small vertical chases can be made but these should be kept to a maximum of 1200mm vertically as shown below. Plumbing can be face fixed as an alternative and then aquachek type Gyprock fixed over to finish. A vapour check must be in place for all wet rooms.

The sealing of any penetrations is the responsibility of the plumber. This must be done with expanding type foam.

3 AIR CONDITIONER CONSIDERATIONS

SIPS building tightness and wall R-values allow air conditioning equipment to be downsized and ductwork to be minimized. Care should be taken on planning duct work by using dropped ceilings, floor joist zones and service risers to aid the installation of the air conditioner. Service holes can be cut into the SIPs however; installers should call SIPS Industries before they cut any panels to avoid any unnecessary structural failure. Homeowners that incorporate other energy efficient features with SIP construction can benefit from the energy efficiency of a SIP home with reductions in heating and cooling costs of up to 50 percent or more due to the air conditioner cooling/heating the air, as opposed to the air conditioner heating/cooling the structure.