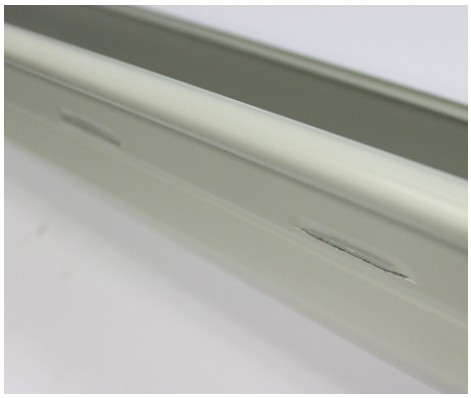
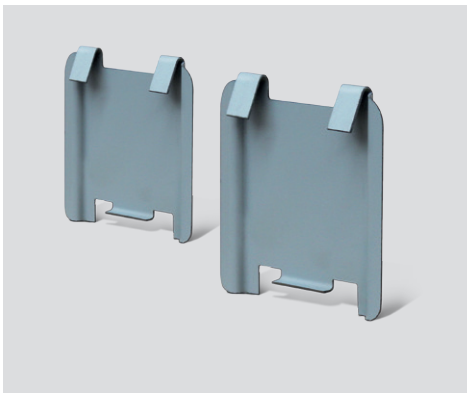
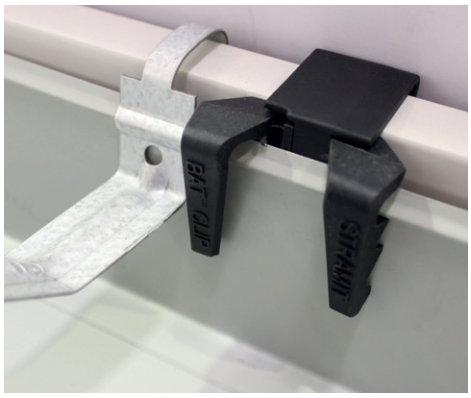
Stramit® Gutter Spacer Installed



Slotted Stramit® Gutter



Stramit® Gutter Spacer



Stramit BAT® clip with 10mm gap between gutter and fascia

STRAMIT® GUTTER OVERFLOW OPTIONS

Solutions for Gutter Overflow
Compatible with Stramit® Fascia and Gutters
For use in Victoria and Tasmania

p r o d u c t t e c h n i c a l s u p p l e m e n t

Stramit® Gutter Overflow Options

Gutter Overflow Design

The requirements for roof drainage systems installed in Victoria and Tasmania are stipulated in Volume 3 of the National Construction Code. Design should be carried out by a plumber or building designer, taking into account the size of gutter, and size and number of downpipes. The system needs to allow for overflow from gutters by installation and maintenance of suitable measures of adequate capacity. This requirement can be met by either a Deemed to Satisfy solution given in AS/NZS 3500.3 Appendix G or a Performance Solution that has been tested or verified by computation and certified.

The table and chart below give information on three overflow options that are available for use with the **Stramit® Fascia and Gutter Systems**. The first is overflow slots in the front of the gutter, which is a performance solution, the second is the **Stramit® Gutter Spacer** which is also a performance solution, and the third is the **Stramit BAT® Clip**, which is a Deemed to Satisfy solution. Testing has shown that provision of a space between the gutter and the fascia is an effective means of increasing the overflow capacity. Slots in the front face of the gutter also provide a limited overflow means.

The slots in the front face of the **Stramit® Victorian Quad 115** gutters have a minimum slot area of 720mm^2 per metre length. Testing at University of NSW has shown that these slots can cater for an overflow of 0.3Litre/sec/metre (L/s/m). Gutters with larger slots of 1060mm^2/m minimum area are also available, with an overflow capacity of 0.5 L/s/m as verified by testing.

The **Stramit® Gutter Spacers** create a gap between the fascia and gutter of 4mm at the spacer locations, and are installed no more than 1200mm apart. They can be retrofitted after installation of the fascia and gutter, and fit under the snap clip. The spacer solution has been tested and found to have a minimum overflow capacity of 1.2L/s/m. Information on installation can be found on the Stramit website www.stramit.com.au. The length of the spacer used with the **Stramit® Victorian Quad 115** gutter is 61mm.

The **Stramit BAT® Clip** creates a 10mm gap at the spacer location, and has an integral snap clip. According to Appendix G of the Standard AS/NZS 3500.3, the overflow capacity can range from 0.5L/s/m to above 1L/s/m depending on the position of the sloping gutter on the **Stramit BAT® Clip**. Information from the above standard is shown below.

Minimum h_f (mm)	12	14	16	17	19
Overflow (L/s/m)	0.2	0.4	0.6	0.8	1

h_f - distance between top of fascia and top of gutter back face.
The above is applicable for sloping gutters only. Where gutter is level, the h_f value should be increased by 6mm.
Table based on information in Appendix G of AS/NZS 3500.3

Choice of Overflow Options

If more than one overflow option is chosen, the total overflow would be the addition of the volumes based on each individual measure.

(a) Continuous Overflow Measures

The information in this section is based on testing carried out by the Australian Steel Institute and the University of New South Wales. Follow the steps given below to find a suitable overflow option.

Step 1: From the tables below, based on the location of the building, determine the design rainfall intensity for overflow.

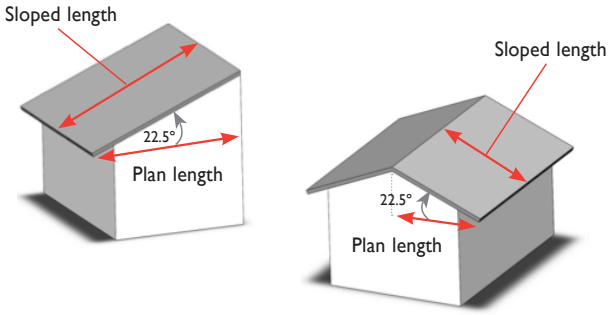
RAINFALL INTENSITIES FOR OVERFLOW DESIGN

Location	Rainfall intensity (mm/hr)
VIC	
Ballarat	188
Benalla	194
Geelong	144
Horsham	173
Lakes Entrance	198
Melbourne	187
Hastings	145
Sorrento	140
Mildura	218
Stawell	186
TAS	
Burnie	180
Flinders Island	166
Hobart	116
Launceston	121
Queenstown	120
St Marys	203

For other locations, refer to the Bureau of Meteorology website for information on finding the rainfall intensity for a 100 year Average Recurrence Interval (ARI) based on Latitude and Longitude.

Regular maintenance and cleaning of the gutter system is recommended to avoid blockages and for longer lasting product.

Step 2: Find the sloped length of roof that feeds into the gutter. A quick guide for finding the sloped length for a 22.5 degree slope is to multiply the plan length of roof by a value of 1.21. Where there is a penetration in the roof, or water from a top roof flowing on to a bottom roof, the value needs to take this additional length into account. If the catchment area is known instead, divide this value by the gutter length to find the roof length applicable.



Step 3: On the coloured chart, find the rainfall intensity row and move across to the roof length column. The colour of the box will give you the information on what overflow methods are available for this roof. A measure with a higher overflow capacity can be substituted for one with a lower capacity.

CHART SHOWING OVERFLOW SOLUTIONS FOR VARIOUS RAINFALL INTENSITIES

Rainfall intensity (mm/hr)	Length of roof feeding into gutter(m)																								
	4	4.5	5	5.5	6	6.5	7	7.5	8	8.5	9	9.5	10	10.5	11	11.5	12	12.5	13	13.5	14	14.5	15	15.5	16
125	0.14	0.16	0.17	0.19	0.21	0.23	0.24	0.26	0.28	0.30	0.31	0.33	0.35	0.36	0.38	0.40	0.42	0.43	0.45	0.47	0.49	0.50	0.52	0.54	0.56
150	0.17	0.19	0.21	0.23	0.25	0.27	0.29	0.31	0.33	0.35	0.38	0.40	0.42	0.44	0.46	0.48	0.50	0.52	0.54	0.56	0.58	0.60	0.63	0.65	0.67
175	0.19	0.22	0.24	0.27	0.29	0.32	0.34	0.36	0.39	0.41	0.44	0.46	0.49	0.51	0.53	0.56	0.58	0.61	0.63	0.66	0.68	0.70	0.73	0.75	0.78
200	0.22	0.25	0.28	0.31	0.33	0.36	0.39	0.42	0.44	0.47	0.50	0.53	0.56	0.58	0.61	0.64	0.67	0.69	0.72	0.75	0.78	0.81	0.83	0.86	0.89
225	0.25	0.28	0.31	0.34	0.38	0.41	0.44	0.47	0.50	0.53	0.56	0.59	0.63	0.66	0.69	0.72	0.75	0.78	0.81	0.84	0.88	0.91	0.94	0.97	1.00
250	0.28	0.31	0.35	0.38	0.42	0.45	0.49	0.52	0.56	0.59	0.63	0.66	0.69	0.73	0.76	0.80	0.83	0.87	0.90	0.94	0.97	1.01	1.04	1.08	1.11

Values are in L/s/m

Slot area 720mm²/m or more - Overflow volume 0.3L/s/m*

Slot area 1060mm²/m or more - Overflow volume 0.5L/s/m*

Stramit® Gutter Spacer - Overflow volume 1.2L/s/m*

Stramit BAT® clip - Overflow volume 0.5 - 1.0L/s/m

* Based on test results. Relevant certification required for these options can be obtained from your local Stramit office.

For gutters with a ribbed rather than hook back only, the data in the table for overflow where the **Stramit® Gutter Spacer** is used is valid for the installation of the gutters on the third notch of the snap clip or below. If overflow provisions are required where the gutter is on the top two notches and the **Stramit® Gutter Spacer** is used, please contact your local Stramit office for advice.

Table above applicable to the following gutters:		
Location	**Gutter**	**Slot area (mm²/m)**
VIC	Quad 115	720, 1060
TAS	Quad 115	720

For other gutters, and for information on availability of different slot areas, please contact your local Stramit office for advice.

An example for a rainfall intensity of 200mm/hr and a roof length of 6.5m is given below, the solution for this case is the use of the gutter with enlarged slots of 1060mm²/m or the **Stramit® Gutter Spacer**.

Slot area1060mm²/m or **Stramit® Gutter Spacer***

Rainfall intensity (mm/hr)	4	4.5	5	5.5	6	6.5
125	0.14	0.16	0.17	0.19	0.21	0.23
150	0.17	0.19	0.21	0.23	0.25	0.27
175	0.19	0.22	0.24	0.27	0.29	0.32
200	0.22	0.25	0.28	0.31	0.33	0.36

Step 4: The **Stramit® Gutter Spacer** solution, where required, can be used for installations using the **Stramit® Fascia, Snap Clip** and **Gutter Stiffener Brackets**. Where increased slot area is part of the solution, please check with your nearest **Stramit®** Location for availability.

Installation of Continuous Overflow Measures

Gutter and fascia installation methods are unchanged where the slotted gutters are used as the only overflow method. For installations with a **Stramit® Gutter Spacer** or **BAT® clip**, refer to the installation sheet placed in the box. If sarking is installed on the roof, ensure it does not obstruct the gap behind the gutter. If required, the **Stramit® Gutter Spacer** can be used to retrofit installations that have been completed. The Spacer can be installed from underneath preferably at the snap clip location, if not at any location. The clips should not be more than 1000mm apart. If placed under the snap clip, the installation ensures an even gap behind the gutter while if it is placed elsewhere, the gap can be variable.

Where the **Stramit® Gutter** is mounted to a timber fascia and Stramit® Concealed or External Brackets are used, a spacer block made of compatible material can be inserted between the **Stramit® Bracket** and timber fascia during installation of the bracket to create the gap, if the bracket does not already create a sufficient gap.

(b) Dedicated Overflow Measures

Dedicated overflow measures provided at discrete locations can only be accepted as overflow measures in Victoria and Tasmania if relevent testing and certification is provided. These measures would be considered Performance Solutions.

Find Stramit online here:
www.stramit.com.au

Details of many Stramit® products can also be seen on the AIA site 'Product Selector' at:
www.selector.com.au

Call us for further information or the name of your local distributor

MELBOURNE
2/1464 Ferntree Gully Road, Knoxfield VIC 3180
Telephone (03) 9237 6200
Facsimile (03) 9237 6299

ALBURY
18 Ariel Drive,Albury NSW 2640
Telephone (02) 6041 7600
Facsimile (02) 6041 7666

BENDIGO
Ramsay Court, Kangaroo Flat VIC 3555
Telephone (03) 5448 6400
Facsimile (03) 5447 9677

HOBART
57 Crooked Billett Drive, Brighton TAS 7030
Telephone (03) 6262 8888
Facsimile (03) 6262 8812