



GUTTER OVERFLOW OPTIONS

Technical Supplement

For use in Victoria

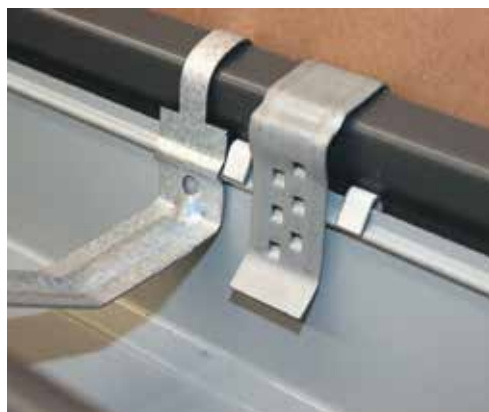
STRAMIT® GUTTER OVERFLOW OPTIONS

GUTTER OVERFLOW

Solutions for gutter overflow compatible with Stramit® fascia and gutters.



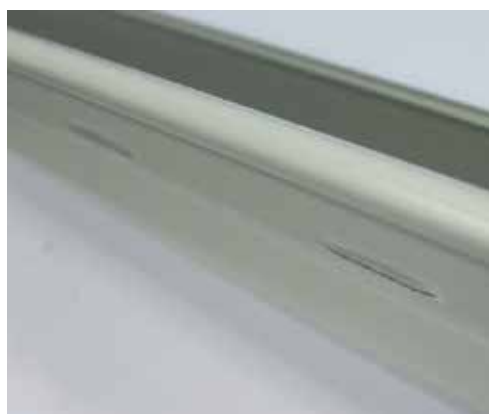
Stramit® gutter spacer



Stramit® gutter spacer installed



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



Slotted Stramit® gutter

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GUTTER OVERFLOW DESIGN

The requirements for roof drainage systems installed in Victoria are stipulated in Volume 3 of the National Construction Code 2022. 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 3500.3:2021 Appendix F or a Performance Solution that has been tested or verified by computation and certified.

The tables and chart in the following pages 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 1060mm² per metre length. These gutters have an overflow capacity of 0.5 Litre/sec/metre (L/s/m) as verified by testing. The Stramit® Easiflow gutter has even larger slots of 1480mm²/m area, allowing for an overflow of 0.8 L/s/m.

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 for the Stramit® Quad 115 gutter and 600mm apart for the Stramit® Easiflow gutter. 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, and with the Stramit® Easiflow gutter is 72mm.

The Stramit BAT® Clip creates a 10mm gap at the spacer location, and has an integral snap clip. According to Appendix F of the Standard AS/NZS 3500.3:2021, 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
Average Inflow (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 F of AS/NZS 3500.3:2021

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 Parametric Developments. Follow the steps given to find a suitable overflow option.

Step 1:

From the table below, based on the location of the building, determine the design rainfall intensity for overflow, the 1% AEP (Annual Exceedance Probability - formerly 100 year ARI) value.

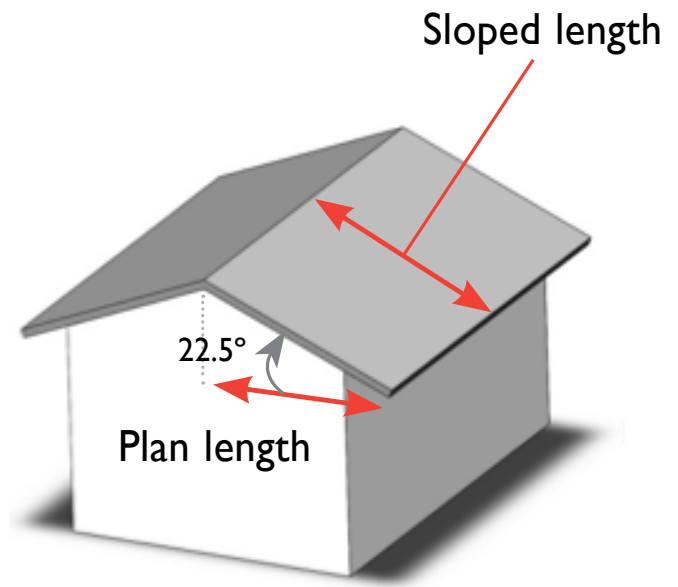
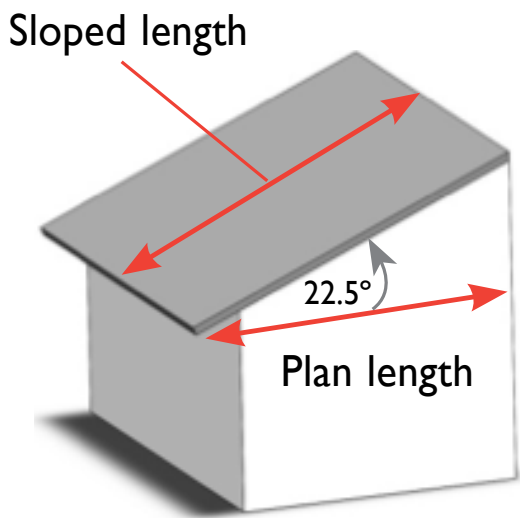
RAINFALL INTENSITIES FOR OVERFLOW DESIGN	
Location	Rainfall intensity (mm/h)
VIC	
Ballarat	192
Benalla	194
Geelong	143
Horsham	173
Lakes Entrance	199
Melbourne	187
Hastings	145
Sorrento	139
Mildura	219
Stawell	187

For other locations, refer to the Bureau of Meteorology website for information on finding the rainfall intensity for a 1% AEP 5 minute duration rainfall based on Latitude and Longitude.

NOTE: 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 into which it feeds to find the roof length applicable.



Step 3:

On the coloured chart, find the 1% AEP 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/h)	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 1060mm²/m or more - Overflow volume 0.5 L/s/m*
- Slot area 1480mm²/m or more - Overflow volume 0.8 L/s/m*
- Stramit® Gutter Spacer - Overflow volume 1.2L/s/m†
- 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
 † - Value applicable to slotted or unslotted gutter

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 when 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 AT MINIMUM 1:500 SLOPE:			
Gutter Style	Overflow options for each colour on table		
	Pink	Grey	Blue**
Quad 115	Slotted gutter OR Stramit® Spacer/BAT® clip with gutter (slotted or unslotted)	Stramit® Spacer/BAT® clip with gutter (slotted or unslotted)	Stramit® Spacer/BAT® clip with gutter (slotted or unslotted)
Easiflow	Slotted gutter OR Stramit® Spacer/BAT® clip with gutter (slotted or unslotted)	Slotted gutter OR Stramit® Spacer/BAT® clip with gutter (slotted or unslotted)	Stramit® Spacer/BAT® clip with gutter (slotted or unslotted)

** below bottom red line, BAT® clip not suitable, use Stramit® Gutter Spacer

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/h and a roof length of 6.5m is given below, the solution for this case is the use of either gutter with slots or with the Stramit® Gutter Spacer/BAT® clip with slotted/unslotted gutter.

Rainfall intensity (mm/h)	Length of roof feeding												
	4	4.5	5	5.5	6	6.5	7	7.5	8	8.5	9	9.5	10
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
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
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
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

- Slotted Stramit® Quad 115/slotted Stramit® Easiflow gutter or Stramit® Gutter Spacer/BAT® clip with slotted/unslotted gutter.

Step 4:

The Stramit® Gutter Spacer solution, where required, can be used for installations using the Stramit® Fascia, Snap Clip and Gutter Stiffener Brackets.

INSTALLATION OF OVERFLOW MEASURES

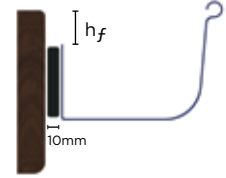
(a) Continuous overflow measures

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 provided with the product. 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 installed from underneath preferably at the snap clip location. If installed at any other position, the clips should not be more than 1000mm apart for Stramit® Quad 115 and 500mm apart for Stramit® Easiflow gutters. 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 and more brackets would be required.

Timber fascia

Where the Stramit® Gutter is mounted to a timber fascia and Stramit® Concealed or External Brackets are used, see options below. Roof covering and bracket omitted for clarity in diagrams.

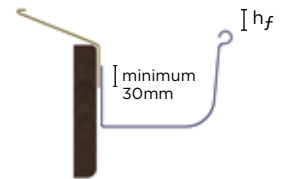
i) a spacer block made of compatible material such as timber, plastic or steel can be inserted between the Stramit® bracket and timber fascia, during installation of the bracket, to create the 10mm gap. In some instances the bracket itself creates a sufficient gap without a spacer.



ii) The gutter can be installed with the front bead at a distance of h_f (see page 3) below the top of the fascia.



iii) Install flashing to fit under the roof covering and between the bracket and fascia, with gutter bead h_f (see page 3) below the top of flashing.



(b) Dedicated Overflow Measures

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

Find Stramit online at www.stramit.com.au.

Details of many Stramit® products can also be seen on the AIA site 'product selector' at architectureau.com/product-selector

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

CONTACT US

Visit stramit.com.au or contact us using the details below.

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	ALBURY 18 Ariel Dr, Albury NSW 2640	Ph 02 6092 3700	
	BENDIGO Lot 7-9 Ramsay Court, Kangaroo Flat VIC 3555	Ph 03 5448 6400	

Talk to your local Stramit account manager to find out more.

Please contact us at techsupport@stramit.com.au
for product installation instructions and further technical support.

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