Stramit
CONSIDER IT **DONE**

GUTTER OVERFLOW OPTIONS

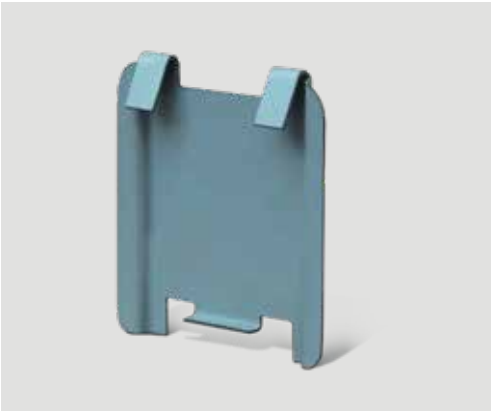
SOLUTIONS FOR GUTTER OVERFLOW COMPATIBLE WITH STRAMIT® FASCIA AND GUTTERS.

Product Technical Supplement

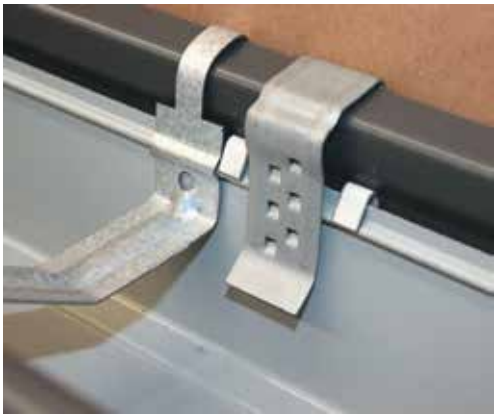
ALL STATES EXCEPT VICTORIA

Part of Fletcher Building

STRAMIT® GUTTER OVERFLOW OPTIONS

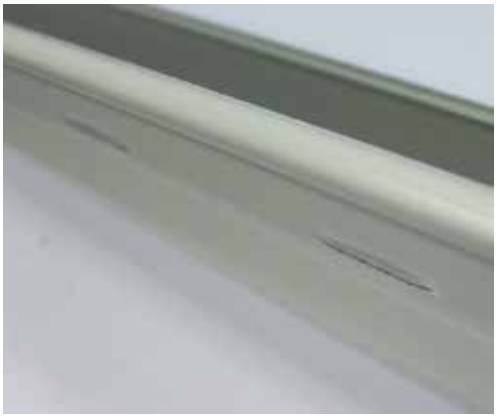


Stramit® gutter spacer



Stramit® gutter spacer installed

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



Slotted Stramit® gutter

GUTTER OVERFLOW DESIGN

The National Construction Code 2019 Volume 2 stipulates that gutter systems when installed on residential buildings should be capable of removing a given volume of water overflow. Numerous means of achieving this objective are given in the NCC Volume 2 Part 3.5.3. This requirement does not apply where the gutter is connected to a verandah, or where the eave is more than 450mm wide with no lining or raked with a slope towards the gutter.

The tables and charts below give information on the various overflow options that are available for use with the Stramit® Fascia and Gutter Systems, including slots on the front face of the gutter, the use of the Stramit® Gutter Spacer, or the use of the Stramit BAT® clip. Testing has shown that provision of a spacer between gutter and fascia is an effective means of increasing the overflow capacity.

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, Parametric Developments 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.

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.

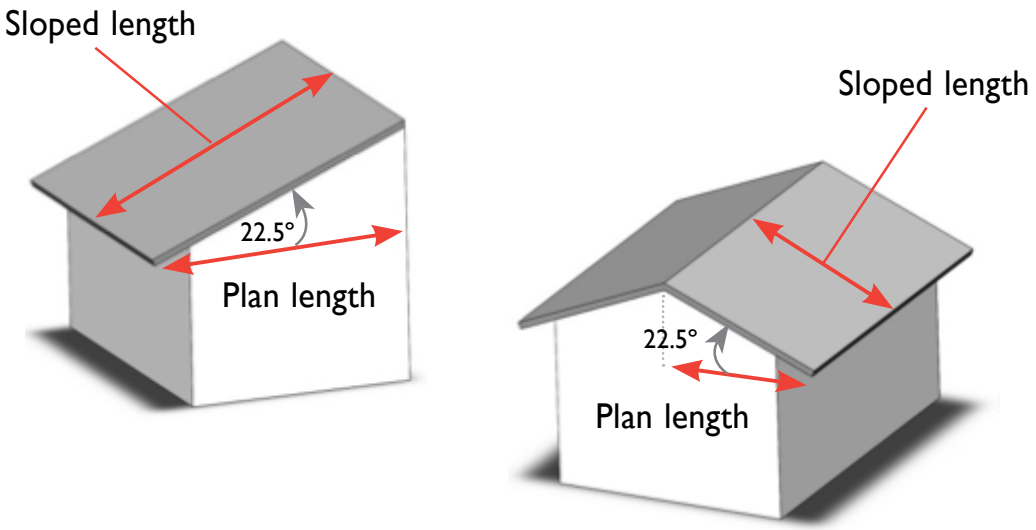
RAINFALL INTENSITIES FOR OVERFLOW DESIGN

Location	Rainfall intensity (mm/hr)	Location	Rainfall intensity (mm/hr)	Location	Rainfall intensity (mm/hr)
NSW		**WA**		**QLD**	
Albury	180	Albany	178	Barnaga	298
Broken Hill	219	Broome	287	Brisbane	305
Coffs Harbour	382	Bunbury	199	Ipswich	278
Goulburn	156	Derby	256	Victoria Point	320
Kiama	319	Geraldton	193	Bundaberg	340
Newcastle	316	Kalgoorlie	204	Cairns	278
Orange	186	Perth	172	Cloncurry	278
Sydney	262	Joondalup	180	Innisfail	301
Avalon	278	Midland	163	Mackay	316
Campbelltown	222	Port Hedland	230	Mt Isa	260
Penrith	244	Tom Price	182	Noosa Heads	331
Windsor	233	**TAS**		Rockhampton	300
Tweed Heads	330	Burnie	180	Toowoomba	268
Wollongong	308	Flinders Island	166	Townsville	300
SA		Hobart	116	Weipa	283
Adelaide	184	Launceston	121	**NT**	
Gawler	158	Queenstown	120	Alice Springs	239
Mt Gambier	144	St Marys	203	Darwin	274
Murray Bridge	178	**ACT**		Katherine	250
Port Augusta	199	Canberra	193		
Port Pirie	181	Gungahlin	179		
Yorketown	166	Tuggeranong	210		

Note: For Victoria, refer to separate brochure on the Stramit® website.

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
275	0.31	0.34	0.38	0.42	0.46	0.50	0.53	0.57	0.61	0.65	0.69	0.73	0.76	0.80	0.84	0.88	0.92	0.95	0.99	1.03	1.07	1.11	1.15	1.18	1.22
300	0.33	0.38	0.42	0.46	0.50	0.54	0.58	0.63	0.67	0.71	0.75	0.79	0.83	0.88	0.92	0.96	1.00	1.04	1.08	1.13	1.17	1.21	1.25	1.29	1.33
325	0.36	0.41	0.45	0.50	0.54	0.59	0.63	0.68	0.72	0.77	0.81	0.86	0.90	0.95	0.99	1.04	1.08	1.13	1.17	1.22	1.26	1.31	1.35	1.40	1.44
350	0.39	0.44	0.49	0.53	0.58	0.63	0.68	0.73	0.78	0.83	0.88	0.92	0.97	1.02	1.07	1.12	1.17	1.22	1.26	1.31	1.36	1.41	1.46	1.51	1.56
375	0.42	0.47	0.52	0.57	0.63	0.68	0.73	0.78	0.83	0.89	0.94	0.99	1.04	1.09	1.15	1.20	1.25	1.30	1.35	1.41	1.46	1.51	1.56	1.61	1.67
400	0.44	0.50	0.56	0.61	0.67	0.72	0.78	0.83	0.89	0.94	1.00	1.06	1.11	1.17	1.22	1.28	1.33	1.39	1.44	1.50	1.56	1.61	1.67	1.72	1.78

- Slot area 720mm²/m or more - Overflow volume 0.3L/s/m
- Slot area 1200mm²/m or Hole area 625mm²/m* or more - Overflow volume 0.5L/s/m
- Hole area 1600mm²/m* or more - Overflow volume 0.75L/s/m OR Slot area 1480mm²/m or more - Overflow volume 0.8L/s/m OR Stramit® Gutter Spacer - Overflow volume 1.2L/s/m*
- Stramit® Gutter Spacer - Overflow volume 1.2L/s/m*
- BAT® clip - Overflow volume 1.5L/s/m OR Stramit® Gutter Spacer* with slotted gutter min 1.5L/s/m
- BAT® clip combined with slotted gutter - Overflow volume min 1.8L/s/m OR Stramit® Gutter Spacer* combined with gutter with slots min 1200mm²/m - 1.7L/s/m OR Stramit® Gutter Spacer* combined with gutter with holes min 625mm²/m - 1.7L/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 ON PAGE 4 APPLICABLE TO THE FOLLOWING STRAMIT® GUTTERS		
Location	**Gutter**	**Slot area (mm²/m)**
NSW	Stramit® Hi-Front Quad Stramit® Infinitiline®	720*, 1200 Hole area 3850*
SA	Stramit® Quad 115	1200
QLD/NT	Queenslander Quad®	Hole area 625* or 1600*
ACT	Stramit® Hi-Front Quad	1200
TAS	Stramit® Quad 115 Stramit® Easiflow	1200 1480*
WA	Stramit® Trad-Line™† Stramit® Quarter Round†	1200 1200

† Cannot be used with Stramit® Gutter Spacer or BAT® Clip

Low fronted Queensland quad gutters do not need specific overflow measures provided they are installed with the bead 10mm below top of the fascia, on the second notch of the snap clip or lower.

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

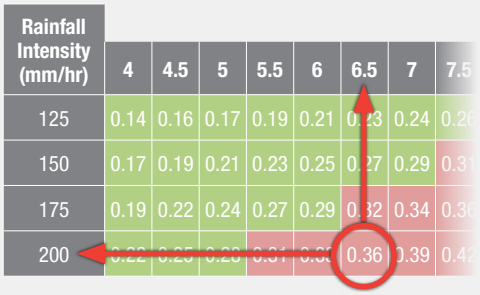
TABLE ON PAGE 4 APPLICABLE TO THE FOLLOWING GUTTERS AT MINIMUM 1:500 SLOPE			
Stramit® Gutter Style	**Overflow options for each colour on table**		
	Green	**Pink**	**Grey**
Stramit® Quad 115 / Stramit® Hi-Front Quad gutter	Slotted gutter OR Stramit® Spacer/BAT® clip and gutter (slotted or unslotted)	Gutter with 1200mm²/m slots OR Stramit® Spacer/BAT® clip and gutter (slotted or unslotted)	Stramit® Spacer/BAT® clip and gutter (slotted or unslotted)
Infinitiline®	Gutter with holes OR Stramit® Spacer/BAT® clip and gutter (with/without holes)	Gutter with holes OR Stramit® Spacer/BAT® clip and gutter (with/without holes)	Gutter with holes OR Stramit® Spacer/BAT® clip and gutter (with/without holes)
Queenslander Quad®	Gutter with holes OR Stramit® Spacer/BAT® clip and gutter (with or without holes)	Gutter with holes OR Stramit® Spacer/BAT® clip and gutter (with or without holes)	Gutter with holes 1600mm²/m OR Stramit® Spacer/BAT® clip and gutter (with or without holes)
Stramit® Trad-Line™	Slotted gutter	Slotted gutter	No option available, contact Stramit for advice
Stramit® Quarter Round	Slotted gutter	Slotted gutter	No option available, contact Stramit for advice
Stramit® Easiflow**	Slotted gutter OR Stramit® Spacer/BAT® clip and gutter (slotted or unslotted)	Slotted gutter OR Stramit® Spacer/BAT® clip and gutter (slotted or unslotted)	Slotted gutter OR Stramit® Spacer/BAT® clip and gutter (slotted or unslotted)

Stramit® Gutter Style	**Blue**	**Brown**	**Black**
Stramit® Quad 115 / Stramit® Hi-Front Quad gutter	Stramit® Spacer/BAT® clip and gutter (slotted or unslotted)	BAT® clip and gutter (slotted or unslotted) OR Stramit® Spacer clip and slotted gutter	BAT® clip and slotted gutter OR Stramit® Spacer clip with slotted gutter (for 1.5-1.7L/s/m only)
Infinitiline®	Gutter with holes OR Stramit® Spacer/BAT® clip and gutter (with/without holes)	Gutter with holes OR Stramit® Spacer/BAT® clip and gutter (with/without holes)	Gutter with holes OR Stramit® Spacer/BAT® clip and gutter (with/without holes)
Queenslander Quad®	Stramit® Spacer/BAT® clip and gutter (with or without holes)	BAT® clip and gutter (with or without holes) OR Stramit® Spacer clip and gutter with holes	BAT® clip and gutter with holes OR Stramit® Spacer clip and gutter with holes (1.7-1.95L/s/m)
Stramit® Trad-Line™	No option available, contact Stramit for advice	No option available, contact Stramit for advice	No option available, contact Stramit for advice
Stramit® Quarter Round	No option available, contact Stramit for advice	No option available, contact Stramit for advice	No option available, contact Stramit for advice
Stramit® Easiflow**	Stramit® Spacer/BAT® clip and gutter (slotted or unslotted)	BAT® clip and gutter (slotted or unslotted) OR Stramit® Spacer clip and slotted gutter	BAT® clip and slotted gutter OR Stramit® Spacer clip with slotted gutter

** Stramit® Spacer (medium size) when required must be installed at 600mm centres.

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 gutters with slots of 1200mm²/m or more or gutters with holes of 625mm²/m or more or the Stramit® Gutter Spacer.

Slot area ⩾ 1200mm²/m or Hole Area ⩾ 625mm²/m* or Stramit® Gutter Spacer*.



Rainfall Intensity (mm/hr)	4	4.5	5	5.5	6	6.5	7	7.5
125	0.14	0.16	0.17	0.19	0.21	0.23	0.24	0.26
150	0.17	0.19	0.21	0.23	0.25	0.27	0.29	0.31
175	0.19	0.22	0.24	0.27	0.29	0.32	0.34	0.36
200	0.22	0.25	0.28	0.31	0.33	0.36	0.39	0.42

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. The Stramit BAT® clip has a large overflow capacity and is suitable for many areas. The InfinitiLine® gutter with holes has the best overflow capacity to cope with heavy rainfall and long roof lengths.

INSTALLATION OF OVERFLOW MEASURES

(a) Continuous Overflow Measures

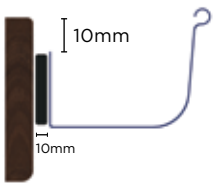
Gutter and fascia installation methods are unchanged where the slotted gutters are used as the only overflow method. For installations with a Stramit® Gutter Spacer or BAT® clip, refer to the installation sheet placed in the box or available on the Stramit® website. For new gutter installations, the Stramit® Gutter Spacer is generally placed at the snap clip locations, except for the Stramit® Easiflow gutter, where the spacer must be at maximum 600mm centres. If sarking is installed on the roof, ensure it does not cover the gap behind the gutter.

If required, the Stramit® Gutter Spacer can be used to retrofit installations that have been completed. 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 except for Stramit® Easiflow gutter. 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.

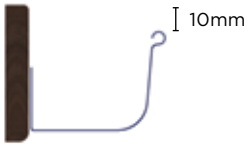
Timber fascia

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.

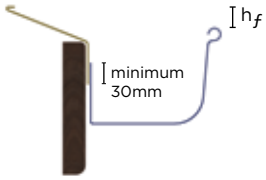
i) a spacer block made of compatible material such as timber, plastic or steel can be inserted between the Stramit® bracket and timber fascia, during installation of the bracket, to create the 10mm gap. In some instances the bracket itself creates a sufficient gap without a spacer.



ii) The gutter can be installed with the front bead at a distance of 10mm 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 below the top of flashing.



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 flashing and front bead of gutter.
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

Low fronted gutters

Low fronted Stramit® gutters including Stramit® Quad 100, Quad 125, Quad 150 and Quad 175 available in Queensland do not need any additional overflow methods if the front of the gutter is installed at least 10mm below the top of the fascia.

(b) Dedicated Overflow Measures

In some circumstances where the volume of overflow to be catered for is small, dedicated overflow measures may be adequate. Examples of these measures are:

1. Inverted Downpipe Nozzle
2. End Stop with cut down weir
3. Front face weir
4. Rainhead

For more information on these options, please refer to the Stramit® Rainwater Technical Manual for your location, or the National Construction Code 2019 - Volume Two, Section 3.5.3.5.

Find Stramit online at 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.

CONTACT US

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

REGION	LOCATION	CONTACT DETAILS	TECHNICAL ENQUIRIES
NSW & ACT	SYDNEY 33-83 Quarry Rd, Erskine Park NSW 2759	Ph 02 9834 0909	Email: techsupport@ stramit.com.au
	CANBERRA 4 Bass St, Queanbeyan NSW 2620	Ph 02 6298 2500	
	COFFS HARBOUR 6 Mansbridge Dr, Coffs Harbour NSW 2450	Ph 02 6656 3800	Ph 02 9834 0964
	NEWCASTLE 17 Nelson Rd, Cardiff NSW 2285	Ph 02 4041 3400	
	ORANGE 51 Leewood Dr, Orange NSW 2800	Ph 02 6360 9200	
	ALBURY 18 Ariel Dr, Albury NSW 2640	Ph 02 6092 3700	
TAS	HOBART 57 Crooked Billett Dr, Brighton TAS 7030	Ph 03 6262 8788	Ph 03 9237 6353
SA	ADELAIDE 11 Stock Rd, Cavan SA 5094	Ph 08 8219 2000	Ph 08 9493 8823
SOUTH QLD	BRISBANE 57-71 Platinum St, Crestmead QLD 4132	Ph 07 3803 9999	Ph 07 3803 9869
	MARYBOROUGH 10 Activity St, Maryborough QLD 4650	Ph 07 4123 9500	
	ROCKHAMPTON 41 Johnson St, Parkhurst QLD 4702	Ph 07 4921 5600	
NORTH QLD	CAIRNS 53 Vickers St, Edmonton QLD 4869	Ph 07 4034 6555	
	TOWNSVILLE 402-408 Bayswater Rd, Garbutt QLD 4814	Ph 07 4412 3900	
WA	PERTH 605-615 Bickley Rd, Maddington WA 6109	Ph 08 9493 8800	Ph 08 9493 8823