RAINWATER GOODS

GUTTERS, FASCIA & ACCESSORIES

A Met-TECH™ GUIDE

JANUARY 2023

Metroll®

BETTER SERVICE • BETTER BUILDING SOLUTIONS

METROLL RAINWATER GOODS

Made from COLORBOND®, ZINCALUME® and galvanised steels, the Metroll range of gutters, fascia and accessories are practical and designed to suit the demanding needs of any building and environment.

WIDE RANGE OF APPLICATIONS

Whether you require a standard or custom item, Metroll rainwater goods are available for a wide range of applications across commercial, domestic, industrial or rural buildings.

STYLE & COLOUR CHOICE

Metroll's style, material and colour range is extensive to ensure your rainwater goods are both durable and complementary to your roof and building design.

DOWNPIPES & ACCESSORIES

The Metroll rainwater accessories range includes downpipes, flashings, gutter brackets, straps, stop ends, mitres, corners and angles. Rectangular downpipes are the most popular. Round downpipes and PVC downpipes are also available. Check with your local Metroll branch for availability and lead times.

MATERIAL & INSTALLATION INFO

MATERIAL COMPATIBILITY

Never use lead flashings with rainwater items made from COLORBOND® and ZINCALUME® steels. Avoid drainage from copper roofs onto COLORBOND®, ZINCALUME® or galvanised steel rainwater products.

ADVERSE CONDITIONS

Localised environmental conditions can impact the corrosive nature of a site which may impact on material choice. Conditions that may impact on material choice include; direction of prevailing winds, rainfall intensity, duration of exposure, temperature, shelter and areas not washed by rainfall. Contact your local Metroll branch if you intend to use any Metroll rainwater goods within 1 km of industrial, chemical, marine or corrosive environments.

MEASUREMENTS & INSTALLATION

Rainwater goods must be installed with special consideration given to roof fall and overall design of the drainage system. Measure along the roof edges to calculate how many sections of gutter are required. Add 10% to allow for fitting and wastage. Combine roof measurements with the gutter layout plan to calculate and assess all other required gutter components.

CLEAN UP

Prior to departing the work site remove all foreign debris, screws, rivets and especially any swarf created by drilling or cutting from the roof surface and/or inside gutters. Failure to do so may result in premature corrosion of the roof and/or gutters.

What is Met-TECH™?

Met-TECH™ is Metroll's Technical Resource Centre. It is the one stop shop for all of Metroll's product and technical information. Perfect for builders, contractors and specifiers to source all the information they may require. You can find other Met-TECH™ items on our website **www.metroll.com.au/resources**

RAINWATER OVERFLOW DESIGN & PROVISION

When designing a roof drainage system there are a range of factors that must be considered. These include:

- Rainfall intensity
- Roof area
- Gutter size
- Gutter capacity
- Gutter fall
- Downpipe size
- Downpipe quantity
- Downpipe placement
- Overflow systems

The NCC 2016, Part 3.5.2 details the appropriate performance requirements for overflow measures of eave and valley gutters. This has recently been updated and incorporates requirements for rainfall intensities of 1 in 20 years and 1 in a 100 years intervals for locations Australia wide.

CONSTRUCTION & COMPLIANCE

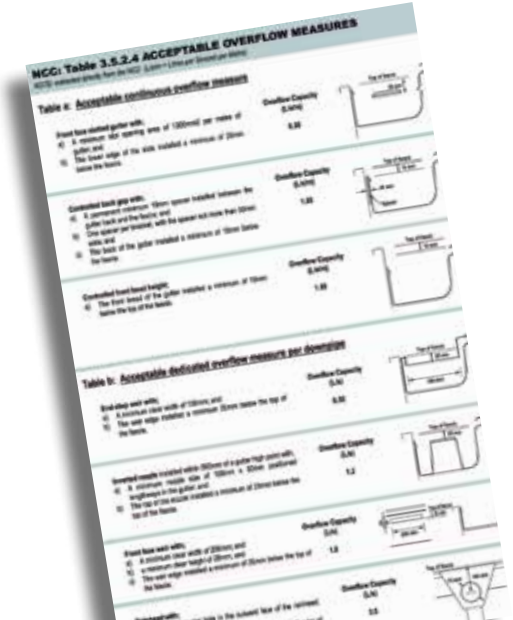
It is important that the drainage system diverts water away from the building. NCC 2016, Part 3.5.2 sets out acceptable construction practices and gives consideration to materials, gutter selection, gutter installation, downpipe size and downpipe installation. The NCC 2016 code also provides information on rainfall duration intensities, overflow volumes and acceptable overflow measures both continuous and dedicated.

OVERFLOW MEASURES & DRAINAGE SYSTEM DESIGN

It is important to note that a combination of overflow measures may be required in order to achieve a drainage system that complies. Overflow systems must be considered in totality of the drainage system as it may not be sufficient to rely on gutter capacity alone.

CLASS 1 DWELLING PROVISION

The NCC requires that eave gutters on Class 1 dwellings be designed to prevent water entry to the building under severe rain conditions. Severe is defined as the 100 year, 5 minute duration average recurrence interval event (100Yr ARI).


NCC: Table 3.5.2.4 ACCEPTABLE OVERFLOW MEASURES

Refer to the NCC 2016, Part 3.5.2 which details the appropriate performance requirements for overflow measures of eave and valley gutters.

DESIGNER RESPONSIBILITY

The designer may be the builder, hydraulic engineer, architect, building designer, roof and guttering contractor or homeowner. In all cases it is up to the designer to design a complete rainwater drainage system that meets the requirements of the NCC Building Code and relevant Australian Standards. Designers should take note of AS/NZS 3500.3 and AS/NZS 3500.5.

Broadly the items for consideration when designing a rainwater drainage system are:

- Ascertain rainfall intensity duration.
- Consider roof design, roof catchment area, slope, downpipe quantity, downpipe position, gutter length and ridge to gutter length.
- Calculate overflow volume.
- Select suitable downpipes, gutters and overflow measures based on overflow volume.

INSTALLER RESPONSIBILITY

The installer is responsible for installing the rainwater drainage system as per the design provided by the designer. The minimum requirements for the installation of gutters is set out in the NCC 2016, Section 3.5.2.4.

HOMEOWNER RESPONSIBILITY

A rainwater drainage system is only as good as the maintenance of the system. Blocked gutters, downpipes or other overflow items will reduce the performance of the drainage system. The homeowner is responsible for ensuring basic maintenance of the drainage system is carried out at regular intervals.

RAINWATER OVERFLOW DESIGN & PROVISION

NCC: Table 3.5.2.4 ACCEPTABLE OVERFLOW MEASURES

Note: Extracted directly from the NCC. (L/s/m = Litres per second per metre)

TABLE A: ACCEPTABLE CONTINUOUS OVERFLOW MEASURES

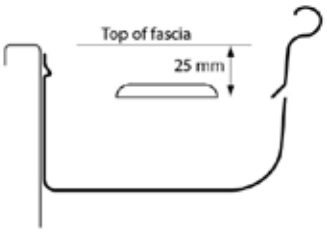
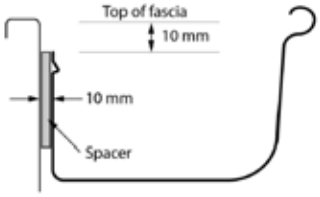
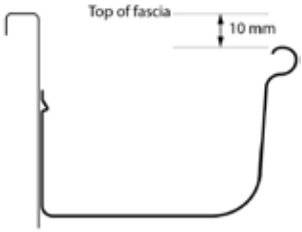
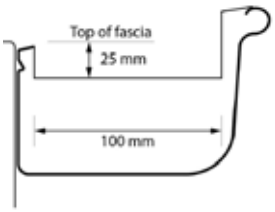
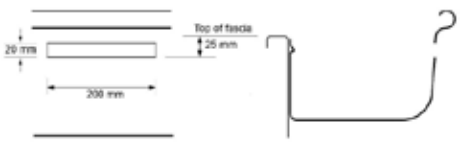
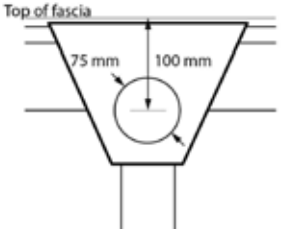
	Overflow Capacity (L/s/m)	
Front face slotted gutter with; a. A minimum slot opening area of 1200mm2 per metre gutter; and b. The lower edge of the slots is installed a minimum of 25mm below the fascia.	**0.50**	
Controlled back gap with; a. A permanent minimum 10mm spacer installed between the gutter back and fascia; and b. One spacer per bracket, with the spacer not more than 50mm wide; and c. The back of the gutter installed a minimum of 10mm below the fascia.	**1.50**	
Controlled front bead height; a. The front bead of the gutter installed a minimum 10mm below the top of the fascia.	**1.50**	

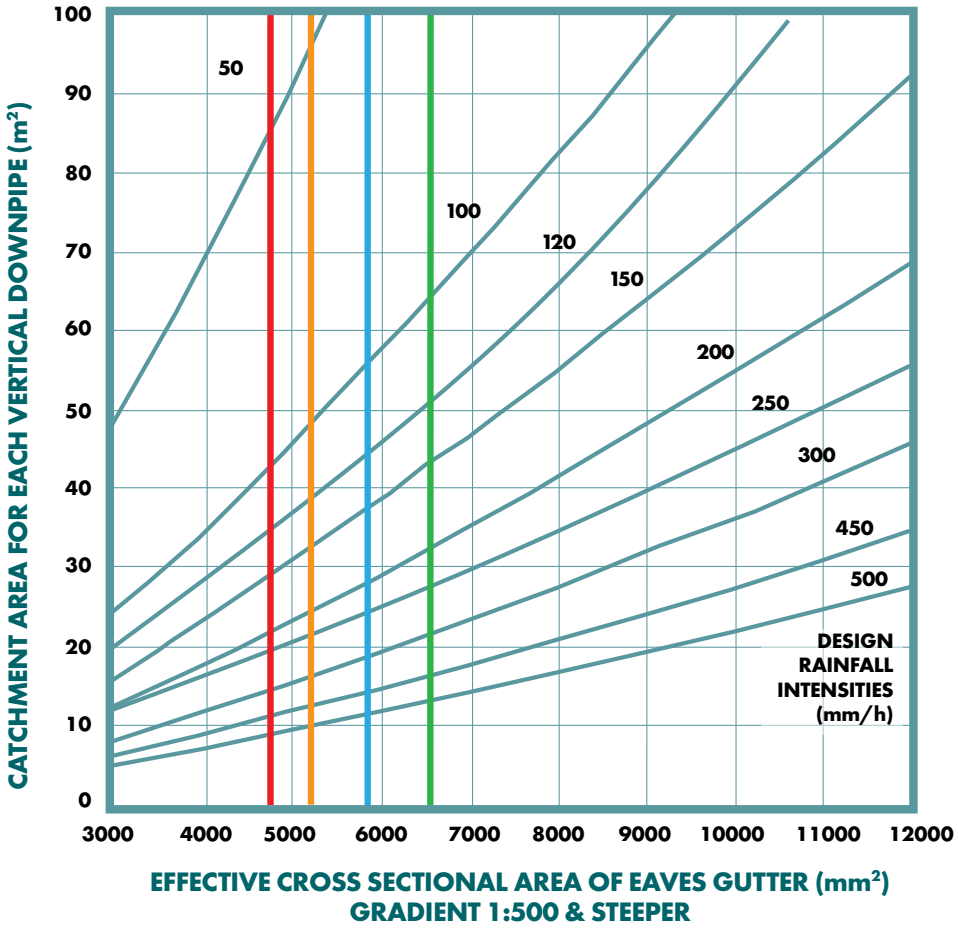
TABLE B: ACCEPTABLE DEDICATED OVERFLOW MEASURES PER DOWNPIPE

End-stop weir with; a. A minimum clear width of 100mm; and b. The weir edge installed a minimum of 25mm below the fascia.	**0.50**	
Inverted nozzle installed within 500mm of a gutter high point with; a. A minimum nozzle size of 100mm x 50m positioned lengthways in the gutter; and b. The top of the nozzle installed a minimum of 25mm below the top of the fascia.	**1.2**	
Front race weir with; a. A minimum clear width of 200mm; and b. A minimum clear height of 20mm; and c. The weir edge installed a minimum of 25mm below the top of the fascia.	**1.0**	
Rainhead with; a. A 75mm diameter hole in the outward face of the rainhead; and b. The centreline of the hole positioned 100mm below the top of the fascia.	**3.5**	

INFORMATION TO ASSIST ROOF DRAINAGE SYSTEM DESIGNERS

GRAPH: CATCHMENT AREA (m²) PER VERTICAL DOWNPIPE

Adapted from AS/NZS 3500.3.2015, Figure 3.5.2 (B). Gradients 1:500 & Steeper Showing Common Metroll Gutters & Capacities



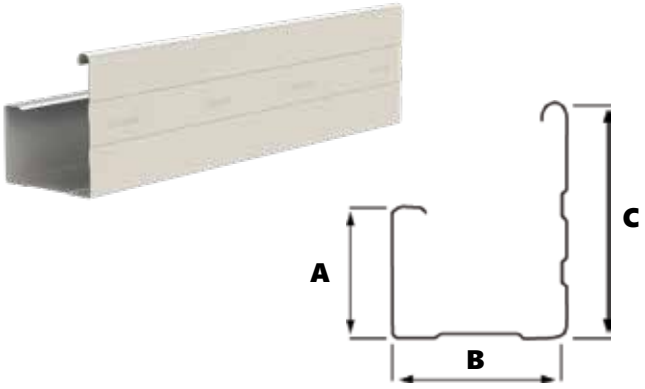
METROLL SLOTTED GUTTER	ECA mm²	MIN. DOWNPIPE SIZE ASSUMPTIONS	
		RECTANGULAR	ROUND
High Front Quad 115	4763	75 x 50mm	75mm
Metroline Square	5202	100 x 50mm	80mm
High Front Quad 150	5852	100 x 50mm	85mm
Big M Square	6634	75 x 70mm	90mm

GUTTER RANGE &SPECIFICATION

TCA: Total Cross Sectional Area.
ECA: Effective Cross Sectional Area.
ECA is 10mm below the overflow level.

SQUARELINE GUTTER*
VIC, WA

Model	Dimensions mm			ECA mm²		TCA mm²	
	A	B	C	STD	SLTD	STD	SLTD
WA	81	120	145	8,308	6,734	9,471	7,923
Standard	65	127	122	6,800	5,800	8,000	7,100
Commercial	83	125	136	-	8,210	-	9,450
Fascia Gutter	60	127	121	6,310	5,840	7,570	7,100



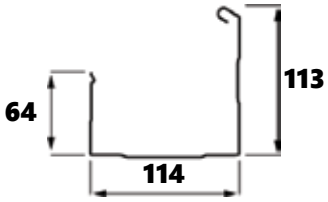
***NOTE: Variations exist in dimensions, ECA & TCA areas across Metroll branches. Please check with your local branch.**

METROLINE SQUARE GUTTER*

QLD, NSW, VIC

	Standard	Slotted
ECA mm²	5,874	5,202
TCA mm²	6,971	6,305

The Metroline Square Gutter has been designed with a high front and angled top edge to hide the ends of roof tiles or roof sheets.

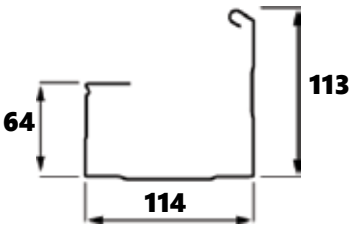


METROLINE FASCIA GUTTER*

QLD, NSW, VIC

	Standard	Slotted
ECA mm²	5,874	5,202
TCA mm²	6,971	6,305

The Metroline Fascia Gutter has been designed for use with patios, verandahs, carports and garages. The wide return fold at the back of the gutter allows it to be fixed to the roof sheeting.

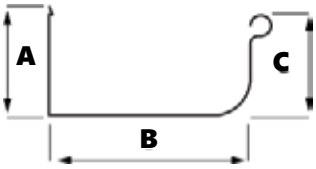


LOW FRONT QUAD GUTTER

QLD & Newcastle Only

Model	Dimensions mm			ECA mm²	TCA mm²
	A	B	C	Standard Only	
115	58	113	61	5,367	6,497
150	76	141	70	8,239	9,762
175^	105	175	100	15,430	17,291

^ Metroll recommends the 175 model is installed with either General Purpose or Spike Brackets.

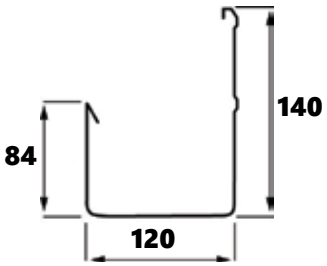


BIG M GUTTER

QLD Only

	Standard	Slotted
ECA mm²	8,564	6,634
TCA mm²	9,727	7,813

This contemporary profile provides excellent water carrying capacity with clean, straight lines.

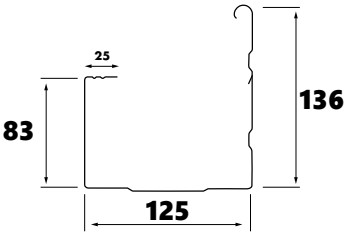


NEWCASTLE FASCIA GUTTER

Newcastle Only

	Standard	Slotted
ECA mm²	9,062	8,437
TCA mm²	10,312	9,687

The Newcastle Fascia Gutter has been designed for use with patios, verandahs, carports and garages.

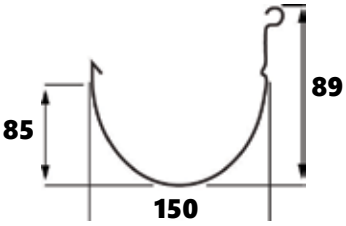


150 HALF ROUND GUTTER*

QLD, NSW, VIC

	Standard	Slotted
ECA mm²	8,303	4,811
TCA mm²	9,791	6,232

The curves of the 150 Half Round Gutter are perfect fora softer finish on both classic and contemporary buildings. This gutter has excellent water carrying capacity.

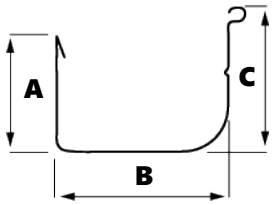


***NOTE:** **Variations exist in dimensions, ECA & TCA areas across Metroll branches.**

HIGH FRONT QUAD GUTTER*

NT, SA, QLD, NSW, VIC, TAS

Model	Dimensions mm			ECA mm²		TCA mm²	
	A	B	C	Standard	Slotted	Standard	Slotted
115**	61	115	90	5,529	4,763	6,660	5,895
125**	68	107	94	5,837	4,939	6,895	5,991
150***	68	130	98	7,298	5,852	8,578	7,137
175^	71	160	99	9,389	7,617	10,970	9,204

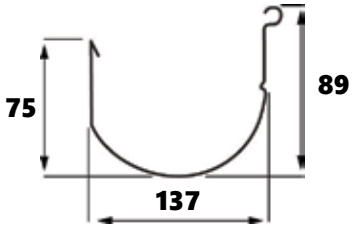


** Suitable for use with Graptor Bracket.
*** 150 model suitable use with Graptor Bracket in QLD only.
^ Metroll recommends the 175 model is installed with either General Purpose or Spike Brackets.

SKYLINE GUTTER*

QLD, NSW, VIC

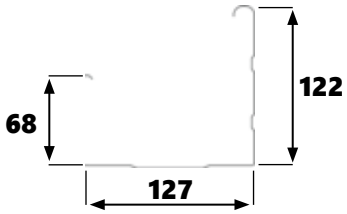
	Standard	Slotted
ECA mm²	8,005	4,706
TCA mm²	9,364	6,039



Suitable for use with Graptor Bracket.

METROLINE GUTTER SA Only

	Standard
ECA mm²	7,331
TCA mm²	6,071

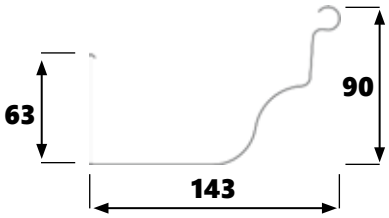


Designed with a high front to hide the edges of roof sheets or tiles, this gutter is easily suited to new projects or renovations.

OG GUTTER

SA Only

	Standard
ECA mm²	5,209
TCA mm²	4,834

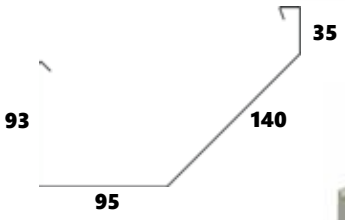


Metroll's traditional colonial style gutter. This gutter is particularly well suited to traditional designs.

CITY GUTTER

SA Only

	Standard
ECA mm²	11,246

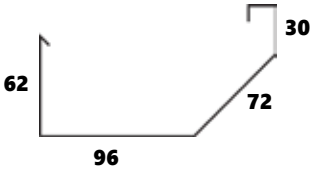


A contemporary style with larger water carrying capacity. No slots.

SUBURBAN GUTTER

SA Only

	Standard
ECA mm²	7,502



A smaller version of the popular City Gutter. Suited to smaller roofs and tighter boundaries. No slots.

TCA: Total Cross Sectional Area. **ECA:** Effective Cross Sectional Area. ECA is 10mm below the overflow level.

GRAPTOR BRACKET

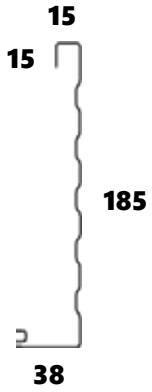
The Graptor bracket offers a compliant solution for the mandatory gutter overflow requirements of the NCC 2019, Part 3.5.2, by way of a controlled back gap between the fascia and the back of the gutter. The Graptor is suitable for use with the Skyline Gutter, 115 High Front Quad Gutter, 125 High Front Quad Gutter, 150 High Front Quad Gutter (QLD only) and the Big M Gutter (QLD only).

Check with your local Metroll branch for dimensions, lead times and availability.

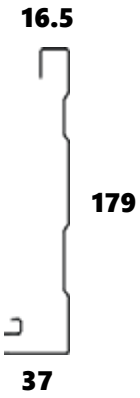
METROLL FASCIA

Metroll's high tensile fascia is designed to create a totally co-ordinated rainwater system that is both functional and aesthetically pleasing. **Please note there may be slight variations in dimensions across Metroll's manufacturing locations, check with your local branch for dimensions, lead times and availability.**

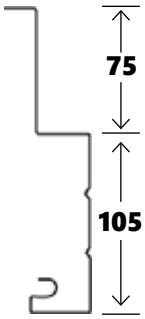
RIBBED FASCIA
DARWIN Only



METROLINE FASCIA
SA, QLD, NSW, VIC, TAS



WA FASCIA
WA only



QLD		NSW		VIC		SA	
Cairns	07 4054 0888	Lismore	02 6622 6677	Sunshine	03 9480 3744	Adelaide	08 82823300
Townsville	07 4779 8266	Tamworth	02 6765 4799	Laverton	03 8369 8300	**NT**	
Mackay	07 4968 1255	Newcastle	02 4954 5799	Geelong	03 5248 2006	Darwin	08 8935 9555
Rockhampton	07 4920 0900	Sydney	1300 766 346	Ballarat	03 5335 6416	**WA**	
Bundaberg	07 4155 5999	Dubbo	02 6883 4800	Pakenham	03 8710 9300	Kalgoorlie	08 9024 1388
Toowoomba	07 4634 6144	Wagga Wagga	02 5924 4500	**TAS**		Perth	08 9365 5444
Sunshine Coast	07 5493 7872	Canberra	02 6298 2777	Hobart	03 6335 8555	Bunbury	08 9796 9796
Brisbane	07 3375 0100	Albury	02 6043 6800	Launceston	03 6335 8555	Albany	08 9841 6966

29 Metroll Branches Nationwide

Visit our website
metroll.com.au

Metroll®
BETTER SERVICE • BETTER BUILDING SOLUTIONS

RG_JAN23