



Date: December 11, 2017

Certificate no. FAC-839 Rev. A

CERTIFICATE OF COMPLIANCE

Description of product certified: Apex Quad 115 High Front Gutters
Aspects of product certified: Continuous front slot overflow capacity and maximum ridge to gutter lengths
Drawing number: FA-APEX-839 Rev. A
Front slot opening area: 1568mm² per lineal meter of gutter

Basis of certification

The following documents were referred to in making this certification:

1. NCC2016 Volume 2
2. NCC2016 Volume 3
3. AS/NZS 3500.3

Certification

I certify that the continuous overflow capacity and the ridge to gutter lengths stated in drawing FA-APEX-839 Rev. A, have been obtained using methods and principles which comply with the requirements of NCC2016 (Volumes 2 and 3) and AS/NZS 3500.3.

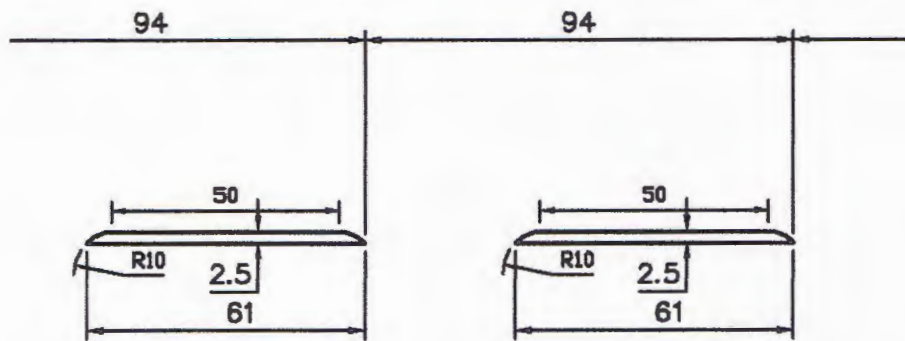
Conditions of certification

Overflow capacities and maximum ridge to gutter lengths are valid for the following conditions:

1. Gutter slope = 1:500 (or steeper)
2. Minimum vertical distance from top of fascia to bottom of gutter slot = 25mm
3. Gutter slots are clean and free from dirt and other obstructions.

Milton Fernandes
FIEAust, CPEng, NER, RPEQ 4112
Chartered Professional Engineer
Principal Engineer
milton@fernandes.net.au
Mobile: 0411 760 565





Number of slots per lineal meter of gutter = 10.64
 Slot area = 142.5mm² per slot
 Total front slot opening area = 1567.7mm² per lineal meter of gutter
 Front slot overflow capacity = 0.63L/s/m

Figure 1. Front slots in APEX Quad 115 High Front Gutters

Rainfall location (Victoria)	ARI (1 in 100 years) (mm/hr)	Maximum ridge to gutter length (m)
Ballarat	188	12.0
Benalla	194	11.5
Geelong	144	15.0
Horsham	173	13.0
Lakes Entrance	198	11.0
Melbourne	187	12.0
Hastings	145	15.0
Sorrento	140	15.0
Mildura	218	10.0
Stawell	186	12.0

Front slot opening area = 1567.7mm² per lineal meter of gutter
 Front slot overflow capacity = 0.63 L/s/m

Table 1. Maximum ridge to gutter lengths for front slots

Notes:

- Overflow capacities and maximum ridge to gutter lengths are valid for the following conditions:
 - Gutter slope = 1:500 (or steeper)
 - Minimum vertical distance from top of fascia to bottom of front slot = 25mm
 - Gutters are regularly maintained and slot openings are free from dirt and other obstructions that prevent the water from flowing through.
- Overflow capacities and maximum ridge to gutter lengths have been calculated in accordance with the requirements of NCC 2016 (volumes 2 and 3) and AS3500.3.

ARI (1 in 100 Years)	Front slot overflow capacity (L/s/m)	Maximum ridge to gutter length (m)
150	0.63	15.0
175		13.0
200		11.0
225		10.0
250		9.0
275		8.0
300		7.5
325		7.0
350		6.5

Table 2. Maximum ridge to gutter lengths vs ARI



Milton J. Fernandes
 RPEQ, FIEAust CPEng
 Chartered Professional Engineer
 Membership No. 920595
 Engineers Australia

**Registered Professional Engineer
 of Queensland
 RPEQ 4112**

MJF
 APPROVED BY: MILTON FERNANDES - FIEAust, CPEng, NER, RPEQ