



The total
solution in
barrier
systems



Armco Information Book

Barrier systems for use in off road applications, providing a low energy vehicle impact deterrent.

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> Beams C35 Slotted Angle Beam

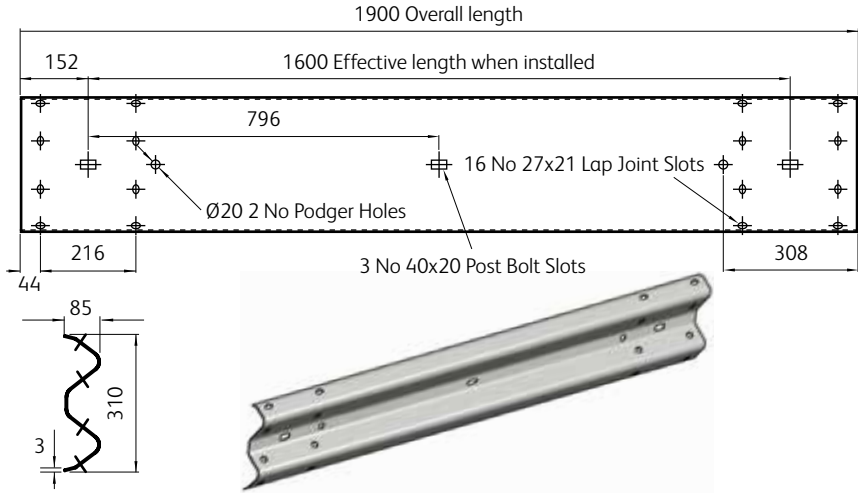
Material Calculator:

- > Divide total length by 1.6m
- > Add 8 x F07SH Lap Joint Bolts per connection
- beam to beam

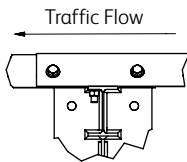
Notes:

- > Material: BS EN 10025 Grade S275JR - 3mm
- > Finish: BS EN ISO 1461 Galvanised

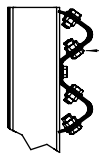
Specification			
Part No	Description	Length	Weight (kgs)
C35	Slotted Angle Beam	1600	22.3



C35 Slotted Angle Beam



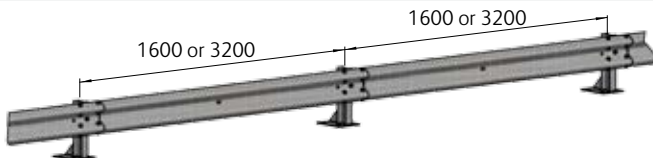
Beam Lap Joint Assembly Details



F07SH x 8,
M16 x 35mm
Hex Head
Screw, 2 No
form E Washers
& M16 Nut

F06
M16 x 50
Hex Head
Bolt, 2 No
form F
Washers &
M16 Nut

Beam to Post
Assembly Details



Corrugated Beam Arrangement Details

> Beams Corrugated Beam

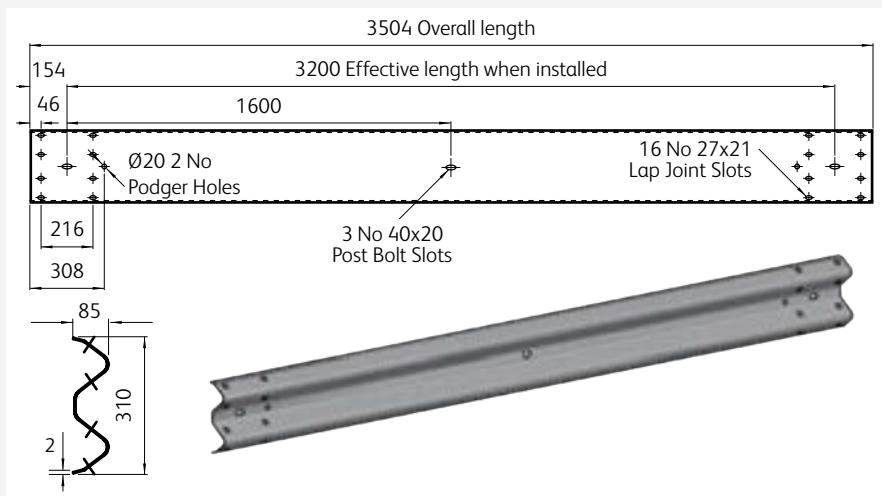
Material Calculator:

- > Divide total length by 3.2m
- > Add 8 x F07SH Lap Joint Bolts per connection - beam to beam
- > For non standard Beam lengths please contact us for further information

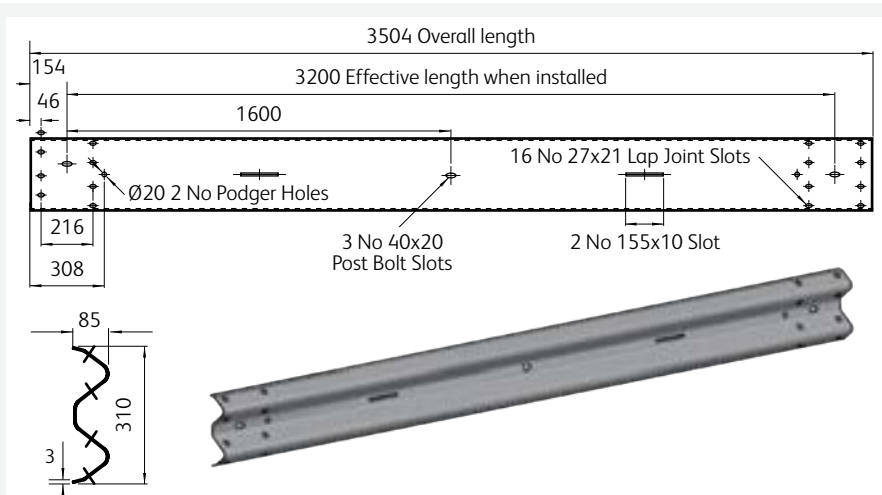
Notes:

- > Material: BS EN 10025 Grade S275JR (ORC027-2mm, C01-3mm)
- > Finish: BS EN ISO 1461 Galvanised

Specification			
Part No	Description	Length	Weight (kgs)
ORC027	2mm Corrugated Beam	3200	27.4
C01	3mm Corrugated Beam	3200	41.1



ORC027 Corrugated Beam



C01 Corrugated Beam

> Posts Concrete-in Z Post

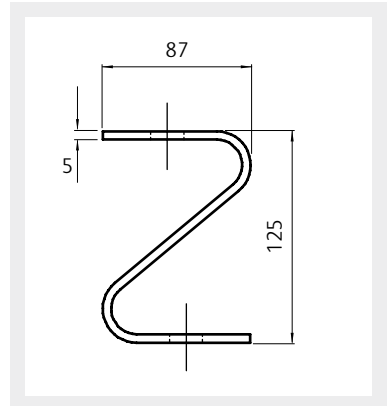
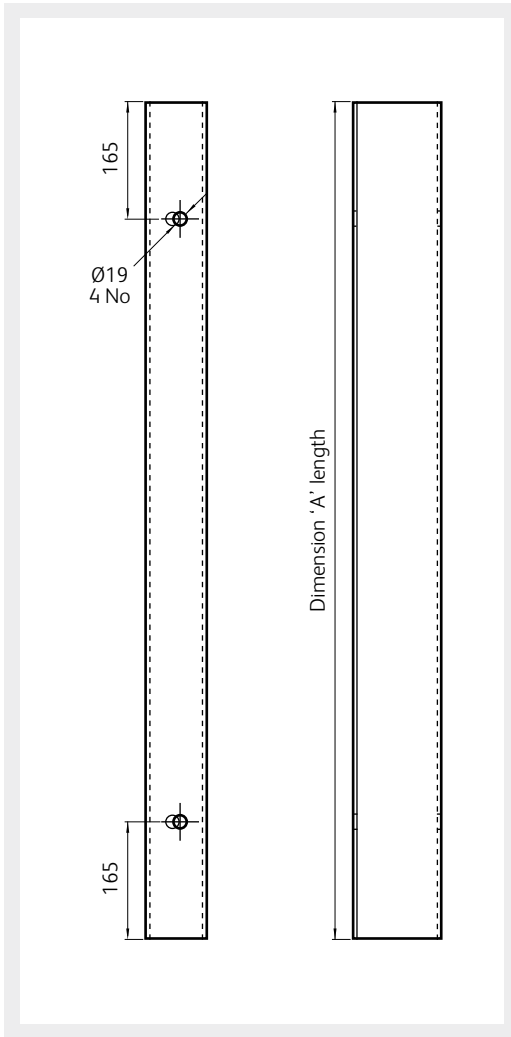
Material Calculator:

- > Divide total length of system required by 1.6m or 3.2m and add 1 No
- > 1 x F06 Post Bolt to bolt Beam to Post, (2 No for double sided)

Notes:

- > Material: BS EN 10025 Grade S275JR 5mm
- > Finish: BS EN ISO 1461 Galvanised
- > Can be used for Double Sided System

Post Variations			
Part No	Description	Length	Weight (kgs)
ORC003-1187	Z Section Post	1187	14.7
ORC003-1487	Z Section Post	1487	18.4



> Posts Surface Mounted Z Post

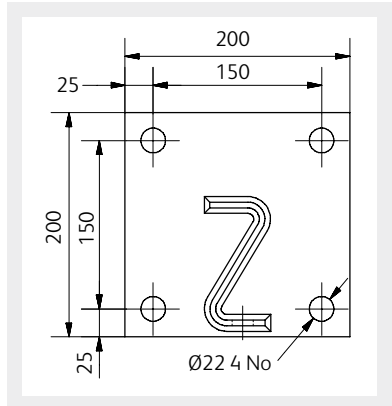
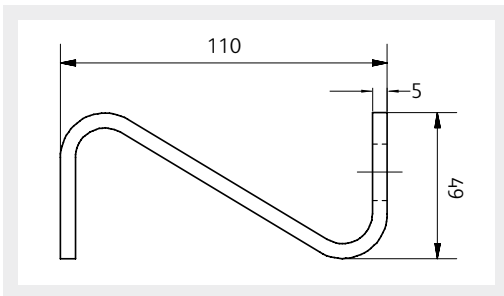
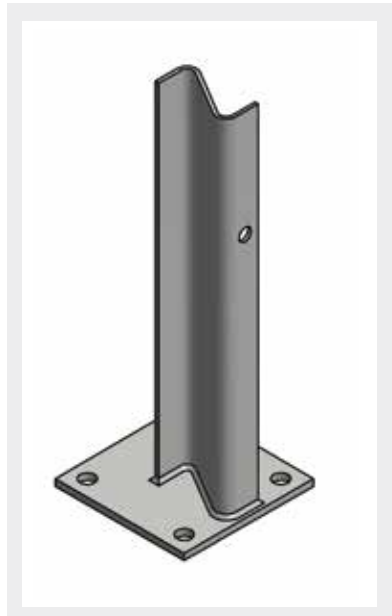
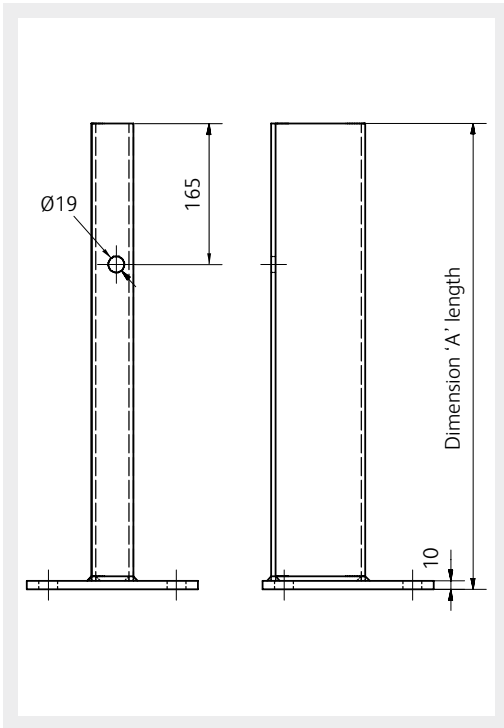
Material Calculator:

- > Divide total length of system required by 1.6m or 3.2m and add 1 No
- > 1 x F06 Post Bolt to bolt Beam to Post

Notes:

- > Material: BS EN 10025 Grade S275JR
- > Finish: BS EN ISO 1461 Galvanised
- > Base anchor/fixing requirements are dependant on the specific site slab/foundation and would need to be determined and supplied by third parties (Please see page 11 for post section properties).

Post Variations		
Part No	Dim 'A'	Weight (kgs)
ORC009-547	547	7.65
ORC009-747	747	9.25



> Posts Concrete-in RSJ Post

Material Calculator:

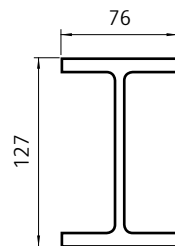
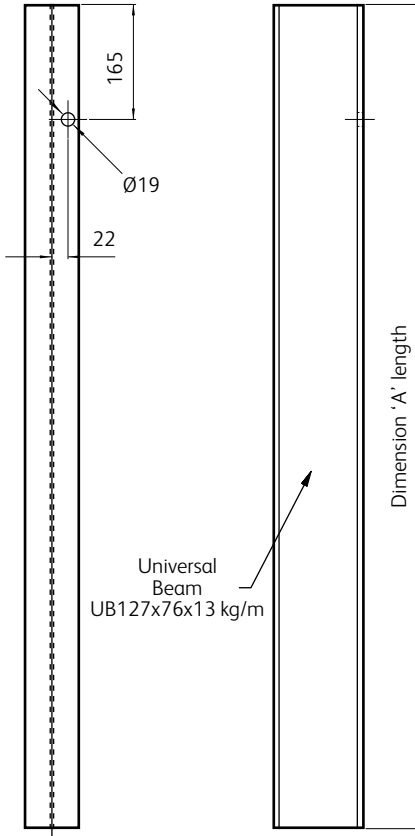
- > Divide total length of system required by 1.6m or 3.2m and add 1 No
- > 1 x F06 Post Bolt to bolt Beam to Post

Notes:

- > Material: BS EN 10025 Grade S275JR
- > Finish: BS EN ISO 1461 Galvanised

Post Variations

Part No	Dim 'A'	Weight (kgs)
ORC002-1087	1,087	14.85
ORC002-1187	1,187	16.20
ORC002-1487	1,487	20.30
ORC002-1787	1,787	24.40



> Posts Surface Mounted RSJ Post

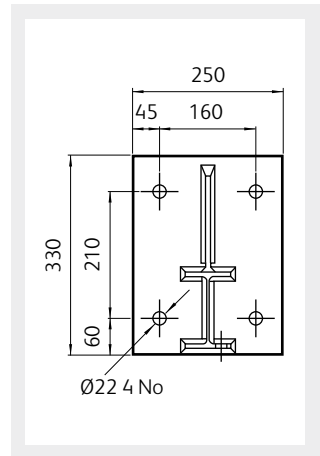
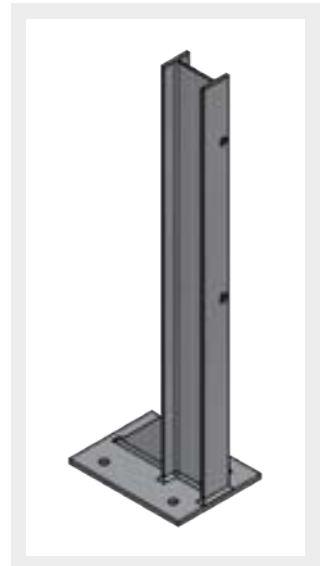
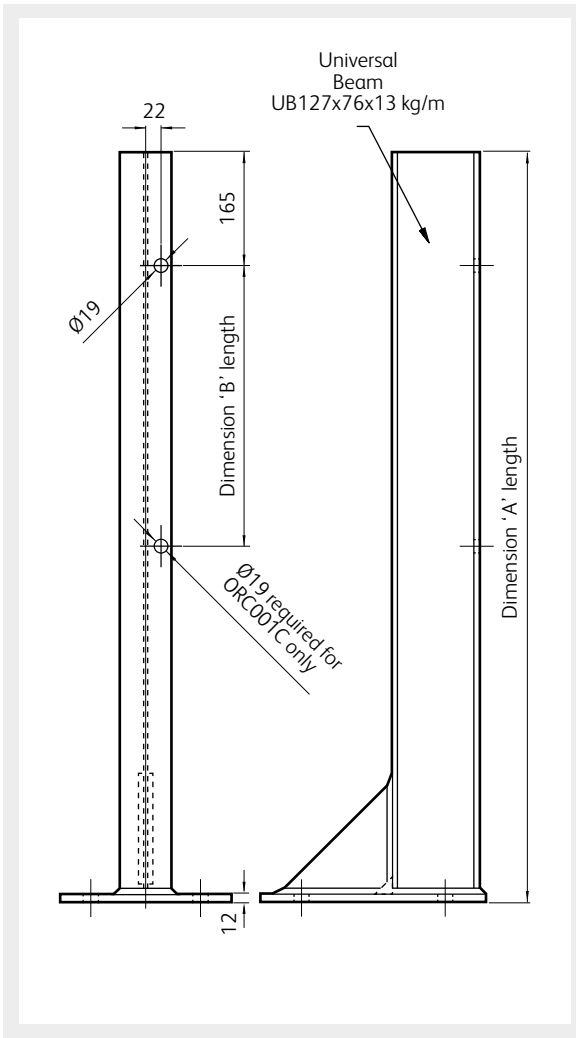
Material Calculator:

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- > 1 x F06 Post Bolt to bolt Beam to Post

Notes:

- > Material: BS EN 10025 Grade S275JR
- > Finish: BS EN ISO 1461 Galvanised
- > Base anchor/fixing requirements are dependant on the specific site slab/foundation and would need to be determined and supplied by third parties
(Please see page 11 for post section properties).

Post Variations		
Part No	Dim 'A'	Weight (kgs)
ORC002-1087	1,087	14.85
ORC002-1187	1,187	16.20
ORC002-1487	1,487	20.30
ORC002-1787	1,787	24.40



> Corners External & Internal Corners

Material Calculator:

- > Add 2 Posts per Corner
- > Add 8 No F075H Lap Joint Bolt per corner

Notes:

- > Material: BS EN 10025 Grade S275JR - 3 mm
- > Finish: BS EN ISO 1461 Galvanised

Specifications	
Component	Weight (kgs)
ORC005	13.2
ORC006	13.2
ORC018	14.5
ORC019	14.5



ORC005 External Corner 90°



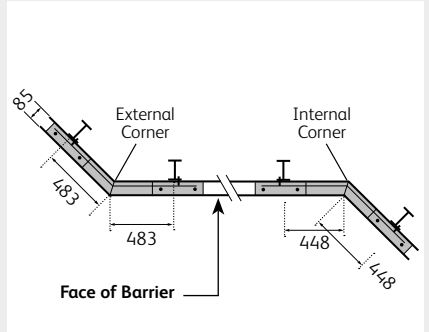
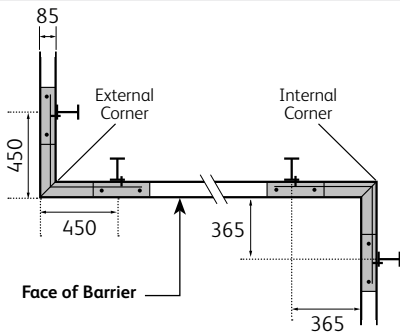
ORC019 External Corner 135°



ORC006 Internal Corner 90°



ORC018 Internal Corner 135°



> Beam Ends Corrugated Beam Plastic End Sleeve, Type D End Termination, End Shoe and Fishtail End Termination

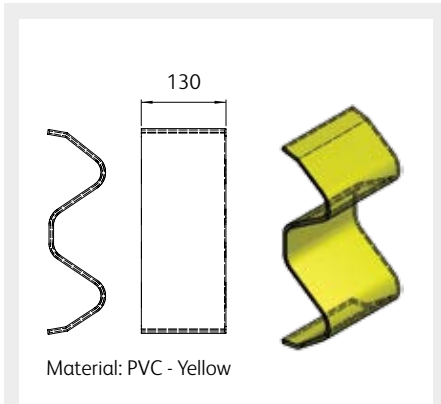
Specifications	
Component	Weight (kgs)
ORC004	0.4
ORC023	7.5
ORC024	10.2
ORC025	5.6

Material Calculator:

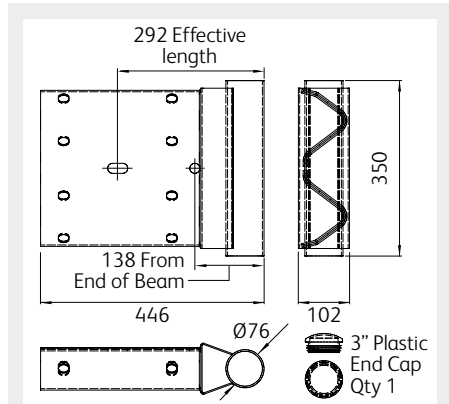
- > Add 4 x F07SH Lap Joint Bolt per ORC025
- > Add 8 x F07SH Lap Joint Bolt per ORC023 and ORC024

Notes: (Do not apply to ORC004)

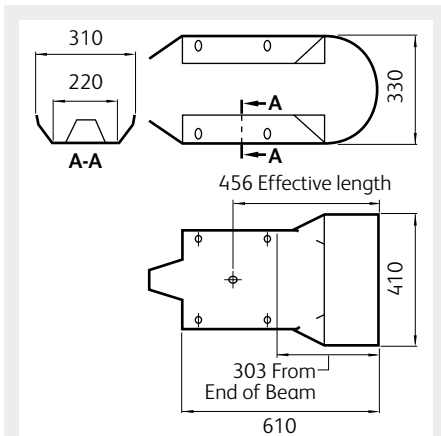
- > Material: BS EN 10025 Grade S275JR
- > Finish: BS EN ISO 1461 Galvanised



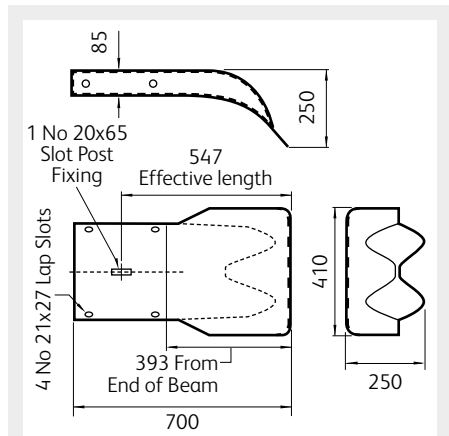
ORC004 Corrugated Beam PVC End Sleeve



ORC023 Type D End Termination



ORC024 End Shoe



ORC025 Fishtail End Termination

> Powder Coated Finishes

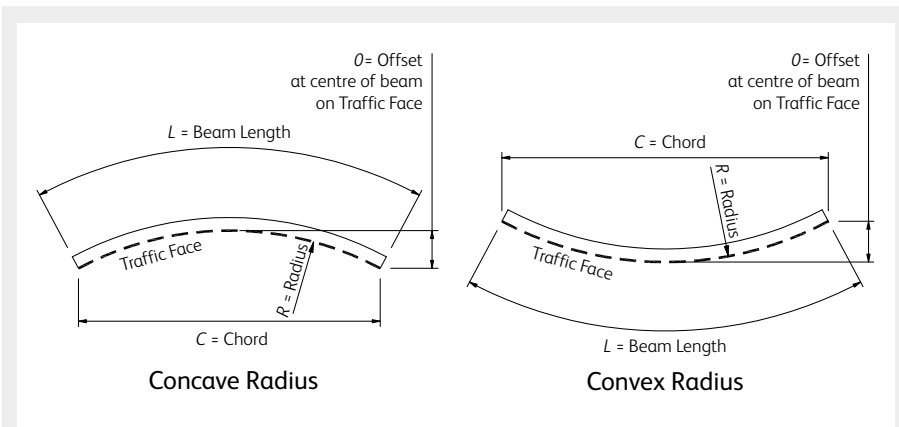
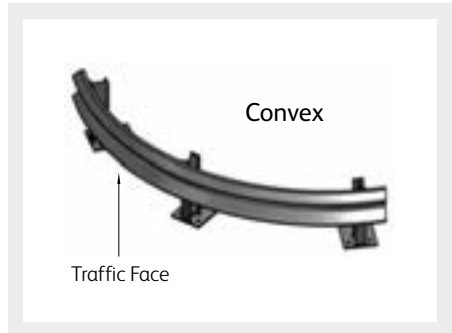
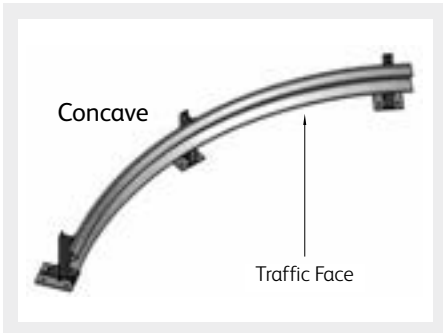
Available by request in the following standard colours:

Traffic Yellow - RAL1023, Traffic White - RAL9016, Traffic Black - RAL9017, Traffic Green - RAL6024

> Curves Concave and Convex Barriers

Notes:

- > Material: BS EN 10025 Grade S275JR 2mm or 3mm
- > Finish: BS EN ISO 1461 Galvanised
- > Radius to be measured from traffic face



How to calculate the radius



$$R = (O^2 + (C/2)^2) / (2 \times O)$$

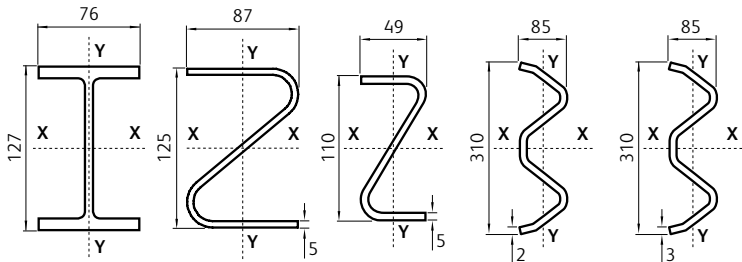
Advisory Note

For a 'traffic face' radius of less than 50m, beams are factory curved. Although beams can be radiused down to 6m it is recommended that the minimum practical radius of 10m is used as the edge of the beam is likely to 'ripple' when formed at a tight radius.

> Off-Road Section Properties

- Hill & Smith Ltd are unable to offer a layout/foundation design service. Ideally the foundation/anchorage should be designed to allow the post to plastically fail.
- The strength of the system depends on the properties of the chosen post, post spacing, strength and size of the foundation & base plate anchors (if applicable).
- Posts can be holed for double height and/or double sided.
- Please contact the team regarding **BRIFEN** wire rope and **OB**B Off Road options.

ORC001	ORC003	ORC009	ORC027	C01
ORC002	125x87x5mm	110x49x5mm	2mm	3mm
127x76x13kg/m	'Z' Post	'Z' Post	'W' Beam	'W' Beam
'UB' Post	Steel Grade –	Steel Grade –	Steel Grade –	Steel Grade
Steel Grade –	S275	S275	S275	–
S275				S275



Sectional Area cm ²	16.50	15.45	9.96	9.50	14.47
Ixx cm ⁴	473.0	359.1	163.3	904.5	1384.3
Iyy cm ⁴	55.7	100.0	20.1	65.9	106.6
Elastic Zxx cm ³	74.6	57.4	29.7	58.2	89.3
Elastic Zyy cm ³	14.7	23.0	8.2	15.5	24.8
r _{yy} cm	1.84	2.55	1.42	2.63	2.71
Plastic Zxx cm ³	84.2	68.7	37.4	N/A	N/A



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