

# Steel fabrication

## Design standards

### Design

Urban Lighting Group lighting poles, brackets and outreaches are designed in Australia to Australian and international standards. Our team can design poles to your exact requirements or assist in selecting a pole from our standard range.

Products are designed using Checkpole, which provides complete pole and connection design, along with automated wind load calculation to AS/NZS 1170. The designs are then realized using the latest 3D CAD software to provide manufacturing data.

Our products are designed to the following standards:

- AS/NZS 1170.2 Structural design actions - Wind actions
- AS 4100 Steel structures
- AS/NZS 4600 - Cold-formed steel structures
- AS/NZS 4680 Hot-dip galvanized (zinc) coatings on fabricated ferrous articles
- AS/NZS 2312 - Protection of structural steel against atmospheric corrosion by the use of protective coatings
- AS 1798 - Lighting poles and bracket arms - Preferred dimensions

### Manufacture

Manufacturing is carried out in China by our ISO 9001 accredited partner companies. Materials and workmanship comply with local and international standards selected for their equivalence with Australian standards. Independent inspections are carried out to ensure compliance with our specifications.

Our products are engineered and manufactured typically using either Q235 or Q345 steel. These materials are equivalent to Australian standard grade 250 and 350 steel.

Welding is carried out by qualified welders using qualified welding procedures. Welders are qualified to either of ISO 9606 or AWS D1.1, and weld qualification procedures are according to ISO 15614 or AWS D1.1. These standards correspond well with the Australian structural welding code AS/NZS 1554.1.

Galvanizing is carried by an ISO 9001 certified galvanizer, to GB/T 13912 and AS 4680. Coating minimum and average thicknesses are tested to AS 4680.

### Equivalent standards

Steel	Grade	Strength (MPa)	Standard	Equivalent Australian standard
Steel plate and coil	Q235B	235	GB/T 700	AS/NZS 3678 grade 250
Steel plate and coil	Q345B	345	GB/T 1591	AS/NZS 3678 grade 350
Steel SHS and RHS	Q235	235	GB/T 6728	AS/NZS 1163 grade 250
Steel CHS	Q235	235	GB/T 13793	AS/NZS 1163 grade 250

Welding	Standard	Title	Equivalent Australian Standard
Welder qualification	ISO 9606	Qualification testing of welders	AS/NZS 1554.1
	AWS D1.1	Structural welding - steel	
Weld procedure qualification	ISO 15614	Specification and qualification of welding procedures	AS/NZS 1554.1
	AWS D1.1	Structural welding - steel	

Galvanizing	Standard	Title	Equivalent Australian Standard
Hot dip galvanizing	GB/T 13912	Hot dip galvanized coatings	AS 4680