



Our Solutions In Steel Are Innovative



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About Us



When you think about project specifications and conforming tenders, you get a set of rules that confine fabricators. At Innovative Steel Solutions, we are all about change and allowing fabricators to tender with freedom. We offer our customer's end-to-end support, fast turnarounds, cost benefits, and above all, weight reductions.

We have supported several fabricators across Australia with intelligent solutions such as custom-built Welded Beams with dissimilar flanges, transition joints, tapered sections, castellated webs, cell form webs, or gooseneck solutions. These solutions would not be available via conventional options.

At Innovative Steel Solutions, we believe in sustainability and quality in steel manufacturing and work steel mills that comply with the following scheme rules; AS/NZ grade, ACRS certification, ISO certified, ResponsibleSteel™, World Steel Association & EPD members.

Vision & Mission

Our vision is to establish our business as one of the leaders in the industry for supplying entirely sustainable and eco-friendly steel solutions.

Our mission is to provide fabricators and engineers with the most innovative steel solutions in Australia.



Utilising Block Chain

At Innovative Steel, we are all about delivering intelligent solutions and firmly believe that utilising blockchain technology can build greater trust, drive collaboration, and allow complete product traceability through securely exchanging data with your business.



What We Offer

Key Market Solutions



Early Engagement

We provide steel solutions from the beginning of your project



Innovative Products

We provide innovative product solutions to assist with your projects



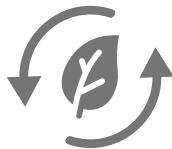
Australian Standards

We supply and conform to AS/NZS grade steel and ACRS certified products.



Economic Solutions

We provide our customers with the most economical solutions based of the current market conditions and opportunity



Eco-Friendly Solutions

We ensure our products meet strict environmentally sustainable solutions



Environmental Compliance

We source and supply products that have EPD, WSTA & CAC certifications

Product Scheme Rules

At Innovative Steel Solutions, we pride ourselves on a sustainable future for steel in the manufacturing industry. Hence why we chose to work with steel mills that provide the following certifications and standards.



ISO 9001:2015
ISO 14001:2015
OHSAS 18001:2007
ISO 3834 Part 2

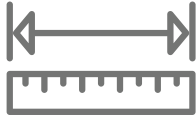


worldsteel
ASSOCIATION



What We Offer

Steel Processing Solutions



Cut-To-Size

Reduce metal wastage with the ability to prepare steel product to the exact size



CNC Drilling

We provide drilling services for products at the highest quality



CNC Plasma & Oxy cutting

We provide plasma & oxy cutting of products at the highest quality



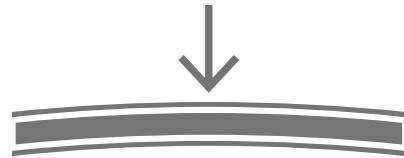
Edge Preparations

We prepare all plates before the weld assembly by grinding the Flange Plate surfaces before the placement of the Web Plates



Coping Of Beams

We offer the service of coping beams as per engineered drawings supplied



Cambering Of Beams

We offer the service of camber for all welded beams to suit your structural steel requirements



Material Traceability & Part ID Marking

Each product is carefully marked with a part ID for complete traceability

For custom and additional steel processing solutions, Please contact us

Sustainable Steel

STEEL SUSTAINABILITY: HOW IS IT IMPORTANT & WHY IS IT SUSTAINABLE

Once steel is produced, it becomes a sustainable material because it can be recycled and reused forever. Steel can be recycled infinite times with NO downgrading in quality, making it one of the earth's most sustainably qualitative metals.

Sustainable steel is essential to the steel industry because it reduces greenhouse gas emissions, carbon footprint & natural resource usage. Steel can only be sustainable if it is recycled, reused and appropriately manufactured.



80%
RECYCLED STEEL USED



70%
ENERGY SAVED



100%
EAF USAGE



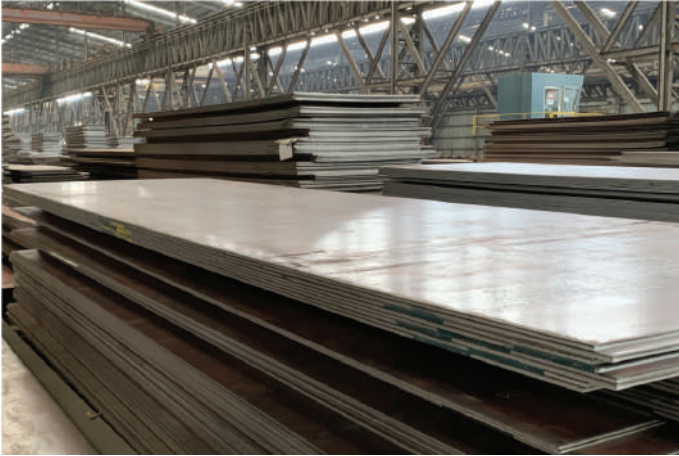
Benefits of sustainable steel:

- Less energy consumption
- Reduces carbon emission
- Decreases carbon footprint
- Reduces cost
- Increase economic growth
- Increase marketability

Energy conservation in steelmaking is crucial to ensure our industry minimises environmental impacts, such as greenhouse gas emissions. That is why we believe in sustainable steel, as it is a known fact that it saves energy through its endless recyclability and durability potential.

We believe that the Australian industry will benefit from Electric Arc Furnace (100% EAF) production with overall lower capital costs, lower operating costs & lower carbon emissions when compared to traditional iron making using Blast Furnace.

Product Overview



EnviroPlate™

Hot Rolled Plate Product Content:

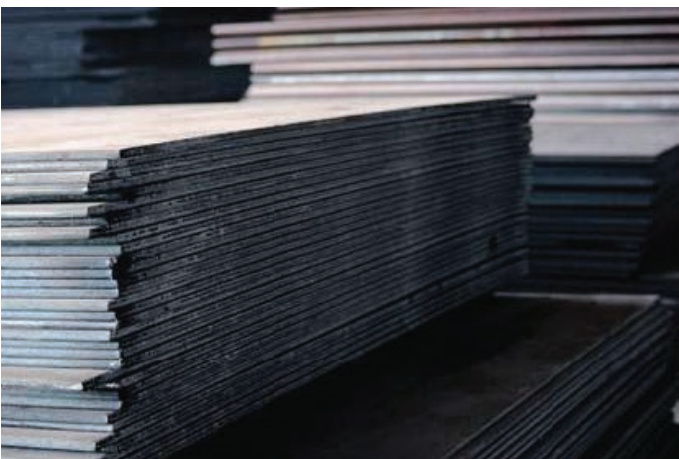
- Available Grades - **Table 1.1**
- Available Sizes - **Table 1.2**
- Product Details & Mechanical Properties:
 - Gr. 250 - **Table 1.3 | 1.4 | 1.5 | 1.6 | 1.7 | 1.8**
 - Gr. 300 - **Table 1.9 | 1.10 | 1.11 | 1.12 | 1.13 | 1.14**
 - Gr. 350 - **Table 1.15 | 1.16 | 1.17 | 1.18 | 1.19 | 1.20**
 - Gr. WR350 - **Table 1.21 | 1.22 | 1.23 | 1.24 | 1.25**
 - Gr. 400 - **Table 1.26 | 1.27 | 1.28 | 1.29 | 1.30 | 1.31**



EnviroBeam™

Welded Beam & Column Product Content:

- Available Grades & Sizes - **Table 2.1** (Beams) | **3.1** (Columns)
- Available CWB's - **Table 2.2** (Beams) | **3.2** (Columns)
- Product Details & Mechanical Properties:
 - Welded Beams - **Table 2.3 | 2.4**
 - Welded Columns - **Table 3.3 | 3.4**



EnviroCoil™

Hot Rolled Plate From Coil Product Content:

- Available Grades & Sizes - **Table 4.1**
- Product Details & Mechanical Properties:
 - Grade 250/300/350 - **Table 4.2 | 4.3**

For more technical information on our products, Please contact us

Product Type: Hot Rolled Plate - AS/NZS3678 : 2016

General Description:

At Innovative Steel Solutions, our products are sourced and manufactured to meet strict sustainable protocols. Our products meet Australian standards and are **ACRS** accredited.

Our hot rolled plates come in various standards, grades, and sizes to meet your direct use, rolling, or fabricating requirements. Hot Rolled plates range from mild steel to high strength steel to suit all your project requirements.

Hot Rolled Plate Grades - Table 1.1

| Available Hot Rolled Plate Grades | | | | | |
|-----------------------------------|----|-----|-----|-----|----|
| Grade | L0 | L15 | L20 | L40 | SO |
| 250 | - | ● | ● | - | - |
| 300 | - | ● | ● | ● | ● |
| 350 | - | ● | ● | ● | - |
| WR350 | ● | ● | ● | - | - |
| 400 | - | ● | ● | - | - |

CNC-UT (Ultrasonic) Testing of all Plates



Standard Plate Sizes - Table 1.2

| Width (mm) | Length (mm) |
|------------|-------------|
| 1200 | 2400 |
| 1219 | 2438 |
| 1500 | 6000 |
| 1520 | 6096 |
| 1800 | 6000 |
| 1830 | 6096 |

The maximum width is 3000 mm and length is 12000 mm, which Innovative is capable of supplying. Other-dimensional (custom) sizes are available upon agreement.

Market Applications

-  Structural Steel Construction
-  Infrastructure
-  Storage Tanks
-  Fabrication & Erection
-  Marine & Civil

Manufacturing Specifications

-  AS/NZ 3678 : 2016
-  ACRS CERTIFIED PRODUCT
-  ISO 9001, ISO 14001 & ISO 18001
-  Member Of WSA (World Steel Association)
- Climate Action Member
-  EPD (Environmental Product Declaration)
-  ResponsibleSteel™ Member

Product Details & Specifications: Gr. 250, 250 L15 & 250 L20

A. Standard Specification - Table 1.3

| Specification & Grades | Applicable Thickness in (mm) | Thickness Range (mm) | Tensile Test (Transversal) | | |
|---|------------------------------|----------------------|----------------------------|-------------------------|------------------|
| | | | YS (N/mm ²) | TS (N/mm ²) | EL (%) (5.65√So) |
| | | | Min | Min | Min |
| AS/NZS 3678 :2016 Gr. 250, 250 L15, & 250 L20 | ≥ 5 - ≤ 100 | ≤ 8 | 280 | 410 ^A | 22 ^B |
| | | > 8 ≤ 12 | 260 | 410 | 22 ^B |
| | | > 12 ≤ 20 | 250 | 410 | 22 ^B |
| | | > 20 ≤ 50 | 250 | 410 | 22 ^B |
| | | > 50 ≤ 80 | 240 | 410 | 22 ^B |
| | | > 80 ≤ 150 | 230 | 410 | 22 ^B |

B. Typical Innovative Steel Mechanical Properties - Table 1.4

| Mechanical Properties | ≥8 - ≤16 mm | >16 - ≤40 mm | >40 - ≤60 mm | >60 - ≤100 mm |
|--------------------------|-------------|--------------|--------------|---------------|
| | Typical | | | |
| Yield Strength (Mpa) | 328 | 313 | 313 | 308 |
| Tensile Strength (Mpa) | 465 | 467 | 466 | 489 |
| Elongation (%) (5.65√So) | 27 | 28 | 28 | 32 |
| Impact (J) (-0 °C) | 115 | 129 | 123 | 93 |
| Impact (J) (-15°C) | 90 | 112 | 117 | 86 |
| Impact (J) (-20 °C) | 88 | 126 | 102 | 122 |

Impact Properties - Table 1.5

| Specification | Grades | Temp. (°C) | Minimum Absorbed Energy (J) |
|-------------------|---------|------------|-----------------------------|
| | | | Avg. |
| AS/NZS 3678 :2016 | 250 | - | - |
| | 250 L15 | -15 | 27 |
| | 250 L20 | -20 | 27 |

^AMinimum tensile strength (TS) is not applicable for material with thickness < 6 mm.

^BFor cross sectional test piece area > 1000 mm², minimum elongation decreased by 2%.

Chemical Composition - Table 1.6

| Chemical Composition | Standard Specification (wt%) | Typical (wt%) |
|----------------------|------------------------------|---------------|
| Carbon (C) | ≤0,22 | 0.16-0.20 |
| Silica (Si) | ≤0,50 | 0.20-0.30 |
| Manganese (Mn) | ≤1,70 | 0.4-0.9 |
| Phosphorus (P) | ≤0,040 | ≤0.015 |
| Sulphur (S) | ≤0,030 | ≤0.010 |

Through Thickness (Z Test) - Table 1.7

| Through Thickness (AS/NZS 3678:2016) | | | | |
|--------------------------------------|-----------------------------|-------------------|------|------|
| Grade | Certified Thickness in (mm) | Z 15 | Z 25 | Z 35 |
| 250 | 5-100 | (Average 3 tests) | | |

Fabricating Performance - Table 1.8

| 1 = Limited | 10 = Excellent |
|-------------|----------------|
| Method | Rating |
| Bending | 8 |
| Welding | 9 |

Product Details & Specifications: Gr. 300, 300 L15, 300 L20, 300 L40 & 300 SO

A. Standard Specification - Table 1.9

| Specification & Grades | Applicable Thickness in (mm) | Thickness Range (mm) | Tensile Test (Transversal) | | | |
|---|------------------------------|----------------------|----------------------------|-------------------------|------------------|------------------|
| | | | YS (N/mm ²) | TS (N/mm ²) | EL (%) (5.65√So) | Yield to Tensile |
| | | | Min | Min | Min | Max |
| AS/NZS 3678 :2016 Gr. 300, 300 L15; 300 L20 300 L40 | ≥8 - ≤100 | ≤ 8 | 320 | 430 | 21 | - |
| | | > 8 ≤ 12 | 310 | 430 | 21 | - |
| | | > 12 ≤ 20 | 300 | 430 | 21 | - |
| | | > 20 ≤ 50 | 280 | 430 | 21 | - |
| | | > 50 ≤ 80 | 270 | 430 | 21 | - |
| | | > 80 ≤ 150 | 260 | 430 | 21 | - |
| AS/NZS 3678 :2016 Gr. 300 SO | ≥8 - ≤40 | ≤ 8 | 320 | 430 | 25 | 0.8 |
| | | > 8 ≤ 12 | 310 | 430 | 25 | 0.8 |
| | | > 12 ≤ 20 | 300 | 430 | 25 | 0.8 |
| | | > 20 ≤ 50 | 280 | 430 | 25 | 0.8 |

Engineers to design any buildings with safety considerations and to cover or control earthquake damages. AS/NZS 3678 Gr. 300 SO is a seismic grade designation in which the engineer must carefully balance the steels' mechanical properties to get suitable joint sections.

B. Typical Innovative Steel Mechanical Properties - Table 1.10

| Mechanical Properties | ≥8 - ≤16 mm | >16 - ≤40 mm | >40 - ≤60 mm | >60 - ≤100 mm |
|--------------------------|-------------|--------------|--------------|---------------|
| | Typical | | | |
| Yield Strength (Mpa) | 353 | 353 | 353 | 358 |
| Tensile Strength (Mpa) | 493 | 510 | 517 | 525 |
| Elongation (%) (5.65√So) | 26 | 28 | 29 | 30 |
| Impact (J) (-0 °C) | 124 | 159 | 163 | 82 |
| Impact (J) (-15°C) | 103 | 115 | 128 | 84 |
| Impact (J) (-20 °C) | 79 | 136 | 88 | 119 |

Impact Properties - Table 1.11

| Specification | Grades | Temp. (°C) | Minimum Absorbed Energy (J) |
|-------------------|----------------------|------------|-----------------------------|
| | | | Avg. |
| AS/NZS 3678 :2016 | 300 | - | - |
| | 300 L15 | -15 | 27 |
| | 300 L20 | -20 | 27 |
| | 300 L40 ^A | -40 | 27 |
| | 300 SO | 0 | 70 |

^ASupplied in normalized condition up to 100 mm thickness to guarantee impact value

Chemical Composition - Table 1.12

| Chemical Composition | Standard Specification (wt%) | Typical Innovative (wt%) |
|----------------------|------------------------------|--------------------------|
| Carbon (C) | ≤0,22 | 0.17-0.20 |
| Silica (Si) | ≤0,50 | 0.20-0.30 |
| Manganese (Mn) | ≤1,70 | 0.8-1.20 |
| Phosphorus (P) | ≤0,040 | ≤0.015 |
| Sulphur (S) | ≤0,030 | ≤0.010 |

Through Thickness (Z Test) - Table 1.13

| Through Thickness (AS/NZS 3678:2016) | | | | |
|--------------------------------------|-----------------------------|-------------------|------|------|
| Grade | Certified Thickness in (mm) | Z 15 | Z 25 | Z 35 |
| 300 | 5-100 | (Average 3 tests) | | |
| 300 | 8-100 | (Average 3 tests) | | |

Fabricating Performance - Table 1.14

| 1 = Limited Method | 10 = Excellent Rating |
|--------------------|-----------------------|
| Bending | 8 |
| Welding | 9 |

Product Details & Specifications: Gr. 350, 350 L15, 350 L20 , 350 L40

A. Standard Specification - Table 1.15

| Specification & Grades | Applicable Thickness in (mm) | Thickness Range (mm) | Tensile Test (Transversal) | | |
|---|------------------------------|----------------------|----------------------------|-------------------------|------------------|
| | | | YS (N/mm ²) | TS (N/mm ²) | EL (%) (5.65√So) |
| | | | Min | Min | Min |
| AS/NZS 3678 :2016 Gr. 350, 350 L15, 350 L20 & 350 L40 | ≥ 8 - ≤ 100 | > 8 ≤ 12 | 360 | 450 | 20 |
| | | > 20 ≤ 32 | 340 | 450 | 20 |
| | | > 32 ≤ 80 | 340 | 450 | 20 |
| | | > 80 ≤ 100 | 330 | 450 | 20 |

B. Typical Innovative Steel Mechanical Properties - Table 1.16

| Mechanical Properties | ≥8 - ≤16 mm | >16 - ≤40 mm | >40 - ≤60 mm | >60 - ≤100 mm |
|--------------------------|-------------|--------------|--------------|---------------|
| | Typical | | | |
| Yield Strength (Mpa) | 380 | 370 | 370 | 380 |
| Tensile Strength (Mpa) | 551 | 547 | 547 | 547 |
| Elongation (%) (5.65√So) | 26 | 26 | 26 | 26 |
| Impact (J) (-0 °C) | 120 | 128 | 130 | 124 |
| Impact (J) (-15°C) | 117 | 119 | 126 | 120 |
| Impact (J) (-20 °C) | 141 | 119 | 120 | 93 |

Impact Properties - Table 1.17

| Specification | Grades | Temp. (°C) | Minimum Absorbed Energy (J) |
|-------------------|----------------------|------------|-----------------------------|
| | | | Avg. |
| AS/NZS 3678 :2016 | 350 | - | - |
| | 350 L15 | -15 | 27 |
| | 350 L20 | -20 | 27 |
| | 350 L40 [^] | -40 | 27 |

[^]For grade 350 L40 supplied in normalized condition up to 100 mm thickness or Thermo-Mechanical Control Process (TMCP) condition up to 40 mm thickness to guarantee impact value.

Chemical Composition - Table 1.18

| Chemical Composition | Standard Specification (wt%) | Typical Innovative (wt%) |
|----------------------|------------------------------|--------------------------|
| Carbon (C) | ≤0,22 | 0.17-0.20 |
| Silica (Si) | ≤0,50 | 0.20-0.30 |
| Manganese (Mn) | ≤1,70 | 1.20-1.40 |
| Phosphorus (P) | ≤0,040 | ≤0.015 |
| Sulphur (S) | ≤0,030 | ≤0.010 |

Through Thickness (Z Test) - Table 1.19

| Through Thickness (AS/NZS 3678:2016) | | | | |
|--------------------------------------|-----------------------------|-------------------|------|------|
| Grade | Certified Thickness in (mm) | Z 15 | Z 25 | Z 35 |
| 350 | 8-100 | (Average 3 tests) | | |

Fabricating Performance - Table 1.20

| 1 = Limited | 10 = Excellent |
|-------------|----------------|
| Method | Rating |
| Bending | 8 |
| Welding | 9 |

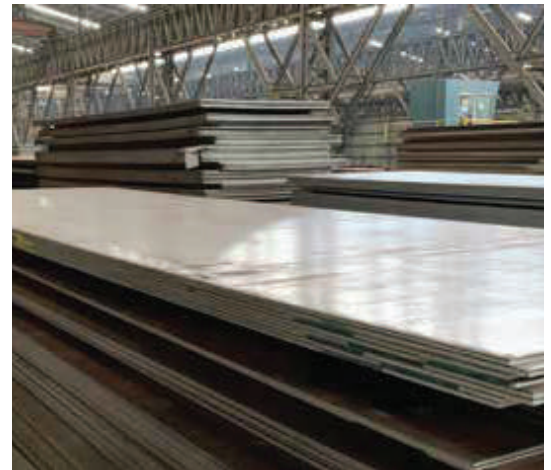
Product Details & Specifications: Gr. WR350, WR350 L0, WR350 L15 & WR350 L20

A. Standard Specification - Table 1.21

| Specification | Grades | Applicable Thickness in (mm) | Thickness Range (mm) | Tensile Test (Transversal) | | | Impact Test (Longitudinal) (Minimum) | | |
|-------------------|-----------|------------------------------|----------------------|----------------------------|-------------------------|------------------|--------------------------------------|--------|--------|
| | | | | YS (N/mm ²) | TS (N/mm ²) | EL (%) (5.65√So) | 0 °C | -15 °C | -20 °C |
| | | | | | | | Min | Min | Min |
| AS/NZS 3678 :2016 | WR350 | ≥8 - ≤60 | ≥ 8 ≤ 12 | 340 | 450 | 20 | 27 | | |
| | WR350 L0 | | > 12 ≤ 20 | 340 | 450 | 20 | | | |
| | WR350 L15 | | >20 ≤ 32 | 340 | 450 | 20 | | | |
| | WR350 L20 | | >32 ≤ 60 | 340 | 450 | 20 | | | |

B. Typical Innovative Steel Mechanical Properties - Table 1.22

| Mechanical Properties | ≥ 8 ≤ 12 mm | > 12 ≤ 20 mm | >20 ≤ 32 mm | >32 ≤ 60 mm |
|--------------------------|-------------|--------------|-------------|-------------|
| | Typical | | | |
| Yield Strength (Mpa) | 424 | 409 | 399 | 392 |
| Tensile Strength (Mpa) | 541 | 541 | 540 | 546 |
| Elongation (%) (5.65√So) | 21 | 22 | 22 | 26 |
| Impact (J) (0°C) | 207 | 210 | 211 | 220 |
| Impact (J) (-15 °C) | 166 | 164 | 164 | 152 |
| Impact (J) (-20 °C) | 152 | 149 | 150 | 147 |



Chemical Composition - Table 1.23

| Chemical Composition | Standard Specification (wt%) | Typical Innovative (wt%) | |
|----------------------|------------------------------|--------------------------|--------------|
| | ≤ 60 mm | ≤ 20 mm | > 20 ≤ 60 mm |
| Carbon (C) | ≤0,14 | 0.12 – 0.14 | 0.12 – 0.14 |
| Silica (Si) | 0,15 – 0,75 | 0.25 – 0.35 | 0.25 – 0.35 |
| Manganese (Mn) | ≤1,70 | 1.15 – 1.25 | 1.30 – 1.40 |
| Phosphorus (P) | ≤0,160 | ≤ 0.025 | ≤ 0.025 |
| Chrome (Cr) | 0.35 – 1.05 | 0.40 – 0.50 | 0.40 – 0.50 |
| Copper (Cu) | 0.15 – 0.50 | 0.25 – 0.35 | 0.30 – 0.40 |
| Nickel (Ni) | ≤0.55 | 0.10 – 0.20 | 0.20 – 0.25 |

Through Thickness (Z Test) - Table 1.24

| Through Thickness (AS/NZS 3678:2016) | | | | |
|--------------------------------------|-----------------------------|-------------------|------|------|
| Grade | Certified Thickness in (mm) | Z 15 | Z 25 | Z 35 |
| WR350 | 8-60 | (Average 3 tests) | | |

Fabricating Performance - Table 1.25

| 1 = Limited | | 10 = Excellent | |
|-------------|--------|----------------|--|
| Method | Rating | | |
| Bending | 8 | | |
| Welding | 8 | | |

Product Details & Specifications: Gr. 400, 400 L15 and 400 L20

A. Standard Specification - Table 1.26

| Specification & Grades | Applicable Thickness in (mm) | Thickness Range (mm) | Tensile Test (Transversal) | | |
|--|------------------------------|----------------------|----------------------------|-------------------------|------------------|
| | | | YS (N/mm ²) | TS (N/mm ²) | EL (%) (5.65√So) |
| | | | Min | Min | Min |
| AS/NZS 3678 :2016 Gr.400, 400 L15, & 400 L20 | ≥ 8 - ≤ 32 | ≤ 8 | 400 | 480 | 18 ^A |
| | | > 8 ≤ 12 | 400 | 480 | 18 ^A |
| | | > 12 ≤ 20 | 380 | 480 | 18 ^A |
| | | > 20 ≤ 50 | 360 | 480 | 18 ^A |
| | | > 50 ≤ 80 | 360 | 480 | 18 ^A |
| | | > 80 ≤ 150 | 360 | 480 | 18 ^A |

B. Typical Innovative Steel Mechanical Properties - Table 1.27

| Mechanical Properties | ≥8 - ≤16 mm | >16 - ≤32 mm |
|--------------------------|--------------------|--------------|
| | Typical properties | |
| Yield Strength (Mpa) | 469 | 471 |
| Tensile Strength (Mpa) | 590 | 592 |
| Elongation (%) (5.65√So) | 22 | 22 |
| Impact (J) (-0 °C) | 171 | 175 |
| Impact (J) (-15°C) | 110 | 111 |
| Impact (J) (-20 °C) | 120 | 136 |

Impact Properties - Table 1.28

| Specification | Grades | Temp. (°C) | Minimum Absorbed Energy (J) |
|-------------------|---------|------------|-----------------------------|
| | | | Avg. |
| AS/NZS 3678 :2016 | 400 | - | - |
| | 400 L15 | -15 | 27 |
| | 400 L20 | -20 | 27 |

^AFor cross sectional test piece area > 1000 mm², minimum elongation decreased by 2%.

Chemical Composition - Table 1.29

| Chemical Composition | Standard Specification (wt%) | Typical Innovative (wt%) |
|----------------------|------------------------------|--------------------------|
| Carbon (C) | ≤0,22 | 0.12-0.20 |
| Silica (Si) | ≤0,50 | 0.20-0.30 |
| Manganese (Mn) | ≤1,70 | 1.25-1.35 |
| Phosphorus (P) | ≤0,040 | ≤0.015 |
| Sulphur (S) | ≤0,030 | ≤0.010 |

Through Thickness (Z Test) - Table 1.30

| Through Thickness (AS/NZS 3678:2016) | | | | |
|--------------------------------------|-----------------------------|-------------------|------|------|
| Grade | Certified Thickness in (mm) | Z 15 | Z 25 | Z 35 |
| 400 | 8-32 | (Average 3 tests) | | |

Fabricating Performance - Table 1.31

| 1 = Limited | 10 = Excellent |
|-------------|----------------|
| Method | Rating |
| Bending | 8 |
| Welding | 9 |

Product Type: Welded Beam - AS/NZS 3679.2:2016

General Description:

At Innovative Steel Solutions, our products are manufactured to meet strict sustainable protocols. Our products meet Australian standard and is **ACRS** accredited.

Our welded beams come in various standards, grades, and sizes to meet your market applications requirements. Welded beams range from mild steel to high strength steel to suit all your project requirements.

Welded Beam Grades & Sizes - Table 2.1

| Designation | Length (m) | | | | | | |
|-------------|------------|------|------|------|------|------|------|
| | 9.0 | 10.5 | 12.0 | 13.5 | 15.0 | 16.5 | 18.0 |
| 1200 WB | ● | ● | ● | ● | ● | ● | ● |
| 1000 WB | ● | ● | ● | ● | ● | ● | ● |
| 900 WB | ● | ● | ● | ● | ● | ● | ● |
| 800 WB | ● | ● | ● | ● | ● | ● | ● |
| 700 WB | ● | ● | ● | ● | ● | ● | ● |

For custom lengths, please contact us for availability

Custom Welded Sections - Table 2.2

When considering Project requirements, the process generally leads fabricators to tender to specified specifications with a slight deviation. At Innovative Steel Solutions, we offer custom welded beams (CWB) built to suit your project and design needs, which include better manufacturing tolerances than AS/NZ 3679.2:2016

We supply a wide range of CWB's:

| Icon | Designation |
|------|---------------------------|
| | Asymmetric CWB'S |
| | Tapered Welded Beams |
| | Castellated Welded Beams |
| | Cellform-CWB Welded Beams |
| | Welded Box Sections |
| | Gooseneck CWB'S Sections |
| | Curved Welded Beams |
| | Pre-camber Welded Beams |

Markets & Applications

- Structural Steel Construction
- Infrastructure
- Heavy Equipment
- Fabrication & Erection
- Marine & Civil

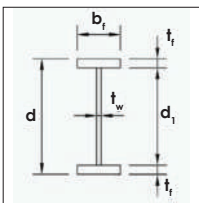
Manufacturing Specifications

- AS/NZ 3679.2: 2016 - Welded Beams - ACRS CERTIFIED
- AS/NZ 3678: 2016 - Hot Rolled Plate - ACRS CERTIFIED
- AS/NZ 1554.1 - Semi-Auto SAW Welding
- ISO 9001, ISO 14001 & ISO 18001
- WPS & PQR To Suit Australian Standards
- Member Of WSA (World Steel Association) - Climate Action Member
- EPD (Environmental Product Declaration)
- No Wastage - Welded Beams - Cut To Size
- ResponsibleSteel™ Member

Product Details & Specifications: Gr. 700WB, 800WB, 900WB, 1000WB & 1200WB

A. Standard Dimensions - Table 2.3

| Designation | Weight kg/m | Depth Of Section d | Flange | | Web Thickness t_w | Depth B/W Flanges d_1 | d1 t_w | (bf-tw) $2t_f$ | Area of Cross Section A_g |
|-------------|----------------|-----------------------|----------------|--------------------|------------------------|----------------------------|-------------|-------------------|--------------------------------|
| | | | Width b_f | Thickness t_f | | | | | |
| 700 WB | 173 | 716 | 275 | 28 | 10 | 660 | 66.0 | 4.73 | 22000 |
| | 150 | 710 | 250 | 25 | 10 | 660 | 66.0 | 4.80 | 19100 |
| | 130 | 700 | 250 | 20 | 10 | 660 | 66.0 | 6.00 | 16600 |
| | 115 | 692 | 250 | 16 | 10 | 660 | 66.0 | 7.50 | 14600 |
| 800 WB | 192 | 816 | 300 | 28 | 10 | 760 | 76.0 | 5.18 | 24400 |
| | 168 | 810 | 275 | 25 | 10 | 760 | 76.0 | 5.30 | 21400 |
| | 146 | 800 | 275 | 20 | 10 | 760 | 76.0 | 6.63 | 18600 |
| | 122 | 792 | 250 | 16 | 10 | 760 | 76.0 | 7.50 | 15600 |
| 900 WB | 282 | 924 | 400 | 32 | 12 | 860 | 71.7 | 6.06 | 35900 |
| | 257 | 916 | 400 | 28 | 12 | 860 | 71.7 | 6.93 | 32700 |
| | 218 | 910 | 350 | 25 | 12 | 860 | 71.7 | 6.76 | 27800 |
| | 175 | 900 | 300 | 20 | 12 | 860 | 71.7 | 7.20 | 22300 |
| 1000 WB | 322 | 1024 | 400 | 32 | 16 | 960 | 60.0 | 6.00 | 41000 |
| | 296 | 1016 | 400 | 28 | 16 | 960 | 60.0 | 6.86 | 37800 |
| | 258 | 1010 | 350 | 25 | 16 | 960 | 60.0 | 6.68 | 32900 |
| | 215 | 1000 | 300 | 20 | 16 | 960 | 60.0 | 7.10 | 27400 |
| 1200 WB | 455 | 1200 | 500 | 40 | 16 | 1120 | 70.0 | 6.05 | 57900 |
| | 423 | 1192 | 500 | 36 | 16 | 1120 | 70.0 | 6.72 | 53900 |
| | 392 | 1184 | 500 | 32 | 16 | 1120 | 70.0 | 7.56 | 49900 |
| | 342 | 1184 | 400 | 32 | 16 | 1120 | 70.0 | 6.00 | 43500 |
| | 317 | 1176 | 400 | 28 | 16 | 1120 | 70.0 | 6.85 | 40300 |
| | 278 | 1170 | 350 | 25 | 16 | 1120 | 70.0 | 6.68 | 35400 |
| | 249 | 1170 | 275 | 25 | 16 | 1120 | 70.0 | 5.18 | 31700 |



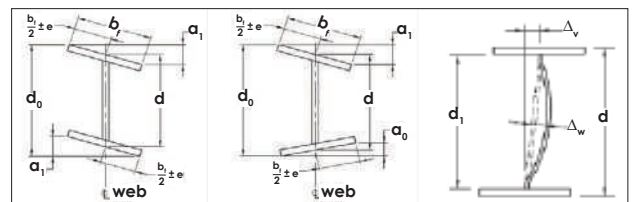
Note:

- All welds are done to **AS/NZS 1554.1**
Category **SP (deep penetration welds)**

- Welds sizes are determined by the minimum yield strength requirements specified in AZ/NZS 3679.2:2016 standards

B. *Permissible Tolerances for Welded Beams - Table 2.4

| Designation | Permissible variation of depth | Permissible variation of flange width | Permissible out-of-square on each flange | Permissible total out-of-square | Permissible web off-centre |
|-------------|--------------------------------|---------------------------------------|--|---------------------------------|----------------------------|
| Depth | d | b_f | a_1 or a_0 | $a_1 + a_0$ | e |
| 700 WB | ±3.0 | ±3.0 | ±(0.012*b _f) mm or ±3.0 | ±6.0 | ±3.5 |
| 800 WB | | | | | |
| 900 WB | | | | | |
| 1000 WB | | | | | |
| 1200 WB | | | | | |



* Note: Innovative Steel permissible tolerances for welded beams exceeds the AS/NZ 3679.2:2016 Standard by %40 in each category

Product Type: Welded Column - AS/NZS 3679.2:2016

General Description:

At Innovative Steel Solutions, our products are manufactured to meet strict sustainable protocols. Our products meet Australian standard and is **ACRS** accredited.

Our welded columns come in various standards, grades, and sizes to meet your market applications requirements. Welded columns range from mild steel to high strength steel to suit all your project requirements.

Welded Column Grades & Sizes - Table 3.1

| Designation | Length (m) | | | | | | |
|-------------|------------|------|------|------|------|------|------|
| | 9.0 | 10.5 | 12.0 | 13.5 | 15.0 | 16.5 | 18.0 |
| 500 WC | ● | ● | ● | ● | ● | ● | ● |
| 400 WC | ● | ● | ● | ● | ● | ● | ● |
| 350 WC | ● | ● | ● | ● | ● | ● | ● |

For custom lengths, please contact us for availability

Custom Welded Sections - Table 3.2

When considering Project requirements, the process generally leads fabricators to tender to specified specifications with a slight deviation. At Innovative Steel Solutions, we offer custom welded columns (CWC) built to suit your project and design needs, which include better manufacturing tolerances than AS/NZ 3679.2:2016

We supply a wide range of CWC's:

| Icon | Designation |
|------|--|
| | Welded Columns |
| | Tapered Welded Columns |
| | King Cross Columns |
| | Welded Box Columns |
| | Circular Welded Columns: - Longitudinal submerged arc welded (LSAW) - Spiral submerged arc welded (SSAW) |

Markets & Applications

- Structural Steel Construction
- Infrastructure
- Heavy Equipment
- Fabrication & Erection
- Marine & Civil

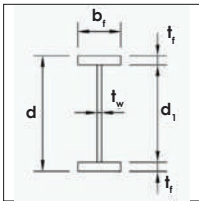
Manufacturing Specifications

- AS/NZ 3679.2: 2016 - Welded Beams
- ACRS CERTIFIED
- AS/NZ 3678: 2016 - Hot Rolled Plate
- ACRS CERTIFIED
- AS/NZ 1554.1 - Semi-Auto SAW Welding
- ISO 9001, ISO 14001 & ISO 18001
- WPS & PQR To Suit Australian Standards
- Member Of WSA (World Steel Association)
- Climate Action Member
- EPD (Environmental Product Declaration)
- No Wastage - Welded Columns
- Cut To Size
- ResponsibleSteel™ Member

Product Details & Specifications: Gr. 350WC, 400WC & 500WC

A. Standard Dimensions - Table 3.3

| Designation | Weight kg/m | Depth Of Section d | Flange | | Web Thickness t_w | Depth B/W Flanges d_1 | d_1 | (bf-tw) 2_{ff} | Area of Cross Section A_g |
|-------------|----------------|-----------------------|----------------|--------------------|------------------------|----------------------------|-------|---------------------|--------------------------------|
| | | | Width b_f | Thickness t_f | | | | | |
| 350 WC | 280 | 355 | 350 | 40 | 28 | 275 | 9.82 | 4.03 | 35700 |
| | 258 | 347 | 350 | 36 | 28 | 275 | 9.82 | 4.47 | 32900 |
| | 230 | 339 | 350 | 32 | 25 | 275 | 11.00 | 5.08 | 29300 |
| | 197 | 331 | 350 | 28 | 20 | 275 | 13.80 | 5.89 | 25100 |
| 400 WC | 361 | 430 | 400 | 40 | 40 | 350 | 8.75 | 4.50 | 46000 |
| | 328 | 430 | 400 | 40 | 28 | 350 | 12.50 | 4.65 | 41800 |
| | 303 | 422 | 400 | 36 | 28 | 350 | 12.50 | 5.17 | 38600 |
| | 270 | 414 | 400 | 32 | 25 | 350 | 14.00 | 5.86 | 34400 |
| | 212 | 400 | 400 | 25 | 20 | 350 | 17.50 | 7.60 | 27000 |
| | 181 | 390 | 400 | 20 | 20 | 350 | 17.50 | 9.50 | 23000 |
| | 144 | 382 | 400 | 16 | 16 | 350 | 21.90 | 12.00 | 18400 |
| 500 WC | 440 | 480 | 500 | 40 | 40 | 400 | 10.00 | 5.75 | 56000 |
| | 414 | 480 | 500 | 40 | 32 | 400 | 12.50 | 5.85 | 52800 |
| | 383 | 472 | 500 | 36 | 32 | 400 | 12.50 | 6.50 | 48800 |
| | 340 | 514 | 500 | 32 | 25 | 400 | 18.00 | 7.42 | 43200 |
| | 290 | 506 | 500 | 28 | 20 | 400 | 22.50 | 8.57 | 37000 |
| | 267 | 500 | 500 | 25 | 20 | 400 | 22.50 | 9.60 | 34000 |
| | 228 | 490 | 500 | 20 | 20 | 400 | 22.50 | 12.00 | 29000 |



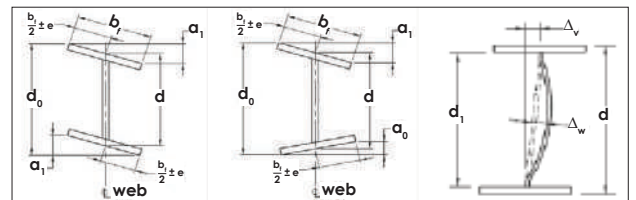
Note:

- All welds are done to **AS/NZS 1554.1**
Category **SP (deep penetration welds)**

- Welds sizes are determined by the minimum yield strength requirements specified in AZ/NZS 3679.2:2016 standards

B. *Permissible Tolerances for Welded Columns - Table 3.4

| Designation | Weight | Permissible variation of depth d | Permissible variation of flange width b_f | Permissible out-of-square on each flange a_1 or a_0 | Permissible total out-of-square a_1 or a_0 | Permissible web off-centre e |
|-------------|--------|-------------------------------------|--|--|---|---------------------------------|
| | kg/m | | | | | |
| 350 WC | 280 | ±3.0 | ±3.0 | ±(0.012* b_f) mm or ±3.0 | ±6.0 | ±3.5 |
| | 258 | | | | | |
| | 230 | | | | | |
| | 197 | | | | | |
| 400 WC | 361 | | | | | |
| | 328 | | | | | |
| | 303 | | | | | |
| | 270 | | | | | |
| | 212 | | | | | |
| | 181 | | | | | |
| | 144 | | | | | |
| 500 WC | 440 | | | | | |
| | 414 | | | | | |
| | 383 | | | | | |
| | 340 | | | | | |
| | 290 | | | | | |
| | 267 | | | | | |
| | 228 | | | | | |



* Note: Innovative Steel permissible tolerances for welded columns exceeds the AS/NZ 3679.2:2016 Standard by %40 in each category

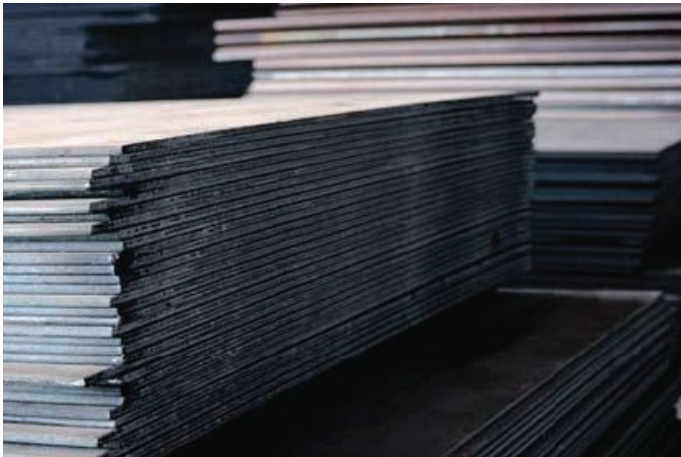
Product Type: Hot Rolled Plate From Coil - AS/NZS 1594 : 2002

General Description:

At Innovative Steel Solutions, our products are sourced and manufactured to meet strict sustainable protocols. Our products meet Australian standards and are **ACRS** accredited.

Our hot rolled plates from coil come in various standards, grades, and sizes to meet your direct use, rolling, or fabricating requirements. Hot Rolled plates range from mild steel to high strength steel to suit all your project requirements.

CNC-UT (Ultrasonic) Testing of all Plates



Coil Plate Sizes & Grades - Table 4.1

| Specification and Grade | Thickness Range (mm) | Maximum Length (mm) | | |
|---|----------------------|---------------------|-------------|-------------|
| | | Width Range (mm) | | |
| | | 900 - 1070 | 1070 - 1219 | 1219 - 1524 |
| AS/NZ 1594:2002 Gr. HA/HU 250 & Gr. HA/HU 300 | 2 - 3 | 4000 | 4000 | - |
| | 3 - 4.5 | 6000 | 6000 | - |
| | 4.5 - 6 | 12000 | 12000 | 12000 |
| | 6 - 8 | 12000 | 12000 | 12000 |
| | 8 - 9 | 12000 | 12000 | 12000 |
| AS/NZS 1594:2002 Gr. HA 350 | 9 - 16 | 12000 | 12000 | 12000 |
| | 6 - 8 | 12000 | 12000 | 12000 |
| | 8 - 9 | 12000 | 12000 | 12000 |
| | 9 - 12 | 12000 | 12000 | 12000 |

*Minimum Length 2000 mm.

Markets & Applications

-  Structural Steel Construction
-  Infrastructure
-  Storage Tanks
-  Fabrication & Erection
-  Marine & Civil

Manufacturing Specifications

-  AS/NZ 1594 : 2002
-  ACRS CERTIFIED PRODUCT
-  ISO 9001, ISO 14001 & ISO 18001
-  Member Of WSA (World Steel Association)
- Climate Action Member
-  EPD (Environmental Product Declaration)
-  ResponsibleSteel™ Member

Product Details & Specifications: Gr. 250, 300 & 350

A. Standard Specification & Mechanical Properties - Table 4.2

| ACRS Certified Specification & Grades | Applicable Thickness (mm) | Thickness Range (mm) | Tensile Test (Longitudinal) | | | | | Bending Test | | |
|---------------------------------------|---------------------------|----------------------|-----------------------------|-------------------------|---------------|--------------|--------------|---------------|-----|-----|
| | | | YS (N/mm ²) | TS (N/mm ²) | EL (%) GL=200 | EL (%) GL=80 | EL (%) GL=50 | Diameter (mm) | | |
| | | | Min | Min | Min | Min | Min | 1 T | 2 T | 3 T |
| AS/NZS 1594:2002 Gr. HA/HU 250 | ≥2 - ≤16 | ≤ 3 | 250 | 350 | 16 | 20 | 22 | √ | - | - |
| | | >3 ≤ 5 | 250 | 350 | 17 | 24 | 26 | √ | - | - |
| | | >5 | 250 | 350 | 17 | 24 | 26 | - | √ | - |
| AS/NZS 1594:2002 Gr. HA/HU 300 | ≥2 - ≤16 | ≤ 3 | 300 | 400 | 15 | 18 | 20 | √ | - | - |
| | | >3 ≤ 5 | 300 | 400 | 16 | 22 | 24 | - | √ | - |
| | | >5 | 300 | 400 | 16 | 22 | 24 | - | √ | - |
| AS/NZS 1594:2002 Gr. HA 350 | ≥6 - ≤12 | ≤ 3 | 350 | 430 | 14 | 16 | 18 | - | √ | - |
| | | >3 ≤ 5 | 350 | 430 | 15 | 20 | 22 | - | √ | - |
| | | >5 | 350 | 430 | 15 | 20 | 22 | - | - | √ |

b. Content Declaration & Chemical Properties - Table 4.3

| ACRS Certified Specification & Grades in Innovative Steel | Chemical Composition | Standard Specification (wt%) | Typical Innovative (wt%) |
|---|----------------------|------------------------------|--------------------------|
| AS/NZS 1594:2002 Gr. HA/HU 250 | Carbon (C) | ≤0,20 | 0.16 |
| | Silica (Si) | ≤0,35 | 0.12 |
| | Manganese (Mn) | ≤1,20 | 0.47 |
| | Phosphorus (P) | ≤0,040 | 0.01 |
| | Sulphur (S) | ≤0,030 | 0.01 |
| AS/NZS 1594:2002 Gr. HA/HU 250 | Carbon (C) | ≤0,20 | 0.17 |
| | Silica (Si) | ≤0,35 | 0.12 |
| | Manganese (Mn) | ≤1,60 | 0.60 |
| | Phosphorus (P) | ≤0,040 | 0.01 |
| | Sulphur (S) | ≤0,030 | 0.01 |
| AS/NZS 1594:2002 Gr. HA 350 | Carbon (C) | ≤0,20 | 0.18 |
| | Silica (Si) | ≤0,35 | 0.12 |
| | Manganese (Mn) | ≤1,60 | 1.20 |
| | Phosphorus (P) | ≤0,040 | 0.01 |
| | Sulphur (S) | ≤0,030 | 0.01 |

Hot rolled steel plate AS/NZS 1594:2002 manufactured by mills is to made of low alloy steels with pig iron and approximately 100% scrap-based material. We follow the chemical range of AS/NZS 1594:2002 as per specifications. Therefore, we work with typical chemical composition can be seen above:



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