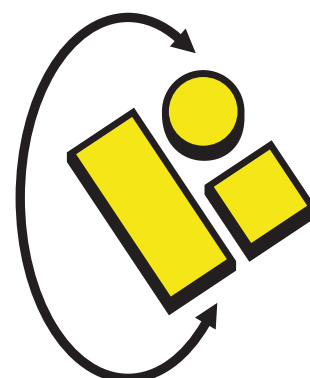


Welded Beams Catalogue



Table of Contents

About Steelforce Australia	1
Business Values	1
Steel Distribution Network	1
Market Solutions	2
Product Scheme Rules	2
Product Overview	3
EnviroPlate	4
Hot Rolled Plate	
EnviroBeam	10
Welded Beam	
Welded Column	
EnviroCoil	14
Hot Rolled Plate from Coil	





About Steelforce Australia

Founded in April 2000, Steelforce has since captured a significant share of the Australian distribution industry and is now a major distributor of Steel products in Australia, with branches in Brisbane, Sydney, Melbourne and Perth.

The focus on bringing "service" to the industry is what differentiates Steelforce from its competitors and has allowed us to build a loyal customer base. It's our commitment to ensure everyday the highest quality products are delivered to our customers on time and at affordable prices.

Our Values

Customers

Our customers choose Steelforce as their preferred supplier because we offer superior service levels in all areas of our business and are responsive to customer needs.

Safety & Environment

Safety is a core value with our target zero harm. OHS&E processes and outcomes meet or better all legislative and legal requirements for the areas in which we operate.

People

Steelforce fosters diversity and values the contribution of individuals and teams. People are treated equitably, fairly, with dignity and respect in a harassment free environment.

Shareholders

By continuously increasing shareholder value, we will encourage continued investment and sustain the long term security of our company.

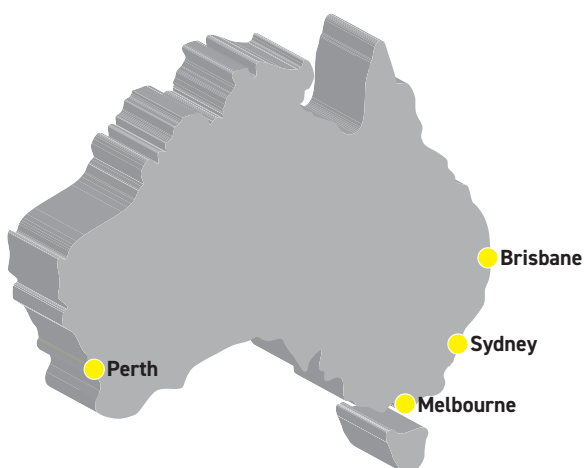
Integrity

We are honest and lawful in all of our dealings with customers, suppliers, regulatory bodies, shareholders, financiers and our people.

Suppliers

We recognise the important role of our suppliers and nurture relationships which are fair, effective and rewarding to both parties.

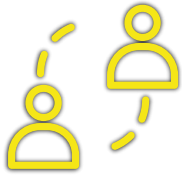
Steelforce Distribution Australian Network



Suppliers of:

- Pipe & Tube
- Universal Beams
- Universal Columns
- Flats
- Angles
- Rounds
- Squares
- Channels
- Sheet & Plate
- Rural Products
- GalForce™ Gates
- GalForce™ Cattle Panels

Market Solutions we Provide



Early Engagement

We provide steel solutions from the beginning of your project.



Innovative Products

We provide innovative product solutions to assist with your projects.



AS/NZS 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 on 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

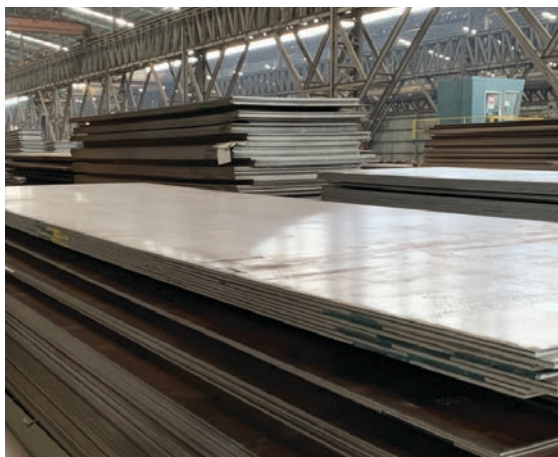
At Steelforce, we pride ourselves on quality, value and sustainability in the steel products we distribute to our customers. We chose to work with partners that provide steel products that conform to the following certifications and standards.



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



Product Overview



EnviroPlate™

Hot Rolled Plate Product Content:

- Available Grades - Table 1.1
- Available Sizes - Table 1.2

Product Details & Mechanical Properties:

Grade 250 - Table 1.3 | 1.4 | 1.5 | 1.6 | 1.7 | 1.8
 Grade 300 - Table 1.9 | 1.10 | 1.11 | 1.12 | 1.13 | 1.14
 Grade 350 - Table 1.15 | 1.16 | 1.17 | 1.18 | 1.19 | 1.20
 Grade 400 - Table 1.21 | 1.22 | 1.23 | 1.24 | 1.25 | 1.26



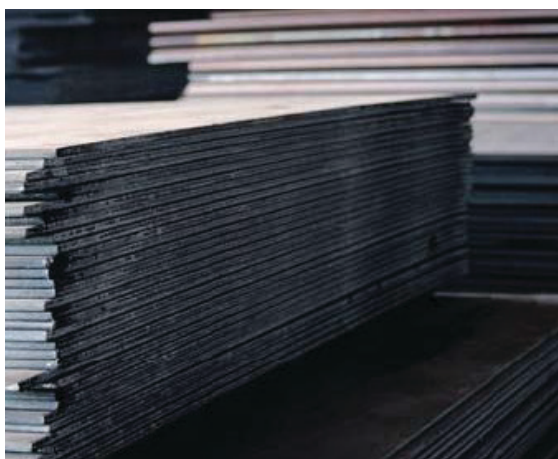
EnviroBeam™

Welded Beam & Column Product Content:

- Available Grades & Sizes - Table 2.1 (Beams) | 3.1 (Columns)
- Available CWBs - 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

Need something that isn't listed here? Please contact us on 1300 661 635.

Product Type: Hot Rolled Plate - AS/NZS 3678: 2016

General Description

Steelforce is committed to providing high level customer service and quality steel products that offer value to its customers. The business is 100 percent Australian owned and supplies steel products that comply with a number of commonly used Standards. Our products meet AS/NZS 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 weathering steel to suit all your project requirements.

Hot Rolled Plate Grades - Table 1.1

Available Hot Rolled Plate Grades					
Grade	L0	L15	L20	L40	S0
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 Steelforce is capable of supplying. Other-dimensional (custom) sizes are available upon agreement.

Market Applications

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

Manufacturing Specifications

-  AS/NZ 3678: 2016
-  ACRS Certified Product
-  ISO 9001, ISO 14001 and 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 (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 Steelforce Mechanical Properties - Table 1.4

Mechanical Properties	≥8 - ≤16 mm	>16 - ≤40 mm	>40 - ≤60 mm	>60 - ≤100 mm
Typical Steelforce				
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	Grade	Temp (°C)	Minimum Absorbed Energy (J) Avg.
AS/NZS 3678: 2016	250	-	-
	250 L15	-15	27
	250 L20	-20	27

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

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

Chemical Composition - Table 1.6

Chemical Composition	Standard Specification (wt%)	Typical Steelforce (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 (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 (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 Steelforce Mechanical Properties - Table 1.10

Mechanical Properties	≥8 - ≤16 mm	>16 - ≤40 mm	>40 - ≤60 mm	>60 - ≤100 mm
Typical Steelforce				
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	Grade	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

^A Supplied in normalized condition up to 100 mm thickness to guarantee impact value.

Chemical Composition - Table 1.12

Chemical Composition	Standard Specification (wt%)	Typical Steelforce (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 (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	10 = Excellent
Method	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 (mm)	Thickness Range (mm)	Tensile Test (Transversal)		
			YS (N/mm ²)	TS (N/mm ²)	EL (%) (5.65vSo)
			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 Steelforce Mechanical Properties - Table 1.16

Mechanical Properties	>8 - <16 mm	>16 - <40 mm	>40 - <60 mm	>60 - <100 mm
	Typical Steelforce			
Yield Strength (Mpa)	380	370	370	380
Tensile Strength (Mpa)	551	547	547	547
Elongation (%) (5.65 vSo)	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	Grade	Temp (°C)	Minimum Absorbed Energy (J)
			Avg.
AS/NZS 3678: 2016	350	-	-
	350 L5	-15	27
	350 L20	-20	27
	350 L40 ^A	-40	27

^A 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 Steelforce (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 (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 & WR300 L20

A. Standard Specification - Table 1.21

Specification	Grade	Applicable Thickness (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	Avg	Avg	Avg
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			
	WR 350 L20		>32 ≤60	340	450	20			

B. Typical Steelforce Mechanical Properties - Table 1.22

Mechanical Properties	≥8 - ≤12 mm	>12 - ≤20 mm	>20 - ≤32 mm	>32 - ≤60 mm
	Typical Steelforce			
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 Steelforce (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 (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 & 400 L20

A. Standard Specification - Table 1.3

Specification & Grades	Applicable Thickness (mm)	Thickness Range (mm)	Tensile Test (Transversal)		
			YS (N/mm ²)	TS (N/mm ²)	EL (%) (5.65 $\sqrt{S_0}$)
			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 Steelforce Mechanical Properties - Table 1.4

Mechanical Properties	≥8 - ≤16 mm	>16 - ≤40 mm
	Typical Steelforce	
Yield Strength (Mpa)	469	471
Tensile Strength (Mpa)	590	592
Elongation (%) (5.65 $\sqrt{S_0}$)	22	22
Impact (J) (-0°C)	171	175
Impact (J) (-15°C)	110	111
Impact (J) (-20°C)	120	136

Impact Properties - Table 1.5

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

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

Chemical Composition - Table 1.6

Chemical Composition	Standard Specification (wt%)	Typical Steelforce (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 1.7

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

Fabricating Performance - Table 1.8

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

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

General Description

Steelforce is committed to providing high level customer service and quality steel products that offer value to its customers. The business is 100 percent Australian owned and supplies steel products that comply with a number of commonly used Standards. Our products meet AS/NZS standards and are 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 Steelforce, we offer custom welded beams (CWB) built to suit your project and design needs, which include tighter manufacturing tolerances that exceed the AS/NZ 3679.2: 2016 standards.

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 Sections
	Curved Welded Beams
	Pre-camber Welded Beams

Market Applications

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

Manufacturing Specifications

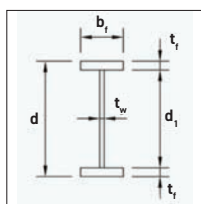
-  AS/NZ 3679.2: 2016 - Welded Beams - ACRS Certified
-  AS/NZ 3678: 2016 - Hot Rolled Plate - ACRS Certified
-  AS/NZ 1554.1 - Semi-Auto SAW Welding
-  ISO 9001, ISO 14001 and ISO 18001
-  WPS & PQR to suit Australian Standards
-  Member of WSA (World Steel Association - Climate Action Member)
-  EPD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

EnviroBeam™

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	t_w	$2t_f$	Area of Cross Section A_g
			Width b_f	Thickness t_f					
700WB	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
800WB	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
900WB	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
1000WB	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
1200WB	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

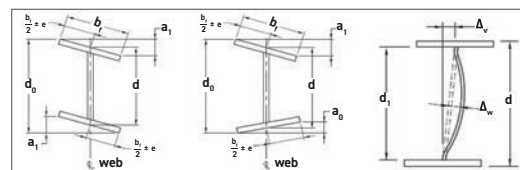


Note:

- All welds are manufactured to AS/NZS 1554.1 Category SP (deep penetration welds)
- Welds sizes are determined by the minimum yield strength requirements specified in AS/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_2	$a_1 + a_2$	e
700WB					
800WB					
900WB	±3.0	±3.0	+(0.012*b _f) mm or +3.0	±6.0	+3.5
1000WB					
1200WB					



* Note: Steelforce 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

Steelforce is committed to providing high level customer service and quality steel products that offer value to its customers. The business is 100 percent Australian owned and supplies steel products that comply with a number of commonly used Standards. Our products meet AS/NZS standards and are 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
500WC	•	•	•	•	•	•	•
400WC	•	•	•	•	•	•	•
350WC	•	•	•	•	•	•	•

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 Steelforce, we offer custom welded columns (CWC) built to suit your project and design needs, which include tighter manufacturing tolerances that exceed the AS/NZ 3679.2: 2016 standards.

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)

Market Applications

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

Manufacturing Specifications

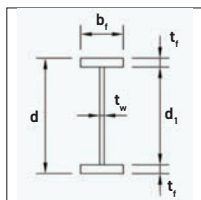
-  AS/NZ 3679.2: 2016 - Welded Beams - ACRS Certified
-  AS/NZ 3678: 2016 - Hot Rolled Plate - ACRS Certified
-  AS/NZ 1554.1 - Semi-Auto SAW Welding
-  ISO 9001, ISO 14001 and ISO 18001
-  WPS & PQR to suit Australian Standards
-  Member of WSA (World Steel Association - Climate Action Member)
-  EPD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

EnviroBeam™

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	t_w	$2u$ (bf-tw)	Area of Cross Section A_g
			Width b_f	Thickness t_f					
350WC	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
400WC	361	430	400	40	40	350	8.75	4.50	46000
	328	430	400	40	27	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
	440	480	500	40	40	400	10.00	5.75	56000
500WC	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

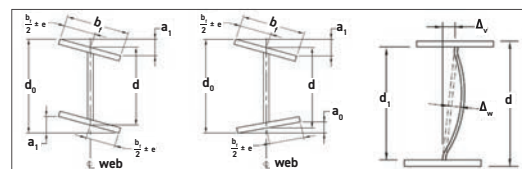


Note:

- All welds are manufactured to AS/NZS 1554.1 Category SP (deep penetration welds)
- Welds sizes are determined by the minimum yield strength requirements specified in AS/NZS 3679.2: 2016 standards

B. *Permissible Tolerances for Welded Columns - Table 3.4

Designation	Weight kg/m	Permissible variation of depth d	Permissible variation of flange width b_f	Permissible out-of-square on each flange a_1 or a_2	Permissible total out-of- square $a_1 + a_2$	Permissible web off- centre e
350 WC	280					
	258					
	230					
	197					
400 WC	361					
	328					
	303					
	270					
	212	±3.0	±3.0	+(0.012*b) mm or ±3.0	±6.0	±3.5
	181					
	144					
	440					
500 WC	414					
	383					
	340					
	290					
	267					
	228					



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

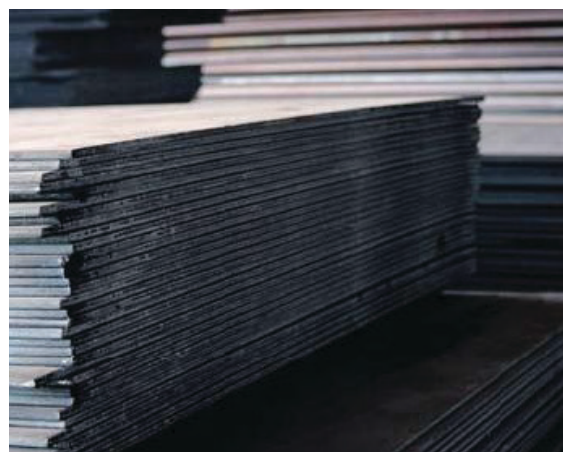
Product Type: Hot Rolled Plate from Coil - AS/NZS 1594: 2002

General Description

Steelforce is committed to providing high level customer service and quality steel products that offer value to its customers. The business is 100 percent Australian owned and supplies steel products that comply with a number of commonly used Standards. Our products meet AS/NZS 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 Grades & Sizes - Table4.1

Specification and Grade	Thickness Range (mm)	Maximum Length (mm)		
		Width Range (mm)		
		900 - 1070	1070 - 1219	1219 - 1524
AS/NZ 1594: 2002	2 - 3	4000	4000	-
	3 - 4.5	6000	6000	-
Gr. HA/HU 250 & Gr. HA/HU300	4.5 - 6	12000	12000	12000
	6 - 8	12000	12000	12000
	8 - 9	12000	12000	12000
	9 - 16	12000	12000	12000
AS/NZS 1594: 2002 Gr. HA 350	6 - 8	12000	12000	12000
	8 - 9	12000	12000	12000
	9 - 12	12000	12000	12000

*Minimum Length 2000 mm.

Market Applications

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

Manufacturing Specifications

-  AS/NZ 3678: 2016
-  ACRS Certified Product
-  ISO 9001, ISO 14001 and 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 - 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 (%) G L=200	EL (%) G L=80	EL (%) G L=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/HU 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 Steelforce	Chemical Composition	Standard Specification (wt%)	Typical Steelforce (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 300	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/HU 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.





Steelforce is a major distributor of steel products in Australia, with branches in Brisbane, Sydney, Melbourne and Perth.

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