



GERDAU

Shape the future

PRODUCT HANDBOOK

Version 2.2 - April 2026

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GERDAU LONG STEEL NORTH AMERICA U.S. & CANADIAN MILL PRODUCTS



SQUARES



ROUNDS



ANGLES



**UNEQUAL
ANGLES**



FLATS



CHANNELS



**MC
CHANNELS**

Cambridge, ON	3/8 - 1 1/2	1/2 - 1 1/4	3/4 - 2	2 x 1 1/2	3/4 - 4	1 - 2 1/2	
Cartersville, GA			4 - 8	6x3 1/2 - 8x6	5 - 14	6 - 12	3 1/4 - 13
Charlotte, NC	1/2 - 1	1/2 - 1 1/4	1 - 2	2x1 1/2	3/4 - 2 1/2	2 x 1	
Jackson, TN	1 1/2 - 2	1 3/8 - 2 1/2	1 1/2 - 4*	3x2 - 5x3 1/2	2 - 6	3 - 6	
Selkirk, MB	2	3/4 - 5 1/8			2 - 16		
Midlothian, TX		5/8 - 3 9/16				6 - 15	18
Petersburg, VA							18
Whitby, ON			2 - 8	2 1/2x2 - 7x4	5 - 10	3 - 12	3
Wilton, IA	1 1/16 - 2 1/2	1 1/4 - 1 3/4	1 1/4 - 3	2 1/2 x 2	1 - 6		



WF BEAMS



M BEAMS



S BEAMS



H PILING



**SHEET
PILING**



REBAR

Cambridge, ON						10M - 25M #3 - #4
Cartersville, GA	4 - 14	5, 10, 12	5			
Charlotte, NC						#4 - #11
Jackson, TN						#4 - #18*
Selkirk, MB			2 3/8 - 4			
Midlothian, TX	4 - 24	4 - 12.5	3 - 12	8 - 10	PS 27.5, 31	#3 - #18
Petersburg, VA	8 - 36			10 - 16	PZC 12 - 41	
Whitby, ON						15M - 35M #4 - #11
Wilton, IA						#4 - #5

*Jackson 1 1/2 angle, and #4/#5 rebar are still under final commissioning steps.

ABOUT US

Gerdau is a global leader in sustainable steel. Each year we produce millions of tons of long steel and special steel and we're one of the largest recyclers in the Americas. From solar farms to data centers, Gerdau partners with some of the largest companies in North America to shape a better future for all.



GERDAU STRUCTURAL STEEL HAS THE LOWEST EMBODIED CARBON IN NORTH AMERICA

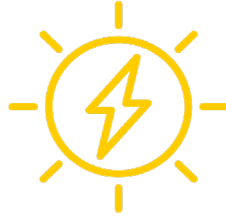
Carbon emissions in steel are quantified as the product's global warming potential (GWP)*, expressed in carbon dioxide equivalent units (MT CO₂e per 1 metric ton unfabricated steel) and found in documents called Environmental Product Declarations (EPDs) published by each producing mill. Publicly available, third-party verified EPD data shows that Gerdau's three structural mills produce beams with the lowest embodied carbon among U.S. mills.

RANKING	DOMESTIC MILL	GWP (CRADLE TO MILL GATE) MT TON CO ₂ EQ / TON STEEL	EXCESS EMISSIONS VS BEST-IN-CLASS
1	Gerdau Petersburg	0.527	-
2	Gerdau Cartersville	0.686	+ 30.1%
3	Gerdau Midlothian	0.713	+ 35.3%
4	Competitor Mill 1	0.742	+ 40.8%
5	Competitor Mill 2	0.816	+ 54.8%
6	Competitor Mill 3	1.60	+ 203.6%

Excluding EPDs that use renewable energy credits or solely include low emission product lines. Data in the table is based on mill average EPDs.

GERDAU STEEL IS SUSTAINABLE STEEL

Gerdau has made a commitment to a sustainability agenda, effectively connecting the steel production business with the purpose of empowering people who build the future, leaving a positive legacy for society.



- › Our steel is amongst the cleanest in the world
- › 100% of the steel we produce in North America is melted in an **electric arc furnace**
- › Our new 80-megawatt solar farm in TX can power 14,000 households
- › Our steel has greater than 96% recycled content
- › 98% of the water and 93% of co-products are reused globally
- › Supplying partner to the largest Wind Farm in U.S. history



(800) 237-0230
sales@gerdau.com
www.gerdau.com

HOW TO READ A MILL TAG

GO GERDAU

Surge A 07-Nov-25 (C)

PRODUCT TYPE > Shape : **BEAM**

SHAPE AND SIZE < **W 18" X 11" X 211#**

GRADE > Grade : **A992/572-50 S30**

LENGTH > Length : **30 FT 00 IN**

WEIGHT > Weight : **6,330 LBS**

BATCH NUMBER > Batch (PCS): **6015655409(1)** < **NUMBER OF PIECES**

2D BARCODE

BUNDLE NUMBER > **11330250000012805657**

1D BARCODE <

SOURCE MILL < **Petersburg, VA**

Made in USA

*Tag format will vary by mill or product.

Structural sections are stenciled as per ASTM A6.

W 14 X 145# 60154932

ONLINE SELF SERVE ECOMMERCE PORTAL

- View your Open Orders
- Build your own shipments
- Search Past Shipments and download Documents IE BOL, MTR's & Invoices
- Download Rolling Schedules
- Download Price Sheets Delivered & FOB Mill

Filter By	Products	Plant	AFS	Roll 1	Roll Week	Order By	Roll 2	Roll Week	Order By	Price			
Shape	L 1 1/4X1 1/4X3/16	GGMULTI	6000*	106258206	Charlotte	0 LB	O	Feb 2	Jan 15	O	Apr 15	Mar 28	\$49.75
Angle	L 1 1/4X1 1/4X1/4	GGMULTI	2000*	106258138	Cambridge	81,176 LB	I	Jan 23	Dec 22	O	Apr 17	Mar 16	\$50.50
Bar Channel	L 1 1/4X1 1/4X1/4	GGMULTI	2000*	106258138	Charlotte	4,762 LB	O	Feb 2	Jan 15	O	Apr 15	Mar 28	\$50.50
Beams (Bantam/Misc)	L 1 1/4X1 1/4X1/4	GGMULTI	2000*	106258138	Wilton	76,453 LB	O	Apr 25	Apr 8				\$50.50
Beams (Standard)	L 1 1/4X1 1/4X1/4	GGMULTI	4000*	106258140	Cambridge	36,634 LB	I	Jan 23					\$50.50
Beams (Wide Flange)	L 1 1/4X1 1/4X1/4	GGMULTI	4000*	106258140	Charlotte	0 LB	O	Feb 2	Jan 15	O	Apr 17	Mar 16	\$50.50
Channel	L 1 1/4X1 1/4X1/4	GGMULTI	4000*	106258140	Wilton	0 LB	O	Apr 25	Apr 8				\$50.50
Flat	L 1 1/4X1 1/4X1/4	GGMULTI	6000*	106258204	Charlotte	0 LB	O	Feb 2	Jan 15	O	Apr 15	Mar 28	\$50.50
Handrail	L 1 1/2X1 1/2X1/8	GGMULTI	2000*	106028848	Cambridge	2,590 LB	C	Jan 29	Dec 30				\$50.70
Pencil Rod	L 1 1/2X1 1/2X1/8	GGMULTI	2000*	106028848	Charlotte	291 LB	I	Jan 19		O	Apr 15	Mar 28	\$50.70
Piling (H-Pile)	L 1 1/2X1 1/2X1/8	GGMULTI	2000*	106028848	Wilton	1,724 LB	O	Apr 24	Apr 3				\$50.70
Rail	L 1 1/2X1 1/2X1/8	GGMULTI	4000*	106028849	Cambridge	0 LB	C	Jan 29		O	Apr 23	Mar 17	\$50.70
Round	L 1 1/2X1 1/2X1/8	GGMULTI	4000*	106028849	Charlotte	0 LB	I	Jan 19	Dec 30	O	Mar 31	Mar 10	\$50.70
Square	L 1 1/2X1 1/2X1/8	GGMULTI	4000*	106028849	Wilton	0 LB	O	Apr 24	Apr 3				\$50.70
	L 1 1/2X1 1/2X1/8	GGMULTI	6000*	106028850	Cambridge	9,594 LB	C	Jan 29	Dec 30	O	Apr 23	Mar 17	\$50.70
	L 1 1/2X1 1/2X1/8	GGMULTI	6000*	106028850	Charlotte	0 LB	I	Jan 19		O	Mar 31	Mar 10	\$50.70
	L 1 1/2X1 1/2X3/16	GGMULTI	2000*	106028883	Cambridge	34,290 LB	C	Jan 29	Dec 30				\$49.75
	L 1 1/2X1 1/2X3/16	GGMULTI	2000*	106028883	Charlotte	0 LB	I	Jan 19	Dec 30	O	Apr 23	Mar 17	\$49.75
	L 1 1/2X1 1/2X3/16	GGMULTI	2000*	106028883	Wilton	40,072 LB	O	Apr 24	Apr 3				\$49.75
	L 1 1/2X1 1/2X3/16	GGMULTI	4000*	106028884	Cambridge	0 LB	C	Jan 29		O	Mar 31	Mar 10	\$49.75

Status Key: ■ = Open ■ = Inquire ■ = Closed

GERDAU EDI

Functionality designed to automate communication and increase ease of doing business with Gerdau EDI.

EDI (Electronic Data Interchange) allows customers to electronically exchange data with Gerdau, regardless of the computer software either organization utilizes.

WHAT ARE THE BENEFITS OF EDI?

- › Save time by cutting down on manual entry
- › Reduce the risk for errors
- › Increase processing speeds
- › Improve efficiency and savings

WHAT TRANSACTIONS CAN BE AUTOMATED THROUGH EDI?



Shipments

EDI Advanced Shipment Notice - ASN (EDI 856 / 857)

- › This transaction allows Gerdau to electronically send the Bill of Lading (BOL).
- › Data grouping of sent shipment data is dynamic based upon customer requirements:
 - ASNs can be sent by delivery or by overall shipment.
 - Data organization within the ASN can vary by customer: PO, Bundle, Heat, etc.

steelXML Advanced Shipment Notice

- › steelXML ASN is a combination of the ASN and MTR outputs.
- › Data grouping is by shipment line and includes chemistries, mechanical and Charpy tests.
- › Customers receive as an email attachment using the AISC steelXML ASN format.



Purchase Orders

EDI PO Request (EDI 850)

- › This transaction allows customers to electronically send Purchase Orders to Gerdau.
- › Supported sales orders include:
 - Stock Order
 - Direct Ship

EDI PO Acknowledgement (EDI 855)

- › This transaction allows Gerdau to electronically send sales order status.
- › Customers can receive EDI PO Acks for a variety of business events:
 - EDI PO Acks upon creation of all new orders (both VMI and non-VMI).
 - EDI PO Acks both upon order creation and changes

Reports

EDI Material Test Report (EDI 863)

- This transaction allows Gerdau to electronically send the Material Test Report (MTR).
 - Allows customization of test results: chemistries, mechanical results, Jominy, Charpy tests, etc.

EDI Material Test Report (PDF)

- This transaction allows Gerdau to electronically send the normal MTR PDF file to customers.
- Optionally, a conversion to TIF image format is available.

EDI Inventory Reports (EDI 846)

- This transaction allows Gerdau to electronically send Inventory Reports.
- Inventory Reports include future v Week Dates.
- Inventory AFS can also be sent via API.

Invoicing

EDI Invoice (EDI 810)

- This transaction allows Gerdau to electronically send Invoices.

Other Transactions




EDI VMI Forecast (EDI 852)

- This transaction allows customers to participate in our Vender Managed Inventory program.
- Gerdau develops the required data points to be included in the 852 file while onboarding the customer.
- Customers may utilize all of the EDI transactions in congruence with the VMI program.

How can you implement EDI?

The first step is getting both trading partners to agree on and adhere to a set of standards for EDI transactions. Utilizing Gerdau's established standards allows for faster development time. Our technical team will work closely with your company to ensure implementation goes smoothly.

MERCHANT

Gerdau  GERDAU Since 1921
Shade Channel
6 X 8 1/2"
Grade GOMULTI
Length 80 FT 00 IN 3643020
Weight 9.840 LBS
Batch (PCS) 832231770204


Made in USA www.gerdau.com/gerdaupl

Gerdau  GERDAU Since 1921
Shade Channel
6 X 8 1/2"
Grade GOMULTI
Length 80 FT 00 IN 3643019
Weight 9.840 LBS
Batch (PCS) 832231770204


Made in USA www.gerdau.com/gerdaupl

Gerdau  GERDAU Since 1921
Shade Channel
6 X 8 1/2"
Grade GOMULTI
Length 80 FT 00 IN 3643014
Weight 9.840 LBS
Batch (PCS) 832231770204


Made in USA www.gerdau.com/gerdaupl

Gerdau  GERDAU Since 1921
Shade Channel
6 X 8 1/2"
Grade GOMULTI
Length 80 FT 00 IN 3643013
Weight 9.840 LBS
Batch (PCS) 832231770204


Made in USA www.gerdau.com/gerdaupl


Gerdau  GERDAU Since 1921
Shade Channel
6 X 8 1/2"
Grade GOMULTI
Length 80 FT 00 IN 3643008
Weight 9.840 LBS
Batch (PCS) 832231770204


Made in USA www.gerdau.com/gerdaupl

Gerdau  GERDAU Since 1921
Shade Channel
6 X 8 1/2"
Grade GOMULTI
Length 80 FT 00 IN 3643007
Weight 9.840 LBS
Batch (PCS) 832231770204


Made in USA www.gerdau.com/gerdaupl

Gerdau **CD GERDAU**
Shade Channel
6 x 8.25
Grade GOMULTI
Length 59 FT 00 IN 3643020
Weight 9.840 LBS
Batch (PCS): 832231770204



MADE IN USA www.gerdau.com/eng/ger 10/2016/01

Gerdau **CD GERDAU**
Shade Channel
6 x 8.25
Grade GOMULTI
Length 59 FT 00 IN 3643019
Weight 9.840 LBS
Batch (PCS): 832231770204



MADE IN USA www.gerdau.com/eng/ger 10/2016/01

Gerdau **CD GERDAU**
Shade Channel
6 x 8.25
Grade GOMULTI
Length 59 FT 00 IN 3643014
Weight 9.840 LBS
Batch (PCS): 832231770204



MADE IN USA www.gerdau.com/eng/ger 10/2016/01

Gerdau **CD GERDAU**
Shade Channel
6 x 8.25
Grade GOMULTI
Length 59 FT 00 IN 3643013
Weight 9.840 LBS
Batch (PCS): 832231770204



MADE IN USA www.gerdau.com/eng/ger 10/2016/01

Gerdau **CD GERDAU**
Shade Channel
6 x 8.25
Grade GOMULTI
Length 59 FT 00 IN 3643008
Weight 9.840 LBS
Batch (PCS): 832231770204



MADE IN USA www.gerdau.com/eng/ger 10/2016/01

Gerdau **CD GERDAU**
Shade Channel
6 x 8.25
Grade GOMULTI
Length 59 FT 00 IN 3643007
Weight 9.840 LBS
Batch (PCS): 832231770204



MADE IN USA www.gerdau.com/eng/ger 10/2016/01



GERDAU MERCHANT PRODUCTS IN USE

GORDIE HOWE BRIDGE

Between Windsor, ON and Detroit, MI

The Gordie Howe Bridge is a 1.5 mi bridge 150 ft in the air connecting the USA and Canada over the Detroit River. The project started in 2018 and is expected to be completed in 2026.

This major infrastructure project had a Buy Canadian/Buy American steel requirement, which Gerdau was able to service while offering shorter delivery lead times due to the proximity of our Whitby, ON mill. Gerdau's extensive range of angle sizes and low carbon/ton emissions also allowed the customer to meet specific project targets and provided an overall cleaner steel solution.

GGMULTI

THE SMART CHOICE FOR RELIABLE CONSISTENCY IN A MULTI-GRADE PRODUCT



GGMULTI Benefits

- Satisfy 11 different grades
- Reduce inventory by combining several grades into one
- Achieve real time savings for purchasing and warehousing
- Narrow chemistry specifications
- Improve weldability
- Improve fabrication processes for shearing, punching, and bending

GGMULTI PRODUCTS	
PRODUCT	RANGE
Angles	3/4" and greater
Channels	3" and greater
MC Channels	3" and greater
Flats	3/16" and greater
Rounds	3/4" - 2 1/2"
Squares	1/2" - 1 1/2"

IMPROVE PRODUCT PERFORMANCE WITH GGMULTI

GGMULTI products have lower carbon levels, help improve weldability, and provide a safeguard against the possibility of weld cracking (as compared to A529-50 grade). GGMULTI products (angles, channels, and flats) are designed to have a consistent minimum yield strength of 50 ksi and this single grade covers the following eleven distinct grades.

	A36	A529-50	A572-50	A709-36	A709-50	A992*	AASHTO M270-36	AASHTO M270-50	CSA 44W	CSA 50W	ASME SA 36
A36	X			X			X			X	
A529-50		X									
A572-50			X		X			X			
A709-36	X			X			X			X	
A709-50			X		X			X			
A992*						X*			X	X	
AASHTO M270-36	X			X			X			X	
AASHTO M270-50			X		X			X			
CSA 44W						X			X		
CSA 50W						X				X	
ASME SA 36	X			X			X				X
GGMULTI	X	X	X	X	X	X*	X	X	X	X	X

*Channel Sections Only

MERCHANT PRODUCTS AND BUNDLES

ANGLES - CARTERSVILLE, GA

MATERIAL DESCRIPTION	WT / FT	PCS / BUNDLE	
		20'	40'
L 5x5x5/16	10.3	24	23
L 5x5x3/8	12.3	20	20
L 5x5x7/16	14.3	17	17
L 5x5x1/2	16.2	15	15
L 5x5x5/8	20.0	12	12
L 5x5x3/4	23.6	9	9
L 6x3 1/2x1/2	15.3	15	15
L 6x3 1/2x3/8	11.7	20	20
L 6x3 1/2x5/16	9.8	23	23
L 6x4x5/16	10.3	23	23
L 6x4x3/8	12.3	18	18
L 6x4x7/16	14.3	23	15
L 6x4x1/2	16.2	15	15
L 6x4x5/8	20.0	15	10
L 6x4x3/4	23.6	12	9
L 6x6x5/16	10.3	18	18
L 6x6x3/8	14.9	17	15
L 6x6x7/16	17.2	12	12

MATERIAL DESCRIPTION	WT / FT	PCS / BUNDLE	
		20'	40'
L 6x6x1/2	19.6	12	12
L 6x6x3/4	28.7	8	8
L 6x6x7/8	33.1	8	6
L 6x6x1	37.4	6	6
L 8x4x1/2	19.6	12	12
L 8x4x5/8	24.2	17	9
L 8x4x3/4	28.7	8	8
L 8x4x1	37.4	12	6
L 8x6x7/16	20.2	18	12
L 8x6x1/2	23.0	18	9
L 8x6x5/8	28.5	17	8
L 8x6x3/4	33.8	9	6
L 8x6x1	44.2	5	5
L 8x8x1/2	26.4	18	9
L 8x8x5/8	32.7	15	6
L 8x8x3/4	38.9	12	6
L 8x8x7/8	45.0	5	5
L 8x8x1	51.0	9	3

ANGLES - JACKSON, TN

MATERIAL DESCRIPTION	WT / FT	PCS / BUNDLE	
		20'	40'
L 2x2x1/8	1.7	147	147
L 2x2x3/16	2.4	97	98
L 2x2x1/4	3.2	77	76
L 2x2x5/16	3.9	62	62
L 2x2x3/8	4.7	49	49
L 2 1/2x2 1/2x3/16	3.1	80	80
L 2 1/2x2 1/2x1/4	4.1	60	60
L 2 1/2x2 1/2x5/16	5.0	45	45
L 2 1/2x2 1/2x3/8	5.3	40	40
L 3x2x3/16	3.1	80	80
L 3x2x1/4	4.1	60	60
L 3x2x5/16	5.0	45	45
L 3x2x3/8	5.9	40	40
L 3x2 1/2x1/4	4.1	55	55
L 3x2 1/2x5/16	5.6	40	40
L 3x2 1/2x3/8	6.6	35	35
L 3 1/2x2 1/2x1/2	8.5	25	25
L 3 1/2x2 1/2x1/4	4.9	50	50
L 3 1/2x2 1/2x3/8	7.2	30	30
L 3 1/2x2 1/2x5/16	6.1	40	40
L 3x3x3/16	3.1	65	65
L 3x3x1/4	4.9	50	50
L 3x3x5/16	5.0	40	40
L 3x3x3/8	7.2	30	30
L 3x3x1/2	9.4	25	25
L 3 1/2x3x1/4	5.4	45	45
L 3 1/2x3x5/16	6.6	35	35
L 3 1/2x3x3/8	7.9	30	30

MATERIAL DESCRIPTION	WT / FT	PCS / BUNDLE	
		20'	40'
L 3 1/2x3x1/2	10.2	20	20
L 3 1/2x3 1/2x1/4	5.8	42	42
L 3 1/2x3 1/2x5/16	7.2	33	33
L 3 1/2x3 1/2x3/8	8.5	28	28
L 3 1/2x3 1/2x1/2	11.1	22	22
L 4x3x1/4	5.8	42	42
L 4x3x5/16	7.2	33	33
L 4x3x3/8	8.5	28	28
L 4x3x1/2	11.1	22	22
L 4x3 1/2x1/4	6.2	39	39
L 4x3 1/2x5/16	7.7	30	30
L 4x3 1/2x3/8	9.1	25	25
L 4x3 1/2x1/2	11.9	19	19
L 4x4x1/4	6.6	36	36
L 4x4x5/16	8.2	27	27
L 4x4x3/8	8.5	25	25
L 4x4x1/2	12.8	19	19
L 4x4x5/8	15.7	13	13
L 4x4x3/4	18.5	13	13
L 5x3x1/4	6.6	30	30
L 5x3x5/16	8.2	27	27
L 5x3x3/8	9.8	25	25
L 5x3x1/2	12.8	19	19
L 5x3 1/2x1/4	7.0	30	30
L 5x3 1/2x5/16	8.7	27	27
L 5x3 1/2x3/8	10.4	22	22
L 5x3 1/2x1/2	13.6	16	16

Exact piece count is not guaranteed for merchant products and standard quantity tolerances apply.
Updated: 09-25

ANGLES - WILTON, IA

MATERIAL DESCRIPTION	WT / FT	PCS / BUNDLE	
		20'	40'
L 1 1/4x1 1/4x1/8	1.0	248	240
L 1 1/4x1 1/4x3/16	1.5	165	165
L 1 1/4x1 1/4x1/4	1.9	128	120
L 1 1/2x1 1/2x1/8	1.2	202	195
L 1 1/2x1 1/2x3/16	1.8	137	137
L 1 1/2x1 1/2x1/4	2.3	104	104
L 1 3/4x1 3/4x1/8	1.4	176	176
L 1 3/4x1 3/4x3/16	2.1	116	116
L 1 3/4x1 3/4x1/4	2.8	88	88
L 2x2x1/8	1.7	153	144
L 2x2x3/16	2.4	104	99
L 2x2x1/4	3.2	77	77
L 2x2x3/8	4.7	54	54

MATERIAL DESCRIPTION	WT / FT	PCS / BUNDLE	
		20'	40'
L 2x2x3/8	4.7	54	54
L 2 1/2x2x1/4	3.2	70	67
L 2 1/2x2x5/16	4.5	56	56
L 2 1/2x2x3/8	4.7	46	46
L 2 1/2x2 1/2x3/16	3.1	81	77
L 2 1/2x2 1/2x1/4	4.1	60	58
L 2 1/2x2 1/2x5/16	5.3	49	49
L 2 1/2x2 1/2x3/8	5.3	42	42
L 3x3x3/16	3.7	68	65
L 3x3x1/4	4.9	50	48
L 3x3x5/16	6.1	40	40
L 3x3x3/8	7.2	35	33

ANGLES - CHARLOTTE, NC

MATERIAL DESCRIPTION	WT / FT	PCS / BUNDLE	
		20'	40'
L 1x1x1/8	0.8	298	298
L 1x1x3/16	1.2	204	204
L 1x1x1/4	1.5	162	162
L 1 1/4x1 1/4x1/8	1.0	234	234
L 1 1/4x1 1/4x3/16	1.5	156	156
L 1 1/4x1 1/4x1/4	1.9	124	124
L 1 1/2x1 1/2x1/8	1.2	193	193
L 1 1/2x1 1/2x3/16	1.8	132	132
L 1 1/2x1 1/2x1/4	2.3	99	99

MATERIAL DESCRIPTION	WT / FT	PCS / BUNDLE	
		20'	40'
L 1 3/4x1 3/4x3/16	2.1	112	112
L 1 3/4x1 3/4x1/4	2.8	84	84
L 2x1 1/2x1/8	1.4	70	70
L 2x1 1/2x3/16	2.1	70	70
L 2x1 1/2x1/4	2.8	55	55
L 2x2x1/8	1.7	145	145
L 2x2x3/16	2.4	95	95
L 2x2x1/4	3.2	72	72

ANGLES - CAMBRIDGE, ON

MATERIAL DESCRIPTION	WT / FT	PCS / BUNDLE	
		20'	40'
L 3/4x3/4x1/8	0.6	413	
L 1x1x1/8	0.8	314	323
L 1x1x3/16	1.2	219	219
L 1x1x1/4	1.5	171	178
L 1 1/4x1 1/4x1/8	1.0	248	255
L 1 1/4x1 1/4x3/16	1.5	173	173
L 1 1/4x1 1/4x1/4	1.9	135	135
L 1 1/2x1 1/2x1/8	1.2	201	208
L 1 1/2x1 1/2x3/16	1.8	143	143
L 1 1/2x1 1/2x1/4	2.3	111	111

MATERIAL DESCRIPTION	WTV / FT	PCS / BUNDLE	
		20'	40'
L 1 3/4x1 3/4x3/16	2.1	120	121
L 1 3/4x1 3/4x1/4	2.8	94	88
L 2x1 1/2x1/8	1.4	173	148
L 2x1 1/2x3/16	2.1	112	104
L 2x1 1/2x1/4	2.8	95	86
L 2x2x1/8	1.7	152	v52
L 2x2x3/16	2.4	103	104
L 2x2x1/4	3.2	81	81
L 2x2x5/16	3.9	81	81

Exact piece count is not guaranteed for merchant products and standard quantity tolerances apply.

ANGLES - WHITBY, ON

MATERIAL DESCRIPTION	WT / FT	PCS / BUNDLE	
		20'	40'
L 2x2x1/8	1.7	180	153
L 2x2x3/16	2.4	126	98
L 2x2x1/4	3.2	81	81
L 2x2x5/16	3.9	80	62
L 2x2x3/8	4.7	54	54
L 2 1/2x2x3/16	2.8	112	91
L 2 1/2x2x1/4	3.6	84	70
L 2 1/2x2x3/8	5.3	56	49
L 2 1/2x2 1/2x3/16	3.1	97	83
L 2 1/2x2 1/2x1/4	4.1	77	63
L 2 1/2x2 1/2x5/16	5.0	63	49
L 2 1/2x2 1/2x3/8	5.9	49	42
L 2 1/2x2 1/2x1/2	7.7	35	28
L 3x2x3/16	3.1	80	80
L 3x2x1/4	4.1	75	60
L 3x2x5/16	5.0	60	50
L 3x2x3/8	5.9	50	40
L 3x2x1/2	7.7	25	25
L 3x2 1/2x1/4	4.5	70	55
L 3x2 1/2x5/16	5.6	55	40
L 3x2 1/2x3/8	6.6	35	35
L 3x3x3/16	3.7	85	70
L 3x3x1/4	4.9	65	50
L 3x3x5/16	6.1	50	40
L 3x3x3/8	7.2	40	35
L 3x3x1/2	9.4	30	25
L 3 1/2x2 1/2x1/4	4.9	65	50
L 3 1/2x2 1/2x5/16	6.1	40	40
L 3 1/2x2 1/2x3/8	7.2	40	35
L 3 1/2x2 1/2x1/2	9.4	25	25
L 3 1/2x3 1/2x1/4	5.8	56	45
L 3 1/2x3 1/2x5/16	7.2	46	36
L 3 1/2x3 1/2x3/8	8.5	37	29
L 3 1/2x3 1/2x1/2	11.1	29	23
L 4x3x1/4	5.8	56	45
L 4x3x5/16	7.2	45	36
L 4x3x3/8	8.5	37	29
L 4x3x1/2	11.1	29	23
L 4x4x1/4	6.6	48	37

MATERIAL DESCRIPTION	WT / FT	PCS / BUNDLE	
		40'	60'
L 4x4x5/16	8.2	37	29
L 4x4x3/8	9.8	33	25
L 4x4x1/2	12.8	25	20
L 4x4x5/8	15.7	20	15
L 4x4x3/4	18.5	17	13
L 5x3x1/4	6.6	48	37
L 5x3x5/16	8.2	37	29
L 5x3x3/8	9.8	33	25
L 5x3x1/2	12.8	25	20
L 5x3 1/2x1/4	7.0	46	37
L 5x3 1/2x5/16	8.7	37	30
L 5x3 1/2x3/8	10.4	31	25
L 5x3 1/2x1/2	13.6	23	18
L 5x5x5/16	10.3	31	25
L 5x5x3/8	12.3	26	21
L 5x5x1/2	16.2	20	16
L 5x5x5/8	20.0	13	13
L 5x5x3/4	23.6	11	11
L 6x3 1/2x5/16	9.8	33	25
L 6x3 1/2x3/8	11.7	27	21
L 6x3 1/2x1/2	15.3	15	15
L 6x4x5/16	10.3	31	25
L 6x4x3/8	12.3	26	21
L 6x4x1/2	16.2	20	16
L 6x4x5/8	20.0	13	13
L 6x4x3/4	23.6	11	11
L 6x6x3/8	14.9	21	17
L 6x6x1/2	19.6	17	13
L 6x6x5/8	24.2	13	10
L 6x6x3/4	28.7	11	9
L 7x4x3/8	13.6	23	19
L 7x4x1/2	17.9	18	14
L 7x4x5/8	22.1	11	11
L 7x4x3/4	26.2	12	10
L 8x8x1/2	26.4	11	9
L 8x8x5/8	32.7	6	6
L 8x8x3/4	38.9	6	6
L 8x8x1	51.0	5	5

CHANNELS - MIDLOTHIAN, TX

MATERIAL DESCRIPTION	PCS / BUNDLE	
	20'	40'
C 6x8.2	24	24
C 6x10.5	18	18
C 8x11.5	16	16
C 8x13.75	12	12
C 8x18.75	8	8
C 10x15.3	12	12
C 10x20	8	8

MATERIAL DESCRIPTION	PCS / BUNDLE	
	20'	40'
C 10x30	8	8
C 12x20.7	8	8
C 12x25	8	8
C 12x30	8	8
C 15x33.9	6	6
C 15x40	6	6
C 15x50	4	4

CHANNELS - CARTERSVILLE, GA

MATERIAL DESCRIPTION	PCS / BUNDLE	
	20'	40'
C 6x8.2	30	30
C 6x10.5	24	21
C 6x13	18	18
C 7x9.8	24	24
C 7x12.25	20	20
C 7x14.75	16	16
C 8x11.5	20	20
C 8x13.75	16	16
C 8x18.75	12	12

MATERIAL DESCRIPTION	PCS / BUNDLE	
	20'	40'
C 9x15	16	16
C 9x20	24	12
C 10x15.3	16	16
C 10x20	12	12
C 10x25	8	8
C 10x30	8	8
C 12x20.7	12	12
C 12x25	10	10
C 12x30	8	8

CHANNELS - JACKSON, TN

MATERIAL DESCRIPTION	PCS / BUNDLE	
	20'	40'
C 3x3.5	64	64
C 3x4.1	56	56
C 3x5	48	48
C 3x6	40	40
C 4x4.5	48	48
C 4x5.4	42	42

MATERIAL DESCRIPTION	PCS / BUNDLE	
	20'	40'
C 4x6.25	36	36
C 5x5.4	28	28
C 5x6.7	28	28
C 5x9	20	20
C 6x8.2	24	24
C 6x10.5	16	16

CHANNELS - WHITBY, ON

MATERIAL DESCRIPTION	PCS / BUNDLE	
	20'	40'
C 3x3.5	48	48
C 3x4.1	48	48
C 3x5	48	48
C 3x6	48	40
C 4x4.5	36	36
C 4x5.4	36	36
C 4x6.25	36	36
C 4x7.25	30	30
C 5x6.7	48	32
C 5x9	32	24
C 6x8.2	42	30
C 6x10.5	30	24
C 6x13	24	18
C 7x9.8	30	24

MATERIAL DESCRIPTION	PCS / BUNDLE	
	20'	40'
C 7x14.75	18	12
C 8x11.5	28	20
C 8x13.75	24	16
C 8x18.75	16	12
C 9x13.4	24	16
C 9x15	20	16
C 9x20	20	12
C 10x15.3	20	16
C 10x20	16	12
C 10x25	12	8
C 10x30	8	8
C 12x20.7	12	12
C 12x25	12	10

MISCELLANEOUS CHANNELS - WHITBY, ON

MATERIAL DESCRIPTION	PCS / BUNDLE	
	20'	40'
MC 3x7.1	40	24

MISCELLANEOUS CHANNELS - MIDLOTHIAN, TX

MATERIAL DESCRIPTION	PCS / BUNDLE	
	20'	40'
MC 18x42.7	4	4
MC 18x45.8	4	4

MATERIAL DESCRIPTION	PCS / BUNDLE	
	20'	40'
MC 18x51.9	4	4
MC 18x58	4	4

MISCELLANEOUS CHANNELS - CARTERSVILLE, GA

MATERIAL DESCRIPTION	PCS / BUNDLE	
	20'	40'
MC 4x13.8	18	18
MC 6x12	18	18
MC 6x15.1	15	15
MC 6x15.3	15	15
MC 6x16.3	15	15
MC 6x18	12	12
MC 7x19.1	12	12
MC 7x22.7	10	10
MC 8x8.5	24	24
MC 8x18.7	12	12
MC 8x20	12	12
MC 8x21.4	10	10
MC 8x22.8	10	10
MC 9x23.9	8	8
MC 9x25.4	8	8
MC 10x8.4	28	28

MATERIAL DESCRIPTION	PCS / BUNDLE	
	20'	40'
MC 10x25	10	8
MC 10x28.5	8	8
MC 10x33.6	7	7
MC 10x41.1	6	6
MC 12x10.6	24	20
MC 12x14.3	16	16
MC 12x31	8	8
MC 12x35	6	6
MC 12x40	6	6
MC 12x45	5	5
MC 12x50	4	4
MC 13x31.8	7	7
MC 13x35	6	6
MC 13x40	6	6
MC 13x50	4	4

FLATS - CARTERSVILLE, GA

MATERIAL DESCRIPTION	WT / FT	PCS / BUNDLE
		20'
F 1/4x6 1/2	5.5	40
F 1/4x7	6.0	37
F 1/4x8	6.8	33
F 1/4x9	7.7	28
F 1/4x10	8.5	26
F 1/4x12	10.2	22
F 5/16x7	7.4	30
F 5/16x8	8.5	26
F 3/8x6 1/2	8.3	30
F 3/8x7	8.9	25
F 3/8x8	10.2	22
F 3/8x9	11.5	19
F 3/8x10	12.8	17
F 3/8x11	14.0	16
F 3/8x12	15.3	14
F 1/2x6 1/2	11.1	20
F 1/2x7	11.9	18
F 1/2x8	13.6	16
F 1/2x9	15.3	14
F 1/2x10	17.0	13
F 1/2x11	18.7	12
F 1/2x12	20.4	11
F 1/2x14	23.8	9
F 5/8x7	14.9	15
F 5/8x8	17.0	13
F 5/8x9	21.3	11

MATERIAL DESCRIPTION	WT / FT	PCS / BUNDLE
		20'
F 5/8x10	21.3	10
F 5/8x11	23.4	10
F 5/8x12	25.5	8
F 5/8x14	29.8	7
F 3/4x7	17.9	12
F 3/4x8	20.4	11
F 3/4x9	23.0	9
F 3/4x10	25.5	8
F 3/4x11	28.1	8
F 3/4x12	30.6	7
F 3/4x14	35.7	6
F 7/8x8	23.8	9
F 1 1/8x8	30.6	7
F 1 1/4x8	34.0	6
F 1 1/2x5	25.5	8
F 1 1/2x8	40.8	5
F 1x7	23.8	9
F 1x8	27.2	8
F 1x9	30.6	7
F 1x10	34.0	6
F 1x11	37.4	6
F 1x12	40.8	5
F 1x14	47.6	5
F 2x7	47.6	5
F 2x8	54.4	4

Exact piece count is not guaranteed for merchant products and standard quantity tolerances apply.

FLATS - CHARLOTTE, NC

MATERIAL DESCRIPTION	WT / FT	PCS / BUNDLE 20'
F 1/4x1	0.9	276
F 1/4x1 1/4	1.1	229
F 1/4x1 1/2	1.3	184
F 1/4x1 3/4	1.7	161
F 1/4x2	1.7	144
F 1/4x2 1/4	1.9	125
F 1/4x2 1/2	2.1	110
F 5/16x1	1.1	216
F 5/16x1 1/2	1.6	152
F 5/16x2	2.1	120
F 3/8x3/4	1.0	180
F 3/8x1	1.3	180

MATERIAL DESCRIPTION	WT / FT	PCS / BUNDLE 20'
F 3/8x1 1/2	1.9	120
F 3/8x1 3/4	2.2	105
F 3/8x2	2.6	90
F 3/8x2 1/4	2.9	85
F 1/2x3/4	1.3	132
F 1/2x1	1.7	132
F 1/2x1 1/4	2.1	110
F 1/2x1 1/2	2.6	88
F 1/2x1 3/4	3.0	77
F 1/2x2	3.4	66
F 1/2x2 1/4	3.8	65
F 1/2x2 1/2	4.3	55

FLATS - JACKSON, TN

MATERIAL DESCRIPTION	WT / FT	PCS / BUNDLE 20'
F 1/4x2	1.7	145
F 1/4x2 1/4	1.9	125
F 1/4x2 1/2	2.1	115
F 1/4x3	2.6	96
F 1/4x3 1/2	3.0	81
F 1/4x4	3.4	72
F 1/4x4 1/2	3.8	63
F 1/4x5	4.3	56
F 1/4x5 1/2	4.7	52
F 1/4x6	5.1	48
F 5/16x2	2.1	115
F 5/16x2 1/2	2.7	90
F 5/16x3	3.2	76
F 5/16x3 1/2	3.7	66
F 5/16x4	4.3	57
F 5/16x4 1/2	4.8	51
F 5/16x5	5.3	46
F 5/16x5 1/2	5.8	42
F 5/16x6	6.4	38
F 3/8x2	2.6	95
F 3/8x3	3.8	64
F 3/8x3 1/2	4.5	54
F 3/8x4	5.1	48
F 3/8x4 1/2	5.7	42
F 3/8x5	6.4	38
F 3/8x5 1/2	7.0	34
F 3/8x6	7.7	32
F 1/2x2	3.4	70
F 1/2x2 1/2	4.3	55
F 1/2x3	5.1	48
F 1/2x3 1/2	6.0	42
F 1/2x4	6.8	36
F 1/2x4 1/2	7.7	30
F 1/2x5	8.5	28
F 1/2x5 1/2	9.4	24

MATERIAL DESCRIPTION	WT / FT	PCS / BUNDLE 20'
F 1/2x6	10.2	24
F 5/8x2	4.3	55
F 5/8x2 1/2	5.3	45
F 5/8x3	6.4	36
F 5/8x3 1/2	7.4	33
F 5/8x4	8.5	27
F 5/8x4 1/2	9.6	24
F 5/8x5	10.6	22
F 5/8x5 1/2	11.7	20
F 5/8x6	12.8	18
F 3/4x2	5.1	45
F 3/4x2 1/2	6.4	35
F 3/4x3	7.7	32
F 3/4x3 1/2	8.9	27
F 3/4x4	10.2	24
F 3/4x4 1/2	11.5	21
F 3/4x5	12.8	18
F 3/4x5 1/2	14.0	16
F 3/4x6	15.3	16
F 1 1/4x2 1/2	10.6	20
F 1 1/4x3	12.8	16
F 1 1/4x4	17.0	12
F 1 1/2x2 1/2	12.8	15
F 1 1/2x3	15.3	16
F 1 1/2x4	20.4	12
F 1x2	6.8	35
F 1x2 1/2	8.5	25
F 1x3	9.1	24
F 1x3 1/2	11.9	21
F 1x4	13.6	18
F 1x4 1/2	15.3	15
F 1x5	17.0	14
F 1x5 1/2	18.7	12
F 1x6	20.4	12

FLATS - WILTON, IA

MATERIAL DESCRIPTION	WT / FT	PCS / BUNDLE 20'
F 3/16x1 1/2	1.0	255
F 3/16x2	1.3	192
F 3/16x3	0.6	128
F 1/4x1	0.9	288
F 1/4x1 1/4	1.1	230
F 1/4x1 1/2	1.3	192
F 1/4x1 3/4	1.5	168
F 1/4x2	1.7	144
F 1/4x2 1/4	1.9	130
F 1/4x2 1/2	2.1	115
F 1/4x2 3/4	2.3	104
F 1/4x3	2.6	96
F 1/4x3 1/2	3.0	84
F 1/4x4	3.4	72
F 1/4x5	4.3	58
F 1/4x5.980	5.1	48
F 1/4x6	5.1	48
F 5/16x1 1/4	1.3	180
F 5/16x1 1/2	1.6	152
F 5/16x1 3/4	1.9	133
F 5/16x2	2.1	114
F 5/16x2 1/2	2.7	90
F 5/16x3	3.2	76
F 5/16x3 1/2	3.7	66
F 5/16x4	4.3	57
F 5/16x5	5.3	46
F 5/16x6	6.4	38
F 3/8x1	1.3	192
F 3/8x1 1/4	1.6	150
F 3/8x1 1/2	1.9	128
F 3/8x1 3/4	2.2	112
F 3/8x2	2.6	96
F 3/8x2 1/4	2.9	85
F 3/8x2 3/4	3.5	68
F 3/8x3	3.8	64
F 3/8x3 1/2	4.5	54
F 3/8x4	5.1	48
F 3/8x5	6.4	38
F 3/8x6	7.7	32
F 1/2x1	1.7	144
F 1/2x1 1/4	2.1	110
F 1/2x1 1/2	0.9	96
F 1/2x1 3/4	3.0	84
F 1/2x2	3.4	72
F 1/2x2 1/4	3.8	65

MATERIAL DESCRIPTION	WT / FT	PCS / BUNDLE 20'
F 1/2x2 1/2	4.3	55
F 1/2x2 3/4	4.7	52
F 1/2x3	5.1	48
F 1/2x3 1/2	6.0	42
F 1/2x4	6.8	36
F 1/2x5	8.5	28
F 1/2x6	10.2	24
F 5/8x1	2.1	108
F 5/8x1 1/4	2.7	90
F 5/8x1 1/2	3.2	72
F 5/8x1 3/4	3.7	63
F 5/8x2	4.3	54
F 5/8x2 1/2	3.2	45
F 5/8x3	6.4	36
F 5/8x3 1/2	7.4	33
F 5/8x4	8.5	27
F 5/8x5	10.6	22
F 5/8x6	12.8	18
F 3/4x1	2.6	96
F 3/4x1 1/4	3.2	70
F 3/4x1 1/2	3.8	64
F 3/4x1 3/4	4.5	56
F 3/4x2	5.1	48
F 3/4x2 1/2	6.4	35
F 3/4x3	7.7	32
F 3/4x3 1/2	8.9	27
F 3/4x4	10.2	24
F 3/4x5	12.8	18
F 3/4x6	15.3	16
F 1 1/4x2	8.5	24
F 1 1/4x2 1/2	10.6	20
F 1 1/4x3	12.8	16
F 1 1/2x2	10.2	24
F 1x1 1/4	4.3	50
F 1x1 1/2	5.1	48
F 1x1 3/4	6.0	42
F 1x2	6.8	36
F 1x2 1/2	8.5	25
F 1x2 3/4	9.4	25
F 1x3	10.2	24
F 1x3 1/2	11.9	21
F 1x4	13.6	18
F 1x5	17.0	14
F 1x6	20.4	12

FLATS - WHITBY, ON

MATERIAL DESCRIPTION	WT / FT	PCS / BUNDLE 20'
F 3/8x5	6.4	45
F 3/8x6	7.7	39
F 3/8x7	8.9	36
F 3/8x8	10.2	30
F 3/8x10	12.8	24
F 1/2x5	8.5	36
F 1/2x6	10.2	30
F 1/2x7	11.9	27
F 1/2x8	40.8	22
F 1/2x10	17.0	18
F 5/8x5	10.6	30
F 5/8x7	14.9	21

MATERIAL DESCRIPTION	WT / FT	PCS / BUNDLE 20'
F 5/8x8	17.0	18
F 5/8x10	21.3	22
F 3/4x5	12.8	24
F 3/4x6	15.3	18
F 3/4x7	17.9	18
F 3/4x8	20.4	14
F 3/4x10	25.5	18
F 1x5	17.0	15
F 1x6	20.4	15
F 1x7	23.8	12
F 1x8	27.2	10

FLATS - CAMBRIDGE, ON

MATERIAL DESCRIPTION	WT / FT	PCS / BUNDLE 20'
F 3/16x3/4	0.5	544
F 3/16x1	0.6	387
F 3/16x1 1/4	0.8	314
F 3/16x1 1/2	1.0	264
F 3/16x2	1.3	197
F 3/16x3	1.9	136
F 1/4x3/4	0.6	400
F 1/4x1	0.9	294
F 1/4x1 1/4	1.1	241
F 1/4x1 1/2	1.3	200
F 1/4x1 3/4	1.5	175
F 1/4x2	1.7	144
F 1/4x2 1/4	1.9	135
F 1/4x2 1/2	2.1	117
F 1/4x2 3/4	2.3	112
F 1/4x3	2.6	100
F 1/4x3 1/4	2.8	96
F 1/4x3 1/2	3.0	84
F 1/4x3 3/4	3.2	81
F 1/4x4	3.4	75
F 5/16x3/4	0.8	316
F 5/16x1	1.1	240
F 5/16x1 1/4	1.3	190
F 5/16x1 1/2	1.6	160
F 5/16x1 3/4	1.9	140
F 5/16x2	2.1	120
F 5/16x2 1/2	2.7	95
F 5/16x3	3.2	80
F 5/16x3 1/2	3.7	69
F 5/16x4	4.3	60
F 3/8x3/4	1.0	252
F 3/8x1	1.3	204
F 3/8x1 1/4	1.6	160
F 3/8x1 1/2	1.9	136
F 3/8x1 3/4	2.2	112
F 3/8x2	2.6	102
F 3/8x2 1/4	2.9	90
F 3/8x2 3/4	3.5	72
F 3/8x3	3.8	68
F 3/8x3 1/4	4.1	64
F 3/8x3 1/2	4.5	57
F 3/8x4	5.1	51
F 7/16x1 1/2	2.2	108
F 1/2x3/4	1.3	192

MATERIAL DESCRIPTION	WT / FT	PCS / BUNDLE 20'
F 1/2x1	1.7	144
F 1/2x1 1/4	2.1	120
F 1/2x1 1/2	2.6	96
F 1/2x1 3/4	3.0	84
F 1/2x2	3.4	72
F 1/2x2 1/4	3.8	65
F 1/2x2 1/2	2.6	60
F 1/2x2 3/4	4.7	56
F 1/2x3	5.1	48
F 1/2x3 1/2	6.0	42
F 1/2x3 3/4	6.4	39
F 1/2x4	6.8	36
F 5/8x1	2.1	120
F 5/8x1 1/4	2.7	100
F 5/8x1 1/2	3.2	80
F 5/8x1 3/4	3.7	69
F 5/8x2	4.3	60
F 5/8x2 1/2	5.3	50
F 5/8x2 3/4	5.8	44
F 5/8x3	6.4	39
F 5/8x3 1/2	7.4	34
F 5/8x4	8.5	30
F 3/4x1	2.6	96
F 3/4x1 1/4	3.2	80
F 3/4x1 1/2	3.8	64
F 3/4x1 3/4	4.5	57
F 3/4x2	5.1	48
F 3/4x2 1/4	5.7	45
F 3/4x2 1/2	6.4	38
F 3/4x2 3/4	7.0	36
F 3/4x3	7.7	33
F 3/4x3 1/4	8.3	30
F 7/8x1 1/2	4.5	56
F 7/8x2	6.0	42
F 7/8x3	8.9	28
F 1x1 1/4	4.3	60
F 1x1 1/2	5.1	48
F 1x1 3/4	6.0	42
F 1x2	6.8	36
F 1x2 1/2	8.5	30
F 1x2 3/4	9.4	28
F 1x3	10.2	24
F 1x3 1/4	11.1	23

Exact piece count is not guaranteed for merchant products and standard quantity tolerances apply.

Updated: 09-25

STRUCTURAL





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Photo credit GMF Steel Group

GERDAU STRUCTURAL PRODUCTS IN USE

TYNDALL AIR FORCE BASE

Panama City, Florida

The Tyndall Air Force Base is located southeast of Panama City, Florida. In 2018, the base sustained a direct hit from Hurricane Michael. Tyndall was rebuilt to include resilient construction design to withstand the impacts of inclement weather.

This project was particularly challenging given the long lead time between initial design and release to production. Gerdau stayed engaged with its customer for over 18 months working on this project until it was finally awarded the steel supply. This close collaboration between mill and fabricator from the early stages of the project allowed Gerdau's customer to navigate the uncertainties associated with long lead time projects.

STRUCTURAL STEEL PRODUCTS AND BUNDLES

WIDE FLANGE BEAMS: MIDLOTHIAN, TX & PETERSBURG, VA

SHAPE	MILL	PCS / BUNDLE
W4x13	TX	15
W6x7	TX	21
W6x7.5	TX	21
W6x8.5	TX	24
W6x9	TX	24
W6x10.4	TX	24
W6x12	TX	18
W6x15	TX	12
W6x16	TX	12
W6x20	TX	9
W6x25	TX	9
W8x10	TX	21
W8x13	TX	15
W8x15	TX	12
W8x18	TX	12
W8x21	TX	10
W8x24	TX	8
W8x28	TX	6
W8x31, 35, 40	TX, VA*	6
W8x48, 58	TX, VA*	4
W8x67	TX, VA*	3
W10x12	TX	16
W10x15	TX	14
W10x17	TX	12
W10x19	TX	10
W10x22, 26	TX	8
W10x30	TX	6
W10x33, 39	TX, VA*	6
W10x45	TX, VA*	4
W10x49, 54, 60	TX, VA	4
W10x68, 77	TX, VA	3
W10x88	TX, VA	2
W10x100, 112	TX, VA	2
W12x14	TX	16
W12x16	TX	14
W12x19	TX	12
W12x22	TX	10
W12x26, 30, 35	TX	6
W12x40, 45, 50	TX, VA*	4
W12x53, 58	TX, VA	4, 3

SHAPE	MILL	PCS / BUNDLE
W12x65, 72	VA	4
W12x79, 87, 96	VA	2
W12x106, 120, 136, 152, 170, 190, 210	VA	1
W14x22, 26	TX	8
W14x30, 34, 38	TX	6
W14x43, 48, 53	TX, VA*	4
W14x61, 68, 74, 82	TX, VA	3
W14x90, 99, 109	VA	2
W14x120, 132	VA	1
W14x145, 159, 176, 193, 211, 233, 257	VA	1
W16x26, 31	TX, VA	6
W16x36, 40, 45	TX, VA	5
W16x50, 57	TX, VA	3
W16x67, 77	TX, VA	3
W16x89, 100	TX, VA	2
W18x35	TX, VA	6
W18x40, 46	TX, VA	5
W18x50, 55	TX, VA	4
W18x60, 65, 71	TX, VA	3
W18x76, 86, 97	VA	2
W18x106, 119, 130, 143, 158, 175, 192, 211	VA	1
W21x44, 50, 57	TX, VA	4
W21x48, 55, 62	TX	4
W21x68, 73, 83	TX	3
W21x93	TX	2
W21x101, 111, 122, 132, 147, 166, 182, 201	VA	1
W24x55, 62	TX, VA	4
W24x68, 76	TX, VA	3
W24x84, 94, 103	TX, VA	2
W24x104, 117, 131, 146, 162, 176, 192, 207	VA	1
W27x84, 94, 102, 114, 129	VA	1
W27x146, 161, 178, 194, 217, 235	VA	1
W30x90, 99, 108, 116, 124, 132, 148	VA	1
W33x118, 130, 141, 152, 169	VA	1
W36x135, 150, 160, 170, 182, 194, 210, 232, 256	VA	1

*Not currently produced in VA
Updated: 09-25

WIDE FLANGE BEAMS: CARTERSVILLE, GA

SHAPE	LENGTH (ft)	PCS / BUNDLE
W4x13	20, 40	18
W4x13	25, 30, 35	21
W4x13	45, 50	15
W4x13	55	13
W4x13	60	12
W6x7	20 - 40, 50, 60	21
W6x7	45, 55	12
W6x8.5	20 - 55	21
W6x8.5	35	24
W6x8.5	60	18
W6x9	20, 25	27
W6x9	30, 35	30
W6x9	40, 50	21
W6x9	45	24
W6x9	55, 60	18
W6x12	20, 35	21
W6x12	25	33
W6x12	30	27
W6x12	40, 45	18
W6x12	50	16
W6x12	55	14
W6x12	60	12
W6x15	20, 30, 40	15
W6x15	25, 45 - 55	12
W6x15	60	10
W6x15	65	9
W6x16	20, 35, 40	15
W6x16	30	18
W6x16	45, 50	12
W6x16	55, 60	10
W6x20	20, 35, 40	12
W6x20	25, 30	15
W6x20	45, 50	9
W6x20	55, 60	8
W6x20	65	6
W6x25	20, 25, 35	9
W6x25	30	12
W6x25	40	10
W6x25	45, 50	8

SHAPE	LENGTH (ft)	PCS / BUNDLE
W6x25	60	6
W8x10	20 - 45	20
W8x10	50, 55	18
W8x10	60	16
W8x13	20, 40	18
W8x13	25 - 35	20
W8x13	45	16
W8x13	50	14
W8x13	55, 60	10
W8x15	20, 40	16
W8x15	25, 30	20
W8x15	35	18
W8x15	45	14
W8x15	50	12
W8x15	55 - 65	10
W8x18	20, 35	14
W8x18	25, 50, 55	10
W8x18	30	16
W8x18	40, 45	12
W8x18	50, 55	10
W8x18	60, 65	8
W8x21	20	12
W8x21	25, 40, 45	10
W8x21	30	14
W8x21	50	8
W8x21	55 - 65	7
W8x24	20, 35, 40	10
W8x24	25, 30	12
W8x24	45, 50	8
W8x24	55 - 65	6
W8x28	20, 35, 40	8
W8x28	25, 45 - 55	6
W8x28	30	10
W8x28	60, 65	5
W8x31, 35, 40	20 - 65	6
W8x48, 58	20 - 65	4
W8x67	20 - 65	3
W10x12	20, 30 - 40	20
W10x12	45	18

WIDE FLANGE BEAMS: CARTERSVILLE, GA

SHAPE	LENGTH (ft)	PCS / BUNDLE
W10x12	25, 50	16
W10x12	55, 60	10
W10x15	20, 40	16
W10x15	25, 30	20
W10x15	35	18
W10x15	45	14
W10x15	50	12
W10x15	55, 60	10
W10x17	20, 40	14
W10x17	25, 30	18
W10x17	35	16
W10x17	45	12
W10x17	50, 55	10
W10x17	60, 65	8
W10x19	20, 40	12
W10x19	25, 45, 50	10
W10x19	35	14
W10x19	55, 60	8
W10x22	20, 40, 45	10
W10x22	25	8
W10x22	30	14
W10x22	35	12
W10x22	50 - 60	7
W10x22	65	6
W10x26	20, 35	10
W10x26	25, 30	12
W10x26	40, 45	8
W10x26	50	7
W10x26	55, 60	6
W10x26	65	5
W10x30	20, 25, 35	8
W10x30	30	10
W10x30	40, 45	7
W10x30	50, 55	6
W10x30	60, 65	5
W10x33, 39	20 - 65	6
W10x45	20 - 65	4
W12x14	20	18
W12x14	25, 45, 50	14

SHAPE	LENGTH (ft)	PCS / BUNDLE
W12x14	30, 35	20
W12x14	40	16
W12x14	55 - 65	10
W12x16	20, 35	16
W12x16	25, 45	12
W12x16	30	18
W12x16	40	14
W12x16	50 - 60	10
W12x19	20, 40	12
W12x19	25, 45, 50	10
W12x19	30	16
W12x19	35	14
W12x19	55 - 65	8
W12x22	20, 40, 45	10
W12x22	25, 50, 55	8
W12x22	30	14
W12x22	35	12
W12x22	60	7
W12x22	65	6
W12x26	20, 25, 35	10
W12x26	30	12
W12x26	40, 45	8
W12x26	50 - 60	6
W12x26	65	5
W12x30	20, 35, 40	8
W12x30	25, 30	10
W12x30	45 - 55	6
W12x30	60, 65	5
W12x35	20, 25, 40, 45	6
W12x35	30, 35	8
W12x35	50, 55	5
W12x35	60, 65	4
W12x40, 45, 50	20 - 65	4
W14x22	20 - 55	8
W14x22	60	7
W14x22	65	6
W14x26	20 - 45	8
W14x26	50	7
W14x26	55, 60	6

WIDE FLANGE BEAMS: CARTERSVILLE, GA

SHAPE	LENGTH (ft)	PCS / BUNDLE
W14x30	60	5
W14x34	20, 30 - 45	6
W14x34	50, 55	5
W14x34	60	4

SHAPE	LENGTH (ft)	PCS / BUNDLE
W14x38	20, 30 - 40	6
W14x38	55, 60, 65	4
W14x38	45, 50	5
W14x43, 48, 53	20 - 30, 40 - 50, 60, 65	4

STANDARD BEAMS: CARTERSVILLE, GA

SHAPE	LENGTH (ft)	PCS / BUNDLE
S5x7.2	20, 40	33
S5x10	20 - 40	24
S5x10	45	21

SHAPE	LENGTH (ft)	PCS / BUNDLE
S5x10	50	18
S5x10	60	15

STANDARD BEAMS: MIDLOTHIAN, TX

SHAPE	PCS / BUNDLE
S3x5.7	36
S3x7.5	28
S4x7.7	28
S4x9.25	20
S4x9.5	20
S5x10	21
S6x12.5	15

SHAPE	PCS / BUNDLE
S6x17.25	12
S8x18.4	10
S8x23	8
S10x25.4	8
S10x35	6
S12x31.8	6

MISCELLANEOUS BEAMS: MIDLOTHIAN, TX

SHAPE	PCS / BUNDLE
M8x6.5	24
M10x8	18
M10x9	16
M12x10.8	12

SHAPE	PCS / BUNDLE
M12x11.8	12
M12.5x11.6	12
M12.5x12.4	12

HIGH-STRENGTH GRADES AND SUSTAINABILITY

Grade 65 beams are becoming increasingly popular, but understanding about this product varies. Check out the most commonly asked questions our team receives below:

WHAT IS GRADE 65?

A high-strength, low-alloy steel designed for structural applications, with minimum yield strength of 65 ksi.

1. Addition of Alloys (A572-65)

Produced similarly to Grade 50 but using higher alloy content to increase strength.

PROS: Can be made in various sizes, from small to large, and is widely available.

CONS: Higher production cost, higher carbon equivalent.

2. Heat Treatment (A913)

Increase in strength is achieved by heat treating the steel directly at the rolling mill.

PROS: Reduced production costs and improved impact resistance (lower alloy).

CONS: Limited to thicker sections and fewer suppliers. Specialized welding procedure and maximum heating temperature that needs to be clearly communicated to the construction team.

CAN GRADE 65 LOWER THE EMISSIONS OF A PROJECT?

Some companies are designing with higher strength steel in effort to reduce building weight and lower the carbon footprint of the structures. Higher strength steel used in column sections and heavy girders typically result in weight reduction. **However, the weight reduction is often not sufficient to lower the carbon footprint of the structure.**

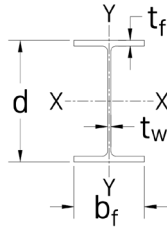
The example below demonstrates why.

Grade 65 Use in Column W14x176 (A913 or A572-65) replacing W14x233 (A992 or A572-50)

The use of the 176 lb/ft column in A913 represents a 23% reduction in the weight. However, that decrease is not enough to offset the difference between the GWP of Gerdau Petersburg and the GWP of the domestic producer of A913.

SHAPE	NOMINAL WEIGHT (LB/FT)	YIELD STRENGTH (KSI)	CRADLE TO GATE MILL PRODUCT	
			PLANT GWP (KG CO2/M TON)	GWP / SECTION (CO2E/FT)
W14x176	176	65 (A913)	816	0.065
W14x233	233	50 (A572-50)	527	0.056

- d - Depth
- t_w - Thickness of web
- t_f - Thickness of flange
- b_f - Width of flange



- I - Moment of inertia
- S - Elastic section modulus
- r - Radius of gyration
- Z - Plastic section modulus

WIDE FLANGE BEAM DIMENSIONS

	Shape	Area	WEB		FLANGE		AXIS X-X				AXIS Y-Y				
			in. (mm)	lb/ft (kg/m)	in. ² (cm ²)	d in. (mm)	tw in. (mm)	bf in. (mm)	tf in. (mm)	I _x in. ⁴ (10 ⁶ mm ⁴)	S _x in. ³ (10 ³ mm ³)	r _x in. ³ (mm)	Z _x in. (10 ³ mm ³)	I _y in. ⁴ (10 ⁶ mm ⁴)	S _y in. ³ (10 ³ mm ³)
W4X4	W4 X	13	3.83	4.16	0.280	4.06	0.345	11.3	5.46	1.72	6.28	3.86	1.9	1.0	2.92
	W100 X	19.3	2,470	106	7.11	103	8.76	4.7	89.5	43.7	103	1.61	31.1	25.4	47.9
W6X4	7	2.1	5.8	0.1	3.9	0.2	12.3	4.3	2.4	4.7	1.6	0.8	0.9	1.3	
	10.4	1335.5	147	3.4	99	4.1	5.1	69.6	62.0	77.5	0.7	13.4	22.3	20.6	
	7.5	2.3	5.8	0.2	3.9	0.2	13.7	4.7	2.4	5.3	1.8	0.9	0.9	1.4	
	11.2	1477.4	148	3.8	100	4.5	5.1	77.0	62.0	86.0	0.7	14.9	22.4	22.9	
	8.5	2.52	5.83	0.17	3.94	0.195	14.9	5.1	2.43	5.73	1.99	1.01	0.89	1.56	
	13	1,630	148	4.32	100	5.0	6.2	83.6	61.7	93.9	0.828	16.6	22.6	25.6	
	9	2.68	5.9	0.17	3.94	0.215	16.4	5.56	2.47	6.23	2.2	1.11	0.905	1.72	
	13.5	1,730	150	4.32	100	5.5	6.83	91.1	62.7	102	0.916	18.2	23	28.2	
	10.4	3.1	6.0	0.2	4.0	0.2	19.3	6.5	2.5	7.3	2.6	1.3	0.9	2.0	
	15.5	2,019	151	5.1	101	6.3	8.0	106.2	63.0	119.8	1.1	21.3	23.1	32.9	
W6X6	W6 X	12	3.55	6.03	0.23	4	0.28	22.1	7.31	2.49	8.3	2.99	1.5	0.918	2.32
	W150 X	18	2,290	153	5.84	102	7.1	9.2	120	63.2	136	1.24	24.6	23.3	38.0
	16	4.74	6.28	0.26	4.03	0.405	32.1	10.2	2.6	11.7	4.43	2.2	0.967	3.39	
	24	3,060	160	6.6	102	10.3	13.4	167	66	192	1.84	36.1	24.6	55.6	
W6X6	15	4.43	5.99	0.23	5.99	0.26	29.1	9.72	2.56	10.8	9.32	3.11	1.45	4.75	
	22.5	2,860	152	5.84	152	6.6	12.1	159	65	177	3.88	51	36.8	77.8	
	20	5.87	6.2	0.26	6.02	0.365	41.4	13.4	2.66	14.9	13.3	4.41	1.5	6.72	
	29.8	3,790	157	6.6	153	9.27	17.2	220	67.6	246	5.54	72.3	38.1	110	
	25	7.34	6.38	0.32	6.08	0.455	53.4	16.7	2.7	18.9	17.1	5.61	1.52	8.56	
37.1	4,740	162	8.13	154	11.6	22.2	274	68.6	310	7.12	91.9	38.6	140		
W8X4	10	2.96	7.89	0.17	3.94	0.205	30.8	7.81	3.22	8.87	2.09	1.06	0.841	1.66	
	15	1,910	200	4.32	100	5.21	12.8	128	81.8	145	0.87	17.4	21.4	27.2	
	13	3.84	7.99	0.23	4	0.255	39.6	9.91	3.21	11.4	2.73	1.37	0.843	2.15	
	19.3	2,480	203	5.84	102	6.48	16.5	162	81.5	187	1.14	22.5	21.4	35.2	
	15	4.44	8.11	0.245	4.02	0.315	48	11.8	3.29	13.6	3.41	1.7	0.876	2.67	
22.5	2,860	206	6.22	102	8	20	193	83.6	223	1.42	27.9	22.3	43.8		

	Shape		WEB		FLANGE		AXIS X-X				AXIS Y-Y			
			d	t _w	b _f	t _f	I _x	S _x	r _x	Z _x	I _y	S _y	r _y	Z _y
			in. (mm)	in. (mm)	in. (mm)	in. (mm)	in. ⁴ (10 ⁶ mm ⁴)	in. ³ (10 ³ mm ³)	in. ³ (mm ³)	in. (10 ³ mm ²)	in. ⁴ (10 ⁶ mm ⁴)	in. ³ (10 ³ mm ³)	in. ³ (mm ³)	in. (10 ³ mm ²)
W8X5 1/4	18	5.26	8.14	0.23	5.25	0.33	61.9	15.2	3.43	17	7.97	3.04	1.23	4.66
	26.6	3,390	207	5.84	133	8.38	25.8	249	87.1	279	3.32	49.8	31.2	76.4
W8X6 1/2	21	6.16	8.28	0.25	5.27	0.4	75.3	18.2	3.49	20.4	9.77	3.71	1.26	5.69
	31.3	3,970	210	6.35	134	10.2	31.3	298	88.6	334	4.07	60.8	32	93.2
W8X8	24	7.08	7.93	0.245	6.5	0.4	82.7	20.9	3.42	23.1	18.3	5.63	1.61	8.57
	35.9	4,570	201	6.22	165	10.2	34.4	342	86.9	379	7.62	92.3	40.9	140
W8 X W200 X	28	8.25	8.06	0.285	6.54	0.465	98	24.3	3.45	27.2	21.7	6.63	1.62	10.1
	41.7	5,320	205	7.24	166	11.8	40.8	398	87.6	446	9.03	109	41.1	166
W8X8	31	9.13	8	0.285	8	0.435	110	27.5	3.47	30.4	37.1	9.27	2.02	14.1
	46.1	5,890	203	7.24	203	11	45.8	451	88.1	498	15.4	152	51.3	231
W8X8	35	10.3	8.12	0.31	8.02	0.495	127	31.2	3.51	34.7	42.6	10.6	2.03	16.1
	52	6,650	206	7.87	204	12.6	52.9	511	89.2	569	17.7	174	51.6	264
W8X8	40	11.7	8.25	0.36	8.07	0.56	146	35.5	3.53	39.8	49.1	12.2	2.04	18.5
	59	7,550	210	9.14	205	14.2	60.8	582	89.7	652	20.4	200	51.8	303
W8X8	48	14.1	8.5	0.4	8.11	0.685	184	43.2	3.61	49	60.9	15	2.08	22.9
	71	9,100	216	10.2	206	17.4	76.6	708	91.7	803	25.3	246	52.8	375
W8X8	58	17.1	8.75	0.51	8.22	0.81	228	52	3.65	59.8	75.1	18.3	2.1	27.9
	86	11,000	222	13	209	20.6	94.9	852	92.7	980	31.3	300	53.3	457
W8X8	67	19.7	9	0.57	8.28	0.935	272	60.4	3.72	70.1	88.6	21.4	2.12	32.7
	100	12,700	229	14.5	210	23.7	113	990	94.5	1,150	36.9	351	53.8	536
W10X4	12	3.54	9.87	0.19	3.96	0.21	53.8	10.9	3.9	12.6	2.18	1.1	0.785	1.74
	17.9	2,280	251	4.83	101	5.33	22.4	179	99.1	206	0.907	18	19.9	28.5
W10X4	15	4.41	9.99	0.23	4	0.27	68.9	13.8	3.95	16	2.89	1.45	0.81	2.3
	22.3	2,850	254	5.84	102	6.86	28.7	226	100	262	1.2	23.8	20.6	37.7
W10X4	17	4.99	10.1	0.24	4.01	0.33	81.9	16.2	4.05	18.7	3.56	1.78	0.845	2.8
	25.3	3,220	257	6.1	102	8.38	34.1	265	103	306	1.48	29.2	21.5	45.9
W10X4	19	5.62	10.2	0.25	4.02	0.395	96.3	18.8	4.14	21.6	4.29	2.14	0.874	3.35
	28.4	3,630	259	6.35	102	10	40.1	308	105	354	1.79	35.1	22.2	54.9
W10X5 3/4	22	6.49	10.2	0.24	5.75	0.36	118	23.2	4.27	26	11.4	3.97	1.33	6.1
	32.7	4,190	259	6.1	146	9.14	49.1	380	108	426	4.75	65.1	33.8	100
W10 X W250 X	26	7.61	10.3	0.26	5.77	0.44	144	27.9	4.35	31.3	14.1	4.89	1.36	7.5
	38.5	4,910	262	6.6	147	11.2	59.9	457	110	513	5.87	80.1	34.5	123
W10X5 3/4	30	8.84	10.5	0.3	5.81	0.51	170	32.4	4.38	36.6	16.7	5.75	1.37	8.84
	44.8	5,700	267	7.62	148	13	70.8	531	111	600	6.95	94.2	34.8	145
W10X8	33	9.71	9.73	0.29	7.96	0.435	171	35	4.19	38.8	36.6	9.2	1.94	14
	49.1	6,260	247	7.37	202	11	71.2	574	106	636	15.2	151	49.3	229
W10X8	39	11.5	9.92	0.315	7.99	0.53	209	42.1	4.27	46.8	45	11.3	1.98	17.2
	58	7,420	252	8	203	13.5	87	690	108	767	18.7	185	50.3	282
W10X8	45	13.3	10.1	0.35	8.02	0.62	248	49.1	4.32	54.9	53.4	13.3	2.01	20.3
	67	8,580	257	8.89	204	15.7	103	805	110	900	22.2	218	51.1	333

Shape	Area	WEB		FLANGE		AXIS X-X				AXIS Y-Y				
		d	t _w	b _f	t _f	I _x	S _x	r _x	Z _x	I _y	S _y	r _y	Z _y	
		in. (mm)	lb/ft (kg/m)	in. ² (cm ²)	in. (mm)	in. (mm)	in. (mm)	in. (mm)	in. ⁴ (10 ⁴ mm ⁴)	in. ³ (10 ³ mm ³)	in. ³ (mm ³)	in. (mm)	in. ⁴ (10 ⁴ mm ⁴)	in. ³ (10 ³ mm ³)
W10 X W250 X	49	14.4	10	0.34	10	0.56	272	54.6	4.35	60.4	93.4	18.7	2.54	28.3
	73	9,290	254	8.64	254	14.2	113	895	110	990	38.9	306	64.5	464
	54	15.8	10.1	0.37	10	0.615	303	60	4.37	66.6	103	20.6	2.56	31.3
	80	10,200	257	9.4	254	15.6	126	983	111	1,090	42.9	338	65	513
	60	17.7	10.2	0.42	10.1	0.68	341	66.7	4.39	74.6	116	23	2.57	35
	89	11,400	259	10.7	257	17.3	142	1,090	112	1,220	48.3	377	65.3	574
	68	19.9	10.4	0.47	10.1	0.77	394	75.7	4.44	85.3	134	26.4	2.59	40.1
	101	12,800	264	11.9	257	19.6	164	1,240	113	1,400	55.8	433	65.8	657
	77	22.7	10.6	0.53	10.2	0.87	455	85.9	4.49	97.6	154	30.1	2.6	45.9
	115	14,600	269	13.5	259	22.1	189	1,410	114	1,600	64.1	493	66	752
	88	26	10.8	0.605	10.3	0.99	534	98.5	4.54	113	179	34.8	2.63	53.1
	131	16,800	274	15.4	262	25.1	222	1,610	115	1,850	74.5	570	66.8	870
	100	29.3	11.1	0.68	10.3	1.12	623	112	4.6	130	207	40	2.65	61
	149	18,900	282	17.3	262	28.4	259	1,840	117	2,130	86.2	655	67.3	1,000
	112	32.9	11.4	0.755	10.4	1.25	716	126	4.66	147	236	45.3	2.68	69.2
	167	21,200	290	19.2	264	31.8	298	2,060	118	2,410	98.2	742	68.1	1,130
W12 X4	14	4.16	11.9	0.2	3.97	0.225	88.6	14.9	4.62	17.4	2.36	1.19	0.753	1.9
	21	2,680	302	5.08	101	5.72	36.9	244	117	285	0.982	19.5	19.1	31.1
	16	4.71	12	0.22	3.99	0.265	103	17.1	4.67	20.1	2.82	1.41	0.773	2.26
	23.8	3,040	305	5.59	101	6.73	42.9	280	119	329	1.17	23.1	19.6	37
	19	5.57	12.2	0.235	4.01	0.35	130	21.3	4.82	24.7	3.76	1.88	0.822	2.98
	28.3	3,590	310	5.97	102	8.89	54.1	349	122	405	1.57	30.8	20.9	48.8
	22	6.48	12.3	0.26	4.03	0.425	156	25.4	4.91	29.3	4.66	2.31	0.848	3.66
	32.7	4,180	312	6.6	102	10.8	64.9	416	125	480	1.94	37.9	21.5	60
W12 X6 1/2 W12 X W310 X	26	7.65	12.2	0.23	6.49	0.38	204	33.4	5.17	37.2	17.3	5.34	1.51	8.17
	38.7	4,940	310	5.84	165	9.65	84.9	547	131	610	7.2	87.5	38.4	134
	30	8.79	12.3	0.26	6.52	0.44	238	38.6	5.21	43.1	20.3	6.24	1.52	9.56
	44.5	5,670	312	6.6	166	11.2	99.1	633	132	706	8.45	102	38.6	157
	35	10.3	12.5	0.3	6.56	0.52	285	45.6	5.25	51.2	24.5	7.47	1.54	11.5
52	6,650	318	7.62	167	13.2	119	747	133	839	10.2	122	39.1	188	
W12 X8	40	11.7	11.9	0.295	8.01	0.515	307	51.5	5.13	57	44.1	11	1.94	16.8
	60	7,550	302	7.49	203	13.1	128	844	130	934	18.4	180	49.3	275
	45	13.1	12.1	0.335	8.05	0.575	348	57.7	5.15	64.2	50	12.4	1.95	19
	67	8,450	307	8.51	204	14.6	145	946	131	1,050	20.8	203	49.5	311
	50	14.6	12.2	0.37	8.08	0.64	391	64.2	5.18	71.9	56.3	13.9	1.96	21.3
	74	9,420	310	9.4	205	16.3	163	1,050	132	1,180	23.4	228	49.8	349
W12 X10	53	15.6	12.1	0.345	10	0.575	425	70.6	5.23	77.9	95.8	19.2	2.48	29.1
	79	10,100	307	8.76	254	14.6	177	1,160	133	1,280	39.9	315	63	477
	58	17	12.2	0.36	10	0.64	475	78	5.28	86.4	107	21.4	2.51	32.5
86	11,000	310	9.14	254	16.3	198	1,280	134	1,420	44.5	351	63.8	533	

Shape	Area	WEB		FLANGE		AXIS X-X				AXIS Y-Y				
		d	t _w	b _f	t _f	I _x	S _x	r _x	Z _x	I _y	S _y	r _y	Z _y	
		in. (mm)	in. (mm)	in. (mm)	in. (mm)	in.4 (10 ⁶ mm ⁴)	in.3 (10 ³ mm ³)	in.3 (mm)	in. (10 ³ mm ²)	in.4 (10 ⁶ mm ⁴)	in.3 (10 ³ mm ³)	in.3 (mm)	in. (10 ³ mm ²)	
W12X12 W310X	65	19.1	12.1	0.39	12	0.605	533	87.9	5.28	96.8	174	29.1	3.02	44.1
	97	12,300	307	9.91	305	15.4	222	1,440	134	1,590	72.4	477	76.7	723
	72	21.1	12.3	0.43	12	0.67	597	97.4	5.31	108	195	32.4	3.04	49.2
	107	13,600	312	10.9	305	17	248	1,600	135	1,770	81.2	531	77.2	806
	79	23.2	12.4	0.47	12.1	0.735	662	107	5.34	119	216	35.8	3.05	54.3
	117	15,000	315	11.9	307	18.7	276	1,750	136	1,950	89.9	587	77.5	890
	87	25.6	12.5	0.515	12.1	0.81	740	118	5.38	132	241	39.7	3.07	60.4
	129	16,500	318	13.1	307	20.6	308	1,930	137	2,160	100	651	78	990
	96	28.2	12.7	0.55	12.2	0.9	833	131	5.44	147	270	44.4	3.09	67.5
	143	18,200	323	14	310	22.9	347	2,150	138	2,410	112	728	78.5	1,110
	106	31.2	12.9	0.61	12.2	0.99	933	145	5.47	164	301	49.3	3.11	75.1
	158	20,100	328	15.5	310	25.1	388	2,380	139	2,690	125	808	79	1,230
	120	35.2	13.1	0.71	12.3	1.11	1,070	163	5.51	186	345	56	3.13	85.4
	179	22,700	333	18	312	28.2	445	2,670	140	3,050	144	918	79.5	1,400
	136	39.9	13.4	0.79	12.4	1.25	1,240	186	5.58	214	398	64.2	3.16	98
	202	25,700	340	20.1	315	31.8	516	3,050	142	3,510	166	1,050	80.3	1,610
	152	44.7	13.7	0.87	12.5	1.4	1,430	209	5.66	243	454	72.8	3.19	111
	226	28,800	348	22.1	318	35.6	595	3,420	144	3,980	189	1,190	81	1,820
	170	50	14	0.96	12.6	1.56	1,650	235	5.74	275	517	82.3	3.22	126
	253	32,300	356	24.4	320	39.6	687	3,850	146	4,510	215	1,350	81.8	2,060
190	56	14.4	1.06	12.7	1.74	1,890	263	5.82	311	589	93	3.25	143	
283	36,100	366	26.9	323	44.2	787	4,310	148	5,100	245	1,520	82.6	2,340	
210	61.8	14.7	1.18	12.8	1.9	2,140	292	5.89	348	664	104	3.28	159	
313	39,900	373	30	325	48.3	891	4,790	150	5,700	276	1,700	83.3	2,610	
W14X5	22	6.49	13.7	0.23	5	0.335	199	29	5.54	33.2	7	2.8	1.04	4.39
	32.9	4,190	348	5.84	127	8.51	82.8	475	141	544	2.91	45.9	26.4	71.9
	26	7.69	13.9	0.255	5.03	0.42	245	35.3	5.65	40.2	8.91	3.55	1.08	5.54
39	4,960	353	6.48	128	10.7	102	578	144	659	3.71	58.2	27.4	90.8	
W14X6¾ W360X	30	8.85	13.8	0.27	6.73	0.385	291	42	5.73	47.3	19.6	5.82	1.49	8.99
	44	5,710	351	6.86	171	9.78	121	688	146	775	8.16	95.4	37.8	147
	34	10	14	0.285	6.75	0.455	340	48.6	5.83	54.6	23.3	6.91	1.53	10.6
	51	6,450	356	7.24	171	11.6	142	796	148	895	9.7	113	38.9	174
	38	11.2	14.1	0.31	6.77	0.515	385	54.6	5.87	61.5	26.7	7.88	1.55	12.1
	57.8	7,230	358	7.87	172	13.1	160	895	149	1,010	11.1	129	39.4	198
	43	12.6	13.7	0.305	8	0.53	428	62.6	5.82	69.6	45.2	11.3	1.89	17.3
	64	8,130	348	7.75	203	13.5	178	1,030	148	1,140	18.8	185	48	283
	48	14.1	13.8	0.34	8.03	0.595	484	70.2	5.85	78.4	51.4	12.8	1.91	19.6
	72	9,100	351	8.64	204	15.1	201	1,150	149	1,280	21.4	210	48.5	321
53	15.6	13.9	0.37	8.06	0.66	541	77.8	5.89	87.1	57.7	14.3	1.92	22	
79	10,100	353	9.4	205	16.8	225	1,270	150	1,430	24	234	48.8	361	

Shape	Area	WEB		FLANGE		AXIS X-X				AXIS Y-Y				
		d	tw	b _f	t _f	I _x	S _x	r _x	Z _x	I _y	S _y	r _y	Z _y	
		in. (mm)	in. (mm)	in. (mm)	in. (mm)	in. ⁴ (10 ⁶ mm ⁴)	in. ³ (10 ³ mm ³)	in. ³ (mm ³)	in. ³ (10 ³ mm ³)	in. ⁴ (10 ⁶ mm ⁴)	in. ³ (10 ³ mm ³)	in. ³ (mm ³)	in. ³ (10 ³ mm ³)	
W14X10	61	17.9	13.9	0.375	10	0.645	640	92.1	5.98	102	107	21.5	2.45	32.8
	91	11,500	353	9.53	254	16.4	266	1,510	152	1,670	44.5	352	62.2	537
	68	20	14	0.415	10	0.72	722	103	6.01	115	121	24.2	2.46	36.9
	101	12,900	356	10.5	254	18.3	301	1,690	153	1,880	50.4	397	62.5	605
	74	21.8	14.2	0.45	10.1	0.785	795	112	6.04	126	134	26.6	2.48	40.5
	110	14,100	361	11.4	257	19.9	331	1,840	153	2,060	55.8	436	63	664
	82	24	14.3	0.51	10.1	0.855	881	123	6.05	139	148	29.3	2.48	44.8
	122	15,500	363	13	257	21.7	367	2,020	154	2,280	61.6	480	63	734
	90	26.5	14	0.44	14.5	0.71	999	143	6.14	157	362	49.9	3.7	75.6
	134	17,100	356	11.2	368	18	416	2,340	156	2,570	151	818	94	1,240
W14X14½	99	29.1	14.2	0.485	14.6	0.78	1,110	157	6.17	173	402	55.2	3.71	83.6
	147	18,800	361	12.3	371	19.8	462	2,570	157	2,830	167	905	94.2	1,370
	109	32	14.3	0.525	14.6	0.86	1,240	173	6.22	192	447	61.2	3.73	92.7
	162	20,600	363	13.3	371	21.8	516	2,830	158	3,150	186	1,000	94.7	1,520
	120	35.3	14.5	0.59	14.7	0.94	1,380	190	6.24	212	495	67.5	3.74	102
	179	22,800	368	15	373	23.9	574	3,110	158	3,470	206	1,110	95	1,670
	132	38.8	14.7	0.645	14.7	1.03	1,530	209	6.28	234	548	74.5	3.76	113
	196	25,000	373	16.4	373	26.2	637	3,420	160	3,830	228	1,220	95.5	1,850
	145	42.7	14.8	0.68	15.5	1.09	1,710	232	6.33	260	677	87.3	3.98	133
	216	27,500	376	17.3	394	27.7	712	3,800	161	4,260	282	1,430	101	2,180
W14X16	159	46.7	15	0.745	15.6	1.19	1,900	254	6.38	287	748	96.2	4	146
	237	30,100	381	18.9	396	30.2	791	4,160	162	4,700	311	1,580	102	2,390
	176	51.8	15.2	0.83	15.7	1.31	2,140	281	6.43	320	838	107	4.02	163
	262	33,400	386	21.1	399	33.3	891	4,600	163	5,240	349	1,750	102	2,670
	193	56.8	15.5	0.89	15.7	1.44	2,400	310	6.5	355	931	119	4.05	180
	287	36,600	394	22.6	399	36.6	999	5,080	165	5,820	388	1,950	103	2,950
	211	62	15.7	0.98	15.8	1.56	2,660	338	6.55	390	1,030	130	4.07	198
	314	40,000	399	24.9	401	39.6	1,110	5,540	166	6,390	429	2,130	103	3,240
	233	68.5	16	1.07	15.9	1.72	3,010	375	6.63	436	1,150	145	4.1	221
	347	44,200	406	27.2	404	43.7	1,250	6,150	168	7,140	479	2,380	104	3,620
W16X15½	257	75.6	16.4	1.18	16	1.89	3,400	415	6.71	487	1,290	161	4.13	246
	382	48,800	417	30	406	48	1,420	6,800	170	7,980	537	2,640	105	4,030
	26	7.68	15.7	0.25	5.5	0.345	301	38.4	6.26	44.2	9.59	3.49	1.12	5.48
	38.8	4,950	399	6.35	140	8.76	125	629	159	724	3.99	57.2	28.4	89.8
	31	9.13	15.9	0.275	5.53	0.44	375	47.2	6.41	54	12.4	4.49	1.17	7.03
	46.1	5,890	404	6.99	140	11.2	156	773	163	885	5.16	73.6	29.7	115

Shape	Area	WEB		FLANGE		AXIS X-X				AXIS Y-Y				
		d	t _w	b _f	t _f	I _x	S _x	r _x	Z _x	I _y	S _y	r _y	Z _y	
		in. (mm)	in. (mm)	in. (mm)	in. (mm)	in. ⁴ (10 ⁶ mm ⁴)	in. ³ (10 ³ mm ³)	in. ³ (mm ³)	in. (10 ³ mm ³)	in. ⁴ (10 ⁶ mm ⁴)	in. ³ (10 ³ mm ³)	in. ³ (mm ³)	in. (10 ³ mm ³)	
W16X7	36	10.6	15.9	0.295	6.99	0.43	448	56.5	6.51	64	24.5	7	1.52	10.8
	53	6,840	404	7.49	178	10.9	186	926	165	1,050	10.2	115	38.6	177
	40	11.8	16	0.305	7	0.505	518	64.7	6.63	73	28.9	8.25	1.57	12.7
	60	7,610	406	7.75	178	12.8	216	1,060	168	1,200	12	135	39.9	208
	45	13.3	16.1	0.345	7.04	0.565	586	72.7	6.65	82.3	32.8	9.34	1.57	14.5
	67	8,580	409	8.76	179	14.4	244	1,190	169	1,350	13.7	153	39.9	238
	50	14.7	16.3	0.38	7.07	0.63	659	81	6.68	92	37.2	10.5	1.59	16.3
	75	9,480	414	9.65	180	16	274	1,330	170	1,510	15.5	172	40.4	267
W16 X W410 X	57	16.8	16.4	0.43	7.12	0.715	758	92.2	6.72	105	43.1	12.1	1.6	18.9
	85	10,800	417	10.9	181	18.2	316	1,510	171	1,720	17.9	198	40.6	310
W16X10¼	67	19.6	16.3	0.395	10.2	0.665	954	117	6.96	130	119	23.2	2.46	35.5
	100	12,600	414	10	259	16.9	397	1,920	177	2,130	49.5	380	62.5	582
	77	22.6	16.5	0.455	10.3	0.76	1,110	134	7	150	138	26.9	2.47	41.1
	114	14,600	419	11.6	262	19.3	462	2,200	178	2,460	57.4	441	62.7	674
	89	26.2	16.8	0.525	10.4	0.875	1,300	155	7.05	175	163	31.4	2.49	48.1
	132	16,900	427	13.3	264	22.2	541	2,540	179	2,870	67.8	515	63.2	788
	100	29.4	17	0.585	10.4	0.985	1,490	175	7.1	198	186	35.7	2.51	54.9
	149	19,000	432	14.9	264	25	620	2,870	180	3,240	77.4	585	63.8	900
W18X6	35	10.3	17.7	0.3	6	0.425	510	57.6	7.04	66.5	15.3	5.12	1.22	8.06
	52	6,650	450	7.62	152	10.8	212	944	179	1,090	6.37	83.9	31	132
	40	11.8	17.9	0.315	6.02	0.525	612	68.4	7.21	78.4	19.1	6.35	1.27	10
	60	7,610	455	8	153	13.3	255	1,120	183	1,280	7.95	104	32.3	164
W18 X W460 X	46	13.5	18.1	0.36	6.06	0.605	712	78.8	7.25	90.7	22.5	7.43	1.29	11.7
	68	8,710	460	9.14	154	15.4	296	1,290	184	1,490	9.37	122	32.8	192
	50	14.7	18	0.355	7.5	0.57	800	88.9	7.38	101	40.1	10.7	1.65	16.6
	74	9,480	457	9.02	191	14.5	333	1,460	187	1,660	16.7	175	41.9	272
	55	16.2	18.1	0.39	7.53	0.63	890	98.3	7.41	112	44.9	11.9	1.67	18.5
	82	10,500	460	9.91	191	16	370	1,610	188	1,840	18.7	195	42.4	303
	60	17.6	18.2	0.415	7.56	0.695	984	108	7.47	123	50.1	13.3	1.68	20.6
	89	11,400	462	10.5	192	17.7	410	1,770	190	2,020	20.9	218	42.7	338
W18X7½	65	19.1	18.4	0.45	7.59	0.75	1,070	117	7.49	133	54.8	14.4	1.69	22.5
	97	12,300	467	11.4	193	19.1	445	1,920	190	2,180	22.8	236	42.9	369
	71	20.9	18.5	0.495	7.64	0.81	1,170	127	7.5	146	60.3	15.8	1.7	24.7
	106	13,500	470	12.6	194	20.6	487	2,080	191	2,390	25.1	259	43.2	405

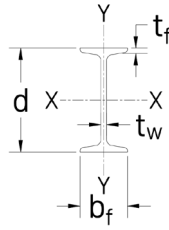
Shape	Area	WEB		FLANGE		AXIS X-X				AXIS Y-Y				
		d	tw	b _f	t _f	I _x	S _x	r _x	Z _x	I _y	S _y	r _y	Z _y	
		in. (mm)	in. (mm)	in. (mm)	in. (mm)	in. ⁴ (10 ⁶ mm ⁴)	in. ³ (10 ³ mm ³)	in. ³ (mm ³)	in. ³ (10 ³ mm ³)	in. ⁴ (10 ⁶ mm ⁴)	in. ³ (10 ³ mm ³)	in. ³ (mm ³)	in. ³ (10 ³ mm ³)	
W18 X W460 X	76	22.3	18.2	0.425	11	0.68	1,330	146	7.73	163	152	27.6	2.61	42.2
	113	14,400	462	10.8	279	17.3	554	2,390	196	2,670	63.3	452	66.3	692
	86	25.3	18.4	0.48	11.1	0.77	1,530	166	7.77	186	175	31.6	2.63	48.4
		128	16,300	467	12.2	282	19.6	637	2,720	197	3,050	72.8	518	66.8
	97	28.5	18.6	0.535	11.1	0.87	1,750	188	7.82	211	201	36.1	2.65	55.3
		144	18,400	472	13.6	282	22.1	728	3,080	199	3,460	83.7	592	67.3
	106	31.1	18.7	0.59	11.2	0.94	1,910	204	7.84	230	220	39.4	2.66	60.5
		158	20,100	475	15	284	23.9	795	3,340	199	3,770	91.6	646	67.6
	119	35.1	19	0.655	11.3	1.06	2,190	231	7.9	262	253	44.9	2.69	69.1
		177	22,600	483	16.6	287	26.9	912	3,790	201	4,290	105	736	68.3
	130	38.3	19.3	0.67	11.2	1.2	2,460	256	8.03	290	278	49.9	2.7	76.7
		193	24,700	490	17	284	30.5	1,020	4,200	204	4,750	116	818	68.6
	143	42	19.5	0.73	11.2	1.32	2,750	282	8.09	322	311	55.5	2.72	85.4
		213	27,100	495	18.5	284	33.5	1,140	4,620	205	5,280	129	909	69.1
	158	46.3	19.7	0.81	11.3	1.44	3,060	310	8.12	356	347	61.4	2.74	94.8
		235	29,900	500	20.6	287	36.6	1,270	5,080	206	5,830	144	1,010	69.6
	175	51.4	20	0.89	11.4	1.59	3,450	344	8.2	398	391	68.8	2.76	106
		260	33,200	508	22.6	290	40.4	1,440	5,640	208	6,520	163	1,130	70.1
	192	56.2	20.4	0.96	11.5	1.75	3,870	380	8.28	442	440	76.8	2.79	119
		286	36,300	518	24.4	292	44.5	1,610	6,230	210	7,240	183	1,260	70.9
211	62.3	20.7	1.06	11.6	1.91	4,330	419	8.35	490	493	85.3	2.82	132	
	315	40,200	526	26.9	295	48.5	1,800	6,870	212	8,030	205	1,400	71.6	2,160
W21 X6 1/2	44	13	20.7	0.35	6.5	0.45	843	81.6	8.06	95.4	20.7	6.37	1.26	10.2
	66	8,390	526	8.89	165	11.4	351	1,340	205	1,560	8.62	104	32	167
	50	14.7	20.8	0.38	6.53	0.535	984	94.5	8.18	110	24.9	7.64	1.3	12.2
	74	9,480	528	9.65	166	13.6	410	1,550	208	1,800	10.4	125	33	200
	57	16.7	21.1	0.405	6.56	0.65	1,170	111	8.36	129	30.6	9.35	1.35	14.8
	85	10,800	536	10.3	167	16.5	487	1,820	212	2,110	12.7	153	34.3	243
	48	14.1	20.6	0.35	8.14	0.43	959	93	8.24	107	38.7	9.52	1.66	14.9
	72	9,100	523	8.89	207	10.9	399	1,520	209	1,750	16.1	156	42.2	244
	55	16.2	20.8	0.375	8.22	0.522	1,140	110	8.4	126	48.4	11.8	1.73	18.4
	82	10,500	528	9.53	209	13.3	475	1,800	213	2,060	20.1	193	43.9	302
W21 X 1/4	62	18.3	21	0.4	8.24	0.615	1,330	127	8.54	144	57.5	14	1.77	21.7
	92	11,800	533	10.2	209	15.6	554	2,080	217	2,360	23.9	229	45	356
	68	20	21.1	0.43	8.27	0.685	1,480	140	8.6	160	64.7	15.7	1.8	24.4
	101	12,900	536	10.9	210	17.4	616	2,290	218	2,620	26.9	257	45.7	400
	73	21.5	21.2	0.455	8.3	0.74	1,600	151	8.64	172	70.6	17	1.81	26.6
	109	13,900	538	11.6	211	18.8	666	2,470	219	2,820	29.4	279	46	436
	83	24.4	21.4	0.515	8.36	0.835	1,830	171	8.67	196	81.4	19.5	1.83	30.5
	123	15,700	544	13.1	212	21.2	762	2,800	220	3,210	33.9	320	46.5	500
	93	27.3	21.6	0.58	8.42	0.93	2,070	192	8.7	221	92.9	22.1	1.84	34.7
	138	17,600	549	14.7	214	23.6	862	3,150	221	3,620	38.7	362	46.7	569

Shape	Area	WEB		FLANGE		AXIS X-X				AXIS Y-Y				
		d	t _w	b _f	t _f	I _x	S _x	r _x	Z _x	I _y	S _y	r _y	Z _y	
		in. (mm)	in. (mm)	in. (mm)	in. (mm)	in.4 (10 ⁶ mm ⁴)	in.3 (10 ³ mm ³)	in.3 (mm)	in. (10 ³ mm ³)	in.4 (10 ⁶ mm ⁴)	in.3 (10 ³ mm ³)	in.3 (mm)	in. (10 ³ mm ³)	
W21 X 12½ WS30 X	101	29.8	21.4	0.5	12.3	0.8	2,420	227	9.02	253	248	40.3	2.89	61.7
	150	19,200	544	12.7	312	20.3	1,010	3,720	229	4,150	103	660	73.4	1,010
	111	32.6	21.5	0.55	12.3	0.875	2,670	249	9.05	279	274	44.5	2.9	68.2
	165	21,000	546	14	312	22.2	1,110	4,080	230	4,570	114	729	73.7	1,120
	122	35.9	21.7	0.6	12.4	0.96	2,960	273	9.09	307	305	49.2	2.92	75.6
	182	23,200	551	15.2	315	24.4	1,230	4,470	231	5,030	127	806	74.2	1,240
	132	38.8	21.8	0.65	12.4	1.04	3,220	295	9.12	333	333	53.5	2.93	82.3
	196	25,000	554	16.5	315	26.4	1,340	4,830	232	5,460	139	877	74.4	1,350
	147	43.2	22.1	0.72	12.5	1.15	3,630	329	9.17	373	376	60.1	2.95	92.6
	219	27,900	561	18.3	318	29.2	1,510	5,390	233	6,110	157	985	74.9	1,520
	166	48.8	22.5	0.75	12.4	1.36	4,280	380	9.36	432	435	70	2.99	108
	248	31,500	572	19.1	315	34.5	1,780	6,230	238	7,080	181	1,150	75.9	1,770
	182	53.6	22.7	0.83	12.5	1.48	4,730	417	9.4	476	483	77.2	3	119
	272	34,600	577	21.1	318	37.6	1,970	6,830	239	7,800	201	1,270	76.2	1,950
201	59.3	23	0.91	12.6	1.63	5,310	461	9.47	530	542	86.1	3.02	133	
300	38,300	584	23.1	320	41.4	2,210	7,550	241	8,690	226	1,410	76.7	2,180	
W24 X 7	55	16.2	23.6	0.395	7.01	0.505	1,350	114	9.11	134	29.1	8.3	1.34	13.3
	82	10,500	599	10	178	12.8	562	1,870	231	2,200	12.1	136	34	218
	62	18.2	23.7	0.43	7.04	0.59	1,550	131	9.23	153	34.5	9.8	1.38	15.7
	92	11,700	602	10.9	179	15	645	2,150	234	2,510	14.4	161	35.1	257
W24 X 9	68	20.1	23.7	0.415	8.97	0.585	1,830	154	9.55	177	70.4	15.7	1.87	24.5
	101	13,000	602	10.5	228	14.9	762	2,520	243	2,900	29.3	257	47.5	401
	76	22.4	23.9	0.44	8.99	0.68	2,100	176	9.69	200	82.5	18.4	1.92	28.6
	113	14,500	607	11.2	228	17.3	874	2,880	246	3,280	34.3	302	48.8	469
	84	24.7	24.1	0.47	9.02	0.77	2,370	196	9.79	224	94.4	20.9	1.95	32.6
	125	15,900	612	11.9	229	19.6	986	3,210	249	3,670	39.3	342	49.5	534
	94	27.7	24.3	0.515	9.07	0.875	2,700	222	9.87	254	109	24	1.98	37.5
	140	17,900	617	13.1	230	22.2	1,120	3,640	251	4,160	45.4	393	50.3	615
	103	30.3	24.5	0.55	9	0.98	3,000	245	10	280	119	26.5	1.99	41.5
	153	19,500	622	14	229	24.9	1,250	4,010	254	4,590	49.5	434	50.5	680
W24 X W610 X	104	30.7	24.1	0.5	12.8	0.75	3,100	258	10.1	289	259	40.7	2.91	62.4
	155	19,800	612	12.7	325	19.1	1,290	4,230	257	4,740	108	667	73.9	1,020
	117	34.4	24.3	0.55	12.8	0.85	3,540	291	10.1	327	297	46.5	2.94	71.4
	174	22,200	617	14	325	21.6	1,470	4,770	257	5,360	124	762	74.7	1,170
W24 X 12¾	131	38.6	24.5	0.605	12.9	0.96	4,020	329	10.2	370	340	53	2.97	81.5
	195	24,900	622	15.4	328	24.4	1,670	5,390	259	6,060	142	869	75.4	1,340
	146	43	24.7	0.65	12.9	1.09	4,580	371	10.3	418	391	60.5	3.01	93.2
	217	27,700	627	16.5	328	27.7	1,910	6,080	262	6,850	163	991	76.5	1,530
	162	47.8	25	0.705	13	1.22	5,170	414	10.4	468	443	68.4	3.05	105
	241	30,800	635	17.9	330	31	2,150	6,780	264	7,670	184	1,120	77.5	1,720
	176	51.7	25.2	0.75	12.9	1.34	5,680	450	10.5	511	479	74.3	3.04	115
	262	33,400	640	19.1	328	34	2,360	7,370	267	8,370	199	1,220	77.2	1,880
	192	56.5	25.5	0.81	13	1.46	6,260	491	10.5	559	530	81.8	3.07	126
	285	36,500	648	20.6	330	37.1	2,610	8,050	267	9,160	221	1,340	78	2,060
	207	60.7	25.7	0.87	13	1.57	6,820	531	10.6	606	578	88.8	3.08	137
307	39,200	653	22.1	330	39.9	2,840	8,700	269	9,930	241	1,460	78.2	2,250	

Shape	Area	WEB		FLANGE		AXIS X-X				AXIS Y-Y				
		d	tw	b _f	t _f	I _x	S _x	r _x	Z _x	I _y	S _y	r _y	Z _y	
		in. (mm)	in. (mm)	in. (mm)	in. (mm)	in.4 (10 ⁴ mm ⁴)	in.3 (10 ³ mm ³)	in.3 (mm)	in. (10 ³ mm ³)	in.4 (10 ⁴ mm ⁴)	in.3 (10 ³ mm ³)	in.3 (mm)	in. (10 ³ mm ³)	
W27x10	84	24.7	26.7	0.46	10	0.64	2,850	213	10.7	244	106	21.2	2.07	33.2
	125	15,900	678	11.7	254	16.3	1,190	3,490	272	4,000	44.1	347	52.6	544
	94	27.6	26.9	0.49	10	0.745	3,270	243	10.9	278	124	24.8	2.12	38.8
	140	17,800	683	12.4	254	18.9	1,360	3,980	277	4,560	51.6	406	53.8	636
	102	30	27.1	0.515	10	0.83	3,620	267	11	305	139	27.8	2.15	43.4
	152	19,400	688	13.1	254	21.1	1,510	4,380	279	5,000	57.9	456	54.6	711
	114	33.6	27.3	0.57	10.1	0.93	4,080	299	11	343	159	31.5	2.18	49.3
	170	21,700	693	14.5	257	23.6	1,700	4,900	279	5,620	66.2	516	55.4	808
	129	37.8	27.6	0.61	10	1.1	4,760	345	11.2	395	184	36.8	2.21	57.6
	192	24,400	701	15.5	254	27.9	1,980	5,650	284	6,470	76.6	603	56.1	944
W27 X W690 X	146	43.2	27.4	0.605	14	0.975	5,660	414	11.5	464	443	63.5	3.2	97.7
	217	27,900	696	15.4	356	24.8	2,360	6,780	292	7,600	184	1,040	81.3	1,600
	161	47.6	27.6	0.66	14	1.08	6,310	458	11.5	515	497	70.9	3.23	109
	240	30,700	701	16.8	356	27.4	2,630	7,510	292	8,440	207	1,160	82	1,790
	178	52.5	27.8	0.725	14.1	1.19	7,020	505	11.6	570	555	78.8	3.25	122
	265	33,900	706	18.4	358	30.2	2,920	8,280	295	9,340	231	1,290	82.6	2,000
	194	57.1	28.1	0.75	14	1.34	7,860	559	11.7	631	619	88.1	3.29	136
	289	36,800	714	19.1	356	34	3,270	9,160	297	10,300	258	1,440	83.6	2,230
	217	63.9	28.4	0.83	14.1	1.5	8,910	627	11.8	711	704	100	3.32	154
	323	41,200	721	21.1	358	38.1	3,710	10,300	300	11,700	293	1,640	84.3	2,520
W30 X W760 X	235	69.4	28.7	0.91	14.2	1.61	9,700	677	11.8	772	769	108	3.33	168
	350	44,800	729	23.1	361	40.9	4,040	11,100	300	12,700	320	1,770	84.6	2,750
	90	26.3	29.5	0.47	10.4	0.61	3,610	245	11.7	283	115	22.1	2.09	34.7
	134	17,000	749	11.9	264	15.5	1,500	4,010	297	4,640	47.9	362	53.1	569
	99	29	29.7	0.52	10.5	0.67	3,990	269	11.7	312	128	24.5	2.1	38.6
	147	18,700	754	13.2	267	17	1,660	4,410	297	5,110	53.3	401	53.3	633
	108	31.7	29.8	0.545	10.5	0.76	4,470	299	11.9	346	146	27.9	2.15	43.9
	161	20,500	757	13.8	267	19.3	1,860	4,900	302	5,670	60.8	457	54.6	719
	116	34.2	30	0.565	10.5	0.85	4,930	329	12	378	164	31.3	2.19	49.2
	173	22,100	762	14.4	267	21.6	2,050	5,390	305	6,190	68.3	513	55.6	806
W33 X W840 X	124	36.5	30.2	0.585	10.5	0.93	5,360	355	12.1	408	181	34.4	2.23	54
	185	23,500	767	14.9	267	23.6	2,230	5,820	307	6,690	75.3	564	56.6	885
	132	38.8	30.3	0.615	10.5	1	5,770	380	12.2	437	196	37.2	2.25	58.4
	196	25,000	770	15.6	267	25.4	2,400	6,230	310	7,160	81.6	610	57.2	957
	148	43.6	30.7	0.65	10.5	1.18	6,680	436	12.4	500	227	43.3	2.28	68
	220	28,100	780	16.5	267	30	2,780	7,140	315	8,190	94.5	710	57.9	1,110
	118	34.7	32.9	0.55	11.5	0.74	5,900	359	13	415	187	32.6	2.32	51.3
	176	22,400	836	14	292	18.8	2,460	5,880	330	6,800	77.8	534	58.9	841
	130	38.3	33.1	0.58	11.5	0.855	6,710	406	13.2	467	218	37.9	2.39	59.5
	193	24,700	841	14.7	292	21.7	2,790	6,650	335	7,650	90.7	621	60.7	975
W33 X W840 X	141	41.5	33.3	0.605	11.5	0.96	7,450	448	13.4	514	246	42.7	2.43	66.9
	210	26,800	846	15.4	292	24.4	3,100	7,340	340	8,420	102	700	61.7	1,100
	152	44.9	33.5	0.635	11.6	1.06	8,160	487	13.5	559	273	47.2	2.47	73.9
	226	29,000	851	16.1	295	26.9	3,400	7,980	343	9,160	114	773	62.7	1,210
	169	49.5	33.8	0.67	11.5	1.22	9,290	549	13.7	629	310	53.9	2.5	84.4
	251	31,900	859	17	292	31	3,870	9,000	348	10,300	129	883	63.5	1,380

Shape		WEB		FLANGE		AXIS X-X				AXIS Y-Y				
in. (mm)	lb/ft (kg/m)	in. ² (cm ²)	d in. (mm)	t _w in. (mm)	b _f in. (mm)	t _f in. (mm)	I _x in. ⁴ (10 ⁶ mm ⁴)	S _x in. ³ (10 ³ mm ³)	r _x in. ³ (mm)	Z _x in. (10 ³ mm ³)	I _y in. ⁴ (10 ⁶ mm ⁴)	S _y in. ³ (10 ³ mm ³)	r _y in. ³ (mm)	Z _y in. (10 ³ mm ³)
W36 X W920 X	135	39.9	35.6	0.6	12	0.79	7,800	439	14	509	225	37.7	2.38	59.7
	201	25,700	904	15.2	305	20.1	3,250	7,190	356	8,340	93.7	618	60.5	978
	150	44.3	35.9	0.625	12	0.94	9,040	504	14.3	581	270	45.1	2.47	70.9
	223	28,600	912	15.9	305	23.9	3,760	8,260	363	9,520	112	739	62.7	1,160
	160	47	36	0.65	12	1.02	9,760	542	14.4	624	295	49.1	2.5	77.3
	238	30,300	914	16.5	305	25.9	4,060	8,880	366	10,200	123	805	63.5	1,270
	170	50	36.2	0.68	12	1.1	10,500	581	14.5	668	320	53.2	2.53	83.8
	253	32,300	919	17.3	305	27.9	4,370	9,520	368	10,900	133	872	64.3	1,370
	182	53.6	36.3	0.725	12.1	1.18	11,300	623	14.5	718	347	57.6	2.55	90.7
	271	34,600	922	18.4	307	30	4,700	10,200	368	11,800	144	944	64.8	1,490
	194	57	36.5	0.765	12.1	1.26	12,100	664	14.6	767	375	61.9	2.56	97.7
	289	36,800	927	19.4	307	32	5,040	10,900	371	12,600	156	1,010	65	1,600
	210	61.9	36.7	0.83	12.2	1.36	13,200	719	14.6	833	411	67.5	2.58	107
	313	313	39,900	21.1	310	34.5	5,490	11,800	371	13,700	171	1,110	65.5	1,750
	232	68	37.1	0.87	12.1	1.57	15,000	809	14.8	936	468	77.2	2.62	122
	345	43,900	943	22.1	307	39.9	6,240	13,300	376	15,300	195	1,270	66.5	2,000
	256	75.3	37.4	0.96	12.2	1.73	16,800	895	14.9	1,040	528	86.5	2.65	137
	381	48,600	951	24.4	310	43.9	6,990	14,700	378	17,000	220	1,420	67.3	2,250

- d - Depth
- t_w - Thickness of web
- t_f - Thickness of flange
- b_f - Width of flange

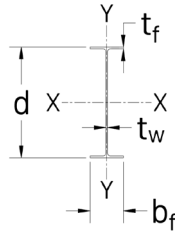


- I - Moment of inertia
- S - Elastic section modulus
- r - Radius of gyration
- Z - Plastic section modulus

STANDARD BEAM DIMENSIONS

Shape		Area	d	WEB		FLANGE		AXIS X-X				AXIS Y-Y			
				t_w	b_f	t_f	I_x	S_x	r_x	Z_x	I_y	S_y	r_y	Z_y	
in.	lb/ft	in. ²	in.	in.	in.	in.	in. ⁴	in. ³	in. ³	in.	in. ⁴	in. ³	in. ³	in.	
(mm)	(kg/m)	(cm ²)	(mm)	(mm)	(mm)	(mm)	(10 ⁴ mm ⁴)	(10 ³ mm ³)	(mm)	(10 ² mm ²)	(10 ⁶ mm ⁴)	(10 ³ mm ³)	(mm)	(10 ² mm ²)	
S3 X S75 X	5.7	1.66	3	0.17	2.33	0.26	2.50	1.67	1.23	1.94	0.447	0.383	0.518	0.656	
	8.5	1,070	76	4.3	59	6.6	1.04	27	31	32	0.186	6.28	13.2	10.70	
	7.5	2.2	3	0.349	2.51	0.26	2.91	1.94	1.15	2.35	0.578	0.461	0.513	0.821	
S4 X S100 X	11.2	1,420	76	8.9	64	6.6	1.21	32	29	39	0.241	7.55	13.0	13.50	
	7.7	2.26	4	0.193	2.66	0.293	6.05	3.03	1.64	3.50	0.748	0.562	0.6	0.97	
	11.5	1,460	102	4.9	68	7.4	2.52	50	42	57	0.311	9.21	14.6	15.90	
S5 X S130 X	9.5	2.79	4	0.326	2.8	0.293	6.76	3.38	1.56	4.04	0.887	0.635	0.564	1.13	
	14.1	1,800	102	8.3	71	7.4	2.81	55	40	66	0.369	10.40	14.3	18.50	
	10	2.93	5	0.214	3	0.326	12.30	4.90	2.05	5.66	1.190	0.795	0.638	1.37	
S6 X S150 X	15	1,890	127	5.4	76	8.3	5.12	80	52	93	0.495	13.00	16.2	22.50	
	12.5	3.66	6	0.232	3.33	0.359	22.0	7.34	2.45	8.45	1.800	1.08	0.7	1.86	
	18.6	2,360	152	5.9	85	9.1	9.16	120	62	138	0.749	17.70	17.8	30.50	
S8 X S200 X	17.25	5.05	6	0.465	3.57	0.359	26.2	8.74	2.28	10.5	2.290	1.28	0.673	2.35	
	25.7	3,260	152	11.8	91	9.1	10.90	143	58	172	0.953	21.00	17.1	38.50	
	18.4	5.4	8	0.271	4	0.425	57.5	14.4	3.26	16.5	3.690	1.84	0.8	3.18	
S10 X S250 X	27.4	3,480	203	6.9	102	10.8	23.90	236	83	270	1.540	30.20	21.0	52.10	
	23	6.76	8	0.441	4.17	0.425	64.7	16.2	3.09	19.2	4.270	2.05	0.795	3.67	
	34	4,360	203	11.2	106	10.8	26.90	265	79	315	1.780	33.60	20.2	60.10	
S12 X S310 X	25.4	7.45	10	0.311	4.66	0.491	123.0	24.6	4.07	28.3	6.730	2.89	1.0	4.99	
	37.8	4,810	254	7.9	118	12.5	51.20	403	103	464	2.800	47.40	24.1	81.80	
	35	10.3	10	0.594	4.94	0.491	147.0	29.4	3.78	35.4	8.300	3.36	0.899	6.19	
S12 X S310 X	52	6,650	254	15.1	125	12.5	61.20	482	96	580	3.450	55.10	22.8	101.00	
	31.8	9.31	12	0.35	5	0.544	217.0	36.2	4.83	41.8	9.330	3.73	1.0	6.44	
	47.3	6,010	305	8.9	127	13.8	90.30	593	123	685	3.880	61.10	25.4	106.00	

- d - Depth
- t_w - Thickness of web
- t_f - Thickness of flange
- b_f - Width of flange



- I - Moment of inertia
- S - Elastic section modulus
- r - Radius of gyration
- Z - Plastic section modulus

MISCELLANEOUS BEAM DIMENSIONS

Shape		Area		WEB		FLANGE		AXIS X-X				AXIS Y-Y			
				d	t_w	b_f	t_f	I_x	S_x	r_x	Z_x	I_y	S_y	r_y	Z_y
in. (mm)	lb/ft (kg/m)	in. ² (cm ²)	in. (mm)	in. (mm)	in. (mm)	in. (mm)	in. ⁴ (10 ⁶ mm ⁴)	in. ³ (10 ³ mm ³)	in. ³ (mm)	in. ³ (10 ³ mm ³)	in. ⁴ (10 ⁶ mm ⁴)	in. ³ (10 ³ mm ³)	in. ³ (mm)	in. ³ (10 ³ mm ³)	
M8 X	6.5	1.92	8	0.135	2.28	0.189	19	4.63	3.11	5.43	0.376	0.329	0.443	0.529	
M200 X	9.7	1,240	203	3.4	58	4.8	8	76	79	89	0.157	5.39	11.3	8.67	
M10 X	8	2.37	9.95	0.141	2.69	0.182	35	6.95	3.82	8.2	0.593	0.441	0.5	0.711	
	M250 X	11.9	1,530	253	3.6	68	4.6	14	114	97	0.247	7.23	12.7	11.70	
	9	2.65	10	0.157	2.69	0.206	39	7.79	3.83	9.22	0.672	0.5	0.503	0.809	
	13.4	1,710	254	4.0	68	5.2	16	128	97	151	0.280	8.19	12.8	13.30	
M12 X	10.8	3.18	12	0.16	3.07	0.21	67	11.1	4.58	13.2	1.010	0.661	0.564	1.070	
	M310 X	16.1	2,050	305	4.1	78	5.3	28	182	116	0.420	10.80	14.3	17.50	
	11.8	3.47	12.00	0.177	3.065	0.225	72.2	12	4.56	14.3	1.09	0.709	0.559	1.15	
	17.6	22.4	305	4.5	78	5.7	30	197	116	234	0.454	11.6	14.2	18.8	
M12.5 X	11.6	3.4	12.5	0.155	3.5	0.211	80	12.8	4.86	15	1.510	0.864	0.667	1.370	
	M318 X	17.3	2,190	318	3.9	89	5.4	33	210	123	0.629	14.20	16.9	22.50	
	12.4	3.63	12.5	0.155	3.75	0.228	89	14.2	4.96	16.5	2.010	1.070	0.744	1.680	
	18.5	2,340	318	3.9	95	5.8	37	233	126	270	0.837	17.50	18.9	27.50	

SOLAR

Power Block
43
Tracker
3
Row
4





Power Block
43
Tracker
3
Row
4



Photo Credit SB Energy

GERDAU SOLAR PRODUCTS IN USE

ORION SOLAR BELT

Buckholts, Texas

With unprecedented growth in data center development in the US, Gerdau is growing its business to support the energy infrastructure needed for data centers. Gerdau supplied 22,800 tons of structural steel from its mills in Midlothian, TX and Cartersville, GA to the Orion Solar Belt. Given the size of the project, there was no margin for error in meeting the tight delivery schedule for the three sites. Gerdau's optimized solar process provided the flexibility to accommodate design changes and adapt to requirements on a weekly basis.

With nearly 1 GW of capacity spread across three energy facilities in Milam County, TX, the Orion Solar Belt is Google's largest solar energy investment in the world. Built with American-made steel, the project delivers domestic energy to the Texas grid to help power Google's Ellis County data centers and Dallas cloud region.

We're proud to have empowered SB Energy, the project owner, and its EPC provider Blattner to use Gerdau Solar Piles as the steel foundation supporting over 1.3 million solar modules, to build the future of energy independence. Together, we've built a blueprint for domestic innovation, job creation, and energy leadership.

FASTER. CLEANER. 100% DOMESTIC.

GERDAU SOLAR PILE MIDLOTHIAN



Gerdau's North American emissions are substantially lower than overseas solar pile alternatives

Location	Emissions per Tonne
U.S. Scope 1 + 2 Average (CO2e)	
Gerdau	0.89x U.S. Average
Turkey (offshore)	3.55x U.S. Average
India (offshore)	7.62x U.S. Average



100% Domestic: Melted and manufactured in the United States

Vertically integrated supply chain



Powered by renewable energy: 80 megawatt onsite solar farm in TX

Equivalent to the annual energy consumption of 14,000 Texas homes



New state of the art facility, located next to our TX mill

Captive steel supply

Faster lead time and flexible scheduling to match project needs



Dedicated team of project managers

Systems and processes designed for solar

Network of partners for additional value-added processing steps

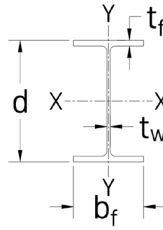


Customizable sections

Higher strength grades available

Design flexibility

- d - Depth
- t_w - Thickness of web
- t_f - Thickness of flange
- b_f - Width of flange



- I - Moment of inertia
- S - Elastic section modulus
- r - Radius of gyration
- Z - Plastic section modulus

WIDE FLANGE BEAM DIMENSIONS

Shape	Area	WEB		FLANGE		AXIS X-X				AXIS Y-Y				
		d	t_w	b_f	t_f	I	S	r	Z	I	S	r	Z	
		in. ² (cm ²)	in. (mm)	in. (mm)	in. (mm)	in. (mm)	in. ⁴ (10 ⁶ mm ⁴)	in. ³ (10 ³ mm ³)	in. ³ (10 ³ mm ³)	in. (10 ³ mm ³)	in. ⁴ (10 ⁶ mm ⁴)	in. ³ (10 ³ mm ³)	in. ³ (mm)	in. (10 ³ mm ³)
W6X4	7	2.1	5.8	0.1	3.9	0.2	12.3	4.3	2.4	4.7	1.6	0.8	0.9	1.3
	10.4	1335.5	147	3.4	99	4.1	5.1	69.6	62.0	77.5	0.7	13.4	22.3	20.6
	7.5	2.3	5.8	0.2	3.9	0.2	13.7	4.7	2.4	5.3	1.8	0.9	0.9	1.4
	11.2	1477.4	148	3.8	100	4.5	5.1	77.0	62.0	86.0	0.7	14.9	22.4	22.9
	8.5	2.52	5.83	0.17	3.94	0.195	14.9	5.1	2.43	5.73	1.99	1.01	0.89	1.56
	13	1,630	148	4.32	100	5.0	6.2	83.6	61.7	93.9	0.828	16.6	22.6	25.6
	9	2.68	5.9	0.17	3.94	0.215	16.4	5.56	2.47	6.23	2.2	1.11	0.905	1.72
	13.5	1,730	150	4.32	100	5.5	6.83	91.1	62.7	102	0.916	18.2	23	28.2
	10.4	3.1	6.0	0.2	4.0	0.2	19.3	6.5	2.5	7.3	2.6	1.3	0.9	2.0
	15.5	2,019	151	5.1	101	6.3	8.0	106.2	63.0	119.8	1.1	21.3	23.1	32.9
W6X10	12	3.55	6.03	0.23	4	0.28	22.1	7.31	2.49	8.3	2.99	1.5	0.918	2.32
	18	2,290	153	5.84	102	7.1	9.2	120	63.2	136	1.24	24.6	23.3	38.0
	16	4.74	6.28	0.26	4.03	0.405	32.1	10.2	2.6	11.7	4.43	2.2	0.967	3.39
	24	3,060	160	6.6	102	10.3	13.4	167	66	192	1.84	36.1	24.6	55.6
	15	4.43	5.99	0.23	5.99	0.26	29.1	9.72	2.56	10.8	9.32	3.11	1.45	4.75
	22.5	2,860	152	5.84	152	6.6	12.1	159	65	177	3.88	51	36.8	77.8
	20	5.87	6.2	0.26	6.02	0.365	41.4	13.4	2.66	14.9	13.3	4.41	1.5	6.72
	29.8	3,790	157	6.6	153	9.27	17.2	220	67.6	246	5.54	72.3	38.1	110
W6X6	25	7.34	6.38	0.32	6.08	0.455	53.4	16.7	2.7	18.9	17.1	5.61	1.52	8.56
	37.1	4,740	162	8.13	154	11.6	22.2	274	68.6	310	7.12	91.9	38.6	140
	10	2.96	7.89	0.17	3.94	0.205	30.8	7.81	3.22	8.87	2.09	1.06	0.841	1.66
W8X200X	15	1,910	200	4.32	100	5.21	12.8	128	81.8	145	0.87	17.4	21.4	27.2
	13	3.84	7.99	0.23	4	0.255	39.6	9.91	3.21	11.4	2.73	1.37	0.843	2.15
	19.3	2,480	203	5.84	102	6.48	16.5	162	81.5	187	1.14	22.5	21.4	35.2
W8X1/4	18	5.26	8.14	0.23	5.25	0.33	61.9	15.2	3.43	17	7.97	3.04	1.23	4.66
	26.6	3,390	207	5.84	133	8.38	25.8	249	87.1	279	3.32	49.8	31.2	76.4
	21	6.16	8.28	0.25	5.27	0.4	75.3	18.2	3.49	20.4	9.77	3.71	1.26	5.69
31.3	3,970	210	6.35	134	10.2	31.3	298	88.6	334	4.07	60.8	32	93.2	

Steel Grades: Beams available in standard structural grades, including A572-50 and 65. Inquire for other high-strength grades. For heavier sections please reference the structural section.

Lengths: Available in standard lengths of 20', 25', 30', 35', 40', 45', 50', 55', 60', and 65'. Non-standard lengths are also available subject to mill tonnage minimums. Inquire for lengths >65'.

Tolerances: All structural sections listed in this document shall comply to the general requirements determined by ASTM A6/A6M.

*W6x7, W6x7.75 and W6x10.4 are not listed in ASTM A6/A6M Table A1.2 (nor in AISC Steel Construction Manual) and therefore dimensions may vary slightly depending on the producing steel mill.

PILING







Photo Credit Triad Metals

GERDAU PILING PRODUCTS IN USE

ROCKAWAY BEACH

New York City, NY

Rockaway Beach is a neighborhood located in the borough of Queens, New York City. It is renowned for the Rockaway Beach and Boardwalk, the largest urban beach in the United States. The dune is reinforced using PZC sheet piling to defend inland areas from erosion and wave attacks during storm events. This limits storm surge inundation and cross-island flooding.

Gerdau contributed to this project by providing its customer with custom ordered lengths that helped optimize logistics and reduced the need for additional processing of the sheets, resulting in a lower cost for the overall project.

PILING PRODUCTS AND BUNDLES

H-PILE: MIDLOTHIAN, TX & PETERSBURG, VA

SHAPE	MILL	PCS / BUNDLE
HP 8x36	TX, VA	6
HP 10x42	TX, VA	4
HP 10x57	VA	4
HP 12x53, 63	VA	4
H12x74	VA	3

SHAPE	MILL	PCS / BUNDLE
HP 12x84	VA	2
HP 14x73, 89, 102, 117	VA	2
HP 16x88, 101, 121, 141	VA	1

PZC™ SHEET PILE: PETERSBURG, VA

SHAPE	PCS / BUNDLE
PZC 12	4
PZC 13	4
PZC 14	4
PZC 17	4
PZC 18	4
PZC 19	4

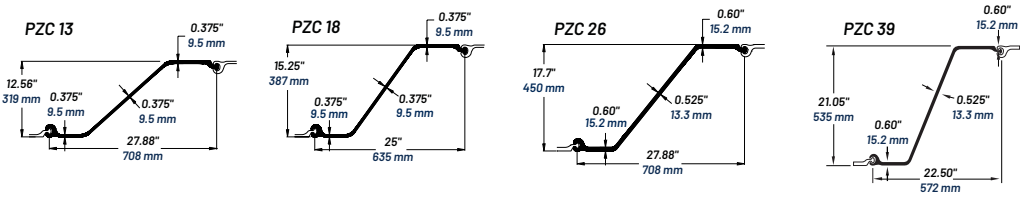
SHAPE	PCS / BUNDLE
PZC 25	4
PZC 26	4
PZC 28	4
PZC 37	4
PZC 39	4
PZC 41	4

PS FLAT SHEET: MIDLOTHIAN, TX

SHAPE	PCS / BUNDLE
PS 27.5	4

SHAPE	PCS / BUNDLE
PS 31	4

GERDAU SHEET PILING



PZC™ SHEET PILING PROPERTIES

PER SINGLE SELECTION

PER UNIT OF WALL

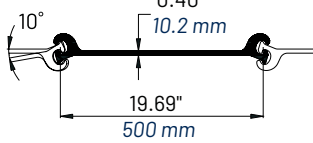
Section	Nominal Width	Wall Depth (Height)	Web Thickness	Flange Thickness	Area	Weight	Moment of Inertia	Elastic Section Modulus	Plastic Section Modulus	Total Surface Area	Nominal Coating Area*	Cross Sectional Area	Weight	Moment of Inertia	Elastic Section Modulus	Plastic Section Modulus
	in. (mm)	in. (mm)	in. (mm)	in. (mm)	in.2 (cm ²)	lbs/ft (kg/m)	in.4 (cm ⁴)	in.3 (cm ³)	in.3 (cm ³)	ft ² /ft (m ² /m)	ft ² /ft (m ² /m)	ft ² /ft (m ² /m)	lbs/ft ² (kg/m ²)	in.4/ft (cm ⁴ /m)	in.4/ft (cm ⁴ /m)	in.3/ft (cm ³ /m)
PZC12	27.88 708	12.52 318	0.335 8.5	0.335 8.5	13.64 88.0	46.4 69.1	324.5 13,510	51.8 850	61.51 1,008	6.1 1.86	5.6 1.71	5.87 124.3	20.0 97.6	139.7 19,080	22.3 1,200	26.47 1,423
PZC13	27.88 708	12.56 319	0.375 9.5	0.375 9.5	14.82 95.6	50.4 75.1	353.0 14,690	56.2 920	66.93 1,097	6.1 1.86	5.6 1.71	6.38 135.1	21.7 106.0	152.0 20,760	24.2 1,300	28.81 1,549
PZC14	27.88 708	12.60 320	0.420 10.7	0.420 10.7	16.15 104.2	55.0 81.8	381.6 15,890	60.5 1,190	72.61 990	6.1 1.86	5.6 1.71	6.95 147.2	23.7 115.5	164.3 22,440	26.0 1,400	31.25 1,680
PZC17	25.00 635	15.21 386	0.335 8.5	0.335 8.5	13.64 88.0	46.4 69.1	491.8 20,470	64.6 1,060	76.07 1,246	6.1 1.86	5.6 1.71	6.55 138.6	22.3 108.8	236.1 32,235	31.0 1,670	36.5 1,962
PZC18	25.00 635	15.25 387	0.375 9.5	0.375 9.5	14.82 95.6	50.4 75.1	532.2 22,150	69.8 1,145	82.2 1,347	6.1 1.86	5.6 1.71	7.12 150.6	24.2 118.2	255.5 34,890	33.5 1,800	39.46 2,121
PZC19	25.00 635	15.30 388	0.420 10.7	0.420 10.7	16.16 104.2	55.0 81.8	576.3 23,990	75.3 1,235	89.14 1,461	6.1 1.86	5.6 1.71	7.75 164.1	26.4 128.8	276.6 37,780	36.1 1,945	42.79 2,301
PZC25	27.88 708	17.66 449	0.485 12.3	0.560 14.2	20.40 131.6	69.4 103.3	938.7 39,070	106.3 1,740	126.77 2,077	6.65 2.03	6.15 1.87	8.78 185.9	29.9 145.9	404.1 55,190	45.7 2,455	54.56 2,933
PZC26	27.88 708	17.70 450	0.525 13.3	0.600 15.2	21.27 140.1	73.9 110.0	994.3 41,390	112.4 1,840	134.46 2,203	6.65 2.03	6.15 1.87	9.35 197.9	31.8 155.4	428.1 58,460	48.4 2,600	57.89 3,112
PZC28	27.88 708	17.75 451	0.570 14.5	0.645 16.4	23.22 149.8	79.0 117.6	1057 44,000	119.1 1,950	143.07 2,344	6.65 2.03	6.15 1.87	10.00 211.6	34.0 166.1	455.1 62,150	51.3 2,755	61.58 3,311
PZC37	22.50 572	21.01 534	0.485 12.3	0.560 14.2	20.44 131.9	69.6 103.9	1,352 56,270	128.7 2,109	152.3 2,496	6.75 2.06	6.3 1.92	10.90 230.7	37.1 181.2	721.1 98,470	68.6 3,688	81.20 4,366
PZC39	22.50 572	21.05 535	0.525 13.3	0.600 15.2	21.83 140.8	74.3 110.6	1,436 59,770	136.4 2,235	162.0 2,655	6.75 2.06	6.3 1.92	11.64 246.4	39.6 193.5	765.9 104,590	72.7 3,909	86.40 4,645
PZC41	22.50 572	21.09 536	0.570 14.5	0.645 16.4	23.10 149.0	78.6 117.0	1,512 62,930	143.4 2,350	170.8 2,799	6.75 2.06	6.3 1.92	12.32 260.8	41.9 204.7	806.4 110,120	76.5 4,113	91.10 4,898

ASTM DESIGNATION**	YIELD STRENGTH		APPLICATION
	ksi	MPa	
A572	60	415	Mill Standard Produced
A588	50	345	Atmospheric Corrosion
A690	50	345	Marine Environment

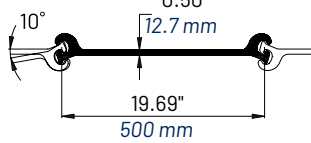
*Both sides of sheet; excludes socket interior and ball of interlock. Manufactured to ASTM A6 specifications.

**Other grades available upon request.

PS 27.5



PS 31



PS (FLAT SHEET) PILING PROPERTIES

Section	PER SINGLE SELECTION										PER UNIT OF WALL			
	Nominal Width	Depth (Height)	Wall Depth (Height)	Web Thickness	Area	Weight	Moment of Inertia	Section Modulus	Total Surface Area	Nominal Coating Area*	Area	Weight	Moment of Inertia	Section Modulus
	in. (mm)	in. (mm)	in. (mm)	in. (mm)	in.2 (cm2)	lbs/ft (kg/m)	in.4 (cm4)	in.3 (cm3)	ft2/ft (m2/m)	ft2/ft (m2/m)	in.2/ft (cm2/m)	lbs/ft2 (kg/m2)	in.4/ft (cm4/m)	in.3/ft (cm3/m)
PS27.5	19.69	2.83	3.55	0.40	13.26	45.1	5.0	3.2	4.50	3.64	8.08	27.5	3.0	1.9
	500	72	90	10.2	85.5	67.1	207	52	1.37	1.11	171.0	134.2	414	103
PS31	19.69	2.83	3.55	0.50	14.96	50.9	5.0	3.2	4.50	3.64	9.11	31.0	3.0	1.9
	500	72	90	12.7	96.5	75.7	207	52	1.37	1.11	192.9	151.4	414	103

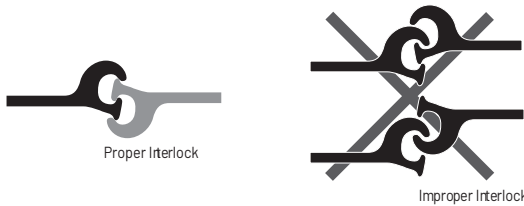
*Both sides of sheet; excludes socket interior and ball of interlock. Manufactured to ASTM A6 specifications.

GRADE ⁽¹⁾	MINIMUM INTERLOCK STRENGTH ⁽²⁾		MINIMUM SWING ⁽³⁾
A572-50	20 kips/in.	(3,500 kN/m)	10 degrees
A572-60	24 kips/in.	(4,200 kN/m)	10 degrees

(1) Other grades available upon request.

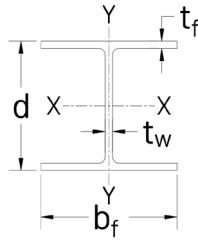
(2) These minimum ultimate interlock strengths assume proper interlocking of sheets. To verify the strength of PS Sheet Piling, consider both yielding of the web and failure of the interlock.

(3) Swing reduces 1.5 degrees for each 10 feet (3 meters) in length over 70 feet (21 meters).



As a general rule, Gerdau advises against interlocking PS sections with other producers' section(s).

Gerdau PS 27.5 and PS 31 can be interlocked together. PS and Z-Piling sections should not be interlocked together.



H-PILE PROPERTIES

Section	Weight lbs/ft (kg/m)	Area A in. ² (cm ²)	Depth d in. (mm)	Web bf in. (mm)	THICKNESS			AXIS X-X				AXIS Y-Y			
					Flange tf in. (mm)	Web tw in. (mm)	Coating Area ft/ft ² (m/m ²)	I in. ³ (cm ³)	S in. ³ (cm ³)	Z in. ³ (cm ³)	r in. (mm)	I in. ⁴ (cm ⁴)	S in. ³ (cm ³)	Z in. ³ (cm ³)	r in. (mm)
HP 8x HP200x	36	10.6	8.02	8.16	0.445	0.445	3.92	119	29.8	33.6	3.36	40.3	9.88	15.2	1.95
	54	68.4	204	207	11.3	11.3	1.21	4,980	488	552	8.53	1,670	162	249	4.95
HP 10x HP250x	42	12.4	9.70	10.10	0.420	0.415	4.83	210	43.4	48.3	4.13	71.7	14.2	21.8	2.41
	62	79.8	246	256	10.7	10.5	1.50	8,750	711	792	10.5	3,000	234	358	6.13
	57	16.7	9.99	10.20	0.565	0.565	4.91	294	58.8	66.5	4.18	101	19.7	30.3	2.45
	85	109.0	254	259	14.4	14.4	1.50	12,300	968	1,090	10.6	4,230	325	500	6.23
HP 12x HP310x	53	15.5	11.80	12.00	0.435	0.435	5.82	393	66.7	74.0	5.03	127	21.1	32.2	2.86
	79	99.8	299	306	11.0	11.0	1.80	16,300	1,090	1,210	12.8	5,260	344	525	7.26
	63	18.4	11.90	12.10	0.515	0.515	5.86	472	79.1	88.3	5.06	153	25.3	38.7	2.88
	94	119.0	303	308	13.1	13.1	1.81	19,600	1,300	1,450	12.9	6,390	415	635	7.33
	74	21.8	12.10	12.20	0.610	0.605	5.91	569	93.8	105	5.11	186	30.4	46.6	2.92
	110	141.0	308	310	15.4	15.4	1.83	23,700	1,540	1,730	13.0	7,710	497	763	7.40
	84	24.6	12.30	12.30	0.685	0.685	5.97	650	106	120	5.14	213	34.6	53.2	2.94
	125	159.0	312	312	17.4	17.4	1.84	27,000	1,730	1,960	13.0	8,820	566	870	7.45
	89	25.9	12.36	12.32	0.720	0.720	6.04	689	111.6	126.3	5.16	225	36.5	56.2	2.94
	132	167	314	313	18.3	18.3	1.84	28,700	1,830	2,070	13.1	9,370	599	922	7.48
HP 14x HP360x	102	29.9	12.56	12.64	0.819	0.819	6.17	811	129.3	147.6	5.20	276	43.7	67.1	3.04
	152	193	319	321	20.8	20.8	1.88	33,800	2,120	2,420	13.2	11,500	716	1,100	7.71
	117	34.4	12.76	12.87	0.929	0.929	6.26	946	148.2	170.8	5.24	331	51.4	79.3	3.11
	174	222	324	327	23.6	23.6	1.91	39,400	2,430	2,800	13.3	13,800	843	1,300	7.89
	73	21.4	13.60	14.60	0.505	0.505	6.96	729	107	118	5.84	261	35.8	54.6	3.49
	108	138	346	370	12.8	12.8	2.15	30,300	1,750	1,940	14.8	10,800	585	891	8.86
	89	26.1	13.80	14.70	0.615	0.615	7.02	904	131	146	5.88	326	44.3	67.7	3.53
132	168	351	373	15.6	15.6	2.16	37,500	2,140	2,380	14.9	13,500	724	1,110	8.96	
HP 16x HP410x	102	30.1	14.00	14.80	0.705	0.705	7.06	1050	150	169	5.92	380	51.4	78.8	3.56
	152	194	3,556	376	17.9	17.9	2.18	43,900	2,470	2,770	15.0	15,900	845	1,290	9.05
	117	34.4	14.20	14.90	0.805	0.805	7.12	1220	172	194	5.96	443	59.5	91.4	3.59
	174	222	361	378	20.4	20.4	2.19	50,800	2,820	3,130	15.2	18,400	973	1,490	9.11
	88	25.8	15.30	15.70	0.540	0.540	7.52	1110	145	161	6.56	349	44.5	68.2	3.68
	131	167	398	399	13.7	13.7	2.29	46,201	2,376	2,683.3	16.7	14,526	729	1,117.6	9.35
	101	29.9	15.50	15.80	0.625	0.625	7.56	1300	168	187	6.59	412	52.2	80.1	3.71
150	193	394	401	15.9	15.9	2.30	54,110	2,753	3,064.4	16.7	17,149	855	1,312.6	9.42	
HP 16x HP410x	121	35.8	15.80	15.90	0.705	0.705	7.62	1590	201	226	6.66	504	63.4	97.6	3.75
	180	231	401	404	19.1	19.1	2.32	66,180	3,294	3,703.5	16.9	20,978	1,039	1,599.4	9.53
	141	41.7	16.00	16.00	0.875	0.875	7.69	1870	234	264	6.70	599	74.9	116	3.79
	210	269	406	406	22.2	22.2	2.34	77,835	3,835	4,326.2	17.0	24,932	1,227	1,900.9	9.63

SPECIAL BAR QUALITY







GERDAU SPECIAL BAR QUALITY PRODUCTS IN USE

SUCKER RODS

Gerdau is the leading manufacturer of SBQ bars used in the production of sucker rods in North America for the oil and gas industry. Sucker rods are used in artificial lift applications and require exceptional dependability, uniform heat-treat response, high surface quality, and efficient production. Our steel enables manufacturers to meet these requirements through optimized SBQ processing, larger heats that result in less heat code changeovers, and state-of-the-art on-site eddy current inspection that can meet API standards when needed.

COMPARISON OF QUALITY DESIGNATIONS: SBQ VS MBQ

	QUALITY DESIGNATIONS	APPLICATIONS	KEY PRODUCT CHARACTERISTICS	SUPPLEMENTARY REQUIRMENTS OR SPECIFIC QUALITY APPLICATION	INDUSTRY STANDARDS
SBQ	Special Quality (Carbon Steels)	Forging Heat Treating Cold Drawing Machining Structural uses	Steel Process Chemistry Grain Size Surface Quality Internal Quality Dimensions	Cold Working Quality Thermal Treatment Special Internal Soundness Non-metallic Inclusion Special Hardenability Austenitic Grain Size Restricted Residual Elements Stress Relieving Descaling Surface Coating Restricted Heat Chemistry	ASTM A29/A29M ASTM A576/A576M
	Standard Quality (Alloy Steels)	Forging Heat treating Cold drawing Machining Structural components	Steel process Chemistry Grain size Slow cooling Surface quality Internal quality Dimensions	Cold Shearing Quality Cold Working Quality Thermal Treatment Special Internal Soundness Non-metallic Inclusion Special Hardenability Austenitic Grain Size Restricted Residual Elements Stress Relieving Descaling Surface Coating Restricted Heat Chemistry	ASTM A29/A29M ASTM A322/A322M
MBQ	Merchant Quality (Carbon Steels)	Structural and miscellaneous applications involving: Bending Moderate forming Punching and welding on non-critical parts	Chemistry (wide range) No visible pipe Dimensions	Special Straightness Descaled Surface Protective Oil Coating	ASTM A29/A29M ASTM A575/A575M

BAR PRODUCTS FOR FASTENERS

F1554 PROPERTIES AVAILABLE

GRADE	MIDLOTHIAN, TX	CAMBRIDGE, ON**	CHARLOTTE, NC
36	M1018M		M1018M
55	M1022M	55W	M1022M
105	4140*	NA	NA

* Gerdau Midlothian Steel Processing (GMSP)

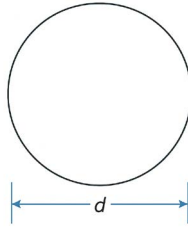
** Inquire on F1554 from Cambridge

OTHER FASTENER SPECIFICATIONS AVAILABLE

ASTM A354 BC
ASTM A193 B7
ASTM A320 L7 (under Development)
ASTM A434

* Please inquire for other ASTM specifications

PITCH DIAMETER ROUNDS



MIDLOTHIAN MILL

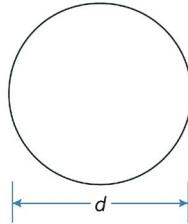
DIAMETER, d (in.)	lb / ft	REDUCTION RATIO*	A29 TOLERANCE
0.677	1.224	117.4	3/4
0.795	1.688	85.2	3/4
0.910	2.216	65.0	3/4
1.025	2.806	51.2	3/4
1.145	3.501	41.1	3/4
1.152	3.543	40.6	3/4
1.381	5.094	28.2	3/4
1.386	5.130	28.0	3/4
1.613	6.948	20.7	3/4
1.848	9.120	15.8	3/4
2.093	11.827	12.3	3/4
2.320	14.407	10.0	3/4
2.622	18.402	7.8	3/4

CHARLOTTE MILL

DIAMETER, d (in.)	lb / ft	REDUCTION RATIO*	A29 TOLERANCE
9/16	0.846	100.6	3/4
0.680	1.236	68.8	3/4
0.795	1.688	50.4	3/4
0.910	2.195	38.4	3/4
1.145	3.501	24.3	3/4

MIDLOTHIAN SBQ PRODUCTS

ROUNDS MIDLOTHIAN MILL



DIAMETER, d	lb / ft	REDUCTION RATIO
5/8	1.043	137.10
11/16	1.262	113.31
3/4	1.502	95.21
13/16	1.763	81.11
7/8	2.044	69.96
15/16	2.347	60.93
1	2.670	53.56
1 1/16	3.015	47.43
1 1/8	3.380	42.31
1 3/16	3.766	37.97
1 1/4	4.172	34.28
1 5/16	4.600	31.09
1 3/8	5.049	28.32
1 7/16	5.518	25.92
1 1/2	6.008	23.80
1 9/16	6.519	21.94
1 5/8	7.051	20.28
1 11/16	7.604	18.81
1 3/4	8.178	17.49
1 13/16	8.773	16.30
1 7/8	9.388	15.23
1 15/16	10.020	14.27
2	10.681	13.39
2 1/16	11.524	12.41

DIAMETER, d	lb / ft	REDUCTION RATIO
2 1/8	12.228	11.69
2 3/16	12.953	11.04
2 1/4	13.698	10.44
2 5/16	14.465	9.89
2 3/8	15.252	9.38
2 7/16	16.060	8.90
2 1/2	16.889	8.47
2 9/16	17.857	8.01
2 5/8	18.730	7.63
2 11/16	19.625	7.29
2 3/4	20.540	6.96
2 13/16	21.476	6.66
2 7/8	22.433	6.37
2 15/16	23.411	6.11
3	24.410	5.86
3 1/16	25.430	5.62
3 1/8	26.470	5.40
3 3/16	27.532	5.19
3 1/4	28.614	5.00
3 5/16	29.717	4.81
3 3/8	30.841	4.64
3 7/16	31.986	4.47
3 1/2	33.151	4.31
3 9/16	34.488	4.15

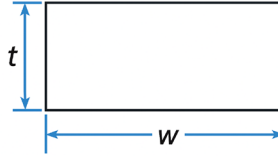
* Inquire on sizes not shown on the table.

* All sizes shown above are rolled to A29 dimensional tolerances. See page 83 for A29 bar tolerances.

* Reduction ratios subject to change.

WILTON SBQ PRODUCTS

FLATS WILTON MILL



THICKNESS, t	WIDTH, w	lb / ft	REDUCTION RATIO
3/16	1 1/2	0.954	109.71
3/16	2	1.272	82.29
3/16	3	1.910	54.80
3/16	3.15	2.000	52.33
1/4	1 1/4	1.063	98.46
1/4	1.5	1.275	82.09
1/4	1 3/4	1.488	70.34
1/4	2	1.700	61.57
1/4	2 1/4	1.913	54.71
1/4	2.5	2.130	49.14
1/4	3	2.550	41.05
1/4	3.5	2.975	35.18
1/4	4	3.400	30.78
1/4	5	4.250	24.63
0.275	2	1.899	55.12
0.275	2.275	2.133	49.07
0.275	3	2.840	36.85
0.275	4.038	3.780	27.69
9/32	1.281	1.282	81.64
9/32	1.406	1.406	74.44
9/32	1 1/2	1.530	68.41
9/32	2.031	2.024	51.71
9/32	2.281	2.272	46.07
9/32	2.531	2.519	41.55
9/32	3	3.014	34.73

THICKNESS, t	WIDTH, w	lb / ft	REDUCTION RATIO
9/32	3.531	3.508	29.84
9/32	4	4.003	26.15
9/32	6.031	5.982	17.50
5/16	1 1/4	1.330	78.70
5/16	1 1/2	1.591	65.79
5/16	1 3/4	1.856	56.39
5/16	2	2.128	49.19
5/16	2 1/4	2.391	43.78
5/16	2.5	2.661	39.33
5/16	3	3.193	32.78
5/16	3.5	3.725	28.10
5/16	4	4.257	24.59
5/16	5	5.321	19.67
5/16	6	6.385	16.39
23/73	3.540	3.791	27.61
15/47	3 1/2	3.840	27.26
23/71	2.046	2.250	46.52
1/3	3 1/2	4.032	25.96
11/32	2.031	2.456	42.62
11/32	2 1/2	3.056	34.25
11/32	3.031	3.656	28.63
3/8	1	1.275	82.09
3/8	1 1/4	1.594	65.66
3/8	1 1/2	1.913	54.71
3/8	1 3/4	2.231	46.92

* Inquire on sizes not shown on the table.

* Reduction Ratio is subject to change.

FLATS WILTON MILL

THICKNESS, t	WIDTH, w	lb / ft	REDUCTION RATIO
3/8	2	2.550	41.05
3/8	2 1/4	2.869	36.48
3/8	2 1/2	3.188	32.83
3/8	2.75	3.506	29.85
3/8	3	3.825	27.36
3/8	3.5	4.463	23.45
3/8	4	5.100	20.52
3/8	5	6.375	16.42
3/8	6	7.650	13.68
2/5	1.036	1.409	74.29
2/5	2	2.778	37.68
2/5	3.043	4.138	25.29
2/5	4	5.498	19.04
13/32	1.031	1.479	70.77
13/32	1.281	1.833	57.10
13/32	1.531	2.187	47.86
13/32	1.781	2.540	41.21
13/32	2.031	2.894	36.17
13/32	2.281	3.247	32.24
13/32	2.531	3.601	29.07
13/32	2.781	3.955	26.46
13/32	3.031	4.308	24.30
0.406	3 1/2	5.015	20.87
0.406	4.031	5.723	18.29
0.406	5	7.137	14.67
0.406	6.031	8.551	12.24
1/2	1	1.700	61.57
1/2	1 1/4	2.125	49.26
1/2	1 1/2	2.550	41.05
1/2	1 3/4	2.975	35.18
1/2	2	3.400	30.78
1/2	2 1/4	3.825	27.36
1/2	2 1/2	4.250	24.63
1/2	2 3/4	4.675	22.39

THICKNESS, t	WIDTH, w	lb / ft	REDUCTION RATIO
1/2	3	5.100	20.52
1/2	3 1/2	5.950	17.59
1/2	4	6.800	15.39
1/2	5	8.500	12.31
1/2	6	10.200	10.26
17/33	2.515	4.632	22.60
17/32	1	1.924	54.40
17/32	1.281	2.384	43.90
17/32	1.406	2.614	40.04
17/32	1.531	2.844	36.80
17/32	1.781	3.304	31.68
17/32	2.031	3.763	27.82
17/32	2.281	4.223	24.79
17/32	2.531	4.683	22.35
17/32	2.781	5.143	20.35
17/32	3.031	5.603	18.68
17/32	3.281	6.063	17.26
17/32	3.531	6.523	16.05
17/32	4	7.442	14.06
17/32	5.031	9.625	10.87
0.531	6	11.530	9.08
0.546	2 1/4	4.177	25.06
0.563	1	2.209	47.38
0.594	1.313	2.650	39.50
19/32	1 3/8	2.776	37.70
14/23	1.313	2.849	36.74
5/8	1	2.125	49.26
5/8	1 1/4	2.656	39.41
5/8	1.531	3.338	31.36
5/8	2	4.250	24.63
5/8	2 1/2	5.313	19.70
5/8	3	6.375	16.42
5/8	3 1/2	7.438	14.07
5/8	4	8.500	12.31

* Inquire on sizes not shown on the table.

* Reduction Ratio is subject to change.

FLATS WILTON MILL

THICKNESS, t	WIDTH, w	lb / ft	REDUCTION RATIO
5/8	5	10.620	9.86
5/8	6	12.750	8.21
21/32	1	2.301	45.49
21/32	1.281	2.935	35.66
21/32	1.406	3.218	32.53
21/32	1.531	3.501	29.90
21/32	1.781	4.067	25.74
21/32	2.031	4.633	22.59
21/32	2.281	5.199	20.13
21/32	2.531	5.765	18.16
21/32	2.781	6.331	16.53
21/32	3.031	6.897	15.18
21/32	3 1/2	8.030	13.03
21/32	4.031	9.162	11.42
21/32	5	11.770	8.89
21/32	6.031	14.100	7.42
2/3	1.295	3.063	34.17
3/4	1	2.550	41.05
3/4	1 1/4	3.188	32.83
3/4	1 1/2	3.825	27.36
3/4	2	5.100	20.52
3/4	2.5	6.375	16.42
3/4	3	7.650	13.68
3/4	3.5	8.925	11.73
3/4	4	10.200	10.26
3/4	5	12.750	8.21
3/4	6	15.300	6.84
25/32	1.031	2.813	37.21
25/32	1.281	3.485	30.03
25/32	1.531	4.158	25.17
25/32	1.781	4.830	21.67
25/32	2.031	5.503	19.02
25/32	2 1/2	6.847	15.29
25/32	2.781	7.520	13.92

THICKNESS, t	WIDTH, w	lb / ft	REDUCTION RATIO
25/32	3	8.192	12.78
25/32	3.281	8.864	11.81
25/32	3 1/2	9.537	10.97
25/32	4.031	10.880	9.62
25/32	5	13.910	7.52
25/32	6.031	16.670	6.28
7/8	5	14.870	7.04
7/8	6	17.850	5.86
29/32	1.281	4.036	25.93
29/32	1.781	5.593	18.71
0.906	3 1/2	11.040	9.48
0.906	5.031	15.710	6.66
1.000	1 1/2	5.100	20.52
1.000	1.75	5.950	17.59
1	2	6.800	15.39
1	2 1/2	8.500	12.31
1	3	10.200	10.26
1	4.0	13.600	7.70
1	6.0	20.400	5.13
1 1/32	1.281	4.609	22.71
1 1/32	1 1/2	5.498	19.04
1 1/32	1.656	5.943	17.61
1 1/32	1.781	6.367	16.44
1 1/32	2.031	7.242	14.45
1 1/32	2.281	8.126	12.88
1 1/32	2.531	9.011	11.62
1 1/32	2.781	9.896	10.58
1 1/32	3.031	10.780	9.71
1 1/32	3.281	11.660	8.98
1 1/32	3.531	12.550	8.34
1 1/32	4	14.320	7.31
1 1/32	5.031	18.200	5.75
1 1/32	6	21.990	4.76
1 5/32	1.531	6.155	17.01

* Inquire on sizes not shown on the table.

* Reduction Ratio is subject to change.

FLATS WILTON MILL

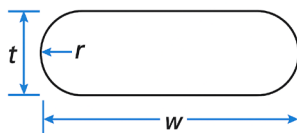
THICKNESS, t	WIDTH, w	lb / ft	REDUCTION RATIO
1 5/32	2	8.110	12.91
1 5/32	2.531	10.090	10.37
1 5/32	3	12.070	8.67
1 5/32	4.031	6.530	16.03
1 1/4	2	8.500	12.31
1 1/4	2.450	10.410	10.05
1 1/4	2 1/2	10.620	9.86
1 1/4	3	12.750	8.21
1.250	4	17.000	6.16
1.281	1.656	7.363	14.22
1.281	1.781	7.883	13.28
1.281	2.031	9.240	11.33
1 9/32	2.531	11.490	9.11

THICKNESS, t	WIDTH, w	lb / ft	REDUCTION RATIO
1 9/32	3.031	13.740	7.62
1 9/32	4	17.760	5.89
1 11/32	2.344	10.710	9.77
1 13/32	2.031	9.850	10.63
1 13/32	3.031	14.660	7.14
1 7/16	2.563	12.530	8.35
1 7/16	2.625	12.830	8.16
1 1/2	2	10.200	10.26
1 17/32	2.031	10.720	9.76
1 17/32	2.281	12.030	8.70
1 17/32	2.531	13.340	7.85
1 17/32	3	15.950	6.56

* Inquire on sizes not shown on the table.

* Reduction Ratio is subject to change.

SPRING FLATS WILTON MILL



THICKNESS, t	WIDTH, w	lb / ft	REDUCTION RATIO
0.167	3.250	1.834	57.07
0.209	4.000	2.825	37.05
0.214	1.750	1.265	82.74
0.214	2.000	1.447	72.33
0.237	1.720	1.375	76.12
0.237	1.970	1.577	66.37
0.237	2.500	2.000	52.33
0.237	3.000	2.413	43.38

THICKNESS, t	WIDTH, w	lb / ft	REDUCTION RATIO
0.25	1.250	1.050	99.68
0.25	2.500	2.112	49.56
0.25	3.000	2.554	40.98
0.25	4.000	3.394	30.84
0.262	1.500	1.321	79.23
0.262	1.720	1.517	69.00
0.262	1.750	1.540	67.97
0.262	1.970	1.740	60.15

* Inquire on sizes not shown on the table.

* Reduction Ratio is subject to change.

SPRING FLATS WILTON MILL

THICKNESS, t	WIDTH, w	lb / ft	REDUCTION RATIO
0.262	2.000	1.767	59.23
0.262	2.500	2.212	47.32
0.262	3.000	2.665	39.28
0.291	1.720	1.682	62.23
0.291	1.750	1.710	61.21
0.291	1.970	1.929	54.26
0.291	2.000	1.960	53.40
0.291	2.500	2.454	42.65
0.291	3.000	2.960	35.36
0.307	2.500	2.587	40.46
0.312	1.720	1.801	58.12
0.315	2.362	2.505	41.78
0.315	2.756	2.935	35.66
0.315	2.992	3.188	32.83
0.323	1.720	1.863	56.18
0.323	1.970	2.137	48.98
0.323	2.000	2.170	48.23
0.323	2.250	2.445	42.81
0.323	2.500	2.719	38.50
0.323	3.000	3.277	31.94
0.323	4.000	4.270	24.51
0.335	3.515	3.983	26.28
0.341	3.000	3.457	30.28
0.36	1.720	2.071	50.54
0.36	1.970	2.377	44.03
0.36	2.000	2.410	43.43
0.36	2.500	3.025	34.60
0.36	3.000	3.647	28.70
0.36	4.000	4.871	21.49
0.375	3.000	3.797	27.57
0.375	4.000	5.070	20.64
0.375	5.000	6.359	16.46
0.38	2.500	3.190	32.81
0.38	3.000	3.847	27.21

THICKNESS, t	WIDTH, w	lb / ft	REDUCTION RATIO
0.393	2.362	3.113	33.62
0.401	1.720	2.300	45.51
0.401	1.970	2.641	39.63
0.401	2.000	2.681	39.04
0.401	2.470	3.322	31.51
0.401	2.500	3.363	31.12
0.401	2.940	3.974	26.34
0.401	2.970	4.015	26.07
0.401	3.000	4.056	25.81
0.401	3.500	4.737	22.10
0.401	4.000	5.419	19.32
0.423	2.500	3.544	29.53
0.423	3.000	4.274	24.49
0.423	4.000	5.713	18.32
0.437	2.000	2.920	35.85
0.447	1.970	2.935	35.66
0.447	2.000	2.981	35.11
0.447	2.470	3.695	28.33
0.447	2.500	3.741	27.98
0.447	2.940	4.421	23.68
0.447	2.970	4.467	23.43
0.447	3.000	4.513	23.19
0.447	4.000	6.032	17.35
0.473	3.000	4.770	21.94
0.473	4.000	6.703	15.62
0.499	1.750	2.893	36.18
0.499	2.500	4.165	25.13
0.499	2.940	4.925	21.25
0.499	2.969	4.974	21.04
0.499	3.000	5.027	20.82
0.499	3.500	5.875	17.82
0.499	4.000	6.724	15.57
0.499	5.000	8.437	12.41
0.5	3.000	5.037	20.78

* Inquire on sizes not shown on the table.

* Reduction Ratio is subject to change.

SPRING FLATS WILTON MILL

THICKNESS, t	WIDTH, w	lb / ft	REDUCTION RATIO
0.5	4.000	6.740	15.53
0.527	4.000	7.095	14.75
0.536	4.000	7.214	14.51
0.558	2.940	5.494	19.05
0.558	3.000	5.608	18.66
0.558	3.500	6.556	15.97
0.558	4.000	7.505	13.95
0.562	1.720	3.186	32.85
0.587	4.000	7.887	13.27
0.59	3.000	5.922	17.67
0.594	3.313	6.591	15.88
0.625	1.720	3.527	29.68
0.625	1.750	3.590	29.16
0.625	3.000	6.264	16.71
0.625	3.975	7.335	14.27
0.625	4.000	8.389	12.48
0.625	5.000	10.530	9.94
0.662	3.000	6.625	15.80
0.662	3.975	8.819	11.87
0.662	4.000	8.876	11.79
0.669	2.933	6.564	15.95
0.702	3.000	7.014	14.92
0.708	3.503	8.282	12.64
0.715	3.500	8.355	12.53
0.715	4.000	9.570	10.94
0.748	2.933	7.288	14.36
0.75	1.500	3.663	28.57
0.75	1.750	4.271	24.51
0.75	2.440	6.030	17.36
0.75	4.000	10.020	10.45
0.77	2.500	6.342	16.50
0.788	2.940	7.684	13.62
0.788	2.970	7.765	13.48

THICKNESS, t	WIDTH, w	lb / ft	REDUCTION RATIO
0.788	3.500	9.184	11.40
0.788	4	10.450	10.02
0.788	4.000	10.520	9.95
0.788	5.000	13.230	7.91
0.812	2.933	7.891	13.26
0.812	3	8.075	12.96
0.815	4.000	10.870	9.63
0.827	3.503	9.633	10.87
0.840	2.5	6.894	15.18
0.850	4	11.330	9.24
0.866	2 3/4	7.876	13.29
0.875	3.975	11.580	9.04
0.887	3	8.793	11.90
0.887	4	11.810	8.86
0.887	5	14.850	7.05
0.938	2.940	9.090	11.51
0.938	2.970	9.185	11.40
0.94	4.00	12.490	8.38
0.97	2.500	7.910	13.23
0.999	2 1/2	8.134	12.87
0.999	4	13.250	7.90
0.999	5	16.680	6.28
1	2	6.442	16.25
1	3	9.732	10.76
1	3	9.869	10.61
1.000	3.97	13.180	7.94
1.085	4	14.350	7.29
1.125	3	11.040	9.48
1.125	5	18.730	5.59
1.210	4	15.920	6.57
1.25	2	7.925	13.21
1.25	2.005	7.886	13.27
1.25	4	16.450	6.36
1.375	3	13.070	8.01

* Inquire on sizes not shown on the table.

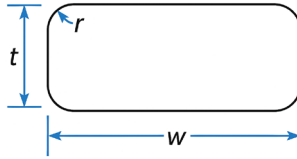
* Reduction Ratio is subject to change.

SPRING FLATS WILTON MILL

THICKNESS, t	WIDTH, w	lb / ft	REDUCTION RATIO
1.375	2.960	13.170	7.95
1.375	2.970	13.210	7.92
1.378	2.756	12.240	8.55
1.625	2.970	15.320	6.83
7	60MM	2.199	47.60
9	60MM	2.810	37.25
12.7	100MM	6.630	15.79
1	3	9.869	10.61
1.000	3.97	13.180	7.94

THICKNESS, t	WIDTH, w	lb / ft	REDUCTION RATIO
1.085	4	14.350	7.29
1.125	3	11.040	9.48
1.125	5	18.730	5.59
1.210	4	15.920	6.57
1.25	2	7.925	13.21
1.25	2.005	7.886	13.27
1.25	4	16.450	6.36
1.375	3	13.070	8.01

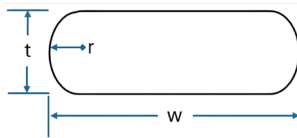
ROUND CORNERED FLATS WILTON MILL



THICKNESS, t	WIDTH, w	CORNER RADIUS, r	lb / ft	REDUCTION RATIO
0.315	1.969	0.125	2.063	50.74
0.315	2.953	0.125	3.117	33.58
0.625	1.125	0.125	2.450	42.72
0.650	1 1/32	0.125	2.333	44.86
0.650	1 1/8	0.125	2.441	42.88
0.650	1 5/32	0.125	2.509	41.72

THICKNESS, t	WIDTH, w	CORNER RADIUS, r	lb / ft	REDUCTION RATIO
0.650	1	0.125	2.227	47.00
11/32	2 9/32	0.050	2.756	37.98
9/32	1 25/32	0.050	1.770	59.13
9/32	2 9/32	0.050	2.272	46.07
9/32	3 1/32	0.050	3.006	34.82

FULL ROUND EDGE FLATS WILTON MILL

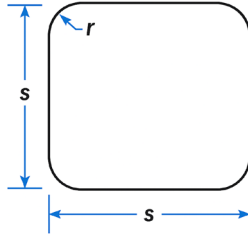


THICKNESS, t	WIDTH, w	lb / ft	REDUCTION RATIO
1/4	1 3/8	1.123	93.20

THICKNESS, t	WIDTH, w	lb / ft	REDUCTION RATIO
3/8	1 1/2	1.810	57.83
9/32	3 1/32	2.952	35.46

* Inquire on sizes not shown on the table.
 * Reduction Ratio is subject to change.

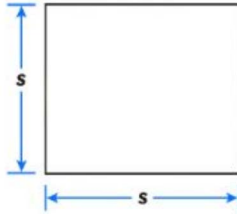
ROUND CORNER SQUARES WILTON MILL



SIDE, s	CORNER RADIUS, r	lb / ft	REDUCTION RATIO
1 1/4"	0.125	5.270	19.86
1.265"	0.125	5.400	19.38
1 3/8"	0.156	6.357	16.46
1 1/2"	0.250	7.470	14.01
1 3/4"	0.250	10.230	10.23

SIDE, s	CORNER RADIUS, r	lb / ft	REDUCTION RATIO
2"	0.312	13.316	7.86
2"	0.250	13.418	7.80
2 1/4"	0.250	17.260	6.06
2 1/2"	0.250	21.323	4.91

SQUARE CORNER SQUARES WILTON MILL



SIDE, s	CORNER RADIUS, MAXIMUM	lb / ft	REDUCTION RATIO
1 1/16"	0.063	3.842	27.24
1 1/4"	0.063	5.313	19.70
1 5/16"	0.094	5.786	18.09
1 7/16"	0.094	7.127	14.69
1 1/2"	0.094	7.650	13.68
1 9/16"	0.094	8.369	12.51

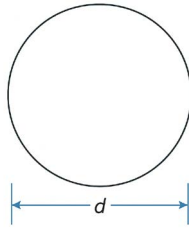
SIDE, s	CORNER RADIUS, MAXIMUM	lb / ft	REDUCTION RATIO
1 3/4"	0.094	10.410	10.05
1 13/16"	0.097	11.251	9.30
2"	0.125	13.600	7.70
2 1/32"	0.125	14.220	7.36
2 1/16"	0.125	14.445	7.25
2 1/16"	0.125	14.445	7.25

* Inquire on sizes not shown on the table.

* Reduction Ratio is subject to change.

Updated: 12-25

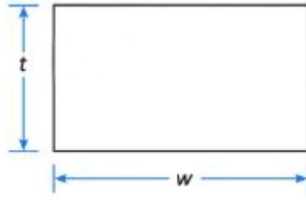
ROUNDS WILTON MILL



DIAMETER, d	lb / ft	REDUCTION RATIO*
1 1/4	4.172	25.09
1 3/8	5.049	20.73

DIAMETER, d	lb / ft	REDUCTION RATIO*
1 3/4	8.178	12.80

CAMBRIDGE SBQ PRODUCTS



FLATS CAMBRIDGE MILL

THICKNESS, t	WIDTH, w	lb / ft	REDUCTION RATIO
3/8	3/4	0.956	131.23
3/8	1 1/2	1.913	65.58
3/8	1 3/4	2.231	56.23
3/8	2 1/2	3.190	39.33
3/8	2	4.172	30.07
3/8	5	6.375	19.68
13/32	1 17/32	2.120	59.18
13/32	2 1/32	2.808	44.68
13/32	3 1/32	4.191	29.94
13/32	4 1/32	5.573	22.51
7/16	1 1/8	1.673	74.99
1/2	3/4	1.280	98.02
1/2	2	3.400	36.90
1/2	2 1/2	4.240	29.59
1/2	3	5.100	24.60
1/2	4	6.800	18.45
17/32	1 1/32	1.924	65.21
17/32	1 17/32	2.844	44.11
17/32	2 1/32	3.674	34.15
17/32	2 17/32	4.683	26.79
17/32	3 1/32	5.603	22.39
17/32	3 17/32	6.523	19.23
17/32	4 1/32	7.280	17.23
5/8	7/8	1.859	67.49

THICKNESS, t	WIDTH, w	lb / ft	REDUCTION RATIO
5/8	1	2.130	58.90
5/8	2	4.250	29.52
5/8	2 1/2	5.313	23.61
.488	1.790	2.972	42.21
.646	1.535	3.371	37.22
3/4	1	2.550	49.20
3/4	1 1/4	3.190	39.33
3/4	2	5.100	24.60
25/32	1 1/32	2.739	45.81
25/32	1 5/32	3.070	40.87
25/32	1 17/32	4.065	30.86
25/32	1 25/32	4.736	26.49
25/32	2 1/32	5.396	23.25
25/32	2 17/32	6.847	18.32
25/32	3 1/32	8.192	15.31
25/32	3 17/32	9.537	13.16
13/16	1	2.765	45.37
7/8	1 1/2	4.470	28.07
29/32	1 1/32	3.180	39.45
1	1 1/4	4.250	29.52
1	1 3/4	5.950	21.09
1	2	6.800	18.45
1 1/32	1 9/32	4.609	27.22
1 1/32	1 11/32	4.700	26.69
1 1/32	1 17/32	5.374	23.35

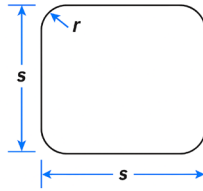
* Inquire on sizes not shown on the table.

* Reduction Ratio is subject to change.

FLATS CAMBRIDGE MILL

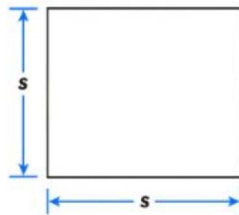
THICKNESS, t	WIDTH, w	lb / ft	REDUCTION RATIO
1 1/32	2 1/32	7.129	17.60
1 1/32	2 17/32	9.011	13.92
1 1/32	3 1/32	10.624	11.81
1 1/32	3 17/32	12.551	10.00

THICKNESS, t	WIDTH, w	lb / ft	REDUCTION RATIO
1 1/16	2 9/16	9.257	13.55
1 1/16	3 1/16	11.074	11.33
1 1/16	3 9/16	12.869	9.75
1.080	1.380	5.072	24.74



ROUND CORNER SQUARES CAMBRIDGE MILL

SIDE, s	CORNER RADIUS, r	lb / ft	REDUCTION RATIO
1 1/4	0.219	5.270	23.81



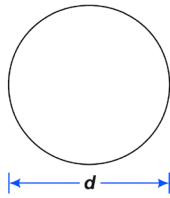
SQUARE CORNER SQUARES CAMBRIDGE MILL

SIDE, s	CORNER RADIUS, MAXIMUM	lb / ft	REDUCTION RATIO
3/8	0.03	0.478	262.47
7/16	0.03	0.651	192.72
1/2	0.03	0.850	147.60
5/8	0.04	1.328	94.47
3/4	0.04	1.503	83.47
7/8	0.04	2.600	48.25

SIDE, s	CORNER RADIUS, MAXIMUM	lb / ft	REDUCTION RATIO
1	0.062	3.400	36.90
1 1/16"	0.062	3.842	32.65
1 1/4"	0.062	5.310	23.63
1 5/16"	0.062	5.786	21.68
1 1/2"	0.062	7.650	16.40

* Inquire on sizes not shown on the table.

* Reduction Ratio is subject to change.



ROUNDS / PITCH CAMBRIDGE MILL

DIAMETER, d	lb / ft	REDUCTION RATIO
1/2	0.668	187.81
17/32	0.754	166.39
5/8	1.043	120.29
3/4	1.502	83.53
7/8	2.044	61.38
1	2.670	46.99
1 1/4	4.172	30.07

DIAMETER, d	lb / ft	REDUCTION RATIO
0.559	0.835	150.25
0.678	1.229	102.08
0.680	1.235	101.59
0.798	1.702	73.71
0.860	1.975	63.52
0.910	2.221	56.49
1.151	3.541	35.43

* Inquire on sizes not shown on the table.
 * Reduction Ratio is subject to change.

GRADE FAMILIES OF CARBON AND ALLOYS STEELS BY MILL

SERIES DESIGNATION ^a	CAMBRIDGE	MANITOBA	MIDLOTHIAN	WILTON
10XX	X	X	X ^b	X
11XX			X	
15XX	X	X ^b	X ^b	X
41XX		X ^b	X	X
43XX			Inquire	
46XX			Inquire	
47XX			X	
50XX		X ^b	X ^b	
51XX	X		X ^b	X
61XX				X
86XX			X	X
87XX			X	
92XX			X	
Inquire on Boron Grades		X	X	

a. Inquire for series designations not shown

b. Inquire on boron grades

BAR TOLERANCE FOR HOT ROLLED CARBON AND ALLOY BARS

SPECIFIED SIZES, in. (ROUNDS OR SQUARES)	VARIATION FROM SIZE ^a , in.		OUT-OF-ROUND OR SQUARE ^b , in.
	OVER	UNDER	
To 5/16 included	.005	.005	.008
Over 5/16 to 7/16 included	.006	.006	.009
Over 7/16 to 5/8 included	.007	.007	.010
Over 5/8 to 7/8 included	.008	.008	.012
Over 7/8 to 1 included	.009	.009	.013
Over 1 to 1-1/8 included	.010	.010	.015
Over 1-1/8 to 1-1/4 included	.011	.011	.016
Over 1-1/4 to 1-3/8 included	.012	.012	.018
Over 1-3/8 to 1-1/2 included	.014	.014	.021
Over 1-1/2 to 2 included	1/64	1/64	.023
Over 2 to 2-1/2 included	1/32	0	.023
Over 2-1/2 to 3-1/2 included	3/64	0	.035
Over 3-1/2 to 4-1/2 included	1/16	0	.046
Over 4-1/2 to 5-1/2 included	5/64	0	.058
Over 5-1/2 to 6-1/2 included	1/8	0	.070
Over 6-1/2 to 8-1/4 included	5/32	0	.085
Over 8-1/4 to 9-1/2 included	3/16	0	.100
Over 9-1/2 to 10 included	1/4	0	.120

a. Steel bars are regularly cut to length by shearing or hot sawing, which can cause end distortion resulting in those portions of the bar being outside the applicable size tolerance. When this end condition is objectionable, a machine cut end should be considered.

b. Out-of-round is the difference between the maximum and minimum diameters of the bar, measured at the same cross section. Out-of-square is the difference in the two dimensions at the same cross section of a square bar between opposite faces.

NOTE: Tolerances shown are based upon ASTM A29.

PERMISSIBLE VARIATIONS IN THICKNESS AND WIDTH FOR HOT ROLLED SQUARE EDGE AND ROUND EDGE FLAT BARS*

PERMISSIBLE VARIATIONS IN THICKNESS FOR THICKNESS GIVEN, OVER AND UNDER**, in.								PERMISSABLE VARIATIONS IN WIDTH, in.	
SPECIFIED WIDTH	.203" TO .230" EXCLUSIVE	.230" TO 1/4" EXCLUSIVE	1/4" TO 1/2" INCLUSIVE	OVER 1/2" TO 1" INCLUSIVE	1" TO 2" INCLUSIVE	2" TO 3" INCLUSIVE	OVER 3"	OVER	UNDER
To 1, Included	.007	.007	.008	.010	---	---	---	1/64	1/64
Over 1 to 2, Included	.007	.007	.012	.015	1/32	---	---	1/32	1/32
Over 2 to 4, Included	.008	.008	.015	.020	1/32	3/64	3/64	1/16	1/32
Over 4 to 6, Included	.009	.009	.015	.020	1/32	3/64	3/64	3/32	1/16
Over 6 to 8, Included	***	.015	.016	.025	1/32	3/64	3/64	1/8	3/32

*When a square is held against a face and an edge of a square flat bar, the edge shall not deviate by more than 3" or 5% of the thickness
 **Steel bars are cut to length by shearing which can cause distortion resulting in those portions of the bar being outside the applicable size tolerance. If this is not acceptable a machine cut end should be considered.

***Flats over 6" to 8" included, are not available as hot rolled steel bars in thickness under .230"
 Note: Tolerances are based on ASTM A29

STRAIGHTNESS TOLERANCE FOR HOT ROLLED STEEL BARS

ROUNDS, SQUARES, HEXAGONS, OCTAGONS, FLATS, AND SPRING FLATS

Measurement is taken on the concave side of the bar with a straight edge.

NORMAL STRAIGHTNESS	SPECIAL STRAIGHTNESS
1/4" in any 5 feet or	1/8" in any 5 feet
$1/4" \times \frac{\text{length in feet}}{5}$	$1/8" \times \frac{\text{length in feet}}{5}$

NOTE: Because of warpage, straightness tolerances do not apply to bars if any subsequent heating operation or controlled cooling has been performed.

NOTE: Tolerances shown are based upon ASTM A29.

PERMISSIBLE VARIATIONS IN LENGTH FOR HOT-ROLLED ROUNDS, SQUARES, HEXAGONS, AND BAR SIZE SECTIONS OF STEEL

SPECIFIED SIZE OF ROUNDS, SQUARES, AND HEXAGONS, in.	PERMISSIBLE VARIATIONS OVER SPECIFIED LENGTH, in.				
	5 to 10 ft, excl	10 to 20 ft, excl	20 to 30 ft, excl	30 to 40 ft, excl	40 to 60 ft, excl
MILL SHEARING					
To 1, incl	1/2	3/4	1 1/4	1 3/4	2 1/4
Over 1 to 2, incl	5/8	1	1 1/2	2	2 1/2
Over 2 to 5, incl	1	1 1/2	1 3/4	2 1/4	2 3/4
Over 5 to 10, incl	2	2 1/2	2 3/4	3	3 1/4
Bar Size Sections	5/8	1	1 1/2	2	2 1/2
HOT SAWING					
2 to 5, incl	**	1 1/2	1 3/4	2 1/4	2 3/4
Over 5 to 10, incl	**	2 1/2	2 3/4	3	3 1/4

*No permissible variations under.

**Smaller sizes and shorter lengths are not hot sawed.

NOTE: Tolerances shown are based upon ASTM A29.

SPECIAL SHAPES







GERDAU SPECIAL SHAPES PRODUCTS IN USE

ONE WORLD TRADE CENTER

New York City, NY

One World Trade Center is a historical landmark skyscraper located in Lower Manhattan, New York City. It stands as the tallest building in the Western Hemisphere, reaching a symbolic height of 1,776 feet.

Visitors are safely transported to the top of the tower thanks to elevator guide rails produced at our Selkirk, MB mill. Gerdau is a leader in elevator guide rails, and our steel can be found in many of the tallest buildings in the world.

Gerdau's larger elevator guide rail sizes as well as our advanced machining practices that create ultrasmooth surfaces allowed modern high-speed elevators to be installed in this project. This ensures visitors travel quickly and safely to the top.

OUR MANITOBA MILL HAS UNIQUE CAPABILITIES TO PRODUCE A WIDE RANGE OF SPECIAL GRADES, SHAPES AND SIZES



ENVIRONMENTAL

Gerdau Manitoba is one of the cleanest steel mills in the world

Manitoba's electricity is 97% derived from renewable hydropower

Our steel has greater than 96% recycled content



CAPABILITIES

Manitoba offers special sections with more than 90 steel grades and 300 sections

Inventory management and just-in-time shipments to ensure business continuity

Value-added capabilities: straightening, hole punching, welding, coating, milling, drilling, and more

A36, CSA 44W - 65W, A572 up to GR65

CVN grades up to 70 ksi with Cat. 2

CSA Gr400R/400W rebar

10XX, 15XX, 41XX, 15BXX, 50BXX, 51BXX, 41BXX

Billet capacity for sales in sizes from 6.75" to 10"x16"



MANITOBA IS NOT JUST YOUR SPECIALTY MILL

FLATS

WIDTH, in.	THICKNESS, in. (CURRENT)	THICKNESS, in. (CAPABILITY)
2	1 1/4" - 1 1/2"	1 - 1/2"
3	1 1/2" - 2"	2"
4	1/4" - 3"	3"
5	1/4" - 3"	4"
6	1/4" - 4 1/2"	4 1/2"
7	1/4" - 2"	4 1/2"
8	1/4" - 3"	3"
9	1/2" - 1"	3"
10	1/2" - 1 3/4"	2"
11	1" - 1 1/2"	5"
12	3/4" - 1 3/4"	5"
13	1"	5"
14	3/4" - 2 1/4"	3"
16		1" - 3"

ROUNDS

CAPABILITY, in.	CAPABILITY, in.
3/4"	2 1/2"
7/8"	3"
1"	3 1/2"
1 1/8"	3 3/8"
1 1/4"	4"
1 3/8"	4 1/2"
1 1/2"	4 3/4"
1 5/8"	5"
1 3/4"	5 1/8"
2"	

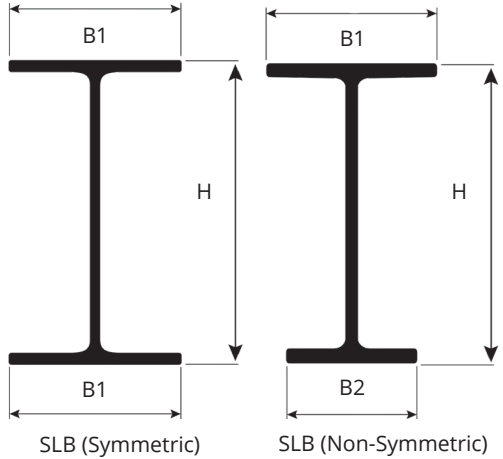
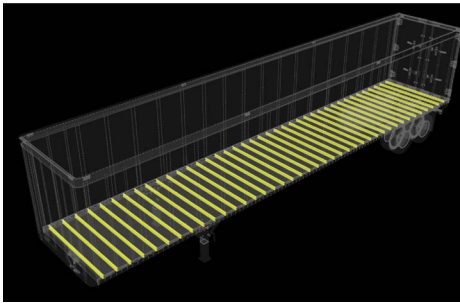


SUPER LIGHT BEAMS

Gerdau Manitoba is a major supplier of special steel sections, with Value Added Capabilities supplying Super Light Beams worldwide.

Value Added Capabilities include:

- Precision cut to length
- Welded end plates
- Wax coating
- Hole punching
- Galvanizing



SIZE	WEIGHT	B1	B2	H
	lbs / ft (kg / m)	in (mm)	in (mm)	in (mm)
SLB 4" x 3.20# G80	3.20	2.25	2.25	4.00
	4.76	57.15	57.15	101.60
SLB 4" x 3.45# G80	3.45	2.25	2.25	4.00
	5.13	57.15	57.15	101.60
SLB 4" x 3.64# G80	3.64	2.25	2.25	4.00
	5.42	57.15	57.15	101.60
SLB 4" x 3.26# G80	3.26	2.25	1.50	4.00
	4.85	57.15	38.10	101.60
SLB 4" x 3.47# G80	3.47	2.25	1.75	4.00
	5.16	57.15	44.85	101.60
SLB 3" x 2.9# G80	2.90	2.25	2.25	3.00
	4.32	57.15	57.15	76.20
SLB 3" x 3.05# G80	3.05	2.25	2.25	3.00
	4.54	57.15	57.15	76.20
SLB 3" x 2.54# G60	2.54	2.00	2.00	3.00
	3.78	50.80	50.80	76.20

For profile, tolerances, or additional special requirements, reach out to your sales representative.

HEAT TREATED







Photo Credit Blattner

GERDAU HEAT TREATED PRODUCTS IN USE

SUNZIA WIND & TRANSMISSION

New Mexico

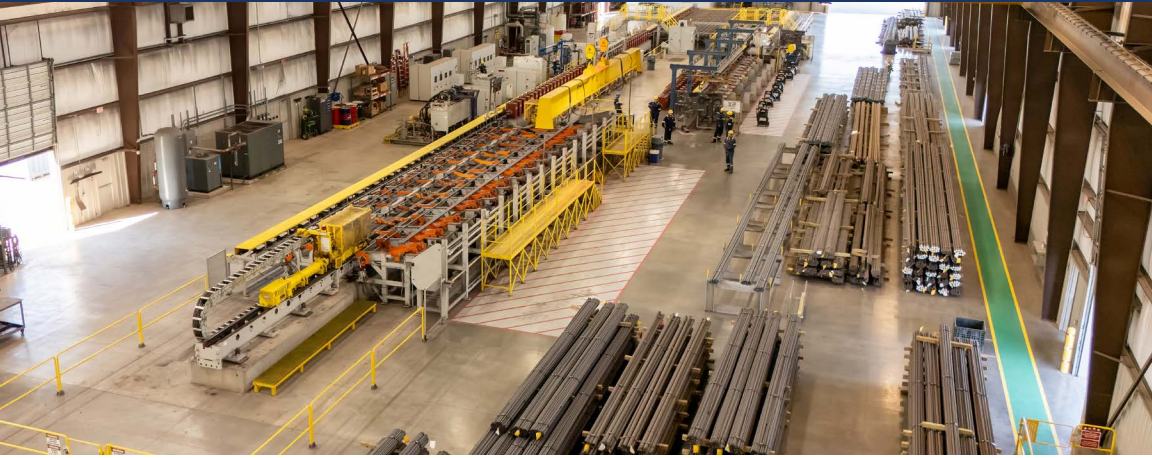
The SunZia Wind and Transmission Project is the largest renewable energy initiative in U.S. history, delivering over 3,500 MW of clean wind energy, enough to power one million homes.

Gerdau supplied A722 steel—the gold standard in strength and reliability for wind tower anchor bolts. Our GMSP facility in Midlothian, TX uses the most modern induction heat treat process available and is the only producer of true ASTM A722 in North America.

We're proud to stand alongside Pattern Energy, Blattner, and Dyson. Our A722 steel was transformed into anchor bolts, which serve as critical components connecting the towers to their foundations.

MOST MODERN STATE-OF-THE-ART INDUCTION HEAT TREATMENT PROCESS IN NORTH AMERICA

GERDAU MIDLOTHIAN STEEL PROCESSING



Gerdau's North American emissions are substantially lower



100% Domestic: Melted and manufactured in the United States



Powered by renewable energy: 80 megawatts onsite solar farm in TX



New state-of-the-art facility, located next to our TX mill

Captive steel supply

Only true producer of A722 in North America

Vertically integrated supply chain



Inhouse testing: tensile, hardness, metallography

Value added services: cut to length, turned & polished, saw cutting

Quench & tempering, cold shear anneal, normalizing, stress relieving



Expanded product range

Q&T size range: 1.0" to 3.0"

Grades: ASTM A722 Type I and Type II, ASTM F1554 Grade 105, ASTM A193 B7

Developing: A320 L7, A354 BC, & A354 BD

QUENCH AND TEMPERED BARS



Gerdaу's Quench & Tempered bars are made at Gerdaу Midlothian Steel Processing (GMSP), adjacent to Gerdaу's Midlothian steel mill and 80-megwatt solar farm. GMSP is the newest, most technologically advanced heat treatment facility in North America. Our bars are passed through an advanced induction heat treating and proprietary quench process that treats each bar individually. The process adds strength and improves resistance to impact and abrasion, enabling customers to machine distortion-free parts, eliminating processes including stress relieving and straightening, resulting in cost savings.

GERDAU QUENCH & TEMPERED ADVANTAGES

ONE PIECE AT A TIME

Each bar is individually heat treated, superior to "batch" treatment.

UNIFORM HEATING

Each rotating bar is uniformly heated to a precise temperature.

INDIVIDUAL QUENCHING

Each bar is individually quenched through a proprietary process, achieving optimum transformation kinetics.

SUPERIOR STRAIGHTNESS

Rotation of individual bars through the spray quench leads to superior straightness.

UNIFORM HARDNESS

Every bar has uniform hardness end-to-end, piece-to-piece, and order-to-order.

STRESS FREE

Each bar is stress free, and ready for critical part applications.

STRENGTH & TOUGHNESS

Our advanced process produces a fully martensitic structure, allowing for demanding strength and toughness requirements.

VALUE-ADDED SERVICES

Orders can be custom cut for specific applications, along with other available services.

SPECIFICATIONS & CAPABILITIES

GRADES TREATED & AVAILABLE TREATMENTS

All heat treatable grades of carbon and alloy steels. Available heat treatments for carbon and alloy bar include quench & temper, normalizing, and stress relieving.

BAR PRODUCTS

- Hot finished.

LENGTH CAPACITY

- 20 ft. to 65 ft.

STRAIGHTNESS TOLERANCES

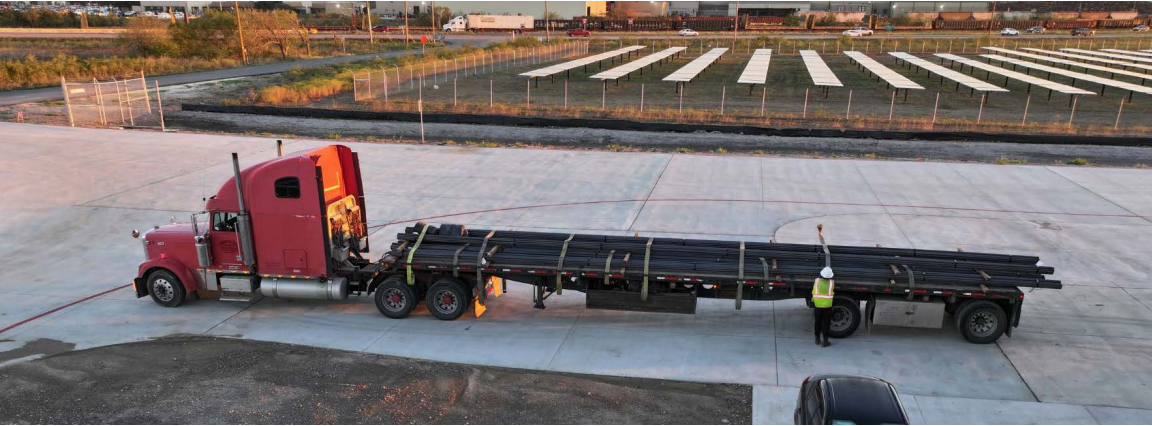
- 0.25" per 5 ft.

CUTTING

- Cut-to-length for product applications

OTHER VALUE-ADDED SERVICES

- Demagnetization
- Metallurgical support
- Complete traceability
- Complete test reports
- Small quantities available
- Color coding
- Experimental or trial orders
- Short lead times
- On-time, all-the-time delivery
- Overseas packaging



Inaugural GMSP shipment, with Gerdau's Midlothian steel mill and solar farm in background

TYPICAL APPLICATIONS

- Bolting stock
- Construction equipment
- Crane booms
- Drill collars
- Farm equipment
- Motor shafting
- Off-road equipment
- Oil country accessories
- Perforator guns
- Screw machine parts
- Tool joints
- Trucks & trailers

A722 BARS

A722 TYPE I (PLAIN) BARS & TYPE II (DEFORMED) BARS

Applications:

- Construction & post-tensioning, commonly for repairs & strengthening projects, or at joints between concrete & steel structures.
- Wind tower anchoring bolts.

Advantages:

- Fully compliant to ASTM A722 specification, a recognized international standard.
- Gerdau is North America's ONLY producer of true A722.
- Superior quality assurance. Each bar is proof-tested.
- Lower stress relaxation than comparable Quench & Temper Products.
- Longer lengths available compared to Quench & Temper Products.
- Shorter lead times due to complete Gerdau supply chain.

MIDLOTHIAN STEEL PROCESSING - SIZE & LENGTH CAPABILITIES

Type I Nominal Sizes, inches ^{1,2}	Type II Nominal Sizes, mm ^{1,2}	Available Lengths ^{2,3}
1.080	26	Available Lengths are from 30 to 65 feet.
1.316	32	
1.473	36	
1.842/1.867	46	

1. Inquire on sizes not listed

2. Dimensional and length tolerances are according to ASTM A29.

3. Short bar(s) due to testing are included in the bundle(s).

A722 - MECHANICAL PROPERTIES

	Tensile Strength	Yield Strength	Elongation
Type I	Minimum of 150 ksi (1,035 MPa)	85% of the minimum tensile strength 127.5 ksi (880 MPa)	4.0% minimum in a gauge length equal to 20 bar diameters, or a 7.0% in a gauge length equal to 10 bar diameters
Type II		80% of the minimum tensile strength 120 ksi (828 MPa)	

GERDAU JUMBO 75S™

HIGH STRENGTH ANCHOR BOLT MATERIAL

GERDAU JUMBO 75S™ BENEFITS

- Reduced fabrication costs
- Eliminates need to fabricate a hook
- Easier to machine than quench and tempered bolt material
- Rounder, heavier bar Flat spots in threaded area of bolt virtually eliminated
- Heat treated for toughness that is superior to standard rebar chemistries at all temperatures
- Certified to ASTM A615 / A615M chemical, dimensional, marking and mechanical requirements



With **Gerdau JUMBO 75S™** High Strength Anchor Bolt, Gerdau has met the utility industry's need for a high strength, easy to use anchor bolt material. **Gerdau JUMBO 75S™** is heat-treated, giving the bars added ductility and toughness. During a special rolling process, dimensions are controlled to produce a bar that's rounder and heavier than standard #18 and #14 ASTM A615 rebar.

GERDAU JUMBO 75S™ MECHANICAL PROPERTIES^(b)

DEFORMED REBAR SIZE	NOMINAL WT / FT	MIN. CHARPY (C) V-NOTCH @ -20°F	MINIMUM YIELD STRENGTH	MINIMUM TENSILE STRENGTH	MINIMUM ELONGATION (D)	BEND TEST 9D PIN
#18J	14.63 lbs	15 ft-lb	75,000 psi	100,000 psi	10%	90 degrees
#14J	9.48 lbs	15 ft-lb	75,000 psi	100,000 psi	10%	90 degrees

(b) This material is certified to ASTM A615/A615M Grade 75/520. (c) Charpy V-Notch per ASTM A673 - material tested on heat lot (H) frequency basis. (d) Full Section Testing, eight (8) inch gauge length

GERDAU JUMBO 75S™ CHEMICAL ANALYSIS, %^(e)

C	Mn	P	Cu	Ni	Cr	Mo	V
.40	1.00	.06	.20	.50	.30	.10	.20
Max.	1.60	Max.	.50	Max.	Max.	Max.	Max.

(e) Aims only - not supplied to a chemical specification. Particular chemical elements or ranges are subject to change without notice.



GERDAU

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