

R.W. CONKLINSTEEL

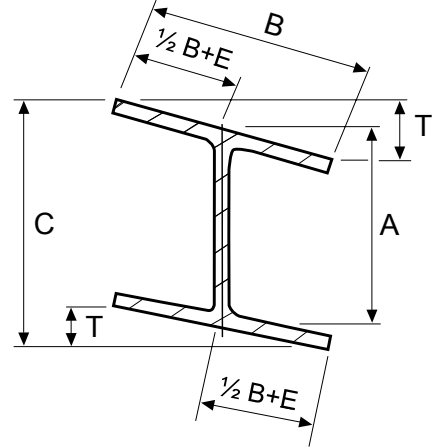
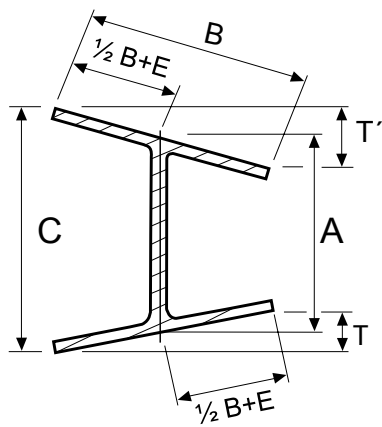
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1-888-CONKLIN (266-5546)

www.conklinsteel.com

PERMISSIBLE VARIATIONS

H-Pile & Wide Flange



PERMISSIBLE VARIATIONS IN CROSS SECTION

	Depth (A)		Flange Width (B)		T + 1'	E	Max (C)
	OVER THEORETICAL	UNDER THEORETICAL	OVER THEORETICAL	UNDER THEORETICAL	FLANGES OUT OF SQ. MAX	WEB OFF CENTER MAX	DEPTH AT ANY CROSS SECT. OVER THEORETICAL
All Sizes Up to 12" (including 12")	1/8"	1/8"	1/4"	3/16"	1/4"	3/16"	1/4"
Sizes Over 12"	1/8"	1/8"	1/4"	3/16"	5/16"	3/16"	1/4"

A is measured at center line of web, B is measured parallel to flange, C is measured parallel to web

*Through 426 lbs/ft, over 426 lbs/ft, 5/16-inch.

PERMISSIBLE VARIATIONS IN LENGTH

Variations from Specified Length for Lengths Given

	30-FOOT AND UNDER		OVER 30-FOOT	
	OVER THEORETICAL	UNDER THEORETICAL	OVER THEORETICAL	UNDER THEORETICAL
24" and Under in Nominal Depth	3/8"	3/8"	3/8" + 1/16" for each additional 5' or fraction thereof	3/8"
24" in Nominal Length & Columns	1/2"	1/2"	1/2" + 1/16" for each additional 5' or fraction thereof	1/2"

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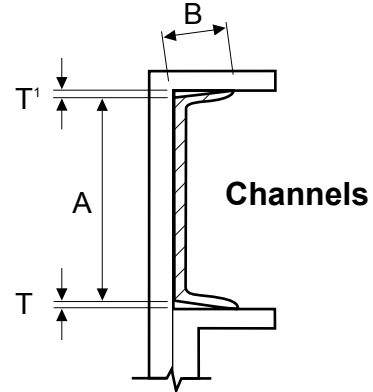
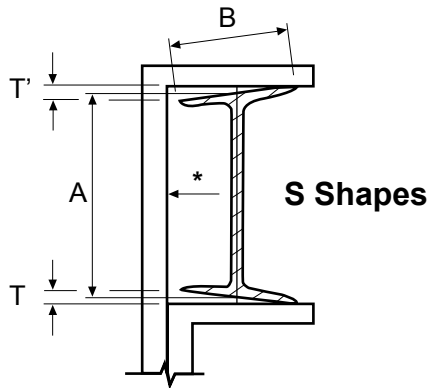
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PERMISSIBLE VARIATIONS

American Standard/Channel



PERMISSIBLE VARIATIONS IN CROSS SECTION

Section	Nominal Size (Inches)	Depth (A)		Flange Width (B)		Max (C)
		OVER THEORETICAL	UNDER THEORETICAL	OVER THEORETICAL	UNDER THEORETICAL	OUT OF SQUARE PER INCH OF B IN INCHES
S Shapes	3" - 7" (including 7")	3/32"	1/16"	1/8"	1/8"	1/32"
	Over 7" - 14" (including 14")	1/8"	3/32"	5/32"	5/32"	1/32"
	Over 14"	3/16"	1/8"	3/16"	3/16"	1/32"
Channels	3" - 7" (including 7")	3/32"	1/16"	1/8"	1/8"	1/32"
	Over 7" - 14" (including 14")	1/8"	3/32"	1/8"	5/32"	1/32"
	Over 14"	3/16"	1/8"	1/8"	3/16"	1/32"

A is measured at center line of web

PERMISSIBLE VARIATIONS IN LENGTH

Variations from Specified Length for Lengths Given

Section	UP TO 30 FT (with 30 ft included)	OVER 30 FT TO 40 FT (with 40 ft included)	OVER 40 FT TO 50 FT (with 50 ft included)	OVER 50 FT TO 65 FT (with 65 ft included)	OVER 65 FT (with 40 ft included)
	OVER THEORETICAL	OVER THEORETICAL	OVER THEORETICAL	OVER THEORETICAL	OVER THEORETICAL
S Shapes & Channels	2"	2"	2"	2"	2"
	UNDER THEORETICAL	UNDER THEORETICAL	UNDER THEORETICAL	UNDER THEORETICAL	UNDER THEORETICAL
	N/A	N/A	N/A	N/A	N/A

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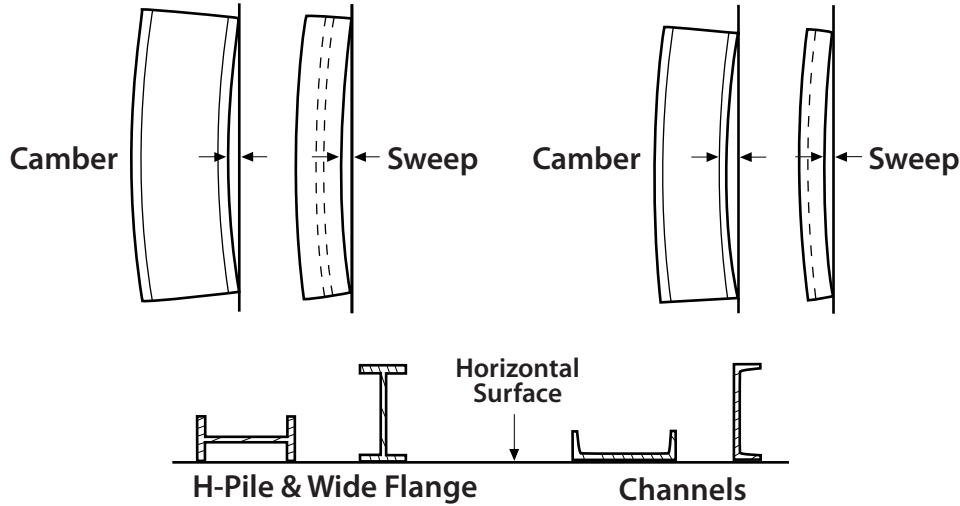
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PERMISSIBLE VARIATIONS

H-Pile/Wide Flange/Standard/Channel

POSITIONS FOR MEASURING CAMBER & SWEEP



PERMISSIBLE VARIATIONS IN CAMBER & SWEEP

Permissible Variations in Inches			
Sizes	Length	CAMBER	SWEEP
Sizes with flange width equal to or greater than 6 inches	All	$\frac{1/8" \times \text{total length (in feet)}}{10}$	
Sizes with flange width equal to or greater than 6 inches	All	$\frac{1/8" \times \text{total length (in feet)}}{10}$	$\frac{1/8" \times \text{total length (in feet)}}{5}$
Certain sections with flange width approximately equal to depth & specified on order as columns	45 Ft. and Under	$\frac{1/8" \times \text{total length (in feet)}}{10}$	(with 3/8" max)
	Over 45 Ft.	$3/8" + \frac{1/8" \times \text{total length (in feet)} - 45}{10}$	

OTHER TOLERANCES FOR H-PILE & WIDE FLANGE

Variation in Weight ± 2.5% of theoretical or published weight	Ends out of Square 1/64" per inch of depth, or flange width if it is greater than depth
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OTHER TOLERANCES FOR STANDARD & CHANNEL

Variation in Weight ± 2.5% of theoretical or published weight	Ends out of Square 1/64" per inch of depth
Camber $\frac{1/8" \times \text{total length (in feet)}}{5}$	Sweep $\frac{1/4" \times \text{total length (in feet)}}{5}$

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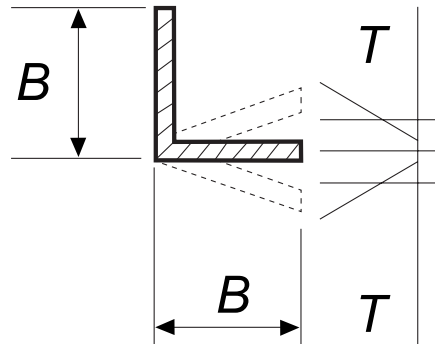
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PERMISSIBLE VARIATIONS

Angles



PERMISSIBLE VARIATIONS IN CROSS SECTION

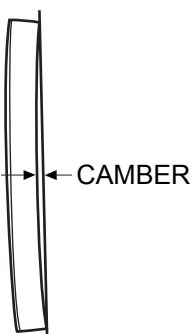
	Nominal Size	Depth (A)		Flange Width (B)		T	E
		OVER THEORETICAL	UNDER THEORETICAL	OVER THEORETICAL	UNDER THEORETICAL	OUT OF SQUARE PER INCH OF B	WEB OFF CENTER MAX
L Angles	3" - 4" (including 4")	—	—	1/8"	3/32"	3/128"*	—
	Over 4" - 6" (including 6")	—	—	1/8"	1/8"	3/128"*	—
	Over 6" - 8" (including 8")	—	—	3/16"	1-8"	3/128"*	—

* 3/128-inch per inch = 1 1/2 degrees.

PERMISSIBLE VARIATIONS IN LENGTH

Variations from Specified Length for Lengths Given

	UP TO 30 FT (with 30 ft included)	OVER 30 FT TO 40 FT (with 40 ft included)	OVER 40 FT TO 50 FT (with 50 ft included)	OVER 50 FT TO 65 FT (with 65 ft included)	OVER 65 FT
	L Angles	OVER THEORETICAL	OVER THEORETICAL	OVER THEORETICAL	OVER THEORETICAL
1/2"		3/4"	1"	1 1/8"	1 1/4"
UNDER THEORETICAL		UNDER THEORETICAL	UNDER THEORETICAL	UNDER THEORETICAL	UNDER THEORETICAL
1/4"		1/4"	1/4"	1/4"	1/4"



STRAIGHTNESS

Permissible Variations

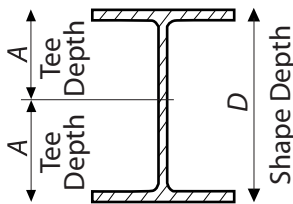
CAMBER	
1/8" x	$\frac{\text{total length (in feet)}}{5}$

HORIZONTAL SURFACE

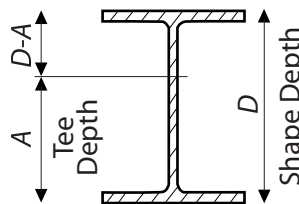


Sweep tolerances are subject to negotiation for the individual shapes involved.

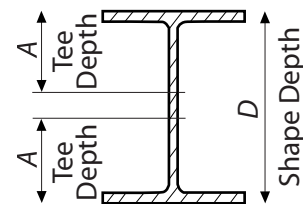
GENERALLY, ANY W-SHAPE OR S-SHAPE FROM 6" - 36" IN DEPTH CAN BE SPLIT TO FORM TEES



Center Splitting



Off-Center Splitting



Two Lines of Cut

Nominal W-Shape Depth in Inches	Variation from Tee Depth Over and Under in Inches
6" - 16" (excluding 16")	3/16"
16" - 20" (excluding 20")	1/4"
20" - 24" (excluding 24")	5/16"
24" and Over	3/8"

All weight, length and ends out of square variations for split tees are the same as those applicable to the shape from which the tees are split.

STRAIGHTNESS

Permissible Variations in Inches

CAMBER

$$1/8" \times \frac{\text{total length (in feet)}}{5}$$