

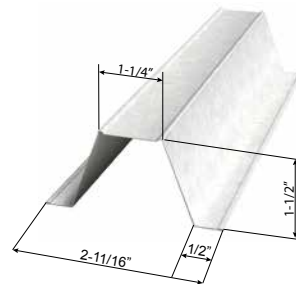
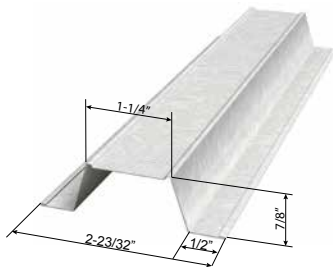
Furring / Hat Channel

(HAT) FURRING (F) CHANNEL SECTION PROPERTIES

Section	Design thickness (in)	Yield Strength, FY (ksi)	Gross Properties						Effective Properties			
			Area (in ²)	Weight (lb/ft)	I _x (in ⁴)	R _x (in)	I _y (in ⁴)	R _y (in)	I _x (in ⁴)	S _x (in ³)	M _a (ft-lb)	V _a (lb)
087F125-18	0.0188	33	0.072	0.244	0.009	0.354	0.035	0.698	0.008	0.016	26.61	255
087F125-27	0.0283	33	0.107	0.365	0.013	0.351	0.051	0.693	0.013	0.027	45.20	381
087F125-30	0.0312	33	0.118	0.401	0.014	0.350	0.056	0.691	0.014	0.031	50.98	420
087F125-33	0.0346	33	0.130	0.443	0.016	0.349	0.062	0.689	0.016	0.034	56.23	464
087F125-43	0.0451	33	0.168	0.572	0.020	0.345	0.079	0.684	0.020	0.043	71.00	599
087F125-54	0.0566	50	0.207	0.706	0.024	0.340	0.095	0.678	0.024	0.059	128.85	1091
150F125-18	0.0188	33	0.095	0.324	0.031	0.572	0.052	0.742	0.029	0.034	56.73	261
150F125-27	0.0283	33	0.143	0.485	0.046	0.569	0.077	0.737	0.046	0.057	94.22	390
150F125-30	0.0312	33	0.157	0.534	0.051	0.568	0.085	0.735	0.050	0.064	105.92	429
150F125-33	0.0346	33	0.174	0.590	0.056	0.566	0.093	0.733	0.056	0.071	117.31	474
150F125-43	0.0451	33	0.225	0.764	0.071	0.563	0.119	0.728	0.071	0.091	149.70	613
150F125-54	0.0566	50	0.278	0.946	0.087	0.558	0.145	0.722	0.087	0.122	275.55	1117

Notes:

- 1 Calculated properties are based on AISI S100-12, North American Specification for Design of Cold-Formed Steel Structural Members.
- 2 Minimum base metal thickness is 95% of design thickness. Design thickness used for determination of properties.
- 3 Effective properties are based on F_y=33ksi. For deflection calculations, use effective I_x. Effective I_x is based on Procedure 1 of NASPEC.
- 4 Effective properties are given as the minimum value for positive or negative bending.



(HAT) FURRING (F) CHANNEL ALLOWABLE CEILING SPANS L/360

Section	Yield Strength, FY (ksi)	Spans	4 psf dead load			6 psf dead load			13 psf dead load		
			Spacing (in) o.c.			Spacing (in) o.c.			Spacing (in) o.c.		
			12	16	24	12	16	24	12	16	24
087F125-18	33	Single	4'-5"	4'-0"	3'-6"	3'-10"	3'-6"	3'-1"	3'-0"	2'-9"	2'-5"
		Multiple	5'-6"	5'-0"	4'-4"	4'-9"	4'-4"	3'-10"	3'-8"	3'-4"	2'-10"
087F125-27	33	Single	5'-3"	4'-9"	4'-2"	4'-7"	4'-2"	3'-8"	3'-6"	3'-3"	2'-10"
		Multiple	6'-6"	5'-11"	5'-2"	5'-8"	5'-2"	4'-6"	4'-4"	4'-0"	3'-6"
087F125-30	33	Single	5'-5"	4'-11"	4'-3"	4'-9"	4'-3"	3'-9"	3'-8"	3'-4"	2'-11"
		Multiple	6'-8"	6'-1"	5'-3"	5'-10"	5'-3"	4'-7"	4'-6"	4'-1"	3'-7"
087F125-33	33	Single	5'-7"	5'-1"	4'-5"	4'-10"	4'-5"	3'-10"	3'-9"	3'-5"	3'-0"
		Multiple	6'-11"	6'-3"	5'-6"	6'-0"	5'-6"	4'-9"	4'-8"	4'-3"	3'-8"
087F125-43	33	Single	6'-0"	5'-6"	4'-9"	5'-3"	4'-9"	4'-2"	4'-1"	3'-8"	3'-3"
		Multiple	7'-5"	6'-9"	5'-11"	6'-6"	5'-11"	5'-2"	5'-0"	4'-7"	4'-0"
087F125-54	50	Single	6'-5"	5'-10"	5'-1"	5'-7"	5'-1"	4'-5"	4'-4"	3'-11"	3'-5"
		Multiple	7'-11"	7'-2"	6'-3"	6'-11"	6'-3"	5'-6"	5'-4"	4'-10"	4'-3"
150F125-18	33	Single	6'-10"	6'-2"	5'-5"	5'-11"	5'-5"	4'-9"	4'-7"	4'-2"	3'-8"
		Multiple	8'-5"	7'-8"	6'-8"	7'-4"	6'-8"	5'-10"	5'-8"	4'-9"	3'-8"
150F125-27	33	Single	7'-11"	7'-3"	6'-4"	6'-11"	6'-4"	5'-6"	5'-4"	4'-11"	4'-3"
		Multiple	9'-10"	8'-11"	7'-10"	8'-7"	7'-10"	6'-10"	6'-8"	6'-0"	5'-3"
150F125-30	33	Single	8'-2"	7'-5"	6'-6"	7'-2"	6'-6"	5'-8"	5'-6"	5'-0"	4'-5"
		Multiple	10'-1"	9'-2"	8'-0"	8'-10"	8'-0"	7'-0"	6'-10"	6'-3"	5'-5"
150F125-33	33	Single	8'-6"	7'-8"	6'-9"	7'-5"	6'-9"	5'-10"	5'-9"	5'-2"	4'-6"
		Multiple	10'-6"	9'-6"	8'-4"	9'-2"	8'-4"	7'-3"	7'-1"	6'-5"	5'-7"
150F125-43	33	Single	9'-2"	8'-4"	7'-4"	8'-0"	7'-4"	6'-4"	6'-2"	5'-8"	4'-11"
		Multiple	11'-4"	10'-4"	9'-0"	9'-11"	9'-0"	7'-11"	7'-8"	7'-0"	6'-1"
150F125-54	50	Single	9'-10"	8'-11"	7'-9"	8'-7"	7'-9"	6'-10"	6'-8"	6'-0"	5'-3"
		Multiple	12'-2"	11'-0"	9'-8"	10'-7"	9'-8"	8'-5"	8'-2"	7'-5"	6'-6"

Notes:

See table notes on next page

(HAT) FURRING (F) CHANNEL ALLOWABLE CEILING SPANS L/240

Section	Yield Strength, FY (ksi)	Spans	4 psf dead load Spacing (in) o.c.			6 psf dead load Spacing (in) o.c.			13 psf dead load Spacing (in) o.c.		
			12	16	24	12	16	24	12	16	24
087F125-18	33	Single	5'-1"	4'-7"	4'-0"	4'-5"	4'-0"	3'-6"	3'-5"	3'-1"	2'-9"
		Multiple	6'-3"	5'-8"	5'-0"	5'-6"	5'-0"	4'-3"	4'-1"	3'-6"	2'-10"
087F125-27	33	Single	6'-0"	5'-5"	4'-9"	5'-3"	4'-9"	4'-2"	4'-1"	3'-8"	3'-3"
		Multiple	7'-5"	6'-9"	5'-11"	6'-6"	5'-11"	5'-2"	5'-0"	4'-7"	3'-9"
087F125-30	33	Single	6'-2"	5'-7"	4'-11"	5'-5"	4'-11"	4'-3"	4'-2"	3'-9"	3'-4"
		Multiple	7'-8"	6'-11"	6'-1"	6'-8"	6'-1"	5'-3"	5'-2"	4'-8"	4'-0"
087F125-33	33	Single	6'-5"	5'-10"	5'-1"	5'-7"	5'-1"	4'-5"	4'-4"	3'-11"	3'-5"
		Multiple	7'-11"	7'-2"	6'-3"	6'-11"	6'-3"	5'-6"	5'-4"	4'-10"	4'-2"
087F125-43	33	Single	6'-11"	6'-3"	5'-6"	6'-0"	5'-6"	4'-9"	4'-8"	3'-8"	3'-8"
		Multiple	8'-6"	7'-9"	6'-9"	7'-5"	6'-9"	5'-11"	5'-9"	5'-3"	4'-7"
087F125-54	50	Single	7'-4"	6'-8"	5'-10"	6'-5"	5'-10"	5'-1"	4'-11"	4'-6"	3'-11"
		Multiple	9'-1"	8'-3"	7'-2"	7'-11"	7'-2"	6'-3"	6'-1"	5'-7"	4'-10"
150F125-18	33	Single	7'-10"	7'-1"	6'-2"	6'-10"	6'-2"	5'-5"	5'-3"	4'-9"	4'-2"
		Multiple	9'-8"	8'-8"	7'-6"	8'-5"	7'-6"	6'-2"	5'-10"	4'-9"	3'-8"
150F125-27	33	Single	9'-1"	8'-3"	7'-3"	7'-11"	7'-3"	6'-4"	6'-2"	5'-7"	4'-11"
		Multiple	11'-3"	10'-3"	8'-11"	9'-10"	8'-11"	7'-10"	7'-7"	6'-7"	5'-9"
150F125-30	33	Single	9'-5"	8'-6"	7'-5"	8'-2"	7'-5"	6'-6"	6'-4"	5'-9"	5'-0"
		Multiple	11'-7"	10'-6"	9'-2"	10'-1"	9'-2"	8'-0"	7'-10"	7'-0"	5'-9"
150F125-33	33	Single	9'-8"	8'-10"	7'-8"	8'-6"	7'-8"	6'-9"	6'-7"	5'-11"	5'-2"
		Multiple	12'-0"	10'-11"	9'-6"	10'-6"	9'-6"	8'-4"	8'-1"	7'-4"	6'-0"
150F125-43	33	Single	10'-6"	9'-7"	8'-4"	9'-2"	8'-4"	7'-4"	7'-1"	6'-5"	5'-8"
		Multiple	13'-0"	11'-10"	10'-4"	11'-4"	10'-4"	9'-0"	8'-9"	8'-0"	6'-9"
150F125-54	50	Single	11'-3"	10'-2"	8'-11"	9'-10"	8'-11"	7'-9"	7'-7"	6'-11"	6'-0"
		Multiple	13'-11"	12'-7"	11'-0"	12'-2"	11'-0"	9'-8"	9'-4"	8'-6"	7'-5"

(HAT) FURRING (F) CHANNEL ALLOWABLE CEILING SPANS L/120

Section	Yield Strength, FY (ksi)	Spans	4 psf dead load Spacing (in) o.c.			6 psf dead load Spacing (in) o.c.			13 psf dead load Spacing (in) o.c.		
			12	16	24	12	16	24	12	16	24
087F125-18	33	Single	6'-5"	5'-10"	5'-1"	5'-7"	5'-1"	4'-5"	4'-4"	3'-11"	3'-4"
		Multiple	7'-4"	6'-4"	5'-1"	5'-11"	5'-2"	4'-2"	4'-1"	3'-6"	2'-10"
087F125-27	33	Single	7'-7"	6'-10"	6'-0"	6'-7"	6'-0"	5'-3"	5'-3"	4'-8"	4'-1"
		Multiple	9'-4"	8'-3"	6'-8"	7'-9"	6'-9"	5'-5"	5'-3"	4'-7"	3'-8"
087F125-30	33	Single	7'-9"	7'-1"	6'-2"	6'-10"	6'-2"	5'-5"	5'-3"	4'-9"	4'-2"
		Multiple	9'-7"	8'-9"	7'-1"	8'-3"	7'-2"	5'-9"	5'-7"	4'-10"	3'-11"
087F125-33	33	Single	8'-0"	7'-4"	6'-5"	7'-0"	6'-5"	5'-7"	5'-5"	4'-11"	4'-4"
		Multiple	9'-11"	9'-0"	7'-5"	8'-8"	7'-6"	6'-1"	5'-11"	5'-1"	4'-1"
087F125-43	33	Single	8'-8"	7'-11"	6'-11"	7'-7"	6'-11"	6'-0"	5'-10"	5'-4"	4'-8"
		Multiple	10'-9"	9'-9"	8'-5"	9'-5"	8'-5"	6'-10"	6'-7"	5'-9"	4'-8"
087F125-54	50	Single	9'-3"	8'-5"	7'-4"	8'-1"	7'-4"	6'-5"	6'-3"	5'-8"	4'-11"
		Multiple	11'-5"	10'-4"	9'-1"	10'-0"	9'-1"	7'-11"	7'-8"	7'-0"	6'-1"
150F125-18	33	Single	9'-10"	8'-11"	7'-10"	8'-7"	7'-10"	6'-10"	6'-8"	6'-0"	5'-3"
		Multiple	10'-8"	9'-3"	7'-6"	8'-8"	7'-6"	6'-1"	5'-10"	4'-5"	2'-11"
150F125-27	33	Single	11'-6"	10'-5"	9'-1"	10'-0"	9'-1"	7'-11"	7'-9"	7'-0"	6'-9"
		Multiple	13'-9"	11'-11"	9'-8"	11'-2"	9'-8"	7'-11"	7'-7"	6'-7"	5'-4"
150F125-30	33	Single	11'-10"	10'-9"	9'-5"	10'-4"	9'-5"	8'-2"	8'-0"	7'-4"	6'-4"
		Multiple	14'-7"	12'-7"	10'-3"	11'-11"	10'-3"	8'-4"	8'-1"	7'-0"	5'-8"
150F125-33	33	Single	12'-3"	11'-1"	9'-8"	10'-8"	9'-8"	8'-6"	8'-3"	7'-6"	6'-7"
		Multiple	15'-1"	13'-3"	10'-9"	12'-6"	10'-10"	8'-10"	8'-6"	7'-4"	6'-0"
150F125-43	33	Single	13'-3"	12'-1"	10'-6"	11'-7"	10'-6"	9'-2"	8'-11"	8'-2"	7'-1"
		Multiple	16'-5"	14'-11"	12'-2"	14'-2"	12'-3"	9'-11"	9'-7"	8'-4"	6'-9"
150F125-54	50	Single	14'-2"	12'-10"	11'-3"	12'-4"	11'-3"	9'-10"	9'-7"	8'-8"	7'-7"
		Multiple	17'-6"	15'-11"	13'-11"	15'-3"	13'-11"	12'-2"	11'-10"	10'-9"	9'-2"

Notes:

- 1 Allowable ceiling spans are based on effective properties.
- 2 Multiple span indicates two or more equal spans with channel continuous over center support.
- 3 Bearing length = 0.75-inches.
- 4 Single spans taken as the minimum span based on moment, shear, web crippling or deflection.
- 5 Multiple span indicates two or more equal, continuous spans with span length measured support to support.
- 6 Multiple spans taken as minimum span based on moment, shear, web crippling, deflection combined bending and shear or combined bending and web crippling.