PROFILES:

Stud

Track
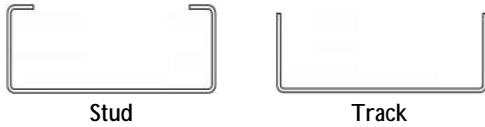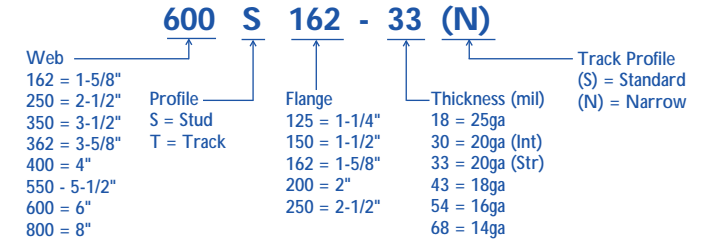
ASTM & CODE STANDARDS:

1. Members shall comply with manufacturing tolerances listed in Table A5-1 of AISI S220-20 for 18-30mil members.
2. Members shall comply with manufacturing tolerances listed in Table A5-3 of AISI S240-20 for 33-68mil members.
3. Reference AISI S100 for Design of Cold Formed Structural Steel Members.

GENERAL FRAMING NOTES:

1. Physical properties have been calculated in accordance with AISI S100.
2. Gross properties are based on the cross-section away from post-roll treatments.
3. Section properties consider cold work of forming.
4. CRC punches for 3-5/8" & wider members is 1.5" x 4" punch (see following page).
5. CRC punches for 1-5/8" & 2-1/2" members is 0.75" x 4" punch (see following page).
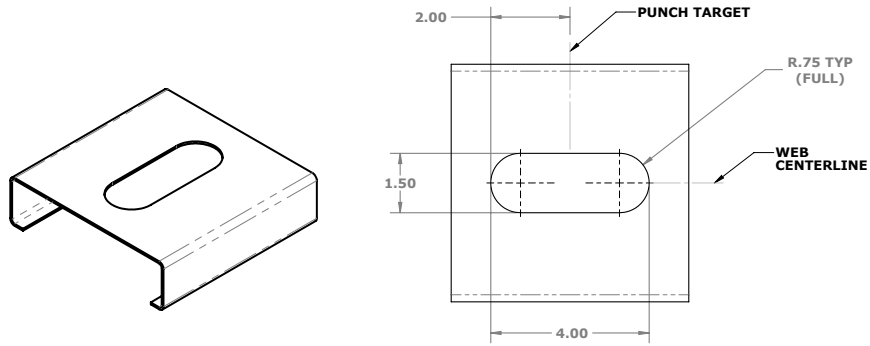
NOMENCLATURE (Example):

600 S 162 - 33 (N)

Web
162 = 1-5/8"
250 = 2-1/2"
350 = 3-1/2"
362 = 3-5/8"
400 = 4"
550 - 5-1/2"
600 = 6"
800 = 8"

Profile
S = Stud
T = Track

Flange
125 = 1-1/4"
150 = 1-1/2"
162 = 1-5/8"
200 = 2"
250 = 2-1/2"

Thickness (mil)
18 = 25ga
30 = 20ga (Int)
33 = 20ga (Str)
43 = 18ga
54 = 16ga
68 = 14ga

Track Profile
(S) = Standard
(N) = Narrow

THICKNESS IDENTIFICATION:

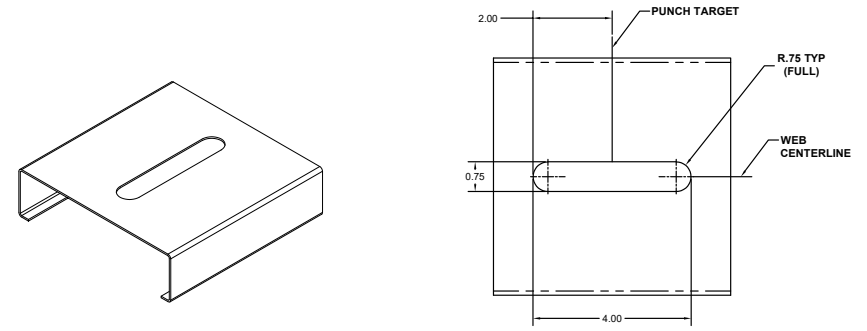| Designation (mils)	Gauge	Minimum Thickness (in.)	Design Thickness (in.)	Design Inside Corner Radii (in.)
18	25	0.0179	0.0188	0.0843
27	22	0.0269	0.0283	0.0796
30	20-INT	0.0296	0.0312	0.0781
33	20-STR	0.0329	0.0346	0.0764
43	18	0.0428	0.0451	0.0712
54	16	0.0538	0.0566	0.0849
68	14	0.0677	0.0713	0.1069

[1] Minimum thickness represents 95% of the design thickness (per AISI S100)
[2] Section properties calculated based on inside corner radii above (per AISI S220-20 for 18-30mil & AISI S240-20 for 33-68mil)

PROJECT:

APPROVAL:

SUBMITTED TO:

SUBMITTED BY:

DATE SUBMITTED:

PUNCHES & POST ROLLING TREATMENTS:

CRC Service Hole

- 2.00
- PUNCH TARGET
- R.75 TYP (FULL)
- WEB CENTERLINE
- 1.50
- 4.00

Service Hole

- 2.00
- PUNCH TARGET
- R.75 TYP (FULL)
- WEB CENTERLINE
- 0.75
- 4.00

Round Web Punch

- PUNCH TARGET
- WEB CENTERLINE
- $\varnothing$.813

Boss Flange Stamp

- PUNCH TARGET
- A
- .25
- .50
- A
- FLANGE CENTERLINE

Swage

- 2.000
- .075 TYP

Flange Dimple

- PUNCH TARGET
- A
- .75
- A

Gross Properties:

I_x = Moment of Inertia of cross-section about the x-axis

S_x = Section Modulus about the x-axis

R_x = Radius of Gyration of cross-section about the x-axis

I_y = Moment of Inertia of cross-section about the y-axis

R_y = Radius of Gyration of cross-section about the y-axis

Effective Properties:

I_{xe} = Effective Moment of Inertia of cross-section about the x-axis
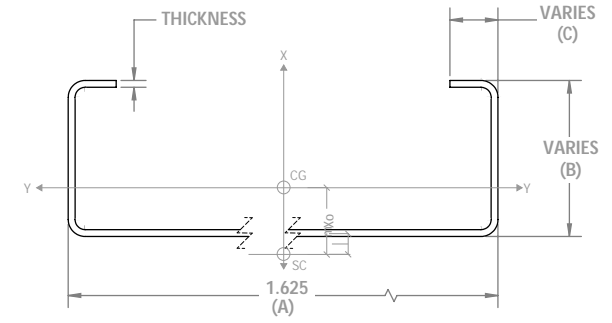
S_{xe} = Effective Section Modulus about the x-axis

M_a = Allowable Bending Moment

M_{da} = Allowable Distortional Buckling Moment at Kϕ = 0

V_{ag} = Allowable Shear Force in Web (Unpunched)

V_{anet} = Allowable Shear Force in Web (Punched)

Torsional Properties:

J = St Vincent Torsional Constant (J x 1000)

C_w = Warping Constant

X_o = Dist. From Shear Center to Neutral Axis

R_o = Radii of Gyration

$β$ = Torsional Flexural Constant

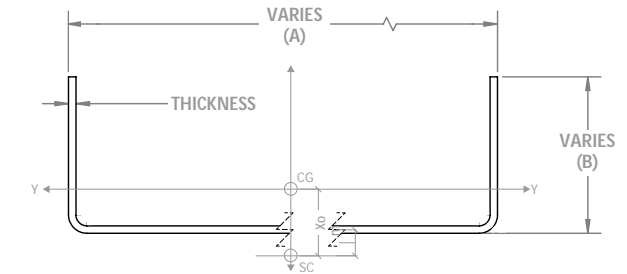**Notes:**

CRC punchouts are min. 12" from leading edge

CRC punchouts are min. 24" o.c.

1-5/8" STUD PROPERTIES

Member	Web Depth (A) (in.)	Flange Width (B) (in.)	Lip Width (C) (in.)	Design Thickness (in.)	Yield Strength Fy (ksi)	Ult Strength Fu (ksi)	Gross Properties						Effective Properties						Torsional Properties				
							Area (in²)	Weight (lb/ft)	I_x (in⁴)	S_x (in³)	R_x (in)	I_y (in⁴)	R_y (in)	I_{xe} (in⁴)	S_{xe} (in³)	M_a (in-k)	M_{da} (in-k)	V_{ag} (lb)	V_{anet} (lb)	Jx1000 (in⁴)	C_w (in⁶)	X_o (in)	R_o (in⁶)	β
162S125-18	1.625	1.250	0.188	0.0188	33	33	0.080	0.27	0.038	0.047	0.686	0.016	0.447	0.034	0.031	0.607	0.585	302.190	99.530	0.009	0.009	-1.029	1.315	0.388
162S125-27	1.625	1.250	0.188	0.0283	33	33	0.120	0.41	0.056	0.069	0.682	0.023	0.443	0.055	0.053	1.046	1.004	493.520	106.440	0.032	0.013	-1.017	1.302	0.390
162S125-30	1.625	1.250	0.188	0.0312	33	33	0.132	0.45	0.061	0.075	0.681	0.026	0.441	0.060	0.060	1.190	1.140	542.970	105.760	0.043	0.014	-1.014	1.298	0.390
162S125-33	1.625	1.250	0.188	0.0346	33	33	0.145	0.49	0.067	0.083	0.679	0.028	0.440	0.066	0.069	1.367	1.302	600.690	104.950	0.058	0.016	-1.010	1.294	0.391

Notes:

Track width = stud web + (design thickness x 2) + design inside corner radius

1-5/8" TRACK PROPERTIES

Member	Web Depth (A) (in.)	Flange Width (B) (in.)	Design Thickness (in.)	Yield Strength Fy (ksi)	Ult Strength Fu (ksi)	Gross Properties							Effective Properties				Torsional Properties				
						Area (in²)	Weight (lb/ft)	I_x (in⁴)	S_x (in³)	R_x (in)	I_y (in⁴)	R_y (in)	I_{xe} (in⁴)	S_{xe} (in³)	M_a (in-k)	V_{ag} (lb)	Jx1000 (in⁴)	C_w (in⁴)	X_o (in⁴)	R_o (in⁴)	β
162T125-18(S)[3]	1.747	1.250	0.0188	33	33	0.753	0.26	0.036	0.044	0.687	0.013	0.412	-	-	-	-	0.009	0.006	-0.906	1.209	-
162T125-27(S)	1.761	1.250	0.0283	33	33	0.117	0.40	0.063	0.072	0.735	0.020	0.410	0.051	0.044	0.868	541.220	0.031	0.011	-0.872	1.211	0.482
162T125-30(S)	1.766	1.250	0.0312	33	33	0.129	0.44	0.070	0.079	0.735	0.022	0.409	0.057	0.050	0.995	597.240	0.042	0.012	-0.870	1.210	0.483
162T125-33(S)	1.771	1.250	0.0346	33	45	0.143	0.49	0.077	0.087	0.736	0.024	0.408	0.066	0.058	1.151	663.050	0.057	0.013	-0.868	1.209	0.484
162T150-18(S)[3]	1.747	1.500	0.0188	33	33	0.087	0.30	0.049	0.056	0.749	0.021	0.496	-	-	-	-	0.010	0.011	-1.117	1.433	-
162T150-27(S)	1.761	1.500	0.0283	33	33	0.131	0.45	0.074	0.084	0.750	0.032	0.495	0.055	0.045	0.897	541.220	0.035	0.017	-1.099	1.420	0.400
162T150-30(S)	1.766	1.500	0.0312	33	33	0.144	0.49	0.081	0.092	0.751	0.035	0.494	0.062	0.052	1.030	597.240	0.047	0.019	-1.098	1.419	0.401
162T150-33(S)	1.771	1.500	0.0346	33	45	0.160	0.54	0.090	0.102	0.751	0.039	0.494	0.072	0.060	1.193	663.050	0.064	0.021	-1.096	1.418	0.402

[3] FLANGE WIDTH-TO-THICKNESS RATIO EXCEEDS 60. EFFECTIVE PROPERTIES ARE NOT CALCULATED. SEE LIMITATIONS IN AISI S100-16 SECTION B4.1 AND SECTION B4.2 FOR LIMITATION CALCULATIONS.

IRENE STEEL

2-1/2" STUD PROPERTIES

Gross Properties:

I_x = Moment of Inertia of cross-section about the x-axis

S_x = Section Modulus about the x-axis

R_x = Radius of Gyration of cross-section about the x-axis

I_y = Moment of Inertia of cross-section about the y-axis

R_y = Radius of Gyration of cross-section about the y-axis
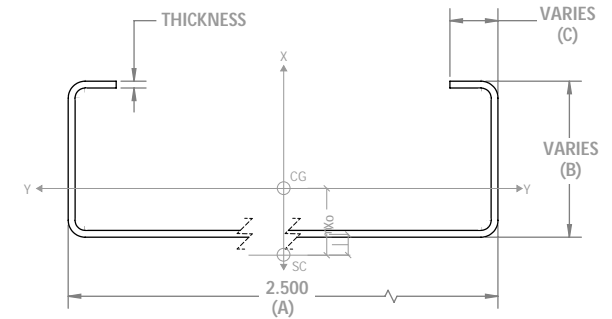
Effective Properties:

I_{xe} = Effective Moment of Inertia of cross-section about the x-axis

S_{xe} = Effective Section Modulus about the x-axis

M_a = Allowable Bending Moment

M_{da} = Allowable Distortional Buckling Moment at $K\phi = 0$

V_{ag} = Allowable Shear Force in Web (Unpunched)

V_{anet} = Allowable Shear Force in Web (Punched)

Torsional Properties:

J = St Vincent Torsional Constant (J x 1000)

C_w = Warping Constant

X_o = Dist. From Shear Center to Neutral Axis

R_o = Radii of Gyration

β = Torsional Flexural Constant

Notes:

CRC punchouts are min. 12" from leading edge

CRC punchouts are min. 24" o.c.

2-1/2" NON-STRUCTURAL STUD PROPERTIES

Member	Web Depth (A) (in.)	Flange Width (B) (in.)	Lip Width (C) (in.)	Design Thickness (in.)	Yield Strength Fy (ksi)	Ult Strength Fu (ksi)	Gross Properties						Effective Properties						Torsional Properties				
							Area (in²)	Weight (lb/ft)	I_x (in⁴)	S_x (in³)	R_x (in)	I_y (in⁴)	R_y (in)	I_{xe} (in⁴)	S_{xe} (in³)	M_a (in-k)	M_{da} (in-k)	V_{ag} (lb)	V_{anet} (lb)	Jx1000 (in⁴)	C_w (in⁶)	X_o (in)	R_o (in⁶)	β
250S125-18	2.500	1.250	0.188	0.0188	33	33	0.097	0.33	0.099	0.079	1.014	0.019	0.439	0.089	0.060	1.175	0.933	257.840	196.030	0.011	0.023	-0.904	1.427	0.599
250S125-27	2.500	1.250	0.188	0.0283	33	33	0.144	0.49	0.147	0.118	1.009	0.027	0.434	0.144	0.097	1.925	1.632	684.770	343.730	0.039	0.034	-0.893	1.416	0.602
250S125-30	2.500	1.250	0.188	0.0312	33	33	0.159	0.54	0.161	0.129	1.008	0.030	0.433	0.159	0.110	2.174	1.863	832.300	378.230	0.052	0.037	-0.889	1.412	0.603
250S125-33	2.500	1.250	0.188	0.0346	33	33	0.176	0.60	0.178	0.142	1.006	0.033	0.431	0.175	0.125	2.478	2.141	975.340	398.800	0.070	0.040	-0.886	1.408	0.605

2-1/2" STRUCTURAL STUD PROPERTIES

Member	Web Depth (A) (in.)	Flange Width (B) (in.)	Lip Width (C) (in.)	Design Thickness (in.)	Yield Strength Fy (ksi)	Ult Strength Fu (ksi)	Gross Properties						Effective Properties						Torsional Properties				
							Area (in²)	Weight (lb/ft)	I_x (in⁴)	S_x (in³)	R_x (in)	I_y (in⁴)	R_y (in)	I_{xe} (in⁴)	S_{xe} (in³)	M_a (in-k)	M_{da} (in-k)	V_{ag} (lb)	V_{anet} (lb)	Jx1000 (in⁴)	C_w (in⁶)	X_o (in)	R_o (in⁶)	β
250S162-33	2.500	1.625	0.500	0.0346	33	45	0.223	0.76	0.235	0.188	1.027	0.087	0.624	0.235	0.180	3.553	3.416	975.340	398.800	0.089	0.146	-1.470	1.898	0.401
250S162-43	2.500	1.625	0.500	0.0451	33	45	0.289	0.98	0.302	0.242	1.022	0.111	0.620	0.302	0.242	4.774	4.722	1265.460	394.230	0.196	0.184	-1.457	1.885	0.402
250S162-54	2.500	1.625	0.500	0.0566	50	65	0.358	1.22	0.370	0.296	1.016	0.135	0.613	0.370	0.288	8.625	8.347	2352.790	564.640	0.383	0.223	-1.443	1.868	0.404
250S162-68	2.500	1.625	0.500	0.0713	50	65	0.444	1.51	0.450	0.360	1.007	0.162	0.605	0.450	0.360	10.780	10.715	2865.590	518.570	0.752	0.268	-1.424	1.846	0.405

2-1/2" NON-STRUCTURAL TRACK PROPERTIES

IRENE STEEL

Gross Properties:

I_x = Moment of Inertia of cross-section about the x-axis
S_x = Section Modulus about the x-axis
R_x = Radius of Gyration of cross-section about the x-axis
I_y = Moment of Inertia of cross-section about the y-axis
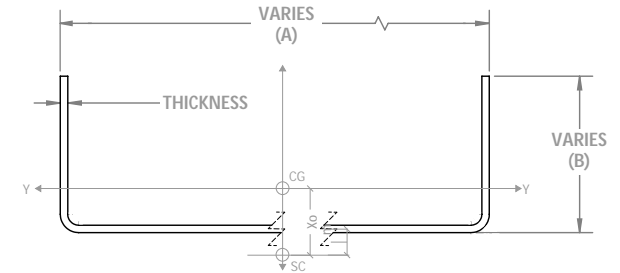R_y = Radius of Gyration of cross-section about the y-axis

Effective Properties:

I_{xe} = Effective Moment of Inertia of cross-section about the x-axis
S_{xe} = Effective Section Modulus about the x-axis
M_a = Allowable Bending Moment
V_{ag} = Allowable Shear Force in Web (Unpunched)

Torsional Properties:

J = St Vincent Torsional Constant ($J \times 1000$)
C_w = Warping Constant
X_o = Dist. From Shear Center to Neutral Axis
R_o = Radii of Gyration
β = Torsional Flexural Constant

Notes:

Track width = stud web + (design thickness x 2) + design inside corner radius

2-1/2" NON-STRUCTURAL TRACK PROPERTIES

Member	Web Depth (A) (in.)	Flange Width (B) (in.)	Design Thickness (in.)	Yield Strength Fy (ksi)	Ult Strength Fu (ksi)	Gross Properties						Effective Properties				Torsional Properties				
						Area (in^2)	Weight (lb/ft)	I_x (in^4)	S_x (in^3)	R_x (in)	I_y (in^4)	R_y (in)	I_{xe} (in^4)	S_{xe} (in^3)	M_a (in-k)	V_{ag} (lb)	Jx1000 (in^4)	C_w (in^4)	X_o (in^4)	R_o (in^4)	β
250T125-18(S)[3]	2.622	1.250	0.0188	33	33	0.092	0.31	0.093	0.075	1.009	0.015	0.402	-	-	-	-	0.011	0.015	-0.791	1.343	-
250T125-27(S)	2.636	1.250	0.0283	33	33	0.142	0.48	0.157	0.119	1.053	0.022	0.398	0.129	0.079	1.557	684.770	0.038	0.027	-0.762	1.360	0.685
250T125-30(S)	2.641	1.250	0.0312	33	33	0.156	0.53	0.173	0.131	1.053	0.025	0.397	0.146	0.090	1.771	832.300	0.051	0.030	-0.762	1.359	0.686
250T150-18(S)[3]	2.622	1.500	0.0188	33	33	0.101	0.34	0.108	0.086	1.032	0.024	0.490	-	-	-	-	0.012	0.025	-1.007	1.523	-
250T150-27(S)	2.636	1.500	0.0283	33	33	0.156	0.53	0.181	0.137	1.078	0.037	0.486	0.139	0.082	1.611	684.770	0.042	0.044	-0.977	1.534	0.595
250T150-30(S)	2.641	1.500	0.0312	33	33	0.172	0.58	0.200	0.151	1.078	0.040	0.486	0.157	0.093	1.835	832.300	0.056	0.049	-0.975	1.533	0.595
250T200-18(S)[3]	2.622	2.000	0.0188	33	33	0.122	0.42	0.152	0.116	1.114	0.053	0.661	-	-	-	-	0.014	0.062	-1.439	1.936	-
250T200-27(S)[3]	2.636	2.000	0.0283	33	33	0.184	0.63	0.229	0.174	1.116	0.080	0.660	-	-	-	-	0.049	0.094	-1.434	1.933	-
250T200-30(S)[3]	2.641	2.000	0.0312	33	33	0.203	0.69	0.253	0.191	1.117	0.088	0.659	-	-	-	-	0.066	0.103	-1.432	1.932	-
250T250-18(S)[3]	2.622	2.500	0.0188	33	33	0.141	0.48	0.184	0.140	1.141	0.097	0.830	-	-	-	-	0.017	0.115	-1.900	2.367	-
250T250-27(S)[3]	2.636	2.500	0.0283	33	33	0.212	0.72	0.277	0.210	1.143	0.146	0.829	-	-	-	-	0.057	0.173	-1.895	2.363	-
250T250-30(S)[3]	2.641	2.500	0.0312	33	33	0.234	0.80	0.306	0.232	1.143	0.160	0.828	-	-	-	-	0.076	0.191	-1.893	2.362	-
250T300-18(S)[3]	2.622	3.000	0.0188	33	33	0.160	0.54	0.216	0.164	1.161	0.158	0.995	-	-	-	-	0.019	0.191	-2.371	2.822	-
250T300-27(S)[3]	2.636	3.000	0.0283	33	33	0.241	0.82	0.325	0.247	1.163	0.238	0.994	-	-	-	-	0.064	0.288	-2.366	2.817	-
250T300-30(S)[3]	2.641	3.000	0.0312	33	33	0.265	0.90	0.359	0.272	1.164	0.262	0.993	-	-	-	-	0.086	0.317	-2.364	2.816	-

[3] FLANGE WIDTH-TO-THICKNESS RATIO EXCEEDS 60. EFFECTIVE PROPERTIES ARE NOT CALCULATED. SEE LIMITATIONS IN AISI S100-16 SECTION B4.1 AND SECTION B4.2 FOR LIMITATION CALCULATIONS.

2-1/2" STRUCTURAL TRACK PROPERTIES

IRENE STEEL

Gross Properties:

I_x = Moment of Inertia of cross-section about the x-axis
S_x = Section Modulus about the x-axis
R_x = Radius of Gyration of cross-section about the x-axis
I_y = Moment of Inertia of cross-section about the y-axis
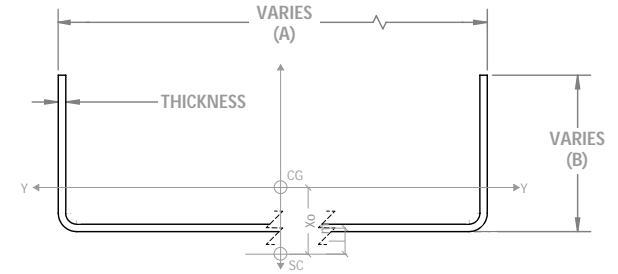R_y = Radius of Gyration of cross-section about the y-axis

Effective Properties:

I_{xe} = Effective Moment of Inertia of cross-section about the x-axis
S_{xe} = Effective Section Modulus about the x-axis
M_a = Allowable Bending Moment
V_{ag} = Allowable Shear Force in Web (Unpunched)

Torsional Properties:

J = St Vincent Torsional Constant (J x 1000)
C_w = Warping Constant
X_o = Dist. From Shear Center to Neutral Axis
R_o = Radii of Gyration
β = Torsional Flexural Constant

Notes:

Track width = stud web + (design thickness x 2) + design inside corner radius

2-1/2" STRUCTURAL TRACK PROPERTIES

Member	Web Depth (A) (in.)	Flange Width (B) (in.)	Design Thickness (in.)	Yield Strength Fy (ksi)	Ult Strength Fu (ksi)	Gross Properties						Effective Properties				Torsional Properties				
						Area (in²)	Weight (lb/ft)	I_x (in⁴)	S_x (in³)	R_x (in)	I_y (in⁴)	R_y (in)	I_{xe} (in⁴)	S_{xe} (in³)	M_a (in-k)	V_{ag} (lb)	Jx1000 (in⁴)	C_w (in⁴)	X_o (in⁴)	R_o (in⁴)	β
250T125-33(S)	2.646	1.250	0.0346	33	45	0.173	0.59	0.192	0.145	1.054	0.027	0.397	0.166	0.103	2.033	1023.500	0.069	0.033	-0.760	1.358	0.687
250T125-43(S)	2.661	1.250	0.0451	33	45	0.225	0.77	0.250	0.188	1.055	0.035	0.395	0.231	0.147	2.909	1355.540	0.153	0.043	-0.755	1.356	0.690
250T125-54(S)	2.698	1.250	0.0566	50	65	0.282	0.96	0.318	0.236	1.062	0.043	0.392	0.297	0.188	5.640	2563.000	0.302	0.054	-0.749	1.357	0.696
250T125-68(S)	2.750	1.250	0.0713	50	65	0.355	1.21	0.408	0.297	1.072	0.054	0.389	0.403	0.262	7.847	3199.200	0.602	0.069	-0.740	1.360	0.704
250T150-33(S)	2.646	1.500	0.0346	33	45	0.190	0.65	0.221	0.167	1.079	0.045	0.485	0.180	0.107	2.110	1023.580	0.076	0.054	-0.973	1.532	0.596
250T150-43(S)	2.661	1.500	0.0451	33	45	0.248	0.84	0.289	0.217	1.080	0.058	0.483	0.252	0.154	3.034	1355.540	0.168	0.070	-0.968	1.529	0.599
250T150-54(S)	2.698	1.500	0.0566	50	65	0.311	1.06	0.368	0.273	1.088	0.072	0.481	0.325	0.197	5.891	2563.020	0.332	0.089	-0.961	1.529	0.605
250T150-68(S)	2.750	1.500	0.0713	50	65	0.391	1.33	0.472	0.344	1.099	0.089	0.478	0.445	0.276	8.271	3199.210	0.663	0.114	-0.953	1.531	0.613
250T200-33(S)	2.646	2.000	0.0346	33	45	0.225	0.76	0.280	0.212	1.117	0.097	0.658	0.203	0.112	2.221	1023.580	0.090	0.118	-1.418	1.922	0.455
250T200-43(S)	2.661	2.000	0.0451	33	45	0.293	1.00	0.366	0.275	1.118	0.126	0.657	0.288	0.163	3.214	1355.540	0.199	0.153	-1.413	1.918	0.457
250T200-54(S)	2.698	2.000	0.0566	50	65	0.367	1.25	0.466	0.346	1.127	0.157	0.654	0.372	0.209	6.251	2563.020	0.392	0.195	-1.405	1.917	0.462
250T200-68(S)	2.750	2.000	0.0713	50	65	0.462	1.57	0.600	0.437	1.139	0.196	0.652	0.517	0.296	8.864	3199.210	0.784	0.251	-1.396	1.916	0.469
250T250-33(S)[3]	2.646	2.500	0.0346	33	45	0.259	0.88	0.339	0.257	1.144	0.178	0.827	-	-	-	-	0.104	0.212	-1.891	2.360	-
250T250-43(S)	2.661	2.500	0.0451	33	45	0.338	1.15	0.443	0.333	1.146	0.230	0.826	0.318	0.169	3.339	1355.540	0.229	0.283	-1.873	2.346	0.362
250T250-54(S)	2.698	2.500	0.0566	50	65	0.424	1.44	0.565	0.419	1.155	0.288	0.824	0.410	0.217	6.501	2563.020	0.453	0.361	-1.865	2.343	0.366
250T250-68(S)	2.750	2.500	0.0713	50	65	0.534	1.82	0.728	0.530	1.168	0.360	0.821	0.576	0.310	9.267	3199.210	0.904	0.466	-1.855	2.341	0.372
250T300-33(S)[3]	2.646	3.000	0.0346	33	45	0.294	1.00	0.398	0.301	1.164	0.290	0.993	-	-	-	-	0.117	0.352	-2.362	2.814	-
250T300-43(S)[3]	2.661	3.000	0.0451	33	45	0.383	0.13	0.521	0.391	1.166	0.376	0.991	-	-	-	-	0.260	0.458	-2.356	2.810	-
250T300-54(S)	2.698	3.000	0.0566	50	65	0.480	1.63	0.664	0.492	1.176	0.470	0.989	0.443	0.223	6.685	2563.020	0.513	0.599	-2.335	2.795	0.302
250T300-68(S)	2.750	3.000	0.0713	50	65	0.605	2.06	0.856	0.623	1.190	0.589	0.987	0.626	0.319	9.563	3199.210	1.025	0.773	-2.324	2.791	0.307

[3] FLANGE WIDTH-TO-THICKNESS RATIO EXCEEDS 60. EFFECTIVE PROPERTIES ARE NOT CALCULATED. SEE LIMITATIONS IN AISI S100-16 SECTION B4.1 AND SECTION B4.2 FOR LIMITATION CALCULATIONS.

IRENE STEEL

3-1/2" STUD PROPERTIES

Gross Properties:

I_x = Moment of Inertia of cross-section about the x-axis

S_x = Section Modulus about the x-axis

R_x = Radius of Gyration of cross-section about the x-axis

I_y = Moment of Inertia of cross-section about the y-axis

R_y = Radius of Gyration of cross-section about the y-axis
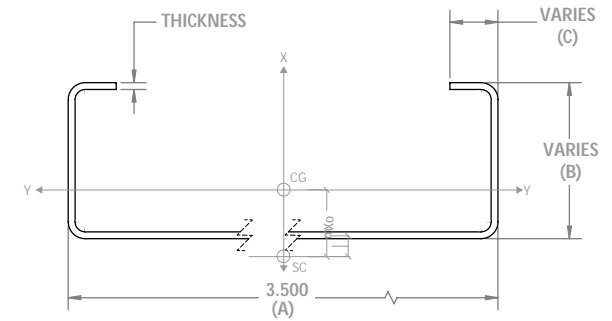
Effective Properties:

I_{xe} = Effective Moment of Inertia of cross-section about the x-axis

S_{xe} = Effective Section Modulus about the x-axis

M_a = Allowable Bending Moment

M_{da} = Allowable Distortional Buckling Moment at Kɸ = 0

V_{ag} = Allowable Shear Force in Web (Unpunched)

V_{anet}= Allowable Shear Force in Web (Punched)

Torsional Properties:

J = St Vincent Torsional Constant (J x 1000)

C_w = Warping Constant

X_o = Dist. From Shear Center to Neutral Axis

R_o = Radii of Gyration

β = Torsional Flexural Constant

Notes:

CRC punchouts are min. 12" from leading edge

CRC punchouts are min. 24" o.c.

3-1/2" NON-STRUCTURAL STUD PROPERTIES

							Gross Properties							Effective Properties						Torsional Properties			
Member	Web Depth (A) (in.)	Flange Width (B) (in.)	Lip Width (C) (in.)	Design Thickness (in.)	Yield Strength Fy (ksi)	Ult Strength Fu (ksi)	Area (in²)	Weight (lb/ft)	I_x (in⁴)	S_x (in³)	R_x (in)	I_y (in⁴)	R_y (in)	I_{xe} (in⁴)	S_{xe} (in³)	M_a (in-k)	M_{da} (in-k)	V_{ag} (lb)	V_{anet} (lb)	Jx1000 (in⁴)	C_w (in⁶)	X_o (in)	R_o (in⁶)	β
350S125-18	3.500	1.250	0.188	0.0188	33	33	0.115	0.39	0.215	0.123	1.366	0.021	0.423	0.203	0.072	1.423	1.346	179.560	158.620	0.014	0.050	-0.797	1.637	0.763
350S125-27	3.500	1.250	0.188	0.0283	33	33	0.173	0.59	0.320	0.183	1.361	0.030	0.418	0.315	0.130	2.569	2.395	614.240	358.570	0.046	0.073	-0.787	1.627	0.766
350S125-30	3.500	1.250	0.188	0.0312	33	33	0.190	0.65	0.351	0.201	1.359	0.033	0.417	0.346	0.150	2.964	2.746	823.810	435.500	0.062	0.079	-0.784	1.624	0.767

3-1/2" STRUCTURAL STUD PROPERTIES

							Gross Properties							Effective Properties						Torsional Properties			
Member	Web Depth (A) (in.)	Flange Width (B) (in.)	Lip Width (C) (in.)	Design Thickness (in.)	Yield Strength Fy (ksi)	Ult Strength Fu (ksi)	Area (in²)	Weight (lb/ft)	I_x (in⁴)	S_x (in³)	R_x (in)	I_y (in⁴)	R_y (in)	I_{xe} (in⁴)	S_{xe} (in³)	M_a (in-k)	M_{da} (in-k)	V_{ag} (lb)	V_{anet} (lb)	Jx1000 (in⁴)	C_w (in⁶)	X_o (in)	R_o (in⁶)	β
350S162-33	3.500	1.625	0.500	0.0346	33	45	0.258	0.88	0.508	0.291	1.404	0.098	0.617	0.508	0.257	5.084	5.010	1023.580	487.000	0.103	0.277	-1.324	2.026	0.573
350S162-43	3.500	1.625	0.500	0.0451	33	45	0.334	1.14	0.654	0.374	1.400	0.125	0.612	0.654	0.357	7.047	7.021	1739.090	631.040	0.227	0.350	-1.312	2.014	0.575
350S162-54	3.500	1.625	0.500	0.0566	50	65	0.415	1.41	0.804	0.460	1.393	0.152	0.606	0.804	0.426	12.740	12.410	3371.560	947.020	0.443	0.426	-1.298	1.998	0.578
350S162-68	3.500	1.625	0.500	0.0713	50	65	0.515	1.75	0.985	0.563	1.383	0.184	0.597	0.985	0.549	16.441	16.143	4202.470	896.930	0.872	0.514	-1.280	1.977	0.581
350S200-33	3.500	2.000	0.625	0.0346	33	45	0.292	0.99	0.598	0.342	1.431	0.175	0.773	0.597	0.283	5.585	5.761	1023.580	487.000	0.117	0.541	-1.760	2.396	0.461
350S200-43	3.500	2.000	0.625	0.0451	33	45	0.379	1.29	0.771	0.441	1.426	0.224	0.768	0.771	0.410	8.092	8.092	1739.090	631.040	0.257	0.687	-1.748	2.383	0.462
350S200-54	3.500	2.000	0.625	0.0566	50	65	0.471	1.60	0.950	0.543	1.420	0.274	0.762	0.950	0.470	14.066	14.285	3371.560	947.020	0.503	0.838	-1.733	2.367	0.464
350S200-68	3.500	2.000	0.625	0.0713	50	65	0.586	1.99	1.167	0.667	1.411	0.333	0.754	1.167	0.638	19.105	18.913	4202.470	896.930	0.993	1.018	-1.715	2.345	0.465
350S250-43	3.500	2.500	0.625	0.0451	33	45	0.424	1.44	0.906	0.518	1.461	0.380	0.946	0.906	0.431	8.525	8.718	1739.090	631.040	0.288	1.151	-2.220	2.821	0.381
350S250-54	3.500	2.500	0.625	0.0566	50	65	0.528	1.80	1.118	0.639	1.455	0.467	0.940	1.113	0.494	14.781	15.321	3371.560	947.020	0.564	1.409	-2.205	2.804	0.382
350S250-68	3.500	2.500	0.625	0.0713	50	65	0.657	2.24	1.376	0.787	1.447	0.570	0.931	1.376	0.661	19.779	20.483	4202.470	896.930	1.114	1.718	-2.186	2.782	0.383

3-1/2" NON-STRUCTURAL TRACK PROPERTIES

IRENE STEEL

Gross Properties:

I_x = Moment of Inertia of cross-section about the x-axis

S_x = Section Modulus about the x-axis

R_x = Radius of Gyration of cross-section about the x-axis

I_y = Moment of Inertia of cross-section about the y-axis

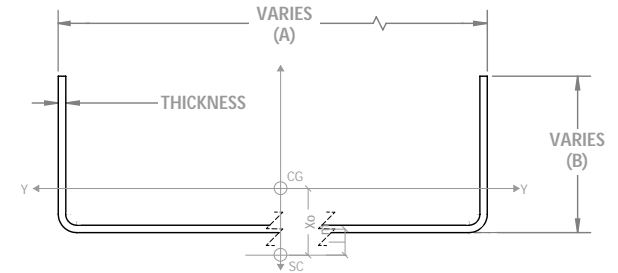R_y = Radius of Gyration of cross-section about the y-axis

Effective Properties:

I_{xe} = Effective Moment of Inertia of cross-section about the x-axis

S_{xe} = Effective Section Modulus about the x-axis

M_a = Allowable Bending Moment

V_{ag} = Allowable Shear Force in Web (Unpunched)

Torsional Properties:

J = St Vincent Torsional Constant (J x 1000)

C_w = Warping Constant

X_o = Dist. From Shear Center to Neutral Axis

R_o = Radii of Gyration

β = Torsional Flexural Constant

Notes:

Track width = stud web + (design thickness x 2) + design inside corner radius

3-1/2" NON-STRUCTURAL TRACK PROPERTIES

Member	Web Depth (A) (in.)	Flange Width (B) (in.)	Design Thickness (in.)	Yield Strength Fy (ksi)	Ult Strength Fu (ksi)	Gross Properties						Effective Properties				Torsional Properties				
						Area (in^2)	Weight (lb/ft)	I_x (in^4)	S_x (in^3)	R_x (in)	I_y (in^4)	R_y (in)	I_{xe} (in^4)	S_{xe} (in^3)	M_a (in-k)	V_{ag} (lb)	Jx1000 (in^4)	C_w (in^4)	X_o (in^4)	R_o (in^4)	β
350T125-18(S)[3]	3.622	1.250	0.0188	33	33	0.113	0.38	0.220	0.121	1.395	0.017	0.382	-	-	-	-	0.013	0.037	-0.683	1.600	-
350T125-27(S)	3.636	1.250	0.0283	33	33	0.170	0.58	0.331	0.182	1.396	0.025	0.381	0.278	0.128	2.529	589.790	0.045	0.057	-0.671	1.595	0.823
350T125-30(S)	3.641	1.250	0.0312	33	33	0.187	0.64	0.365	0.200	1.396	0.027	0.380	0.313	0.145	2.862	789.980	0.061	0.063	-0.669	1.594	0.824
350T150-18(S)[3]	3.622	1.500	0.0188	33	33	0.122	0.42	0.250	0.138	1.431	0.027	0.472	-	-	-	-	0.014	0.061	-0.883	1.746	-
350T150-27(S)	3.636	1.500	0.0283	33	33	0.184	0.63	0.377	0.207	1.432	0.041	0.470	0.298	0.132	2.617	589.790	0.049	0.094	-0.869	1.739	0.751
350T150-30(S)	3.641	1.500	0.0312	33	33	0.203	0.69	0.416	0.228	1.432	0.045	0.470	0.336	0.150	2.964	789.980	0.066	0.103	-0.868	1.739	0.751
350T200-18(S)[3]	3.622	2.000	0.0188	33	33	0.141	0.48	0.311	0.172	1.485	0.060	0.649	-	-	-	-	0.017	0.133	-1.304	2.080	-
350T200-27(S)[3]	3.636	2.000	0.0283	33	33	0.212	0.72	0.469	0.258	1.487	0.089	0.648	-	-	-	-	0.057	0.199	-1.299	2.078	-
350T200-30(S)[3]	3.641	2.000	0.0312	33	33	0.234	0.80	0.517	0.284	1.487	0.098	0.647	-	-	-	-	0.076	0.219	-1.298	2.077	-
350T250-18(S)[3]	3.622	2.500	0.0188	33	33	0.160	0.54	0.372	0.206	1.526	0.109	0.824	-	-	-	-	0.019	0.243	-1.745	2.460	-
350T250-27(S)[3]	3.636	2.500	0.0283	33	33	0.241	0.82	0.561	0.309	1.527	0.163	0.822	-	-	-	-	0.064	0.365	-1.740	2.457	-
350T250-30(S)[3]	3.641	2.500	0.0312	33	33	0.265	0.90	0.619	0.340	1.528	0.179	0.822	-	-	-	-	0.086	0.403	-1.738	2.456	-
350T300-18(S)[3]	3.622	3.000	0.0188	33	33	0.179	0.61	0.433	0.239	1.557	0.177	0.995	-	-	-	-	0.021	0.400	-2.199	2.873	-
350T300-27(S)[3]	3.636	3.000	0.0283	33	33	0.269	0.91	0.653	0.359	1.559	0.265	0.994	-	-	-	-	0.072	0.601	-2.194	2.869	-
350T300-30(S)[3]	3.641	3.000	0.0312	33	33	0.296	1.01	0.721	0.396	1.560	0.292	0.993	-	-	-	-	0.096	0.663	-2.192	2.868	-

[3] FLANGE WIDTH-TO-THICKNESS RATIO EXCEEDS 60. EFFECTIVE PROPERTIES ARE NOT CALCULATED. SEE LIMITATIONS IN AISI S100-16 SECTION B4.1 AND SECTION B4.2 FOR LIMITATION CALCULATIONS.

IRENE STEEL

3-1/2" STRUCTURAL TRACK PROPERTIES

Gross Properties:

I_x = Moment of Inertia of cross-section about the x-axis
S_x = Section Modulus about the x-axis
R_x = Radius of Gyration of cross-section about the x-axis
I_y = Moment of Inertia of cross-section about the y-axis
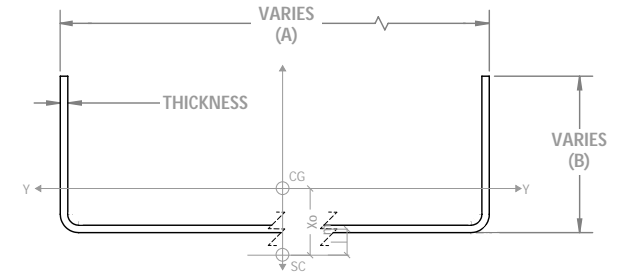R_y = Radius of Gyration of cross-section about the y-axis

Effective Properties:

I_{xe} = Effective Moment of Inertia of cross-section about the x-axis
S_{xe} = Effective Section Modulus about the x-axis
M_a = Allowable Bending Moment
V_{ag} = Allowable Shear Force in Web (Unpunched)

Torsional Properties:

J = St Vincent Torsional Constant (J x 1000)
C_w = Warping Constant
X_o = Dist. From Shear Center to Neutral Axis
R_o = Radii of Gyration
β = Torsional Flexural Constant

Notes:

Track width = stud web + (design thickness x 2) + design inside corner radius

3-1/2" STRUCTURAL TRACK PROPERTIES

Member	Web Depth (A) (in.)	Flange Width (B) (in.)	Design Thickness (in.)	Yield Strength Fy (ksi)	Ult Strength Fu (ksi)	Gross Properties							Effective Properties				Torsional Properties				
						Area (in²)	Weight (lb/ft)	I_x (in⁴)	S_x (in³)	R_x (in)	I_y (in⁴)	R_y (in)	I_{xe} (in⁴)	S_{xe} (in³)	M_a (in-k)	V_{ag} (lb)	Jx1000 (in⁴)	C_w (in⁴)	X_o (in⁴)	R_o (in⁴)	β
350T125-33(S)	3.646	1.250	0.0346	33	45	0.208	0.71	0.405	0.222	1.397	0.030	0.379	0.355	0.165	3.267	1023.580	0.083	0.070	-0.668	1.594	0.824
350T125-43(S)	3.661	1.250	0.0451	33	45	0.270	0.92	0.528	0.288	1.398	0.039	0.377	0.490	0.233	4.605	1739.090	0.183	0.090	-0.663	1.592	0.827
350T125-54(S)	3.698	1.250	0.0566	50	65	0.339	1.15	0.668	0.361	1.404	0.048	0.375	0.626	0.297	8.895	3371.560	0.362	0.114	-0.658	1.595	0.830
350T125-68(S)	3.750	1.250	0.0713	50	65	0.427	1.45	0.851	0.454	1.412	0.059	0.372	0.839	0.407	12.184	4536.080	0.723	0.144	-0.650	1.599	0.835
350T150-33(S)	3.646	1.500	0.0346	33	45	0.225	0.76	0.461	0.253	1.432	0.049	0.469	0.382	0.172	3.388	1023.580	0.090	0.114	-0.866	1.738	0.752
350T150-43(S)	3.661	1.500	0.0451	33	45	0.293	1.00	0.601	0.329	1.433	0.064	0.467	0.531	0.243	4.798	1739.090	0.199	0.148	-0.861	1.736	0.754
350T150-54(S)	3.698	1.500	0.0566	50	65	0.367	1.25	0.761	0.412	1.440	0.079	0.465	0.679	0.310	9.278	3371.560	0.392	0.187	-0.855	1.738	0.758
350T150-68(S)	3.750	1.500	0.0713	50	65	0.462	1.57	0.972	0.518	1.450	0.099	0.462	0.919	0.428	12.810	4536.080	0.784	0.238	-0.847	1.741	0.763
350T200-33(S)	3.646	2.000	0.0346	33	45	0.259	0.88	0.574	0.315	1.487	0.108	0.647	0.428	0.181	3.573	1023.580	0.104	0.249	-1.285	2.069	0.614
350T200-43(S)	3.661	2.000	0.0451	33	45	0.338	1.15	0.749	0.409	1.489	0.140	0.645	0.601	0.257	5.086	1739.090	0.229	0.323	-1.280	2.067	0.616
350T200-54(S)	3.698	2.000	0.0566	50	65	0.424	1.44	0.949	0.513	1.497	0.175	0.642	0.770	0.329	9.848	3371.560	0.453	0.409	-1.273	2.067	0.621
350T200-68(S)	3.750	2.000	0.0713	50	65	0.534	1.82	1.213	0.647	1.508	0.218	0.639	1.054	0.458	13.714	4536.080	0.904	0.522	-1.265	2.069	0.627
350T250-33(S)[3]	3.646	2.500	0.0346	33	45	0.294	1.00	0.687	0.377	1.529	0.198	0.821	-	-	-	-	0.117	0.446	-1.737	2.455	-
350T250-43(S)	3.661	2.500	0.0451	33	45	0.383	1.30	0.896	0.490	1.530	0.257	0.819	0.659	0.268	5.294	1739.090	0.260	0.593	-1.719	2.443	0.505
350T250-54(S)	3.698	2.500	0.0566	50	65	0.480	1.63	1.137	0.615	1.538	0.321	0.817	0.846	0.343	10.260	3371.560	0.513	0.752	-1.712	2.442	0.509
350T250-68(S)	3.750	2.500	0.0713	50	65	0.605	2.06	1.454	0.776	1.550	0.401	0.814	1.168	0.479	14.352	4536.080	1.025	0.961	-1.703	2.443	0.514
350T300-33(S)[3]	3.646	3.000	0.0346	33	45	0.329	1.12	0.800	0.439	1.560	0.324	0.993	-	-	-	-	0.131	0.735	-2.191	2.867	-
350T300-43(S)[3]	3.661	3.000	0.0451	33	45	0.428	1.45	1.044	0.570	1.562	0.420	0.991	-	-	-	-	0.290	0.956	-2.185	2.863	-
350T300-54(S)	3.698	3.000	0.0566	50	65	0.537	1.83	1.324	0.716	1.570	0.525	0.989	0.912	0.353	10.575	3371.560	0.573	1.238	-2.165	2.851	0.424
350T300-68(S)	3.750	3.000	0.0713	50	65	0.676	2.30	1.695	0.904	1.583	0.657	0.986	1.265	0.496	14.834	4536.080	1.146	1.585	-2.155	2.850	0.428

[3] FLANGE WIDTH-TO-THICKNESS RATIO EXCEEDS 60. EFFECTIVE PROPERTIES ARE NOT CALCULATED. SEE LIMITATIONS IN AISI S100-16 SECTION B4.1 AND SECTION B4.2 FOR LIMITATION CALCULATIONS.

Gross Properties:

I_x = Moment of Inertia of cross-section about the x-axis

S_x = Section Modulus about the x-axis

R_x = Radius of Gyration of cross-section about the x-axis

I_y = Moment of Inertia of cross-section about the y-axis

R_y = Radius of Gyration of cross-section about the y-axis
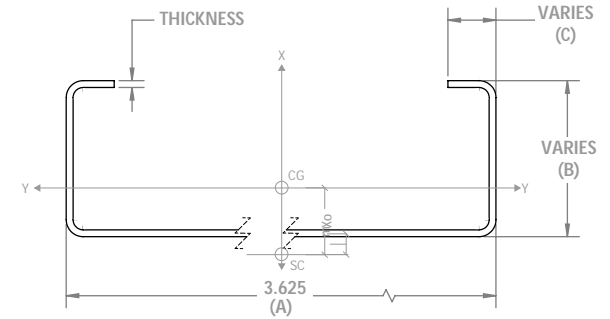
Effective Properties:

I_{xe} = Effective Moment of Inertia of cross-section about the x-axis

S_{xe} = Effective Section Modulus about the x-axis

M_a = Allowable Bending Moment

M_{da} = Allowable Distortional Buckling Moment at Kϕ = 0

V_{ag} = Allowable Shear Force in Web (Unpunched)

V_{anet}= Allowable Shear Force in Web (Punched)

Torsional Properties:

J   = St Vincent Torsional Constant (J x 1000)

C_w = Warping Constant

X_o = Dist. From Shear Center to Neutral Axis

R_o = Radii of Gyration

β = Torsional Flexural Constant

Notes:

CRC punchouts are min. 12" from leading edge
CRC punchouts are min. 24" o.c.

3-5/8" NON-STRUCTURAL STUD PROPERTIES

Member	Web Depth (A) (in.)	Flange Width (B) (in.)	Lip Width (C) (in.)	Design Thickness (in.)	Yield Strength Fy (ksi)	Ult Strength Fu (ksi)	Gross Properties						Effective Properties						Torsional Properties				
							Area (in²)	Weight (lb/ft)	I_x (in⁴)	S_x (in³)	R_x (in)	I_y (in⁴)	R_y (in)	I_{xe} (in⁴)	S_{xe} (in³)	M_a (in-k)	M_{da} (in-k)	V_{ag} (lb)	V_{anet} (lb)	Jx1000 (in⁴)	C_w (in⁶)	X_o (in)	R_o (in⁶)	β
362S125-18	3.625	1.250	0.188	0.0188	33	33	0.118	0.40	0.234	0.129	1.409	0.021	0.421	0.221	0.075	1.477	1.398	172.990	163.470	0.014	0.539	-0.786	1.667	0.777
362S125-27	3.625	1.250	0.188	0.0283	33	33	0.176	0.60	0.347	0.192	1.404	0.031	0.416	0.342	0.135	2.671	2.492	591.720	369.620	0.047	0.079	-0.776	1.657	0.781
362S125-30	3.625	1.250	0.188	0.0312	33	33	0.194	0.66	0.381	0.210	1.402	0.033	0.415	0.376	0.156	3.082	2.859	793.580	448.960	0.063	0.086	-0.773	1.654	0.782

3-5/8" STRUCTURAL STUD PROPERTIES

Member	Web Depth (A) (in.)	Flange Width (B) (in.)	Lip Width (C) (in.)	Design Thickness (in.)	Yield Strength Fy (ksi)	Ult Strength Fu (ksi)	Gross Properties						Effective Properties						Torsional Properties				
							Area (in²)	Weight (lb/ft)	I_x (in⁴)	S_x (in³)	R_x (in)	I_y (in⁴)	R_y (in)	I_{xe} (in⁴)	S_{xe} (in³)	M_a (in-k)	M_{da} (in-k)	V_{ag} (lb)	V_{anet} (lb)	Jx1000 (in⁴)	C_w (in⁶)	X_o (in)	R_o (in⁶)	β
362S162-33	3.625	1.625	0.5	0.0346	33	45	0.262	0.89	0.551	0.304	1.450	0.099	0.616	0.551	0.268	5.290	5.214	1023.580	521.240	0.105	0.297	-1.308	2.048	0.592
362S162-43	3.625	1.625	0.5	0.0451	33	45	0.340	1.16	0.710	0.392	1.445	0.127	0.611	0.710	0.372	7.344	7.315	1739.090	675.670	0.230	0.376	-1.297	2.036	0.594
362S162-54	3.625	1.625	0.5	0.0566	50	65	0.422	1.44	0.873	0.482	1.438	0.154	0.604	0.873	0.444	13.280	12.933	3371.560	1015.970	0.451	0.457	-1.283	2.020	0.597
362S162-68	3.625	1.625	0.5	0.0713	50	65	0.524	1.78	1.069	0.590	1.429	0.186	0.596	1.069	0.574	17.182	16.936	4369.580	1003.530	0.887	0.552	-1.264	1.998	0.600
362S200-33	3.625	2.000	0.625	0.0346	33	45	0.297	1.01	0.648	0.358	1.478	0.177	0.772	0.647	0.294	5.812	5.991	1023.580	521.240	0.118	0.577	-1.741	2.411	0.479
362S200-43	3.625	2.000	0.625	0.0451	33	45	0.385	1.31	0.836	0.461	1.474	0.227	0.767	0.836	0.427	8.432	8.423	1739.090	675.670	0.261	0.734	-1.729	2.398	0.480
362S200-54	3.625	2.000	0.625	0.0566	50	65	0.479	1.63	1.030	0.568	1.467	0.277	0.761	1.030	0.490	14.657	14.872	3371.560	1015.970	0.511	0.896	-1.715	2.382	0.482
362S200-68	3.625	2.000	0.625	0.0713	50	65	0.595	2.02	1.265	0.698	1.458	0.337	0.753	1.265	0.666	19.948	19.714	4369.580	1003.530	1.008	1.089	-1.696	2.360	0.484
362S250-43	3.625	2.500	0.625	0.0451	33	45	0.430	1.46	0.980	0.541	1.510	0.385	0.946	0.980	0.449	8.877	9.060	1739.090	675.670	0.292	1.230	-2.199	2.830	0.396
362S250-54	3.625	2.500	0.625	0.0566	50	65	0.535	1.82	1.210	0.668	1.504	0.473	0.940	1.205	0.514	15.395	15.923	3371.560	1015.970	0.571	1.506	-2.184	2.813	0.397
362S250-68	3.625	2.500	0.625	0.0713	50	65	0.666	2.27	1.491	0.822	1.496	0.578	0.931	1.491	0.689	20.635	21.311	4369.580	1003.530	1.129	1.837	-2.165	2.791	0.398
362S300-54	3.625	3.000	0.625	0.0566	50	65	0.592	2.01	1.390	0.767	1.533	0.734	1.114	1.312	0.529	15.831	16.722	3371.560	1015.970	0.632	2.316	-2.659	3.265	0.337
362S300-68	3.625	3.000	0.625	0.0713	50	65	0.738	2.51	1.716	0.947	1.525	0.900	1.105	1.684	0.716	21.444	22.536	4369.580	1003.530	1.250	2.833	-2.640	3.243	0.337

IRENE STEEL

3-5/8" NON-STRUCTURAL TRACK PROPERTIES

Gross Properties:

I_x = Moment of Inertia of cross-section about the x-axis
S_x = Section Modulus about the x-axis
R_x = Radius of Gyration of cross-section about the x-axis
I_y = Moment of Inertia of cross-section about the y-axis
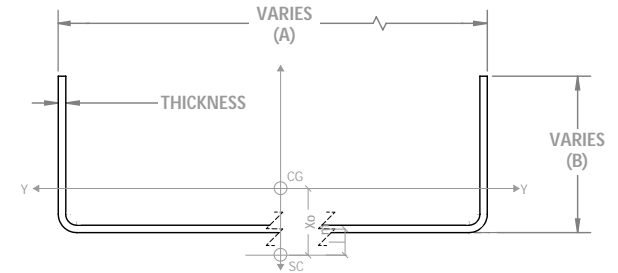R_y = Radius of Gyration of cross-section about the y-axis

Effective Properties:

I_{xe} = Effective Moment of Inertia of cross-section about the x-axis
S_{xe} = Effective Section Modulus about the x-axis
M_a = Allowable Bending Moment
V_{ag} = Allowable Shear Force in Web (Unpunched)

Torsional Properties:

J = St Vincent Torsional Constant ($J \times 1000$)
C_w = Warping Constant
X_o = Dist. From Shear Center to Neutral Axis
R_o = Radii of Gyration
β = Torsional Flexural Constant

Notes:

Track width = stud web + (design thickness x 2) + design inside corner radius

3-5/8" NON-STRUCTURAL TRACK PROPERTIES

Member	Web Depth (A) (in.)	Flange Width (B) (in.)	Design Thickness (in.)	Yield Strength Fy (ksi)	Ult Strength Fu (ksi)	Gross Properties						Effective Properties				Torsional Properties				
						Area (in²)	Weight (lb/ft)	I_x (in⁴)	S_x (in³)	R_x (in)	I_y (in⁴)	R_y (in)	I_{xe} (in⁴)	S_{xe} (in³)	M_a (in-k)	V_{ag} (lb)	Jx1000 (in⁴)	C_w (in⁴)	X_o (in⁴)	R_o (in⁴)	β
362T125-18(S)[3]	3.747	1.250	0.0188	33	33	0.115	0.39	0.238	0.127	1.437	0.017	0.380	-	-	-	-	0.014	0.040	-0.673	1.632	-
362T125-27(S)	3.761	1.250	0.0283	33	33	0.173	0.59	0.358	0.191	1.438	0.025	0.378	0.301	0.135	2.664	568.990	0.046	0.062	-0.661	1.627	0.835
362T125-30(S)	3.766	1.250	0.0312	33	33	0.191	0.65	0.395	0.210	1.438	0.027	0.378	0.339	0.153	3.013	762.140	0.062	0.068	-0.659	1.627	0.836
362T150-18(S)[3]	3.747	1.500	0.0188	33	33	0.125	0.42	0.271	0.144	1.474	0.028	0.470	-	-	-	-	0.015	0.066	-0.871	1.775	-
362T150-27(S)	3.761	1.500	0.0283	33	33	0.188	0.64	0.408	0.217	1.475	0.041	0.468	0.323	0.140	2.757	568.990	0.050	0.102	-0.857	1.769	0.765
362T150-30(S)	3.766	1.500	0.0312	33	33	0.207	0.70	0.449	0.239	1.475	0.045	0.467	0.364	0.158	3.121	762.140	0.067	0.112	-0.856	1.768	0.766
362T200-18(S)[3]	3.747	2.000	0.0188	33	33	0.143	0.49	0.336	0.179	1.530	0.060	0.648	-	-	-	-	0.017	0.144	-1.289	2.103	-
362T200-27(S)[3]	3.761	2.000	0.0283	33	33	0.216	0.73	0.506	0.269	1.532	0.090	0.646	-	-	-	-	0.058	0.216	-1.284	2.101	-
362T200-30(S)[3]	3.766	2.000	0.0312	33	33	0.238	0.81	0.558	0.297	1.532	0.099	0.645	-	-	-	-	0.077	0.237	-1.283	2.100	-
362T250-18(S)[3]	3.747	2.500	0.0188	33	33	0.162	0.55	0.401	0.214	1.573	0.110	0.823	-	-	-	-	0.019	0.263	-1.728	2.477	-
362T250-27(S)[3]	3.761	2.500	0.0283	33	33	0.244	0.83	0.605	0.322	1.574	0.165	0.821	-	-	-	-	0.065	0.395	-1.723	2.474	-
362T250-30(S)[3]	3.766	2.500	0.0312	33	33	0.269	0.91	0.667	0.354	1.575	0.181	0.820	-	-	-	-	0.087	0.436	-1.721	2.473	-
362T300-18(S)[3]	3.747	3.000	0.0188	33	33	0.181	0.62	0.467	0.249	1.606	0.179	0.994	-	-	-	-	0.021	0.433	-2.180	2.884	-
362T300-27(S)[3]	3.761	3.000	0.0283	33	33	0.272	0.93	0.703	0.374	1.607	0.268	0.993	-	-	-	-	0.073	0.650	-2.175	2.880	-
362T300-30(S)[3]	3.766	3.000	0.0312	33	33	0.300	1.02	0.776	0.412	1.608	0.296	0.992	-	-	-	-	0.097	0.717	-2.173	2.879	-

[3] FLANGE WIDTH-TO-THICKNESS RATIO EXCEEDS 60. EFFECTIVE PROPERTIES ARE NOT CALCULATED. SEE LIMITATIONS IN AISI S100-16 SECTION B4.1 AND SECTION B4.2 FOR LIMITATION CALCULATIONS.

IRENE STEEL

3-5/8" STANDARD TRACK PROPERTIES

Gross Properties:

I_x = Moment of Inertia of cross-section about the x-axis
S_x = Section Modulus about the x-axis
R_x = Radius of Gyration of cross-section about the x-axis
I_y = Moment of Inertia of cross-section about the y-axis
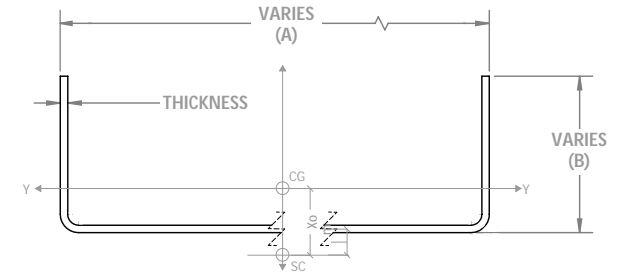R_y = Radius of Gyration of cross-section about the y-axis

Effective Properties:

I_{xe} = Effective Moment of Inertia of cross-section about the x-axis
S_{xe} = Effective Section Modulus about the x-axis
M_a = Allowable Bending Moment
V_{ag} = Allowable Shear Force in Web (Unpunched)

Torsional Properties:

J = St Vincent Torsional Constant ($J \times 1000$)
C_w = Warping Constant
X_o = Dist. From Shear Center to Neutral Axis
R_o = Radii of Gyration
β = Torsional Flexural Constant

Notes:

Track width = stud web + (design thickness x 2) + design inside corner radius

3-5/8" STANDARD TRACK PROPERTIES

Member	Web Depth (A) (in.)	Flange Width (B) (in.)	Design Thickness (in.)	Yield Strength Fy (ksi)	Ult Strength Fu (ksi)	Gross Properties Area (in²)	Weight (lb/ft)	I_x (in⁴)	S_x (in³)	R_x (in)	I_y (in⁴)	R_y (in)	Effective Properties I_{xe} (in⁴)	S_{xe} (in³)	M_a (in-k)	V_{ag} (lb)	Torsional Properties Jx1000 (in⁴)	C_w (in⁴)	X_o (in⁴)	R_o (in⁴)	β
362T125-33(S)	3.771	1.250	0.0346	33	45	0.212	0.72	0.438	0.232	1.438	0.030	0.377	0.385	0.174	3.437	1023.580	0.085	0.076	-0.658	1.626	0.836
362T125-43(S)	3.786	1.250	0.0451	33	45	0.276	0.94	0.571	0.302	1.439	0.039	0.375	0.531	0.245	4.839	1739.090	0.187	0.098	-0.654	1.625	0.838
362T125-54(S)	3.823	1.250	0.0566	50	65	0.346	1.18	0.723	0.378	1.445	0.048	0.373	0.678	0.312	9.342	3371.560	0.370	0.123	-0.648	1.627	0.841
362T125-68(S)	3.875	1.250	0.0713	50	65	0.436	1.48	0.921	0.475	1.454	0.060	0.370	0.907	0.427	12.777	4703.190	0.738	0.156	-0.641	1.631	0.846
362T150-33(S)	3.771	1.500	0.0346	33	45	0.229	0.78	0.499	0.264	1.475	0.050	0.467	0.414	0.180	3.565	1023.580	0.091	0.124	-0.854	1.767	0.766
362T150-43(S)	3.786	1.500	0.0451	33	45	0.298	1.02	0.650	0.344	1.476	0.064	0.465	0.574	0.255	5.041	1739.090	0.202	0.160	-0.850	1.766	0.768
362T150-54(S)	3.823	1.500	0.0566	50	65	0.374	1.27	0.823	0.431	1.483	0.080	0.462	0.735	0.325	9.743	3371.560	0.400	0.202	-0.844	1.768	0.772
362T150-68(S)	3.875	1.500	0.0713	50	65	0.471	1.60	1.050	0.542	1.492	0.100	0.459	0.993	0.449	13.429	4703.190	0.799	0.257	-0.836	1.771	0.777
362T189-33(S)	3.771	1.890	0.0346	33	45	0.256	0.87	0.593	0.314	1.521	0.094	0.606	0.454	0.188	3.722	1023.580	0.102	0.231	-1.177	2.017	0.660
362T189-43(S)	3.786	1.890	0.0451	33	45	0.334	1.14	0.773	0.409	1.523	0.122	0.604	0.634	0.267	5.285	1739.090	0.226	0.300	-1.172	2.014	0.662
362T189-54(S)	3.823	1.890	0.0566	50	65	0.418	1.42	0.980	0.512	1.530	0.151	0.602	0.812	0.342	10.227	3371.560	0.447	0.379	-1.165	2.015	0.666
362T189-68(S)	3.875	1.890	0.0713	50	65	0.527	1.79	1.251	0.646	1.541	0.189	0.599	1.108	0.474	14.195	4703.130	0.893	0.483	-1.157	2.017	0.671
362T200-33(S)	3.771	2.000	0.0346	33	45	0.264	0.90	0.619	0.329	1.533	0.110	0.645	0.464	0.190	3.760	1023.580	0.105	0.269	-1.270	2.092	0.631
362T200-43(S)	3.786	2.000	0.0451	33	45	0.344	1.17	0.808	0.427	1.534	0.142	0.643	0.649	0.270	5.343	1739.090	0.233	0.350	-1.265	2.090	0.633
362T200-54(S)	3.823	2.000	0.0566	50	65	0.431	1.47	1.024	0.536	1.541	0.177	0.641	0.832	0.345	10.341	3371.560	0.460	0.442	-1.259	2.091	0.638
362T200-68(S)	3.875	2.000	0.0713	50	65	0.543	1.85	1.307	0.675	1.552	0.221	0.638	1.138	0.480	14.374	4703.190	0.919	0.564	-1.250	2.093	0.643
362T239-33(S)[3]	3.771	2.390	0.0346	33	45	0.291	0.99	0.714	0.378	1.567	0.178	0.782	-	-	-	-	0.116	0.427	-1.622	2.386	-
362T239-43(S)	3.786	2.390	0.0451	33	45	0.379	1.29	0.931	0.492	1.568	0.230	0.780	0.700	0.279	5.519	1739.090	0.257	0.567	-1.605	2.375	0.544
362T239-54(S)	3.823	2.390	0.0566	50	65	0.475	1.62	1.180	0.618	1.576	0.287	0.777	0.897	0.357	10.690	3371.560	0.507	0.718	-1.598	2.375	0.548
362T239-68(S)	3.875	2.390	0.0713	50	65	0.598	2.04	1.509	0.779	1.588	0.359	0.775	1.234	0.498	14.913	4703.130	1.014	0.918	-1.589	2.376	0.553
362T250-33(S)[3]	3.771	2.500	0.0346	33	45	0.298	1.01	0.740	0.393	1.575	0.201	0.820	-	-	-	-	0.119	0.483	-1.719	2.472	-
362T250-43(S)	3.786	2.500	0.0451	33	45	0.389	1.32	0.966	0.510	1.577	0.260	0.818	0.713	0.282	5.562	1739.090	0.264	0.641	-1.702	2.460	0.521
362T250-54(S)	3.823	2.500	0.0566	50	65	0.488	1.66	1.225	0.641	1.585	0.324	0.816	0.914	0.360	10.775	3371.560	0.521	0.812	-1.695	2.460	0.525
362T250-68(S)	3.875	2.500	0.0713	50	65	0.614	2.09	1.565	0.808	1.597	0.406	0.813	1.259	0.503	15.044	4703.190	1.040	1.038	-1.686	2.460	0.531
362T289-33(S)[3]	3.771	2.890	0.0346	33	45	0.325	1.11	0.834	0.443	1.602	0.296	0.954	-	-	-	-	0.130	0.717	-2.071	2.786	-
362T289-43(S)[3]	3.786	2.890	0.0451	33	45	0.424	1.44	1.089	0.575	1.603	0.384	0.952	-	-	-	-	0.287	0.933	-2.065	2.783	-
362T289-54(S)	3.823	2.890	0.0566	50	65	0.532	1.81	1.381	0.723	1.612	0.480	0.950	0.970	0.369	11.041	3371.560	0.568	1.207	-2.046	2.772	0.456
362T289-68(S)	3.875	2.890	0.0713	50	65	0.670	2.28	1.766	0.912	1.624	0.601	0.947	1.342	0.516	15.450	4703.130	1.135	1.544	-2.036	2.771	0.460
362T300-33(S)[3]	3.771	3.000	0.0346	33	45	0.333	1.13	0.861	0.457	1.608	0.327	0.992	-	-	-	-	0.133	0.795	-2.171	2.878	-
362T300-43(S)[3]	3.786	3.000	0.0451	33	45	0.434	1.47	1.124	0.594	1.610	0.425	0.990	-	-	-	-	0.294	1.034	-2.166	2.874	-
362T300-54(S)	3.823	3.000	0.0566	50	65	0.544	1.85	1.425	0.746	1.619	0.531	0.988	0.985	0.371	11.108	3371.560	0.581	1.337	-2.146	2.863	0.439
362T300-68(S)	3.875	3.000	0.0713	50	65	0.685	2.33	1.823	0.941	1.631	0.665	0.985	1.364	0.519	15.551	4703.190	1.161	1.711	-2.136	2.862	0.443

[3] FLANGE WIDTH-TO-THICKNESS RATIO EXCEEDS 60. EFFECTIVE PROPERTIES ARE NOT CALCULATED. SEE LIMITATIONS IN AISI S100-16 SECTION B4.1 AND SECTION B4.2 FOR LIMITATION CALCULATIONS.
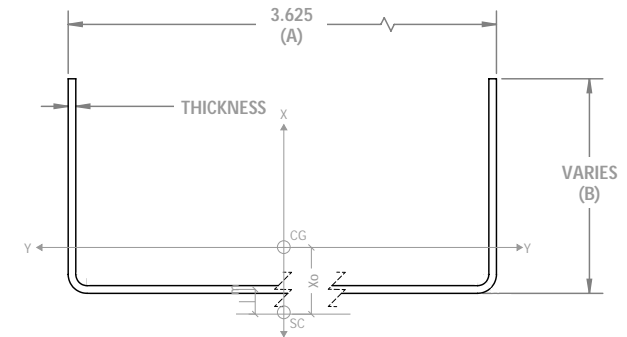
IRENE STEEL

Gross Properties:

I_x = Moment of Inertia of cross-section about the x-axis
S_x = Section Modulus about the x-axis
R_x = Radius of Gyration of cross-section about the x-axis
I_y = Moment of Inertia of cross-section about the y-axis
R_y = Radius of Gyration of cross-section about the y-axis

Torsional Properties:

J = St Vincent Torsional Constant (J x 1000)
C_w = Warping Constant
X_o = Dist. From Shear Center to Neutral Axis
R_o = Radii of Gyration
β = Torsional Flexural Constant

Effective Properties:

I_{xe} = Effective Moment of Inertia of cross-section about the x-axis
S_{xe} = Effective Section Modulus about the x-axis
M_a = Allowable Bending Moment
V_{ag} = Allowable Shear Force in Web (Unpunched)

3-5/8" NARROW TRACK PROPERTIES

Member	Web Depth (A) (in.)	Flange Width (B) (in.)	Design Thickness (in.)	Yield Strength Fy (ksi)	Ult Strength Fu (ksi)	Gross Properties						Effective Properties				Torsional Properties				
						Area (in²)	Weight (lb/ft)	I_x (in⁴)	S_x (in³)	R_x (in)	I_y (in⁴)	R_y (in)	I_{xe} (in⁴)	S_{xe} (in³)	M_a (in-k)	V_{ag} (lb)	Jx1000 (in⁴)	C_w (in⁴)	X_o (in⁴)	R_o (in⁴)	β
362T125-33(N)	3.625	1.250	0.0346	33	45	0.207	0.70	0.399	0.220	1.390	0.030	0.380	0.350	0.164	3.238	1023.500	0.083	0.069	-0.670	1.588	0.822
362T125-43(N)	3.625	1.250	0.0451	33	45	0.269	0.91	0.516	0.284	1.385	0.038	0.378	0.478	0.230	4.539	1739.090	0.182	0.088	-0.666	1.583	0.823
362T125-54(N)	3.625	1.250	0.0566	50	65	0.335	1.14	0.637	0.351	1.379	0.047	0.376	0.597	0.289	8.637	3371.560	0.358	0.109	-0.664	1.576	0.823
362T125-68(N)	3.625	1.250	0.0713	50	65	0.418	1.42	0.785	0.433	1.371	0.059	0.374	0.773	0.388	11.602	4368.910	0.708	0.133	-0.660	1.567	0.822
362T150-33(N)	3.625	1.500	0.0346	33	45	0.224	0.76	0.455	0.251	1.425	0.049	0.469	0.376	0.170	3.359	1023.580	0.089	0.113	-0.868	1.733	0.749
362T150-43(N)	3.625	1.500	0.0451	33	45	0.291	0.99	0.588	0.324	1.421	0.064	0.468	0.518	0.239	4.729	1739.090	0.197	0.145	-0.865	1.728	0.750
362T150-54(N)	3.625	1.500	0.0566	50	65	0.363	1.24	0.727	0.401	1.415	0.079	0.466	0.648	0.301	9.011	3371.560	0.388	0.178	-0.862	1.721	0.749
362T150-68(N)	3.625	1.500	0.0713	50	65	0.453	1.54	0.897	0.495	1.407	0.098	0.464	0.848	0.408	12.203	4368.910	0.768	0.220	-0.859	1.712	0.748
362T199-33(N)	3.625	1.990	0.0346	33	45	0.258	0.88	0.564	0.311	1.479	0.107	0.643	0.422	0.179	3.539	1023.580	0.103	0.242	-1.279	2.058	0.614
362T199-43(N)	3.625	1.990	0.0451	33	45	0.335	1.14	0.729	0.402	1.475	0.138	0.642	0.586	0.253	5.008	1739.090	0.227	0.312	-1.276	2.053	0.614
362T199-54(N)	3.625	1.990	0.0566	50	65	0.419	1.42	0.903	0.498	1.469	0.171	0.640	0.733	0.319	9.556	3371.560	0.447	0.385	-1.273	2.047	0.613
362T199-68(N)	3.625	1.990	0.0713	50	65	0.523	1.78	1.118	0.617	1.462	0.213	0.638	0.972	0.436	13.052	4368.910	0.887	0.475	-1.271	2.039	0.612
362T249-33(N)[3]	3.625	2.490	0.0346	33	45	0.293	0.99	0.676	0.373	1.520	0.196	0.818	-	-	-	-	0.117	0.435	-1.731	2.444	-
362T249-43(N)	3.625	2.490	0.0451	33	45	0.380	1.29	0.874	0.482	1.516	0.253	0.816	0.643	0.264	5.214	1739.090	0.258	0.573	-1.715	2.430	0.502
362T249-54(N)	3.625	2.490	0.0566	50	65	0.475	1.62	1.084	0.598	1.510	0.315	0.814	0.806	0.333	9.957	3371.560	0.507	0.710	-1.713	2.425	0.501
362T249-68(N)	3.625	2.490	0.0713	50	65	0.595	2.02	1.343	0.741	1.503	0.392	0.812	1.078	0.456	13.662	4368.910	1.008	0.878	-1.711	2.418	0.499
362T299-33(N)[3]	3.625	2.990	0.0346	33	45	0.327	1.11	0.787	0.434	1.551	0.320	0.989	-	-	-	-	0.131	0.719	-2.185	2.856	-
362T299-43(N)[3]	3.625	2.990	0.0451	33	45	0.425	1.45	1.018	0.562	1.547	0.415	0.988	-	-	-	-	0.289	0.926	-2.182	2.851	-
362T299-54(N)	3.625	2.990	0.0566	50	65	0.532	1.81	1.264	0.697	1.542	0.517	0.986	0.869	0.343	10.263	3371.560	0.568	1.172	-2.167	2.836	0.416
362T299-68(N)	3.625	2.990	0.0713	50	65	0.666	2.27	1.568	0.865	1.535	0.644	0.983	1.169	0.472	14.122	4368.910	1.128	1.452	-2.165	2.830	0.415

[3] FLANGE WIDTH-TO-THICKNESS RATIO EXCEEDS 60. EFFECTIVE PROPERTIES ARE NOT CALCULATED. SEE LIMITATIONS IN AISI S100-16 SECTION B4.1 AND SECTION B4.2 FOR LIMITATION CALCULATIONS.

IRENE STEEL

4" STUD PROPERTIES

Gross Properties:

I_x = Moment of Inertia of cross-section about the x-axis
S_x = Section Modulus about the x-axis
R_x = Radius of Gyration of cross-section about the x-axis
I_y = Moment of Inertia of cross-section about the y-axis
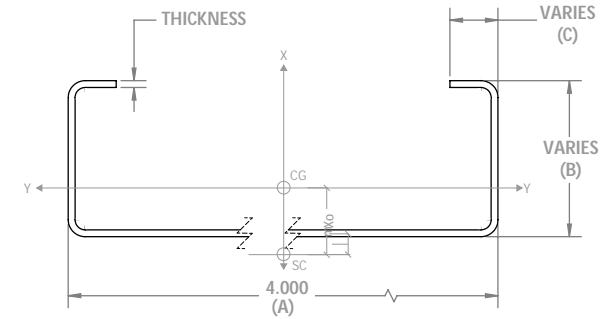R_y = Radius of Gyration of cross-section about the y-axis

Effective Properties:

I_{xe} = Effective Moment of Inertia of cross-section about the x-axis
S_{xe} = Effective Section Modulus about the x-axis
M_a = Allowable Bending Moment
M_{da} = Allowable Distortional Buckling Moment at $K\phi = 0$
V_{ag} = Allowable Shear Force in Web (Unpunched)
V_{anet} = Allowable Shear Force in Web (Punched)

Torsional Properties:

J = St Vincent Torsional Constant ($J \times 1000$)
C_w = Warping Constant
X_o = Dist. From Shear Center to Neutral Axis
R_o = Radii of Gyration
β = Torsional Flexural Constant

Notes:

CRC punchouts are min. 12" from leading edge
CRC punchouts are min. 24" o.c.

4" NON-STRUCTURAL STUD PROPERTIES

Member	Web Depth (A) (in.)	Flange Width (B) (in.)	Lip Width (C) (in.)	Design Thickness (in.)	Yield Strength Fy (ksi)	Ult Strength Fu (ksi)	Gross Properties						Effective Properties						Torsional Properties				
							Area (in²)	Weight (lb/ft)	I_x (in⁴)	S_x (in³)	R_x (in)	I_y (in⁴)	R_y (in)	I_{xe} (in⁴)	S_{xe} (in³)	M_a (in-k)	M_{da} (in-k)	V_{ag} (lb)	V_{anet} (lb)	Jx1000 (in⁴)	C_w (in⁶)	X_o (in)	R_o (in⁶)	β
400S125-18[1]	4.000	1.250	0.188	0.0188	33	33	0.125	0.42	0.294	0.147	1.536	0.021	0.414	0.281	0.083	1.639	1.552	155.890	155.890	0.015	0.068	-0.754	1.760	0.817
400S125-27	4.000	1.250	0.188	0.0283	33	33	0.187	0.64	0.438	0.219	1.531	0.031	0.410	0.431	0.151	2.974	2.785	533.090	398.400	0.050	0.098	-0.744	1.751	0.819
400S125-30	4.000	1.250	0.188	0.0312	33	33	0.206	0.70	0.481	0.240	1.529	0.034	0.409	0.474	0.174	3.437	3.198	714.880	483.990	0.067	0.107	-0.741	1.748	0.820

[1] WEB DEPTH-TO-THICKNESS RATIO EXCEEDS 200.

4" STRUCTURAL STUD PROPERTIES

Member	Web Depth (A) (in.)	Flange Width (B) (in.)	Lip Width (C) (in.)	Design Thickness (in.)	Yield Strength Fy (ksi)	Ult Strength Fu (ksi)	Gross Properties						Effective Properties						Torsional Properties				
							Area (in²)	Weight (lb/ft)	I_x (in⁴)	S_x (in³)	R_x (in)	I_y (in⁴)	R_y (in)	I_{xe} (in⁴)	S_{xe} (in³)	M_a (in-k)	M_{da} (in-k)	V_{ag} (lb)	V_{anet} (lb)	Jx1000 (in⁴)	C_w (in⁶)	X_o (in)	R_o (in⁶)	β
400S162-33	4.000	1.625	0.5	0.0346	33	45	0.275	0.94	0.692	0.346	1.586	0.103	0.611	0.692	0.299	5.907	5.829	975.860	594.870	0.110	0.363	-1.263	2.118	0.644
400S162-43	4.000	1.625	0.5	0.0451	33	45	0.357	1.21	0.892	0.446	1.581	0.131	0.606	0.892	0.417	8.232	8.206	1739.090	809.560	0.242	0.460	-1.252	2.106	0.647
400S162-54	4.000	1.625	0.5	0.0566	50	65	0.443	1.51	1.098	0.549	1.574	0.159	0.600	1.097	0.498	14.896	14.517	3371.560	1222.800	0.473	0.560	-1.238	2.090	0.649
400S162-68	4.000	1.625	0.5	0.0713	50	65	0.550	1.87	1.346	0.673	1.564	0.192	0.591	1.346	0.648	19.406	19.248	4870.900	1355.880	0.933	0.677	-1.220	2.069	0.653
400S200-33	4.000	2.000	0.625	0.0346	33	45	0.310	1.05	0.812	0.406	1.619	0.183	0.769	0.812	0.329	6.491	6.685	975.860	594.870	0.124	0.697	-1.688	2.462	0.530
400S200-43	4.000	2.000	0.625	0.0451	33	45	0.402	1.37	1.048	0.524	1.615	0.235	0.764	1.048	0.478	9.451	9.427	1739.090	809.560	0.272	0.886	-1.676	2.450	0.532
400S200-54	4.000	2.000	0.625	0.0566	50	65	0.500	1.70	1.292	0.646	1.608	0.287	0.758	1.292	0.549	16.426	16.650	3371.560	1222.800	0.534	1.083	-1.662	2.433	0.534
400S200-68	4.000	2.000	0.625	0.0713	50	65	0.622	2.12	1.589	0.795	1.599	0.349	0.750	1.589	0.751	22.476	22.146	4870.900	1355.880	1.054	1.318	-1.643	2.412	0.536
400S250-43	4.000	2.500	0.625	0.0451	33	45	0.447	1.52	1.224	0.612	1.655	0.399	0.945	1.224	0.503	9.930	10.091	1739.090	809.560	0.303	1.486	-2.139	2.865	0.443
400S250-54	4.000	2.500	0.625	0.0566	50	65	0.556	1.89	1.512	0.756	1.649	0.490	0.938	1.506	0.576	17.236	17.746	3371.560	1222.800	0.594	1.821	-2.124	2.848	0.444
400S250-68	4.000	2.500	0.625	0.0713	50	65	0.693	2.36	1.864	0.932	1.640	0.599	0.929	1.864	0.775	23.194	23.818	4870.900	1355.880	1.174	2.225	-2.105	2.826	0.445
400S300-54	4.000	3.000	0.625	0.0566	50	65	0.613	2.09	1.732	0.866	1.681	0.760	1.114	1.637	0.592	17.718	18.570	3371.560	1222.800	0.655	2.802	-2.594	3.285	0.377
400S300-68	4.000	3.000	0.625	0.0713	50	65	0.764	2.60	2.140	1.070	1.673	0.933	1.105	2.099	0.805	24.094	25.089	4870.900	1355.880	1.295	3.433	-2.574	3.263	0.378

Gross Properties:

I_x = Moment of Inertia of cross-section about the x-axis

S_x = Section Modulus about the x-axis

R_x = Radius of Gyration of cross-section about the x-axis

I_y = Moment of Inertia of cross-section about the y-axis

R_y = Radius of Gyration of cross-section about the y-axis
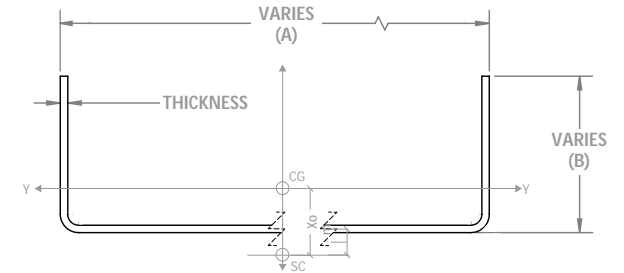
Effective Properties:

I_{xe} = Effective Moment of Inertia of cross-section about the x-axis

S_{xe} = Effective Section Modulus about the x-axis

M_a = Allowable Bending Moment

V_{ag} = Allowable Shear Force in Web (Unpunched)

Torsional Properties:

J = St Vincent Torsional Constant (J x 1000)

C_w = Warping Constant

X_o = Dist. From Shear Center to Neutral Axis

R_o = Radii of Gyration

β = Torsional Flexural Constant

Notes:

Track width = stud web + (design thickness x 2) + design inside corner radius

4" NON-STRUCTURAL TRACK PROPERTIES

Member	Web Depth (A) (in.)	Flange Width (B) (in.)	Design Thickness (in.)	Yield Strength Fy (ksi)	Ult Strength Fu (ksi)	Gross Properties Area (in²)	Weight (lb/ft)	I_x (in⁴)	S_x (in³)	R_x (in)	I_y (in⁴)	R_y (in)	Effective Properties I_{xe} (in⁴)	S_{xe} (in³)	M_a (in-k)	V_{ag} (lb)	Torsional Properties Jx1000 (in⁴)	C_w (in⁴)	X_o (in⁴)	R_o (in⁴)	β
400T125-18(S)[1,3]	4.122	1.250	0.0188	33	33	0.122	0.42	0.298	0.145	1.561	0.017	0.374	-	-	-	-	0.014	0.051	-0.645	1.730	-
400T125-27(S)	4.136	1.250	0.0283	33	33	0.184	0.63	0.449	0.217	1.562	0.025	0.372	0.380	0.156	3.079	514.570	0.049	0.078	-0.633	1.726	0.866
400T125-30(S)	4.141	1.250	0.0312	33	33	0.203	0.69	0.495	0.239	1.562	0.028	0.371	0.427	0.177	3.487	689.260	0.066	0.086	-0.631	1.726	0.866
400T150-18(S)[1,3]	4.122	1.500	0.0188	33	33	0.132	0.45	0.338	0.164	1.601	0.028	0.463	-	-	-	-	0.016	0.083	-0.837	1.865	-
400T150-27(S)	4.136	1.500	0.0283	33	33	0.198	0.67	0.509	0.246	1.602	0.042	0.461	0.409	0.154	3.042	514.570	0.053	0.127	-0.824	1.860	0.804
400T150-30(S)	4.141	1.500	0.0312	33	33	0.218	0.74	0.561	0.271	1.603	0.046	0.461	0.458	0.183	3.611	689.260	0.071	0.140	-0.822	1.860	0.804
400T200-18(S)[1,3]	4.122	2.000	0.0188	33	33	0.150	0.51	0.417	0.202	1.664	0.062	0.642	-	-	-	-	0.018	0.180	-1.246	2.176	-
400T200-27(S)[3]	4.136	2.000	0.0283	33	33	0.226	0.77	0.628	0.304	1.665	0.093	0.640	-	-	-	-	0.060	0.270	-1.242	2.174	-
400T200-30(S)[3]	4.141	2.000	0.0312	33	33	0.250	0.85	0.693	0.335	1.666	0.102	0.639	-	-	-	-	0.081	0.297	-1.240	2.173	-
400T250-18(S)[1,3]	4.122	2.500	0.0188	33	33	0.169	0.58	0.496	0.241	1.712	0.113	0.818	-	-	-	-	0.020	0.329	-1.678	2.532	-
400T250-27(S)[3]	4.136	2.500	0.0283	33	33	0.255	0.87	0.747	0.361	1.713	0.170	0.816	-	-	-	-	0.068	0.493	-1.673	2.530	-
400T250-30(S)[3]	4.141	2.500	0.0312	33	33	0.281	0.95	0.824	0.398	1.714	0.187	0.816	-	-	-	-	0.091	0.544	-1.671	2.529	-
400T300-18(S)[1,3]	4.122	3.000	0.0188	33	33	0.188	0.64	0.575	0.279	1.749	0.185	0.991	-	-	-	-	0.022	0.539	-2.124	2.924	-
400T300-27(S)[3]	4.136	3.000	0.0283	33	33	0.283	0.96	0.867	0.419	1.750	0.277	0.990	-	-	-	-	0.076	0.810	-2.119	2.921	-
400T300-30(S)[3]	4.141	3.000	0.0312	33	33	0.312	1.06	0.956	0.462	1.751	0.305	0.989	-	-	-	-	0.101	0.893	-2.117	2.920	-

[1] WEB DEPTH-TO-THICKNESS RATIO EXCEEDS 200.

[3] FLANGE WIDTH-TO-THICKNESS RATIO EXCEEDS 60. EFFECTIVE PROPERTIES ARE NOT CALCULATED. SEE LIMITATIONS IN AISI S100-16 SECTION B4.1 AND SECTION B4.2 FOR LIMITATION CALCULATIONS.

4" STANDARD TRACK PROPERTIES

Gross Properties:

I_x = Moment of Inertia of cross-section about the x-axis
S_x = Section Modulus about the x-axis
R_x = Radius of Gyration of cross-section about the x-axis
I_y = Moment of Inertia of cross-section about the y-axis
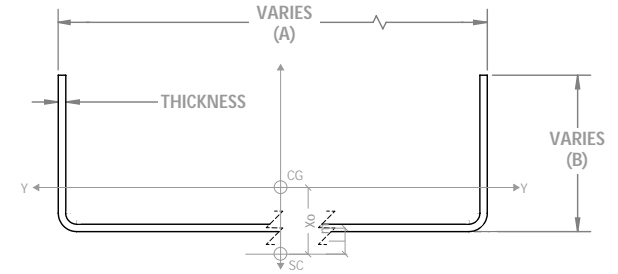R_y = Radius of Gyration of cross-section about the y-axis

Effective Properties:

I_{xe} = Effective Moment of Inertia of cross-section about the x-axis
S_{xe} = Effective Section Modulus about the x-axis
M_a = Allowable Bending Moment
V_{ag} = Allowable Shear Force in Web (Unpunched)

Torsional Properties:

J = St Vincent Torsional Constant ($J \times 1000$)
C_w = Warping Constant
X_o = Dist. From Shear Center to Neutral Axis
R_o = Radii of Gyration
β = Torsional Flexural Constant

Notes:

Track width = stud web + (design thickness x 2) + design inside corner radius

4" STANDARD TRACK PROPERTIES

Member	Web Depth (A) (in.)	Flange Width (B) (in.)	Design Thickness (in.)	Yield Strength Fy (ksi)	Ult Strength Fu (ksi)	Area (in²)	Weight (lb/ft)	Ix (in⁴)	Sx (in³)	Rx (in)	Iy (in⁴)	Ry (in)	Ixe (in⁴)	Sxe (in³)	Ma (in-k)	Vag (lb)	Jx1000 (in⁴)	Cw (in⁴)	Xo (in⁴)	Ro (in⁴)	β
400T125-33(S)	4.146	1.250	0.0346	33	45	0.225	0.76	0.549	0.265	1.563	0.031	0.371	0.484	0.201	3.972	939.640	0.090	0.095	-0.630	1.725	0.867
400T125-43(S)	4.161	1.250	0.0451	33	45	0.293	1.00	0.716	0.344	1.563	0.040	0.369	0.666	0.282	5.568	1739.090	0.199	0.122	-0.626	1.724	0.868
400T125-54(S)	4.198	1.250	0.0566	50	65	0.367	1.25	0.904	0.431	1.569	0.049	0.366	0.849	0.359	10.739	3371.560	0.392	0.154	-0.621	1.727	0.871
400T125-68(S)	4.250	1.250	0.0713	50	65	0.462	1.57	1.150	0.541	1.577	0.061	0.363	1.134	0.488	14.623	5204.520	0.784	0.194	-0.614	1.731	0.874
400T150-33(S)	4.146	1.500	0.0346	33	45	0.242	0.82	0.622	0.300	1.603	0.051	0.460	0.519	0.208	4.117	939.640	0.097	0.155	-0.822	1.859	0.805
400T150-43(S)	4.161	1.500	0.0451	33	45	0.315	1.07	0.811	0.390	1.604	0.066	0.458	0.719	0.293	5.797	1739.090	0.214	0.200	-0.817	1.857	0.807
400T150-54(S)	4.198	1.500	0.0566	50	65	0.396	1.35	1.025	0.489	1.610	0.082	0.456	0.918	0.374	11.193	3371.560	0.422	0.252	-0.811	1.860	0.810
400T150-68(S)	4.250	1.500	0.0713	50	65	0.498	1.69	1.306	0.615	1.619	0.102	0.453	1.237	0.513	15.354	5204.520	0.844	0.320	-0.804	1.864	0.814
400T189-33(S)	4.146	1.890	0.0346	33	45	0.269	0.92	0.736	0.355	1.654	0.097	0.600	0.568	0.218	4.299	939.650	0.107	0.289	-1.137	2.095	0.706
400T189-43(S)	4.161	1.890	0.0451	33	45	0.351	1.19	0.960	0.461	1.655	0.125	0.598	0.792	0.308	6.076	1739.090	0.238	0.375	-1.132	2.092	0.707
400T189-54(S)	4.198	1.890	0.0566	50	65	0.440	1.50	1.215	0.579	1.662	0.156	0.595	1.013	0.392	11.745	3371.560	0.470	0.473	-1.126	2.094	0.711
400T189-68(S)	4.250	1.890	0.0713	50	65	0.554	1.88	1.549	0.729	1.673	0.194	0.592	1.376	0.542	16.221	5204.450	0.938	0.602	-1.117	2.097	0.716
400T200-33(S)	4.146	2.000	0.0346	33	45	0.277	0.94	0.768	0.371	1.666	0.113	0.639	0.581	0.220	4.343	939.640	0.110	0.336	-1.229	2.167	0.678
400T200-43(S)	4.161	2.000	0.0451	33	45	0.360	1.23	1.002	0.482	1.668	0.146	0.637	0.811	0.311	6.143	1739.090	0.244	0.437	-1.224	2.164	0.680
400T200-54(S)	4.198	2.000	0.0566	50	65	0.452	1.54	1.268	0.604	1.675	0.182	0.635	1.037	0.397	11.877	3371.560	0.483	0.551	-1.217	2.165	0.684
400T200-68(S)	4.250	2.000	0.0713	50	65	0.569	1.94	1.617	0.761	1.685	0.227	0.632	1.412	0.549	16.424	5204.520	0.965	0.702	-1.209	2.168	0.689
400T239-33(S)[3]	4.146	2.390	0.0346	33	45	0.304	1.03	0.882	0.426	1.705	0.183	0.777	-	-	-	-	0.121	0.533	-1.573	2.446	-
400T239-43(S)	4.161	2.390	0.0451	33	45	0.396	1.35	1.151	0.553	1.706	0.237	0.775	0.872	0.321	6.348	1739.090	0.268	0.707	-1.557	2.436	0.592
400T239-54(S)	4.198	2.390	0.0566	50	65	0.496	1.69	1.457	0.694	1.714	0.296	0.772	1.116	0.410	12.280	3371.560	0.530	0.894	-1.550	2.437	0.595
400T239-68(S)	4.250	2.390	0.0713	50	65	0.625	2.13	1.860	0.875	1.725	0.370	0.770	1.529	0.569	17.041	5204.450	1.059	1.140	-1.541	2.438	0.600
400T250-33(S)[3]	4.146	2.500	0.0346	33	45	0.311	1.06	0.915	0.441	1.714	0.207	0.815	-	-	-	-	0.124	0.602	-1.670	2.528	-
400T250-43(S)	4.161	2.500	0.0451	33	45	0.406	1.38	1.193	0.573	1.715	0.268	0.813	0.888	0.324	6.398	1739.090	0.275	0.799	-1.653	2.517	0.569
400T250-54(S)	4.198	2.500	0.0566	50	65	0.509	1.73	1.511	0.720	1.723	0.335	0.811	1.137	0.414	12.379	3371.560	0.543	1.011	-1.646	2.517	0.573
400T250-68(S)	4.250	2.500	0.0713	50	65	0.641	2.18	1.928	0.908	1.735	0.418	0.808	1.559	0.574	17.191	5204.520	1.086	1.289	-1.637	2.519	0.578
400T289-33(S)[3]	4.146	2.890	0.0346	33	45	0.338	1.15	1.029	0.496	1.744	0.306	0.951	-	-	-	-	0.135	0.894	-2.016	2.830	-
400T289-43(S)[3]	4.161	2.890	0.0451	33	45	0.441	1.50	1.342	0.645	1.745	0.397	0.949	-	-	-	-	0.299	1.163	-2.011	2.827	-
400T289-54(S)	4.198	2.890	0.0566	50	65	0.553	1.88	1.700	0.810	1.754	0.496	0.947	1.206	0.424	12.690	3371.56	0.590	1.501	-1.991	2.817	0.500
400T289-68(S)	4.250	2.890	0.0713	50	65	0.696	2.37	2.171	1.022	1.766	0.620	0.944	1.661	0.590	17.661	5204.450	1.180	1.916	-1.982	2.817	0.505
400T300-33(S)[3]	4.146	3.000	0.0346	33	45	0.346	1.18	1.061	0.512	1.751	0.338	0.989	-	-	-	-	0.138	0.990	-2.115	2.919	-
400T300-43(S)[3]	4.161	3.000	0.0451	33	45	0.451	1.53	1.384	0.665	1.753	0.439	0.987	-	-	-	-	0.306	1.288	-2.110	2.915	-
400T300-54(S)	4.198	3.000	0.0566	50	65	0.565	1.92	1.754	0.835	1.761	0.548	0.985	1.224	0.427	12.768	3371.560	0.604	1.662	-2.090	2.905	0.482
400T300-68(S)	4.250	3.000	0.0713	50	65	0.712	2.42	2.239	1.054	1.774	0.686	0.982	1.687	0.594	17.778	5204.520	1.206	2.122	-2.081	2.905	0.487

[3] FLANGE WIDTH-TO-THICKNESS RATIO EXCEEDS 60. EFFECTIVE PROPERTIES ARE NOT CALCULATED. SEE LIMITATIONS IN AISI S100-16 SECTION B4.1 AND SECTION B4.2 FOR LIMITATION CALCULATIONS.

IRENE STEEL

Gross Properties:

I_x = Moment of Inertia of cross-section about the x-axis
S_x = Section Modulus about the x-axis
R_x = Radius of Gyration of cross-section about the x-axis
I_y = Moment of Inertia of cross-section about the y-axis
R_y = Radius of Gyration of cross-section about the y-axis

Torsional Properties:

J = St Vincent Torsional Constant (J x 1000)
C_w = Warping Constant
X_o = Dist. From Shear Center to Neutral Axis
R_o = Radii of Gyration
β = Torsional Flexural Constant

Effective Properties:

I_{xe} = Effective Moment of Inertia of cross-section about the x-axis
S_{xe} = Effective Section Modulus about the x-axis
M_a = Allowable Bending Moment
V_{ag} = Allowable Shear Force in Web (Unpunched)

4" NARROW TRACK PROPERTIES

Member	Web Depth (A) (in.)	Flange Width (B) (in.)	Design Thickness (in.)	Yield Strength Fy (ksi)	Ult Strength Fu (ksi)	Area (in²)	Weight (lb/ft)	I_x (in⁴)	S_x (in³)	R_x (in)	I_y (in⁴)	R_y (in)	I_{xe} (in⁴)	S_{xe} (in³)	M_a (in-k)	V_{ag} (lb)	Jx1000 (in⁴)	C_w (in⁴)	X_o (in⁴)	R_o (in⁴)	β
400T125-33(N)	4.000	1.250	0.0346	33	45	0.220	0.75	0.504	0.252	1.515	0.031	0.373	0.444	0.190	3.760	975.860	0.088	0.087	-0.641	1.686	0.856
400T125-43(N)	4.000	1.250	0.0451	33	45	0.286	0.97	0.651	0.326	1.510	0.039	0.372	0.606	0.266	5.249	1739.090	0.194	0.111	-0.638	1.681	0.856
400T125-54(N)	4.000	1.250	0.0566	50	65	0.356	1.21	0.805	0.403	1.504	0.049	0.370	0.756	0.334	9.991	3371.560	0.380	0.137	-0.635	1.674	0.856
400T125-68(N)	4.000	1.250	0.0713	50	65	0.445	1.51	0.994	0.497	1.495	0.060	0.368	0.980	0.447	13.383	4870.900	0.753	0.168	-0.631	1.664	0.856
400T150-33(N)	4.000	1.500	0.0346	33	45	0.237	0.81	0.572	0.286	1.554	0.051	0.463	0.477	0.197	3.899	975.860	0.095	0.142	-0.834	1.823	0.791
400T150-43(N)	4.000	1.500	0.0451	33	45	0.308	1.05	0.739	0.370	1.549	0.066	0.461	0.654	0.277	5.466	1739.090	0.209	0.183	-0.831	1.817	0.791
400T150-54(N)	4.000	1.500	0.0566	50	65	0.384	1.31	0.915	0.458	1.543	0.081	0.459	0.818	0.348	10.417	3371.560	0.410	0.225	-0.828	1.810	0.791
400T150-68(N)	4.000	1.500	0.0713	50	65	0.480	1.63	1.132	0.566	1.535	0.100	0.457	1.071	0.470	14.062	4870.900	0.814	0.278	-0.825	1.802	0.790
400T199-33(N)	4.000	1.990	0.0346	33	45	0.271	0.92	0.705	0.353	1.614	0.110	0.638	0.532	0.208	4.109	975.860	0.108	0.305	-1.236	2.130	0.663
400T199-43(N)	4.000	1.990	0.0451	33	45	0.352	1.20	0.912	0.456	1.609	0.142	0.636	0.737	0.293	5.787	1739.090	0.239	0.392	-1.233	2.124	0.663
400T199-54(N)	4.000	1.990	0.0566	50	65	0.440	1.50	1.131	0.565	1.604	0.177	0.634	0.923	0.369	11.044	3371.560	0.470	0.485	-1.230	2.118	0.663
400T199-68(N)	4.000	1.990	0.0713	50	65	0.550	1.87	1.401	0.701	1.596	0.220	0.632	1.223	0.502	15.031	4870.900	0.932	0.600	-1.227	2.110	0.662
400T249-33(N)[3]	4.000	2.490	0.0346	33	45	0.306	1.04	0.841	0.421	1.660	0.202	0.814	-	-	-	-	0.122	0.548	-1.680	2.497	-
400T249-43(N)	4.000	2.490	0.0451	33	45	0.397	1.35	1.088	0.544	1.655	0.262	0.812	0.808	0.305	6.029	1739.090	0.269	0.721	-1.665	2.484	0.551
400T249-54(N)	4.000	2.490	0.0566	50	65	0.496	1.69	1.351	0.675	1.650	0.326	0.810	1.014	0.385	11.512	3371.560	0.530	0.893	-1.663	2.478	0.550
400T249-68(N)	4.000	2.490	0.0713	50	65	0.621	2.11	1.676	0.838	1.643	0.406	0.808	1.353	0.526	15.738	4870.900	1.053	1.106	-1.660	2.471	0.549
400T299-33(N)[3]	4.000	2.990	0.0346	33	45	0.340	1.16	0.977	0.489	1.695	0.331	0.987	-	-	-	-	0.136	0.903	-2.128	2.894	-
400T299-43(N)[3]	4.000	2.990	0.0451	33	45	0.442	1.50	1.265	0.632	1.691	0.429	0.985	-	-	-	-	0.300	1.164	-2.124	2.888	-
400T299-54(N)	4.000	2.990	0.0566	50	65	0.553	1.88	1.571	0.785	1.685	0.534	0.983	1.092	0.397	11.873	3371.560	0.591	1.472	-2.110	2.874	0.461
400T299-68(N)	4.000	2.990	0.0713	50	65	0.693	2.36	1.952	0.976	1.679	0.666	0.981	1.466	0.544	16.275	4870.900	1.174	1.826	-2.108	2.867	0.460

[3] FLANGE WIDTH-TO-THICKNESS RATIO EXCEEDS 60. EFFECTIVE PROPERTIES ARE NOT CALCULATED. SEE LIMITATIONS IN AISI S100-16 SECTION B4.1 AND SECTION B4.2 FOR LIMITATION CALCULATIONS.
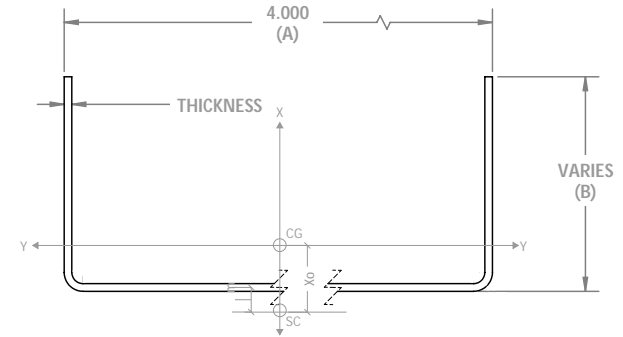
Gross Properties:

I_x = Moment of Inertia of cross-section about the x-axis

S_x = Section Modulus about the x-axis

R_x = Radius of Gyration of cross-section about the x-axis

I_y = Moment of Inertia of cross-section about the y-axis

R_y = Radius of Gyration of cross-section about the y-axis
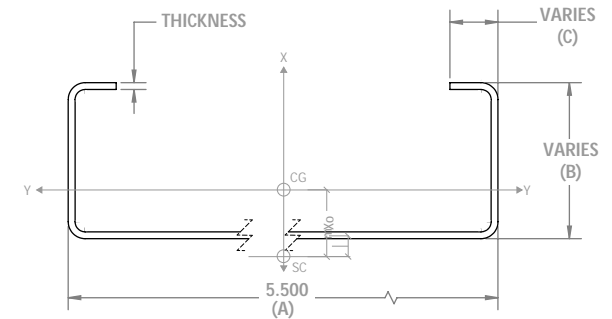
Effective Properties:

I_{xe} = Effective Moment of Inertia of cross-section about the x-axis

S_{xe} = Effective Section Modulus about the x-axis

M_a = Allowable Bending Moment

M_{da} = Allowable Distortional Buckling Moment at $K\phi = 0$

V_{ag} = Allowable Shear Force in Web (Unpunched)

V_{anet} = Allowable Shear Force in Web (Punched)

Torsional Properties:

J = St Vincent Torsional Constant (J x 1000)

C_w = Warping Constant

X_o = Dist. From Shear Center to Neutral Axis

R_o = Radii of Gyration

β = Torsional Flexural Constant

Notes:

CRC punchouts are min. 12" from leading edge

CRC punchouts are min. 24" o.c.

5-1/2" NON-STRUCTURAL STUD PROPERTIES

Member	Web Depth (A) (in.)	Flange Width (B) (in.)	Lip Width (C) (in.)	Design Thickness (in.)	Yield Strength Fy (ksi)	Ult Strength Fu (ksi)	Gross Properties						Effective Properties						Torsional Properties				
							Area (in²)	Weight (lb/ft)	I_x (in⁴)	S_x (in³)	R_x (in)	I_y (in⁴)	R_y (in)	I_{xe} (in⁴)	S_{xe} (in³)	M_a (in-k)	M_{da} (in-k)	V_{ag} (lb)	V_{anet} (lb)	Jx1000 (in⁴)	C_w (in⁶)	X_o (in)	R_o (in⁶)	β
550S125-27	5.500	1.250	0.188	0.0283	33	33	0.229	0.78	0.938	0.341	2.023	0.034	0.385	0.898	0.246	4.863	3.926	381.760	381.760	0.061	0.205	-0.642	2.157	0.912
550S125-30	5.500	1.250	0.188	0.0312	33	33	0.252	0.86	1.031	0.375	2.021	0.037	0.384	0.996	0.286	5.648	4.536	511.840	511.840	0.082	0.224	-0.639	2.154	0.912

5-1/2" STRUCTURAL STUD PROPERTIES

Member	Web Depth (A) (in.)	Flange Width (B) (in.)	Lip Width (C) (in.)	Design Thickness (in.)	Yield Strength Fy (ksi)	Ult Strength Fu (ksi)	Gross Properties						Effective Properties						Torsional Properties				
							Area (in²)	Weight (lb/ft)	I_x (in⁴)	S_x (in³)	R_x (in)	I_y (in⁴)	R_y (in)	I_{xe} (in⁴)	S_{xe} (in³)	M_a (in-k)	M_{da} (in-k)	V_{ag} (lb)	V_{anet} (lb)	Jx1000 (in⁴)	C_w (in⁶)	X_o (in)	R_o (in⁶)	β
550S162-33	5.500	1.625	0.500	0.0346	33	45	0.327	1.11	1.459	0.530	2.112	0.113	0.589	1.459	0.512	10.111	8.313	698.520	698.520	0.131	0.713	-1.114	2.459	0.795
550S162-43	5.500	1.625	0.500	0.0451	33	45	0.424	1.44	1.883	0.685	2.107	0.145	0.584	1.883	0.685	13.531	11.842	1550.050	1198.910	0.288	0.905	-1.103	2.449	0.797
550S162-54	5.500	1.625	0.500	0.0566	50	65	0.528	1.80	2.324	0.845	2.098	0.176	0.577	2.324	0.822	24.596	20.997	3093.430	1881.020	0.564	1.105	-1.090	2.434	0.800
550S162-68	5.500	1.625	0.500	0.0713	50	65	0.657	2.24	2.861	1.040	2.086	0.212	0.568	2.861	1.040	31.151	28.225	5350.290	2531.530	1.114	1.342	-1.072	2.414	0.803
550S200-33	5.500	2.000	0.625	0.0346	33	45	0.362	1.23	1.694	0.616	2.164	0.204	0.751	1.678	0.559	11.050	12.021	698.520	698.520	0.144	1.326	-1.508	2.742	0.698
550S200-43	5.500	2.000	0.625	0.0451	33	45	0.469	1.60	2.189	0.796	2.159	0.261	0.746	2.189	0.776	15.335	15.603	1550.050	1198.910	0.318	1.691	-1.496	2.731	0.700
550S200-54	5.500	2.000	0.625	0.0566	50	65	0.585	1.99	2.706	0.984	2.152	0.320	0.739	2.706	0.901	26.985	26.788	3093.430	1881.020	0.624	2.072	-1.483	2.716	0.702
550S200-68	5.500	2.000	0.625	0.0713	50	65	0.729	2.48	3.341	1.215	2.141	0.389	0.731	3.341	1.188	35.571	34.143	5350.290	2531.530	1.235	2.531	-1.465	2.695	0.705

IRENE STEEL

5-1/2" NON-STRUCTURAL TRACK PROPERTIES

Gross Properties:

I_x = Moment of Inertia of cross-section about the x-axis

S_x = Section Modulus about the x-axis

R_x = Radius of Gyration of cross-section about the x-axis

I_y = Moment of Inertia of cross-section about the y-axis

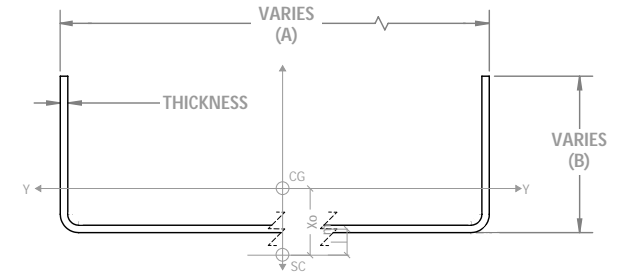R_y = Radius of Gyration of cross-section about the y-axis

Effective Properties:

I_{xe} = Effective Moment of Inertia of cross-section about the x-axis

S_{xe} = Effective Section Modulus about the x-axis

M_a = Allowable Bending Moment

V_{ag} = Allowable Shear Force in Web (Unpunched)

Torsional Properties:

J = St Vincent Torsional Constant (J x 1000)

C_w = Warping Constant

X_o = Dist. From Shear Center to Neutral Axis

R_o = Radii of Gyration

β = Torsional Flexural Constant

Notes:

Track width = stud web + (design thickness x 2) + design inside corner radius

5-1/2" NON-STRUCTURAL TRACK PROPERTIES

Member	Web Depth (A) (in.)	Flange Width (B) (in.)	Design Thickness (in.)	Yield Strength Fy (ksi)	Ult Strength Fu (ksi)	Gross Properties						Effective Properties				Torsional Properties				
						Area (in^2)	Weight (lb/ft)	I_x (in^4)	S_x (in^3)	R_x (in)	I_y (in^4)	R_y (in)	I_{xe} (in^4)	S_{xe} (in^3)	M_a (in-k)	V_{ag} (lb)	Jx1000 (in^4)	C_w (in^4)	X_o (in^4)	R_o (in^4)	β
550T125-18(S)[2,3]	5.622	1.250	0.0188	33	33	0.150	0.51	0.630	0.224	2.046	0.018	0.349	-	-	-	-	0.018	0.106	-0.553	2.148	-
550T125-27(S)	5.636	1.250	0.0283	33	33	0.226	0.77	0.948	0.336	2.046	0.027	0.348	0.786	0.192	3.786	372.170	0.060	0.160	-0.543	2.145	0.936
550T125-30(S)	5.641	1.250	0.0312	33	33	0.250	0.85	1.045	0.371	2.046	0.030	0.347	0.897	0.226	4.472	498.570	0.081	0.176	-0.542	2.145	0.936
550T150-18(S)[2,3]	5.622	1.500	0.0188	33	33	0.160	0.54	0.704	0.250	2.098	0.031	0.437	-	-	-	-	0.019	0.173	-0.727	2.263	-
550T150-27(S)	5.636	1.500	0.0283	33	33	0.241	0.82	1.059	0.376	2.098	0.046	0.436	0.893	0.208	4.100	372.170	0.064	0.263	-0.716	2.260	0.900
550T150-30(S)	5.641	1.500	0.0312	33	33	0.265	0.90	1.168	0.414	2.099	0.050	0.435	0.995	0.251	4.964	498.570	0.086	0.289	-0.715	2.259	0.900
550T200-18(S)[2,3]	5.622	2.000	0.0188	33	33	0.179	0.61	0.851	0.303	2.183	0.068	0.616	-	-	-	-	0.021	0.374	-1.103	2.522	-
550T200-27(S)[3]	5.636	2.000	0.0283	33	33	0.269	0.91	1.281	0.455	2.183	0.101	0.614	-	-	-	-	0.072	0.560	-1.099	2.520	-
550T200-30(S)[3]	5.641	2.000	0.0312	33	33	0.296	1.01	1.413	0.501	2.184	0.112	0.614	-	-	-	-	0.096	0.616	-1.098	2.520	-
550T250-18(S)[2,3]	5.622	2.500	0.0188	33	33	0.197	0.67	0.999	0.355	2.249	0.125	0.795	-	-	-	-	0.023	0.680	-1.506	2.821	-
550T250-27(S)[3]	5.636	2.500	0.0283	33	33	0.297	1.01	1.504	0.534	2.250	0.187	0.793	-	-	-	-	0.079	1.020	-1.502	2.819	-
550T250-30(S)[3]	5.641	2.500	0.0312	33	33	0.328	1.11	1.659	0.588	2.250	0.206	0.793	-	-	-	-	0.106	1.124	-1.501	2.819	-
550T300-18(S)[2,3]	5.622	3.000	0.0188	33	33	0.216	0.74	1.146	0.408	2.302	0.205	0.972	-	-	-	-	0.026	1.110	-1.928	3.156	-
550T300-27(S)[3]	5.636	3.000	0.0283	33	33	0.325	1.11	1.726	0.613	2.303	0.307	0.971	-	-	-	-	0.087	1.668	-1.924	3.154	-
550T300-30(S)[3]	5.641	3.000	0.0312	33	33	0.359	1.22	1.904	0.675	2.304	0.338	0.970	-	-	-	-	0.116	1.838	-1.922	3.153	-

[2] WEB DEPTH-TO-THICKNESS RATIO EXCEEDS 260.

[3] FLANGE WIDTH-TO-THICKNESS RATIO EXCEEDS 60. EFFECTIVE PROPERTIES ARE NOT CALCULATED. SEE LIMITATIONS IN AISI S100-16 SECTION B4.1 AND SECTION B4.2 FOR LIMITATION CALCULATIONS.

IRENE STEEL

5-1/2" STRUCTURAL TRACK PROPERTIES

Gross Properties:

I_x = Moment of Inertia of cross-section about the x-axis

S_x = Section Modulus about the x-axis

R_x = Radius of Gyration of cross-section about the x-axis

I_y = Moment of Inertia of cross-section about the y-axis

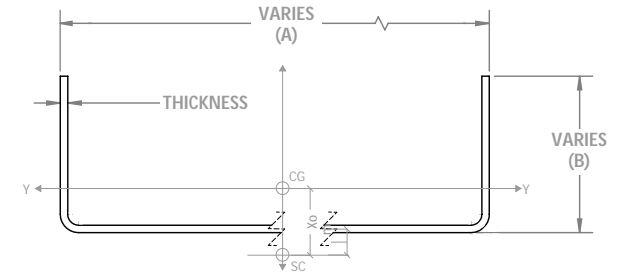R_y = Radius of Gyration of cross-section about the y-axis

Effective Properties:

I_{xe} = Effective Moment of Inertia of cross-section about the x-axis

S_{xe} = Effective Section Modulus about the x-axis

M_a = Allowable Bending Moment

V_{ag} = Allowable Shear Force in Web (Unpunched)

Torsional Properties:

J = St Vincent Torsional Constant (J x 1000)

C_w = Warping Constant

X_o = Dist. From Shear Center to Neutral Axis

R_o = Radii of Gyration

β = Torsional Flexural Constant

Notes:

Track width = stud web + (design thickness x 2) + design inside corner radius

5-1/2" STRUCTURAL TRACK PROPERTIES

Member	Web Depth (A) (in.)	Flange Width (B) (in.)	Design Thickness (in.)	Yield Strength Fy (ksi)	Ult Strength Fu (ksi)	Area (in²)	Weight (lb/ft)	I_x (in⁴)	S_x (in³)	R_x (in)	I_y (in⁴)	R_y (in)	I_{xe} (in⁴)	S_{xe} (in³)	M_a (in-k)	V_{ag} (lb)	Jx1000 (in⁴)	C_w (in⁴)	X_o (in⁴)	R_o (in⁴)	β
550T125-33(S)	5.646	1.250	0.0346	33	45	0.277	0.94	1.159	0.410	2.046	0.033	0.346	1.029	0.270	5.327	679.760	0.110	0.195	-0.541	2.145	0.937
550T125-43(S)	5.661	1.250	0.0451	33	45	0.360	1.23	1.510	0.533	2.047	0.043	0.345	1.428	0.417	8.230	1503.960	0.244	0.252	-0.537	2.144	0.937
550T125-54(S)	5.698	1.250	0.0566	50	65	0.452	1.54	1.903	0.668	2.052	0.053	0.342	1.811	0.535	16.007	2980.260	0.483	0.315	-0.532	2.147	0.939
550T125-68(S)	5.750	1.250	0.0713	50	65	0.569	1.94	2.412	0.839	2.058	0.066	0.339	2.379	0.769	23.016	5350.290	0.965	0.397	-0.526	2.152	0.940
550T150-33(S)	5.646	1.500	0.0346	33	45	0.294	1.00	1.295	0.459	2.099	0.056	0.434	1.115	0.310	6.120	679.760	0.117	0.320	-0.714	2.259	0.900
550T150-43(S)	5.661	1.500	0.0451	33	45	0.383	1.30	1.688	0.596	2.099	0.072	0.433	1.516	0.468	9.251	1503.960	0.260	0.414	-0.710	2.258	0.901
550T150-54(S)	5.698	1.500	0.0566	50	65	0.480	1.63	2.128	0.747	2.105	0.089	0.430	1.928	0.595	17.805	2980.260	0.513	0.519	-0.704	2.261	0.903
550T150-68(S)	5.750	1.500	0.0713	50	65	0.605	2.06	2.699	0.939	2.112	0.111	0.427	2.569	0.804	24.073	5350.290	1.025	0.655	-0.698	2.265	0.905
550T200-33(S)	5.646	2.000	0.0346	33	45	0.329	1.12	1.567	0.555	2.184	0.123	0.613	1.246	0.307	6.060	679.760	0.131	0.694	-1.088	2.516	0.813
550T200-43(S)	5.661	2.000	0.0451	33	45	0.428	1.46	2.043	0.722	2.185	0.160	0.611	1.690	0.495	9.787	1503.960	0.290	0.900	-1.083	2.514	0.814
550T200-54(S)	5.698	2.000	0.0566	50	65	0.537	1.83	2.578	0.905	2.191	0.199	0.609	2.153	0.630	18.858	2980.260	0.573	1.133	-1.078	2.517	0.817
550T200-68(S)	5.750	2.000	0.0713	50	65	0.676	2.30	3.274	1.139	2.200	0.248	0.606	2.894	0.857	25.670	5350.290	1.146	1.434	-1.070	2.521	0.820
550T250-33(S)[3]	5.646	2.500	0.0346	33	45	0.363	1.23	1.840	0.652	2.251	0.228	0.792	-	-	-	-	0.145	1.245	-1.499	2.818	-
550T250-43(S)	5.661	2.500	0.0451	33	45	0.473	1.61	2.399	0.848	2.252	0.295	0.790	1.841	0.516	10.199	1503.960	0.321	1.643	-1.484	2.810	0.721
550T250-54(S)	5.698	2.500	0.0566	50	65	0.594	2.02	3.029	1.063	2.259	0.368	0.788	2.346	0.657	19.663	2980.260	0.634	2.070	-1.478	2.812	0.724
550T250-68(S)	5.750	2.500	0.0713	50	65	0.748	2.54	3.849	1.339	2.269	0.460	0.785	3.173	0.897	26.860	5350.290	1.267	2.627	-1.470	2.815	0.727
550T300-33(S)[3]	5.646	3.000	0.0346	33	45	0.398	1.35	2.112	0.748	2.304	0.374	0.970	-	-	-	-	0.159	2.036	-1.920	3.152	-
550T300-43(S)[3]	5.661	3.000	0.0451	33	45	0.518	1.76	2.754	0.973	2.306	0.485	0.968	-	-	-	-	0.351	2.646	-1.915	3.150	-
550T300-54(S)	5.698	3.000	0.0566	50	65	0.650	2.21	3.479	1.221	2.313	0.606	0.965	2.526	0.663	19.840	2980.260	0.694	3.390	-1.898	3.144	0.636
550T300-68(S)	5.750	3.000	0.0713	50	65	0.819	2.79	4.424	1.539	2.324	0.758	0.962	3.417	0.929	27.800	5350.290	1.388	4.307	-1.889	3.146	0.640

[3] FLANGE WIDTH-TO-THICKNESS RATIO EXCEEDS 60. EFFECTIVE PROPERTIES ARE NOT CALCULATED. SEE LIMITATIONS IN AISI S100-16 SECTION B4.1 AND SECTION B4.2 FOR LIMITATION CALCULATIONS.

Gross Properties:

I_x = Moment of Inertia of cross-section about the x-axis

S_x = Section Modulus about the x-axis

R_x = Radius of Gyration of cross-section about the x-axis

I_y = Moment of Inertia of cross-section about the y-axis

R_y = Radius of Gyration of cross-section about the y-axis
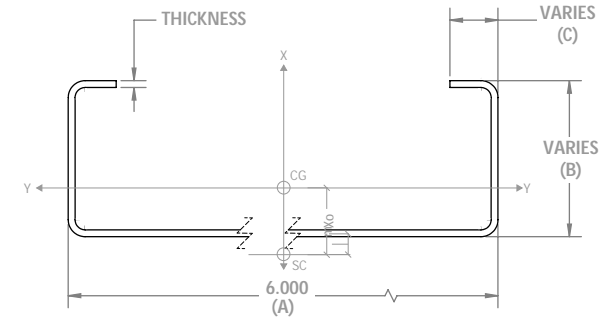
Effective Properties:

I_{xe} = Effective Moment of Inertia of cross-section about the x-axis

S_{xe} = Effective Section Modulus about the x-axis

M_a = Allowable Bending Moment

M_{da} = Allowable Distortional Buckling Moment at $K\phi = 0$

V_{ag} = Allowable Shear Force in Web (Unpunched)

V_{anet} = Allowable Shear Force in Web (Punched)

Torsional Properties:

J = St Vincent Torsional Constant ($J \times 1000$)

C_w = Warping Constant

X_o = Dist. From Shear Center to Neutral Axis

R_o = Radii of Gyration

β = Torsional Flexural Constant

Notes:

CRC punchouts are min. 12" from leading edge

CRC punchouts are min. 24" o.c.

6" NON-STRUCTURAL STUD PROPERTIES

Member	Web Depth (A) (in.)	Flange Width (B) (in.)	Lip Width (C) (in.)	Design Thickness (in.)	Yield Strength Fy (ksi)	Ult Strength Fu (ksi)	Gross Properties						Effective Properties						Torsional Properties				
							Area (in²)	Weight (lb/ft)	I_x (in⁴)	S_x (in³)	R_x (in)	I_y (in⁴)	R_y (in)	I_{xe} (in⁴)	S_{xe} (in³)	M_a (in-k)	M_{da} (in-k)	V_{ag} (lb)	V_{anet} (lb)	Jx1000 (in⁴)	C_w (in⁶)	X_o (in)	R_o (in⁶)	β
600S125-18[2]	6.000	1.250	0.188	0.0188	33	33	0.162	0.55	0.778	0.259	0.024	0.024	0.382	1.218	0.315	6.219	4.959	467.570	467.570	0.019	0.172	-0.623	2.308	0.927
600S125-27[1]	6.000	1.250	0.188	0.0283	33	33	0.243	0.83	1.160	0.387	2.183	0.035	0.378	1.097	0.271	5.348	4.284	348.760	348.760	0.065	0.251	-0.614	2.299	0.929
600S125-30	6.000	1.250	0.188	0.0312	33	33	0.268	0.91	1.275	0.425	2.181	0.038	0.376	1.218	0.315	6.219	4.959	467.570	467.570	0.087	0.274	-0.611	2.296	0.929

[1] WEB DEPTH-TO-THICKNESS RATIO EXCEEDS 200.

[2] WEB DEPTH-TO-THICKNESS RATIO EXCEEDS 260.

6" STRUCTURAL STUD PROPERTIES

Member	Web Depth (A) (in.)	Flange Width (B) (in.)	Lip Width (C) (in.)	Design Thickness (in.)	Yield Strength Fy (ksi)	Ult Strength Fu (ksi)	Gross Properties						Effective Properties						Torsional Properties				
							Area (in²)	Weight (lb/ft)	I_x (in⁴)	S_x (in³)	R_x (in)	I_y (in⁴)	R_y (in)	I_{xe} (in⁴)	S_{xe} (in³)	M_a (in-k)	M_{da} (in-k)	V_{ag} (lb)	V_{anet} (lb)	Jx1000 (in⁴)	C_w (in⁶)	X_o (in)	R_o (in⁶)	β
600S162-33	6.000	1.625	0.5	0.0346	33	45	0.344	1.17	1.793	0.598	2.282	0.116	0.581	1.793	0.577	11.408	10.324	638.070	638.070	0.137	0.862	-1.072	2.587	0.828
600S162-43	6.000	1.625	0.5	0.0451	33	45	0.447	1.52	2.316	0.772	2.276	0.148	0.576	2.316	0.772	15.254	13.858	1415.670	1240.290	0.303	1.095	-1.062	2.577	0.830
600S162-54	6.000	1.625	0.5	0.0566	50	65	0.556	1.89	2.860	0.954	2.268	0.181	0.570	2.860	0.927	27.760	23.790	2822.880	1947.400	0.594	1.337	-1.049	2.562	0.833
600S162-68	6.000	1.625	0.5	0.0713	50	65	0.693	2.36	3.525	1.175	2.255	0.218	0.561	3.525	1.175	35.176	31.346	5350.290	2878.930	1.174	1.626	-1.032	2.543	0.835
600S200-33	6.000	2.000	0.625	0.0346	33	45	0.379	1.29	2.075	0.692	2.340	0.209	0.743	2.058	0.621	12.277	13.446	638.070	638.070	0.151	1.593	-1.457	2.855	0.740
600S200-43	6.000	2.000	0.625	0.0451	33	45	0.492	1.67	2.683	0.894	2.335	0.268	0.739	2.683	0.873	17.243	17.519	1415.670	1240.290	0.334	2.033	-1.446	2.844	0.742
600S200-54	6.000	2.000	0.625	0.0566	50	65	0.613	2.09	3.319	1.106	2.327	0.329	0.732	3.319	1.015	30.3954	29.854	2822.880	1947.400	0.655	2.493	-1.433	2.829	0.744
600S200-68	6.000	2.000	0.625	0.0713	50	65	0.764	2.60	4.101	1.367	2.316	0.400	0.723	4.101	1.337	40.029	38.068	5350.290	2878.930	1.295	3.047	-1.415	2.809	0.746
600S250-43	6.000	2.500	0.625	0.0451	33	45	0.537	1.83	3.083	1.028	2.396	0.458	0.923	3.083	0.918	18.139	20.036	1415.670	1240.290	0.364	3.411	-1.874	3.179	0.652
600S250-54	6.000	2.500	0.625	0.0566	50	65	0.670	2.28	3.819	1.273	2.388	0.562	0.917	3.766	1.069	32.001	33.689	2822.880	1947.400	0.715	4.194	-1.860	3.163	0.654
600S250-68	6.000	2.500	0.625	0.0713	50	65	0.836	2.84	4.727	1.576	2.378	0.688	0.908	4.723	1.386	41.491	42.618	5350.290	2878.930	1.416	5.146	-1.842	3.142	0.657
600S300-54	6.000	3.000	0.625	0.0566	50	65	0.726	2.47	4.319	1.440	2.439	0.875	1.098	4.014	1.106	33.126	37.307	2822.880	1947.400	0.775	6.452	-2.299	3.527	0.575
600S300-68	6.000	3.000	0.625	0.0713	50	65	0.907	3.09	5.354	1.785	2.430	1.075	1.089	5.221	1.446	43.296	46.962	5350.290	2878.930	1.537	7.937	-2.280	3.506	0.577

IRENE STEEL

Gross Properties:

I_x = Moment of Inertia of cross-section about the x-axis

S_x = Section Modulus about the x-axis

R_x = Radius of Gyration of cross-section about the x-axis

I_y = Moment of Inertia of cross-section about the y-axis

R_y = Radius of Gyration of cross-section about the y-axis
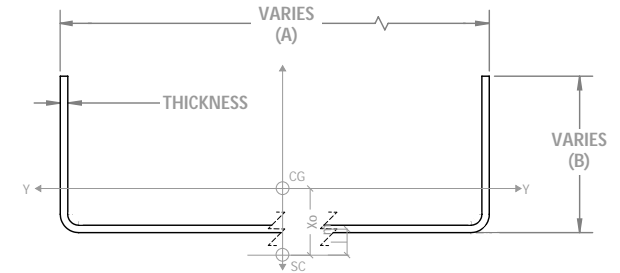
Effective Properties:

I_{xe} = Effective Moment of Inertia of cross-section about the x-axis

S_{xe} = Effective Section Modulus about the x-axis

M_a = Allowable Bending Moment

V_{ag} = Allowable Shear Force in Web (Unpunched)

Torsional Properties:

J = St Vincent Torsional Constant (J x 1000)

C_w = Warping Constant

X_o = Dist. From Shear Center to Neutral Axis

R_o = Radii of Gyration

β = Torsional Flexural Constant

Notes:

Track width = stud web + (design thickness x 2) + design inside corner radius

6" NON-STRUCTURAL TRACK PROPERTIES

Member	Web Depth (A) (in.)	Flange Width (B) (in.)	Design Thickness (in.)	Yield Strength Fy (ksi)	Ult Strength Fu (ksi)	Gross Properties						Effective Properties				Torsional Properties				
						Area (in^2)	Weight (lb/ft)	I_x (in^4)	S_x (in^3)	R_x (in)	I_y (in^4)	R_y (in)	I_{xe} (in^4)	S_{xe} (in^3)	M_a (in-k)	V_{ag} (lb)	Jx1000 (in^4)	C_w (in^4)	X_o (in^4)	R_o (in^4)	β
600T125-18(S)[2,3]	6.122	1.250	0.0188	33	33	0.160	0.54	0.776	0.254	2.204	0.019	0.342	-	-	-	-	0.019	0.129	-0.528	2.292	-
600T125-27(S)[1]	6.136	1.250	0.0283	33	33	0.241	0.82	1.168	0.381	2.204	0.028	0.340	0.958	0.211	4.159	340.740	0.064	0.196	-0.519	2.290	0.949
600T125-30(S)	6.141	1.250	0.0312	33	33	0.265	0.90	1.288	0.420	2.204	0.031	0.340	1.095	0.249	4.920	456.480	0.086	0.215	-0.518	2.289	0.949
600T150-18(S)[2,3]	6.122	1.500	0.0188	33	33	0.169	0.58	0.864	0.282	2.259	0.031	0.429	-	-	-	-	0.020	0.211	-0.697	2.403	-
600T150-27(S)[1]	6.136	1.500	0.0283	33	33	0.255	0.87	1.300	0.424	2.260	0.047	0.428	1.011	0.214	4.226	340.740	0.068	0.320	-0.686	2.400	0.918
600T150-30(S)	6.141	1.500	0.0312	33	33	0.281	0.96	1.434	0.467	2.260	0.051	0.427	1.159	0.253	5.007	456.480	0.091	0.352	-0.685	2.400	0.919
600T200-18(S)[2,3]	6.122	2.000	0.0188	33	33	0.188	0.64	1.039	0.339	2.350	0.069	0.607	-	-	-	-	0.022	0.457	-1.063	2.650	-
600T200-27(S)[1,3]	6.136	2.000	0.0283	33	33	0.283	0.96	1.564	0.510	2.351	0.104	0.605	-	-	-	-	0.076	0.684	-1.059	2.649	-
600T200-30(S)[3]	6.141	2.000	0.0312	33	33	0.312	1.06	1.725	0.562	2.352	0.114	0.605	-	-	-	-	0.101	0.753	-1.058	2.649	-
600T250-18(S)[2,3]	6.122	2.500	0.0188	33	33	0.207	0.70	1.214	0.397	2.423	0.128	0.786	-	-	-	-	0.024	0.831	-1.458	2.935	-
600T250-27(S)[1,3]	6.136	2.500	0.0283	33	33	0.311	1.06	1.828	0.596	2.423	0.192	0.784	-	-	-	-	0.083	1.246	-1.453	2.933	-
600T250-30(S)[3]	6.141	2.500	0.0312	33	33	0.343	1.17	2.016	0.657	2.424	0.211	0.784	-	-	-	-	0.111	1.373	-1.452	2.932	-
600T300-18(S)[2,3]	6.122	3.000	0.0188	33	33	0.226	0.77	1.389	0.454	2.481	0.210	0.965	-	-	-	-	0.027	1.355	-1.872	3.254	-
600T300-27(S)[1,3]	6.136	3.000	0.0283	33	33	0.340	1.15	2.092	0.682	2.482	0.315	0.963	-	-	-	-	0.091	2.035	-1.867	3.252	-
600T300-30(S)[3]	6.141	3.000	0.0312	33	33	0.374	1.27	2.307	0.751	2.483	0.347	0.962	-	-	-	-	0.122	2.243	-1.866	3.251	-

[1] WEB DEPTH-TO-THICKNESS RATIO EXCEEDS 200.

[2] WEB DEPTH-TO-THICKNESS RATIO EXCEEDS 260.

[3] FLANGE WIDTH-TO-THICKNESS RATIO EXCEEDS 60. EFFECTIVE PROPERTIES ARE NOT CALCULATED. SEE LIMITATIONS IN AISI S100-16 SECTION B4.1 AND SECTION B4.2 FOR LIMITATION CALCULATIONS.

IRENE STEEL

6" STANDARD TRACK PROPERTIES

Gross Properties:

I_x = Moment of Inertia of cross-section about the x-axis
S_x = Section Modulus about the x-axis
R_x = Radius of Gyration of cross-section about the x-axis
I_y = Moment of Inertia of cross-section about the y-axis
R_y = Radius of Gyration of cross-section about the y-axis
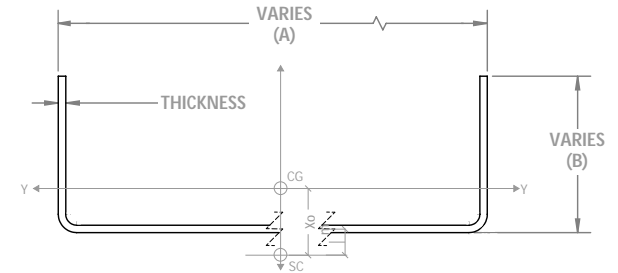
Effective Properties:

I_{xe} = Effective Moment of Inertia of cross-section about the x-axis
S_{xe} = Effective Section Modulus about the x-axis
M_a = Allowable Bending Moment
V_{ag} = Allowable Shear Force in Web (Unpunched)

Torsional Properties:

J = St Vincent Torsional Constant ($J \times 1000$)
C_w = Warping Constant
X_o = Dist. From Shear Center to Neutral Axis
R_o = Radii of Gyration
β = Torsional Flexural Constant

Notes:

Track width = stud web + (design thickness x 2) + design inside corner radius

6" STANDARD TRACK PROPERTIES

Member	Web Depth (A) (in.)	Flange Width (B) (in.)	Design Thickness (in.)	Yield Strength Fy (ksi)	Ult Strength Fu (ksi)	Area (in²)	Weight (lb/ft)	Ix (in⁴)	Sx (in³)	Rx (in)	Iy (in⁴)	Ry (in)	Ixe (in⁴)	Sxe (in³)	Ma (in-k)	Vag (lb)	Jx1000 (in⁴)	Cw (in⁴)	Xo (in⁴)	Ro (in⁴)	β
600T125-33(S)	6.146	1.250	0.0346	33	45	0.294	1.00	1.428	0.465	2.204	0.034	0.339	1.258	0.297	5.868	622.380	0.117	0.238	-0.517	2.289	0.949
600T125-43(S)	6.161	1.250	0.0451	33	45	0.383	1.30	1.861	0.604	2.205	0.044	0.337	1.768	0.461	9.113	1377.130	0.260	0.307	-0.513	2.288	0.950
600T125-54(S)	6.198	1.250	0.0566	50	65	0.480	1.63	2.344	0.756	2.209	0.054	0.335	2.241	0.592	17.735	2728.340	0.513	0.384	-0.508	2.291	0.951
600T125-68(S)	6.250	1.250	0.0713	50	65	0.605	2.06	2.969	0.950	2.215	0.067	0.332	2.934	0.858	25.692	5350.290	1.025	0.483	-0.503	2.296	0.952
600T150-33(S)	6.146	1.500	0.0346	33	45	0.311	1.06	1.590	0.517	2.260	0.057	0.426	1.334	0.303	5.985	622.380	0.124	0.390	-0.684	2.399	0.919
600T150-43(S)	6.161	1.500	0.0451	33	45	0.406	1.38	2.072	0.673	2.261	0.073	0.424	1.890	0.474	9.358	1377.130	0.275	0.504	-0.680	2.398	0.920
600T150-54(S)	6.198	1.500	0.0566	50	65	0.509	1.73	2.611	0.843	2.266	0.091	0.422	2.400	0.609	18.237	2728.340	0.543	0.633	-0.675	2.401	0.921
600T150-68(S)	6.250	1.500	0.0713	50	65	0.641	2.18	3.309	1.059	2.273	0.113	0.419	3.162	0.891	26.675	5350.290	1.086	0.797	-0.669	2.406	0.923
600T189-33(S)	6.146	1.890	0.0346	33	45	0.338	1.15	1.842	0.599	2.333	0.108	0.565	1.509	0.334	6.592	622.390	0.135	0.727	-0.965	2.588	0.861
600T189-43(S)	6.161	1.890	0.0451	33	45	0.441	1.50	2.401	0.779	2.334	0.140	0.563	2.033	0.559	11.038	1377.130	0.299	0.943	-0.961	2.586	0.862
600T189-54(S)	6.198	1.890	0.0566	50	65	0.553	1.88	3.027	0.977	2.340	0.174	0.561	2.586	0.710	21.247	2728.340	0.590	1.185	-0.956	2.589	0.864
600T189-68(S)	6.250	1.890	0.0713	50	65	0.696	2.37	3.840	1.229	2.349	0.217	0.558	3.461	0.961	28.775	5350.290	1.180	1.498	-0.949	2.594	0.866
600T200-33(S)	6.146	2.000	0.0346	33	45	0.346	1.18	1.913	0.623	2.352	0.126	0.604	1.542	0.333	6.585	622.380	0.138	0.847	-1.048	2.645	0.843
600T200-43(S)	6.161	2.000	0.0451	33	45	0.451	1.53	2.494	0.810	2.353	0.163	0.602	2.076	0.565	11.157	1377.130	0.306	1.098	-1.044	2.643	0.844
600T200-54(S)	6.198	2.000	0.0566	50	65	0.565	1.92	3.145	1.015	2.359	0.204	0.600	2.641	0.717	21.479	2728.340	0.604	1.381	-1.038	2.646	0.846
600T200-68(S)	6.250	2.000	0.0713	50	65	0.712	2.42	3.990	1.277	2.367	0.254	0.597	3.540	0.973	29.120	5350.290	1.206	1.746	-1.031	2.650	0.849
600T239-33(S)[3]	6.146	2.390	0.0346	33	45	0.373	1.27	2.165	0.705	2.410	0.206	0.744	-	-	-	-	0.149	1.347	-1.362	2.866	-
600T239-43(S)	6.161	2.390	0.0451	33	45	0.486	1.65	2.823	0.916	2.411	0.267	0.742	2.228	0.565	11.166	1377.130	0.329	1.775	-1.348	2.860	0.778
600T239-54(S)	6.198	2.390	0.0566	50	65	0.610	2.07	3.561	1.149	2.417	0.333	0.740	2.828	0.735	22.001	2728.340	0.651	2.235	-1.342	2.862	0.780
600T239-68(S)	6.250	2.390	0.0713	50	65	0.768	2.61	4.520	1.447	2.427	0.417	0.737	3.802	1.009	30.194	5350.290	1.301	2.831	-1.334	2.866	0.783
600T250-33(S)[3]	6.146	2.500	0.0346	33	45	0.380	1.29	2.236	0.728	2.424	0.233	0.783	-	-	-	-	0.152	1.520	-1.451	2.932	-
600T250-43(S)	6.161	2.500	0.0451	33	45	0.496	1.69	2.916	0.946	2.425	0.303	0.781	2.269	0.563	11.127	1377.130	0.336	2.004	-1.436	2.925	0.759
600T250-54(S)	6.198	2.500	0.0566	50	65	0.622	2.12	3.678	1.187	2.432	0.377	0.779	2.881	0.732	21.918	2728.340	0.664	2.523	-1.430	2.927	0.761
600T250-68(S)	6.250	2.500	0.0713	50	65	0.783	2.67	4.670	1.495	2.442	0.472	0.776	3.871	1.017	30.461	5350.290	1.327	3.198	-1.422	2.931	0.765
600T289-33(S)[3]	6.146	2.890	0.0346	33	45	0.407	1.39	2.488	0.810	2.471	0.347	0.923	-	-	-	-	0.163	2.247	-1.772	3.177	-
600T289-43(S)[3]	6.161	2.890	0.0451	33	45	0.531	1.80	3.244	1.053	2.472	0.450	0.921	-	-	-	-	0.360	2.919	-1.767	3.175	-
600T289-54(S)	6.198	2.890	0.0566	50	65	0.666	2.27	4.095	1.321	2.480	0.562	0.918	3.060	0.724	21.669	2728.340	0.711	3.732	-1.750	3.171	0.695
600T289-68(S)	6.250	2.890	0.0713	50	65	0.839	2.85	5.201	1.664	2.490	0.703	0.915	4.102	1.046	31.313	5350.290	1.421	4.735	-1.742	3.174	0.699
600T300-33(S)[3]	6.146	3.000	0.0346	33	45	0.415	1.41	2.559	0.833	2.483	0.384	0.962	-	-	-	-	0.166	2.485	-1.864	3.250	-
600T300-43(S)[3]	6.161	3.000	0.0451	33	45	0.541	1.84	3.337	1.083	2.484	0.498	0.960	-	-	-	-	0.367	3.229	-1.859	3.248	-
600T300-54(S)	6.198	3.000	0.0566	50	65	0.679	2.31	4.212	1.359	2.492	0.622	0.957	3.108	0.722	21.610	2728.340	0.725	4.129	-1.842	3.243	0.677
600T300-68(S)	6.250	3.000	0.0713	50	65	0.855	2.91	5.351	1.712	2.502	0.778	0.955	4.164	1.053	31.529	5350.290	1.448	5.239	-1.834	3.246	0.681

[3] FLANGE WIDTH-TO-THICKNESS RATIO EXCEEDS 60. EFFECTIVE PROPERTIES ARE NOT CALCULATED. SEE LIMITATIONS IN AISI S100-16 SECTION B4.1 AND SECTION B4.2 FOR LIMITATION CALCULATIONS.
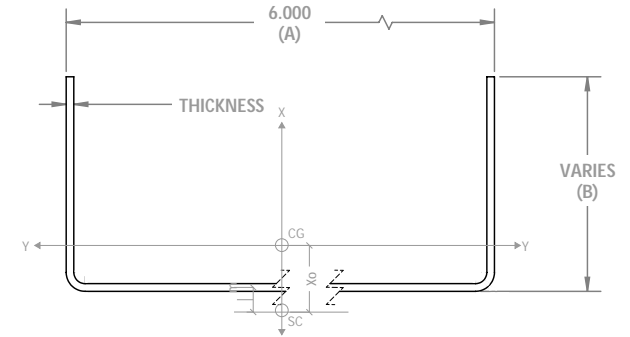
IRENE STEEL

Gross Properties:

I_x = Moment of Inertia of cross-section about the x-axis
S_x = Section Modulus about the x-axis
R_x = Radius of Gyration of cross-section about the x-axis
I_y = Moment of Inertia of cross-section about the y-axis
R_y = Radius of Gyration of cross-section about the y-axis

Torsional Properties:

J = St Vincent Torsional Constant (J x 1000)
C_w = Warping Constant
X_o = Dist. From Shear Center to Neutral Axis
R_o = Radii of Gyration
β = Torsional Flexural Constant

Effective Properties:

I_{xe} = Effective Moment of Inertia of cross-section about the x-axis
S_{xe} = Effective Section Modulus about the x-axis
M_a = Allowable Bending Moment
V_{ag} = Allowable Shear Force in Web (Unpunched)

6" NARROW TRACK PROPERTIES

Member	Web Depth (A) (in.)	Flange Width (B) (in.)	Design Thickness (in.)	Yield Strength Fy (ksi)	Ult Strength Fu (ksi)	Gross Properties Area (in²)	Weight (lb/ft)	I_x (in⁴)	S_x (in³)	R_x (in)	I_y (in⁴)	R_y (in)	Effective Properties I_{xe} (in⁴)	S_{xe} (in³)	M_a (in-k)	V_{ag} (lb)	Torsional Properties Jx1000 (in⁴)	C_w (in⁴)	X_o (in⁴)	R_o (in⁴)	β
600T125-33(N)	6.000	1.25	0.0346	33	45	0.289	0.98	1.346	0.449	2.158	0.034	0.341	1.188	0.289	5.711	638.070	0.115	0.225	-0.523	2.247	0.946
600T125-43(N)	6.000	1.25	0.0451	33	45	0.376	1.28	1.743	0.581	2.154	0.043	0.339	1.653	0.447	8.828	1415.670	0.255	0.289	-0.520	2.242	0.946
600T125-54(N)	6.000	1.25	0.0566	50	65	0.469	1.60	2.162	0.721	2.147	0.054	0.338	2.064	0.570	17.050	2822.880	0.501	0.356	-0.518	2.234	0.946
600T125-68(N)	6.000	1.25	0.0713	50	65	0.587	2.00	2.682	0.894	2.137	0.066	0.336	2.648	0.814	24.366	5350.290	0.995	0.439	-0.514	2.224	0.947
600T150-33(N)	6.000	1.5	0.0346	33	45	0.306	1.04	1.500	0.500	2.213	0.056	0.429	1.262	0.295	5.826	638.070	0.122	0.369	-0.692	2.358	0.914
600T150-43(N)	6.000	1.5	0.0451	33	45	0.398	1.36	1.943	0.648	2.209	0.073	0.427	1.750	0.512	10.125	1415.670	0.270	0.474	-0.689	2.353	0.914
600T150-54(N)	6.000	1.5	0.0566	50	65	0.498	1.69	2.412	0.804	2.202	0.090	0.425	2.190	0.644	19.293	2822.880	0.531	0.586	-0.686	2.345	0.914
600T150-68(N)	6.000	1.5	0.0713	50	65	0.623	2.12	2.995	0.998	2.193	0.112	0.423	2.857	0.846	25.323	5350.290	1.055	0.724	-0.683	2.336	0.915
600T199-33(N)	6.000	1.99	0.0346	33	45	0.340	1.16	1.802	0.601	2.302	0.124	0.603	1.449	0.326	6.433	638.070	0.136	0.790	-1.052	2.601	0.837
600T199-43(N)	6.000	1.99	0.0451	33	45	0.442	1.51	2.334	0.778	2.297	0.160	0.602	1.942	0.541	10.696	1415.670	0.300	1.018	-1.049	2.596	0.837
600T199-54(N)	6.000	1.99	0.0566	50	65	0.553	1.88	2.902	0.967	2.291	0.199	0.600	2.435	0.682	20.403	2822.880	0.591	1.262	-1.046	2.589	0.837
600T199-68(N)	6.000	1.99	0.0713	50	65	0.693	2.36	3.609	1.203	2.283	0.248	0.598	3.201	0.913	27.347	5350.290	1.174	1.565	-1.043	2.580	0.837
600T249-33(N)³	6.000	2.49	0.0346	33	45	0.375	1.27	2.109	0.703	2.373	0.229	0.782	-	-	-	-	0.150	1.421	-1.456	2.892	-
600T249-43(N)	6.000	2.49	0.0451	33	45	0.488	1.66	2.734	0.911	2.368	0.297	0.781	2.121	0.549	10.848	1415.670	0.331	1.863	-1.443	2.881	0.749
600T249-54(N)	6.000	2.49	0.0566	50	65	0.610	2.07	3.402	1.134	2.362	0.370	0.779	2.653	0.710	21.247	2822.880	0.651	2.313	-1.441	2.875	0.749
600T249-68(N)	6.000	2.49	0.0713	50	65	0.764	2.60	4.236	1.412	2.355	0.461	0.777	3.506	0.956	28.619	5350.290	1.295	2.873	-1.437	2.866	0.749
600T299-33(N)³	6.000	2.99	0.0346	33	45	0.409	1.39	2.417	0.806	2.430	0.378	0.960	-	-	-	-	0.163	2.327	-1.872	3.214	-
600T299-43(N)³	6.000	2.99	0.0451	33	45	0.533	1.81	3.134	1.045	2.426	0.490	0.959	-	-	-	-	0.361	3.007	-1.868	3.209	-
600T299-54(N)	6.000	2.99	0.0566	50	65	0.666	2.27	3.902	1.301	2.420	0.610	0.957	2.864	0.699	20.916	2822.880	0.711	3.792	-1.855	3.196	0.663
600T299-68(N)	6.000	2.99	0.0713	50	65	0.835	2.84	4.862	1.621	2.413	0.762	0.955	3.775	0.990	29.627	5350.290	1.415	4.718	-1.852	3.188	0.663

³ FLANGE WIDTH-TO-THICKNESS RATIO EXCEEDS 60. EFFECTIVE PROPERTIES ARE NOT CALCULATED. SEE LIMITATIONS IN AISI S100-16 SECTION B4.1 AND SECTION B4.2 FOR LIMITATION CALCULATIONS.

IRENE STEEL

Gross Properties:

I_x = Moment of Inertia of cross-section about the x-axis

S_x = Section Modulus about the x-axis

R_x = Radius of Gyration of cross-section about the x-axis

I_y = Moment of Inertia of cross-section about the y-axis

R_y = Radius of Gyration of cross-section about the y-axis
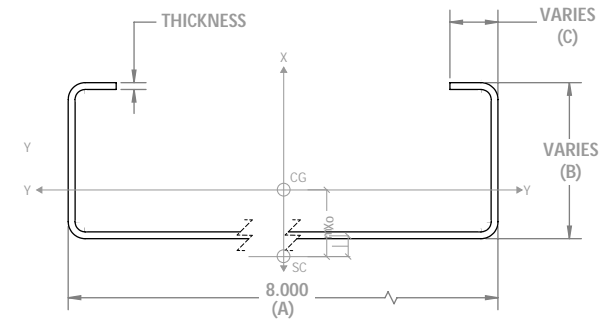
Effective Properties:

I_{xe} = Effective Moment of Inertia of cross-section about the x-axis

S_{xe} = Effective Section Modulus about the x-axis

M_a = Allowable Bending Moment

M_{da} = Allowable Distortional Buckling Moment at $K\phi = 0$

V_{ag} = Allowable Shear Force in Web (Unpunched)

V_{anet} = Allowable Shear Force in Web (Punched)

Torsional Properties:

J = St Vincent Torsional Constant (J x 1000)

C_w = Warping Constant

X_o = Dist. From Shear Center to Neutral Axis

R_o = Radii of Gyration

β = Torsional Flexural Constant

Notes:

CRC punchouts are min. 12" from leading edge

CRC punchouts are min. 24" o.c.

8" STUD PROPERTIES

Member	Web Depth (A) (in.)	Flange Width (B) (in.)	Lip Width (C) (in.)	Design Thickness (in.)	Yield Strength Fy (ksi)	Ult Strength Fu (ksi)	Gross Properties						Effective Properties						Torsional Properties				
							Area (in²)	Weight (lb/ft)	I_x (in⁴)	S_x (in³)	R_x (in)	I_y (in⁴)	R_y (in)	I_{xe} (in⁴)	S_{xe} (in³)	M_a (in-k)	M_{da} (in-k)	V_{ag} (lb)	V_{anet} (lb)	Jx1000 (in⁴)	C_w (in⁶)	X_o (in)	R_o (in⁶)	β
800S162-33[1]	8.000	1.625	0.5	0.0346	33	45	0.414	1.41	3.582	0.896	2.943	0.125	0.550	3.384	0.710	14.027	14.436	474.000	474.000	0.165	1.630	-0.936	3.137	0.911
800S162-43	8.000	1.625	0.5	0.0451	33	45	0.537	1.83	4.633	1.158	2.937	0.160	0.546	4.500	1.019	20.141	19.411	1051.150	1051.150	0.364	2.076	-0.926	3.128	0.912
800S162-54	8.000	1.625	0.5	0.0566	50	65	0.670	2.28	5.736	1.434	2.927	0.194	0.539	5.600	1.229	36.791	33.104	2091.280	2091.280	0.715	2.539	-0.914	3.113	0.914
800S162-68	8.000	1.625	0.5	0.0713	50	65	0.836	2.84	7.089	1.772	2.913	0.235	0.530	7.070	1.663	49.803	43.851	4220.730	3367.370	1.416	3.093	-0.899	3.094	0.916
800S200-33[1]	8.000	2.000	0.625	0.0346	33	45	0.448	1.52	4.096	1.024	3.023	0.227	0.712	4.096	0.816	16.120	19.245	474.000	474.000	0.179	2.971	-1.288	3.363	0.853
800S200-43	8.000	2.000	0.625	0.0451	33	45	0.582	1.98	5.302	1.325	3.018	0.292	0.708	5.302	1.293	25.541	25.218	1051.150	1051.150	0.395	3.797	-1.278	3.353	0.855
800S200-54	8.000	2.000	0.625	0.0566	50	65	0.726	2.47	6.573	1.643	3.009	0.357	0.701	6.573	1.499	44.867	42.510	2091.280	2091.280	0.775	4.663	-1.265	3.338	0.856
800S200-68	8.000	2.000	0.625	0.0713	50	65	0.907	3.09	8.141	2.035	2.996	0.435	0.692	8.141	1.993	59.661	54.329	4220.730	3367.370	1.537	5.712	-1.248	3.319	0.859
800S250-43	8.000	2.500	0.625	0.0451	33	45	0.627	2.13	6.015	1.504	3.097	0.500	0.893	6.015	1.313	25.953	28.705	1051.150	1051.150	0.425	6.374	-1.675	3.632	0.787
800S250-54	8.000	2.500	0.625	0.0566	50	65	0.783	2.66	7.465	1.866	3.088	0.614	0.886	7.378	1.525	45.658	48.090	2091.280	2091.280	0.836	7.850	-1.661	3.617	0.789
800S250-68	8.000	2.500	0.625	0.0713	50	65	0.978	3.33	9.261	2.315	3.077	0.752	0.877	9.240	2.059	61.650	60.922	4220.730	3367.370	1.658	9.653	-1.644	3.597	0.791
800S300-54	8.000	2.000	0.625	0.0566	50	65	0.839	2.86	8.358	2.090	3.156	0.960	1.069	7.862	1.535	45.960	53.189	2091.280	2091.280	0.896	12.076	-2.073	3.924	0.721
800S300-68	8.000	2.000	0.625	0.0713	50	65	1.050	3.57	10.382	2.595	3.145	1.179	1.060	10.082	2.145	64.213	67.033	4220.730	3367.370	1.779	14.888	-2.055	3.904	0.723

[1] WEB DEPTH-TO-THICKNESS RATIO EXCEEDS 200.

IRENE STEEL

8" STANDARD TRACK PROPERTIES

Gross Properties:

I_x = Moment of Inertia of cross-section about the x-axis
S_x = Section Modulus about the x-axis
R_x = Radius of Gyration of cross-section about the x-axis
I_y = Moment of Inertia of cross-section about the y-axis
R_y = Radius of Gyration of cross-section about the y-axis

Effective Properties:
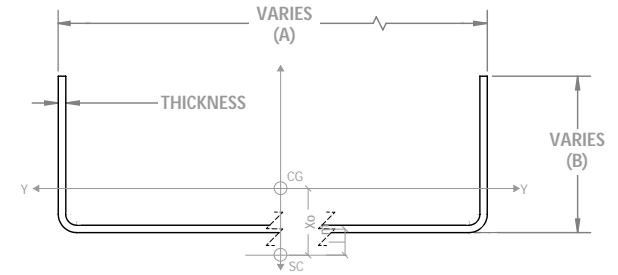
I_{xe} = Effective Moment of Inertia of cross-section about the x-axis
S_{xe} = Effective Section Modulus about the x-axis
M_a = Allowable Bending Moment
V_{ag} = Allowable Shear Force in Web (Unpunched)

Torsional Properties:

J = St Vincent Torsional Constant ($J \times 1000$)
C_w = Warping Constant
X_o = Dist. From Shear Center to Neutral Axis
R_o = Radii of Gyration
$β$ = Torsional Flexural Constant

Notes:

Track width = stud web + (design thickness x 2) + design inside corner radius

8" STANDARD TRACK PROPERTIES

Member	Web Depth (A) (in.)	Flange Width (B) (in.)	Design Thickness (in.)	Yield Strength Fy (ksi)	Ult Strength Fu (ksi)	Area (in²)	Weight (lb/ft)	I_x (in⁴)	S_x (in³)	R_x (in)	I_y (in⁴)	R_y (in)	I_{xe} (in⁴)	S_{xe} (in³)	M_a (in-k)	V_{ag} (lb)	Jx1000 (in⁴)	C_w (in⁴)	X_o (in⁴)	R_o (in⁴)	$β$
800T125-33(S)[1]	8.146	1.250	0.0346	33	45	0.363	1.24	2.896	0.711	2.824	0.036	0.313	2.441	0.407	8.034	465.290	0.145	0.456	-0.439	2.875	0.977
800T125-43(S)	8.161	1.250	0.0451	33	45	0.473	1.61	3.773	0.925	2.824	0.046	0.311	3.484	0.640	12.652	1029.750	0.321	0.589	-0.436	2.874	0.977
800T125-54(S)	8.198	1.250	0.0566	50	65	0.594	2.02	4.745	1.158	2.827	0.057	0.309	4.426	0.824	24.662	2038.940	0.634	0.735	-0.432	2.877	0.978
800T125-68(S)	8.250	1.250	0.0713	50	65	0.748	2.54	5.998	1.454	2.833	0.070	0.307	5.956	1.216	36.395	4087.290	1.267	0.920	-0.427	2.881	0.978
800T150-33(S)[1]	8.146	1.500	0.0346	33	45	0.381	1.29	3.180	0.781	2.891	0.060	0.397	2.569	0.414	8.177	465.290	0.152	0.752	-0.588	2.977	0.961
800T150-43(S)	8.161	1.500	0.0451	33	45	0.496	1.69	4.144	1.016	2.891	0.077	0.395	3.689	0.655	12.947	1029.750	0.336	0.972	-0.584	2.976	0.961
800T150-54(S)	8.198	1.500	0.0566	50	65	0.622	2.12	5.214	1.272	2.896	0.096	0.393	4.692	0.844	25.266	2038.940	0.664	1.215	-0.580	2.979	0.962
800T150-68(S)	8.250	1.500	0.0713	50	65	0.783	2.67	6.594	1.599	2.902	0.119	0.390	6.361	1.255	37.582	4087.290	1.327	1.526	-0.575	2.984	0.963
800T189-33(S)[1]	8.146	1.890	0.0346	33	45	0.407	1.39	3.624	0.890	2.982	0.115	0.532	2.744	0.422	8.335	465.290	0.163	1.406	-0.842	3.144	0.928
800T189-43(S)	8.161	1.890	0.0451	33	45	0.531	1.81	4.723	1.158	2.983	0.149	0.530	3.970	0.672	13.278	1029.750	0.360	1.822	-0.838	3.143	0.929
800T189-54(S)	8.198	1.890	0.0566	50	65	0.666	2.27	5.946	1.451	2.988	0.186	0.528	5.056	0.866	25.941	2038.940	0.711	2.284	-0.833	3.146	0.930
800T189-68(S)	8.250	1.890	0.0713	50	65	0.839	2.85	7.524	1.824	2.995	0.231	0.525	6.910	1.300	38.920	4087.320	1.421	2.877	-0.827	3.151	0.931
800T200-33(S)[1]	8.146	2.000	0.0346	33	45	0.415	1.41	3.749	0.921	3.005	0.135	0.571	2.789	0.424	8.370	465.290	0.166	1.638	-0.917	3.194	0.918
800T200-43(S)	8.161	2.000	0.0451	33	45	0.541	1.84	4.887	1.198	3.006	0.175	0.569	4.043	0.676	13.352	1029.750	0.367	2.124	-0.913	3.193	0.918
800T200-54(S)	8.198	2.000	0.0566	50	65	0.679	2.31	6.152	1.501	3.011	0.218	0.567	5.149	0.872	26.092	2038.940	0.725	2.664	-0.908	3.196	0.919
800T200-68(S)	8.250	2.000	0.0713	50	65	0.855	2.91	7.786	1.888	3.019	0.272	0.564	7.052	1.310	39.220	4087.290	1.448	3.357	-0.902	3.201	0.921
800T239-33(S)[1,3]	8.146	2.390	0.0346	33	45	0.442	1.50	4.194	1.030	3.080	0.222	0.709	-	-	-	-	0.176	2.617	-1.204	3.382	-
800T239-43(S)	8.161	2.390	0.0451	33	45	0.576	1.96	5.466	1.340	3.081	0.288	0.707	4.517	0.739	14.608	1029.750	0.391	3.434	-1.192	3.378	0.875
800T239-54(S)	8.198	2.390	0.0566	50	65	0.723	2.46	6.884	1.679	3.086	0.359	0.705	5.718	0.959	28.725	2038.940	0.772	4.313	-1.187	3.381	0.877
800T239-68(S)	8.250	2.390	0.0713	50	65	0.910	3.10	8.716	2.113	3.095	0.449	0.702	7.464	1.547	46.319	4087.320	1.542	5.446	-1.180	3.386	0.879
800T250-33(S)[1,3]	8.146	2.500	0.0346	33	45	0.450	1.53	4.319	1.060	3.099	0.252	0.748	-	-	-	-	0.179	2.953	-1.286	3.438	-
800T250-43(S)	8.161	2.500	0.0451	33	45	0.586	1.99	5.629	1.380	3.100	0.326	0.746	4.593	0.739	14.600	1029.750	0.397	3.877	-1.274	3.433	0.862
800T250-54(S)	8.198	2.500	0.0566	50	65	0.735	2.50	7.090	1.730	3.106	0.407	0.744	5.816	0.959	28.706	2038.940	0.785	4.870	-1.268	3.436	0.864
800T250-68(S)	8.250	2.500	0.0713	50	65	0.926	3.15	8.978	2.177	3.114	0.509	0.741	7.588	1.560	46.718	4087.290	1.569	6.151	-1.261	3.441	0.866
800T289-33(S)[1,3]	8.146	2.890	0.0346	33	45	0.477	1.62	4.763	1.169	3.161	0.376	0.888	-	-	-	-	0.190	4.359	-1.585	3.646	-
800T289-43(S)[3]	8.161	2.890	0.0451	33	45	0.621	2.11	6.208	1.521	3.162	0.488	0.886	-	-	-	-	0.421	5.661	-1.580	3.644	-
800T289-54(S)	8.198	2.890	0.0566	50	65	0.779	2.65	7.822	1.908	3.168	0.608	0.884	6.148	0.957	28.638	2038.940	0.832	7.198	-1.566	3.643	0.815
800T289-68(S)	8.250	2.890	0.0713	50	65	0.981	3.34	9.908	2.402	3.177	0.761	0.881	8.038	1.553	46.483	4087.320	1.663	9.101	-1.558	3.647	0.818
800T300-33(S)[1,3]	8.146	3.000	0.0346	33	45	0.484	1.65	4.888	1.200	3.177	0.416	0.927	-	-	-	-	0.193	4.819	-1.671	3.708	-
800T300-43(S)[3]	8.161	3.000	0.0451	33	45	0.631	2.15	6.372	1.562	3.178	0.540	0.925	-	-	-	-	0.428	6.260	-1.667	3.706	-
800T300-54(S)	8.198	3.000	0.0566	50	65	0.792	2.69	8.028	1.959	3.184	0.675	0.923	6.237	0.956	28.619	2038.940	0.845	7.960	-1.652	3.704	0.801
800T300-68(S)	8.250	3.000	0.0713	50	65	0.997	3.39	10.171	2.466	3.194	0.844	0.920	8.160	1.548	46.358	4087.290	1.690	10.067	-1.644	3.708	0.804

[1] WEB DEPTH-TO-THICKNESS RATIO EXCEEDS 200.

[3] FLANGE WIDTH-TO-THICKNESS RATIO EXCEEDS 60. EFFECTIVE PROPERTIES ARE NOT CALCULATED. SEE LIMITATIONS IN AISI S100-16 SECTION B4.1 AND SECTION B4.2 FOR LIMITATION CALCULATIONS.
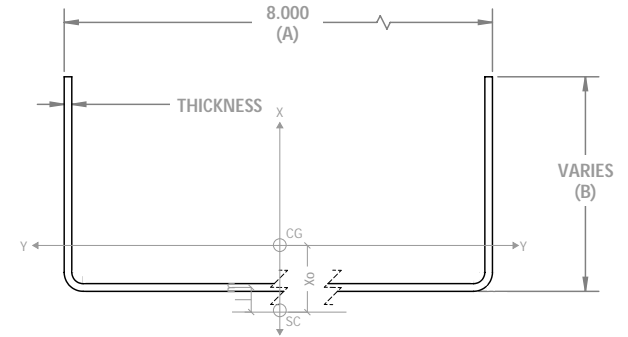
IRENE STEEL

8" NARROW TRACK PROPERTIES

Gross Properties:

Ix = Moment of Inertia of cross-section about the x-axis
Sx = Section Modulus about the x-axis
Rx = Radius of Gyration of cross-section about the x-axis
Iy = Moment of Inertia of cross-section about the y-axis
Ry = Radius of Gyration of cross-section about the y-axis

Effective Properties:

Ixe = Effective Moment of Inertia of cross-section about the x-axis
Sxe = Effective Section Modulus about the x-axis
Ma = Allowable Moment based on local buckling
     (add'l capacity possible by analyzing strength increase from cold-work forming)

Torsional Properties:

J = St Vincent Torsional Constant
Cw = Warping Torsion Constant
Ro = Polar Radius of Gyration of cross-section about the shear center
$\beta = 1 - (X_o/R_o)^2$

8" NARROW TRACK PROPERTIES

Member	Web Depth (A) (in.)	Flange Width (B) (in.)	Design Thickness (in.)	Yield Strength Fy (ksi)	Ult Strength Fu (ksi)	Gross Properties						Effective Properties				Torsional Properties				
						Area (in²)	Weight (lb/ft)	I_x (in⁴)	S_x (in³)	R_x (in)	I_y (in⁴)	R_y (in)	I_{xe} (in⁴)	S_{xe} (in³)	M_a (in-k)	V_{ag} (lb)	Jx1000 (in⁴)	C_w (in⁴)	X_o (in⁴)	R_o (in⁴)	β
800T125-33(N)[1]	8.000	1.25	0.0346	33	45	0.358	1.22	2.766	0.691	2.779	0.036	0.315	2.340	0.399	7.877	474.000	0.143	0.438	-0.444	2.832	0.976
800T125-43(N)	8.000	1.25	0.0451	33	45	0.466	1.59	3.586	0.896	2.774	0.046	0.313	3.321	0.626	12.366	1051.150	0.316	0.563	-0.441	2.827	0.976
800T125-54(N)	8.000	1.25	0.0566	50	65	0.582	1.98	4.458	1.115	2.767	0.057	0.312	4.172	0.801	23.976	2091.280	0.622	0.695	-0.438	2.819	0.976
800T125-68(N)	8.000	1.25	0.0713	50	65	0.730	2.48	5.544	1.386	2.756	0.070	0.309	5.511	1.171	35.056	4220.730	1.237	0.857	-0.435	2.808	0.976
800T150-33(N)[1]	8.000	1.5	0.0346	33	45	0.375	1.28	3.040	0.760	2.846	0.060	0.399	2.464	0.406	8.018	474.000	0.150	0.721	-0.594	2.934	0.959
800T150-43(N)	8.000	1.5	0.0451	33	45	0.488	1.66	3.942	0.986	2.841	0.077	0.397	3.518	0.641	12.657	1051.150	0.331	0.928	-0.591	2.929	0.959
800T150-54(N)	8.000	1.5	0.0566	50	65	0.611	2.08	4.904	1.226	2.834	0.096	0.396	4.427	0.821	24.569	2091.280	0.652	1.148	-0.588	2.921	0.959
800T150-68(N)	8.000	1.5	0.0713	50	65	0.765	2.60	6.105	1.526	2.824	0.119	0.394	5.896	1.210	36.219	4220.730	1.297	1.421	-0.585	2.911	0.960
800T199-33(N)[1]	8.000	1.99	0.0346	33	45	0.409	1.39	3.578	0.895	2.957	0.133	0.570	2.673	0.415	8.205	474.000	0.163	1.550	-0.919	3.148	0.915
800T199-43(N)	8.000	1.99	0.0451	33	45	0.533	1.81	4.642	1.160	2.952	0.172	0.568	3.853	0.660	13.051	1051.150	0.361	1.999	-0.916	3.143	0.915
800T199-54(N)	8.000	1.99	0.0566	50	65	0.666	2.27	5.779	1.445	2.945	0.214	0.566	4.856	0.847	25.369	2091.280	0.711	2.481	-0.913	3.135	0.915
800T199-68(N)	8.000	1.99	0.0713	50	65	0.835	2.84	7.203	1.801	2.937	0.266	0.564	6.542	1.263	37.799	4220.730	1.415	3.081	-0.909	3.125	0.915
800T249-33(N)[1,3]	8.000	2.49	0.0346	33	45	0.444	1.51	4.127	1.032	3.049	0.248	0.747	-	-	-	-	0.177	2.800	-1.289	3.394	-
800T249-43(N)	8.000	2.49	0.0451	33	45	0.578	1.97	5.355	1.339	3.045	0.321	0.746	4.361	0.725	14.320	1051.150	0.392	3.660	-1.278	3.385	0.858
800T249-54(N)	8.000	2.49	0.0566	50	65	0.723	2.46	6.672	1.668	3.038	0.400	0.744	5.458	0.936	28.035	2091.280	0.772	4.549	-1.275	3.378	0.858
800T249-68(N)	8.000	2.49	0.0713	50	65	0.907	3.08	8.323	2.081	3.030	0.499	0.742	7.028	1.486	44.496	4220.730	1.536	5.660	-1.272	3.369	0.858
800T299-33(N)[1,3]	8.000	2.99	0.0346	33	45	0.479	1.63	4.676	1.169	3.126	0.411	0.926	-	-	-	-	0.191	4.577	-1.676	3.666	-
800T299-43(N)[3]	8.000	2.99	0.0451	33	45	0.623	2.12	6.069	1.517	3.122	0.532	0.925	-	-	-	-	0.422	5.919	-1.673	3.660	-
800T299-54(N)	8.000	2.99	0.0566	50	65	0.779	2.65	7.565	1.891	3.116	0.664	0.923	5.859	0.933	27.927	2091.280	0.832	7.449	-1.661	3.649	0.793
800T299-68(N)	8.000	2.99	0.0713	50	65	0.978	3.33	9.444	2.361	3.108	0.829	0.921	7.546	1.504	45.038	4220.730	1.657	9.281	-1.657	3.640	0.793

[1] WEB DEPTH-TO-THICKNESS RATIO EXCEEDS 200.

[3] FLANGE WIDTH-TO-THICKNESS RATIO EXCEEDS 60. EFFECTIVE PROPERTIES ARE NOT CALCULATED. SEE LIMITATIONS IN AISI S100-16 SECTION B4.1 AND SECTION B4.2 FOR LIMITATION CALCULATIONS.

Notes:
1. Limiting heights using all steel non-composite design are in accordance with AISI S100-16/S2-20.
2. For studs with h/t < 200, no web stiffeners are required.
3. Factory punchouts are in accordance with AISI standards.

Stud Member	Spacing	F_y	5 psf			7.5 psf			10psf		
			L/120	L/240	L/360	L/120	L/240	L/360	L/120	L/240	L/360
162S125-18	12	33	8'-4"	7'-7"	6'-8"	6'-10"	6'-8"	5'-10"	5'-11"	5'-11"	5'-3"
	16		7'-3"	6'-11"	6'-1"	5'-11"	5'-11"	5'-3"	5'-1"	5'-1"	4'-10"
	24		5'-11"	5'-11"	5'-3"	4'-10"	4'-10"	4'-7"	4'-2"	4'-2"	4'-2"
162S125-27	12	33	10'-11"	8'-11"	7'-10"	8'-11"	7'-10"	6'-10"	7'-9"	7'-1"	6'-2"
	16		9'-6"	8'-1"	7'-1"	7'-9"	7'-1"	6'-2"	6'-9"	6'-6"	5'-7"
	24		7'-9"	7'-1"	6'-2"	6'-4"	6'-2"	5'-5"	5'-6"	5'-6"	4'-11"
162S125-30	12	33	11'-7" [1]	9'-3"	8'-1"	9'-7"	8'-1"	7'-0"	8'-4"	7'-4"	6'-5"
	16		10'-2"	8'-4"	7'-4"	8'-4"	7'-4"	6'-5"	7'-2"	6'-8"	5'-9"
	24		8'-4"	7'-4"	6'-5"	6'-9"	6'-5"	5'-7"	5'-10"	5'-10"	5'-1"
162S125-33	12	33	12'-0" [1]	9'-6"	8'-4"	10'-3"	8'-4"	7'-3"	8'-11"	7'-7"	6'-7"
	16		10'-11"	8'-8"	7'-7"	8'-11"	7'-7"	6'-7"	7'-9"	6'-10"	6'-0"
	24		8'-11"	7'-7"	6'-7"	7'-4"	6'-7"	5'-9"	6'-4"	6'-0"	5'-3"
250S125-18	12	33	11'-1"	10'-6"	9'-2"	9'-1"	9'-1"	8'-0"	7'-10"	7'-10"	7'-4"
	16		9'-7"	9'-7"	8'-4"	7'-10"	7'-10"	7'-3"	6'-9"	6'-9"	6'-7"
	24		7'-10"	7'-10"	7'-3"	6'-5"	6'-5"	6'-4"	5'-6" [2]	5'-6" [2]	5'-6" [2]
250S125-27	12	33	14'-7"	12'-4"	10'-10"	11'-10"	10'-10"	9'-5"	10'-3"	9'-10"	8'-7"
	16		12'-7"	11'-3"	9'-10"	10'-3"	9'-10"	8'-7"	8'-11"	8'-11"	7'-9"
	24		10'-3"	9'-10"	8'-7"	8'-5"	8'-5"	7'-6"	7'-3"	7'-3"	6'-10"
250S125-30	12	33	15'-6"	12'-9"	11'-2"	12'-8"	11'-2"	9'-9"	10'-3"	10'-2"	8'-10"
	16		13'-5"	11'-7"	10'-1"	11'-0"	10'-1"	8'-10"	9'-6"	9'-2"	8'-0"
	24		11'-0"	10'-1"	8'-10"	9'-0"	8'-10"	7'-9"	7'-9"	7'-9"	7'-0"
350S125-18	12	33	12'-9"	12'-9"	12'-1"	10'-5"	10'-5"	10'-5"	9'-0"	9'-0"	9'-0"
	16		11'-0"	11'-0"	11'-0"	9'-0"	9'-0"	9'-0"	7'-10" [2]	7'-10" [2]	7'-10" [2]
	24		9'-0"	9'-0"	9'-0"	7'-4" [2]	7'-4" [2]	7'-4" [2]	6'-5" [2]	6'-5" [2]	6'-5" [2]
350S125-27	12	33	17'-1"	16'-1"	14'-0"	14'-0"	14'-0"	12'-3"	12'-1"	12'-1"	11'-1"
	16		14'-10"	14'-7"	12'-9"	12'-1"	12'-1"	11'-1"	10'-6"	10'-6"	10'-1"
	24		12'-1"	12'-1"	11'-1"	9'-11"	9'-11"	9'-9"	8'-7"	8'-7"	8'-7"
350S125-30	12	33	18'-4"	16'-7"	14'-6"	15'-0"	14'-6"	12'-7"	13'-0"	13'-0"	11'-6"
	16		15'-11"	15'-0"	13'-1"	13'-0"	13'-0"	11'-6"	11'-3"	11'-3"	10'-5"
	24		13'-0"	13'-0"	11'-6"	10'-8"	10'-8"	10'-0"	9'-3"	9'-3"	9'-1"
362S125-18	12	33	13'-0"	13'-0"	12'-5"	10'-7"	10'-7"	10'-7"	9'-2"	9'-2"	9'-2"
	16		11'-3"	11'-3"	11'-3"	9'-2"	9'-2"	9'-2"	8'-0" [2]	8'-0" [2]	8'-0" [2]
	24		9'-2"	9'-2"	9'-2"	7'-6" [2]	7'-6" [2]	7'-6" [2]	6'-6" [2]	6'-6" [2]	6'-6" [2]
362S125-27	12	33	17'-5"	16'-6"	14'-5"	14'-3"	14'-3"	12'-7"	12'-4"	12'-4"	11'-5"
	16		15'-1"	15'-0"	13'-1"	12'-4"	12-4"	11'-5"	10'-8"	10'-8"	10'-5"
	24		12'-4"	12'-4"	11'-5"	10'-1"	10'-1"	10'-0"	8'-9"	8'-9"	8'-9"
362S125-30	12	33	18'-8"	17'-0"	14'-10"	15'-4"	14'-10"	13'-0"	13'-3"	13'-3"	11'-10"
	16		16'-2"	15'-5"	13'-6"	13'-3"	13'-3"	11'-9"	11'-6"	11'-6"	10'-9"
	24		13'-3"	13'-3"	11'-10"	10'-10"	10'-10"	10'-4"	9'-5"	9'-5"	9'-4"
400S125-18	12	33	12'-9" [2]	12'-9" [2]	12'-9" [2]	10'-5" [2]	10'-5" [2]	10'-5" [2]	9'-0" [2]	9'-0" [2]	9'-0" [2]
	16		11'-0" [2]	11'-0" [2]	11'-0" [2]	9'-0" [2]	9'-0" [2]	9'-0" [2]	7'-9" [2]	7'-9" [2]	7'-9" [2]
	24		9'-0" [2]	9'-0" [2]	9'-0" [2]	7'-4" [2]	7'-4" [2]	7'-4" [2]	6'-4" [2]	6'-4" [2]	6'-4" [2]
400S125-27	12	33	18'-4"	17'-10"	15'-7"	15'-0"	15'-0"	13'-7"	13'-0"	13'-0"	12'-4"
	16		15'-11"	15'-11"	14'-2"	13'-0"	13'-3"	12'-4"	11'-3"	11'-3"	11'-3"
	24		13'-0"	13'-0"	12'-4"	10'-8"	10'-8"	10'-8"	9'-3"	9'-3"	9'-3"
400S125-30	12	33	19'-9"	18'-5"	16'-1"	16'-2"	16'-1"	14'-0"	14'-0"	14'-0"	12'-9"
	16		17'-1"	16'-8"	14'-7"	14'-0"	14'-0"	12'-9"	12'-2"	12'-2"	11'-7"
	24		14'-0"	14'-0"	12'-9"	11'-5"	11'-5"	11'-2"	9'-11"	9'-11"	9'-11"
550S125-27	12	33	22'-8"	22'-8"	19'-11"	18'-6"	18'-6"	17'-4"	16'-1"	16'-1"	15'-9"
	16		19'-8"	19'-8"	18'-1"	16'-1"	16'-1"	15'-9"	13'-11"	13'-11"	13'-11"
	24		16'-0"	16'-0"	15'-9"	13'-2"	13'-2"	13'-2"	11'-5" [2]	11'-5" [2]	11'-5" [2]
550S125-30	12	33	24'-4"	23'-7"	20'-7"	19'-11"	19'-11"	18'-0"	17'-3"	17'-3"	16'-4"
	16		21'-1"	21'-1"	18'-8"	17'-3"	17'-3"	16'-4"	15'-0"	15'-0"	14'-10"
	24		17'-3"	17'-3"	16'-4"	14'-1"	14'-1"	14'-1"	12'-3"	12'-3"	12'-3"
600S125-30	12	33	25'-5"	25'-2"	22'-0"	20'-10"	20'-10"	19'-3"	18'-1"	18'-1"	17'-6"
	16		22'-1"	22'-1"	22'-0"	18'-1"	18'-1"	17'-6"	15'-8"	15'-8"	15'-8"
	24		18'-1"	18'-1"	17'-6"	14'-9"	14'-9"	14'-9"	12'-9" [2]	12'-9" [2]	12'-9" [2]

[1] Max KL/r exceeds 200

[2] Web stiffeners required

Notes:
1. Limiting height values extracted from ASTM C754-20.
2. Allowable composite heights are derived from tests conducted in accordance with ICC-ES AC86-2012.
3. Table heights also applicable for two layers of gypsum board.
4. The gypsum board (one or two layers) must be installed vertically full height to each stud flange using minimum No. 6 Type-S drywall screws spaced a maximum of 12 in. (305 mm0 on-center for studs at 24 in. (610 mm) spacing, and 16 in. (406 mm) on-center for studs at 16 in. (406 mm) and 12 in. (305 mm) spacing. Gypsum board (one or two layers) must be attached to each top and bottom track flange using minimum No. 6 drywall screws at maximum 16 in. (406 mm) on center.
5. Application of gypsum board as required in accordance with Specification C840.
6. No fasteners are required for attaching the stud to the track except as required by subsection 5.3.2.1.
7. Stud end bearing must be a minimum of 1 in. (254 mm).
8. Minimum material yield strength equals 33 ksi (230 MPa).

Stud Member	Spacing	Fy	5 psf			7.5 psf			10psf		
			L/120	L/240	L/360	L/120	L/240	L/360	L/120	L/240	L/360
162S125-18	12	33	13'-0"f	11'-1"	9'-10"	10'-8"	9'-8"	8'-7"	9'-3"f	8'-9"	7'-9"
	16		11'-3"	10'-1"	8'-11"	9'-3"f	8'-9"	7'-9"	8'-0"f	7'-11"	n/a
	24		9'-3"f	8'-9"	7'-9"	n/a	n/a	n/a	n/a	n/a	n/a
162S125-30	12	33	14'-11"	11'-10"	10'-4"	13'-1"	10'-4"	8'-11"	11'-10"	9'-4"	7'-11"
	16		13'-7"	10'-9"	9'-4"	11'-10"	9'-4"	7'-11"	10'-9"	8'-3"	n/a
	24		11'-10"	9'-4"	7'-11"	10'-4"	7'-11"	n/a	9'-4"	n/a	n/a
250S125-18	12	33	16'-4"f	14'-2"	12'-9"	13'-4"	12'-4"	11'-2"	11'-7"f	11'-3"	10'-2"
	16		14'-2"f	12'-10"	11'-7"	11'-7"f	11'-3"	10'-2"	10'-0"f	10'-0"f	9'-0"
	24		11'-7"f	11'-3"	10'-2"	9'-5"f	9'-5"f	8'-6"	8'-2"f	8'-2"f	n/a
250S125-30	12	33	18'-5"	15'-10"	14'-1"	16'-1"	13'-10"	12'-4"	14'-7"	12'-7"	11'-2"
	16		16'-9"	14'-5"	12'-10"	14'-7"	12'-7"	11'-2"	13'3"	11'-5"	10'-2"
	24		14'-7"	12'-7"	11'-2"	12'-9"	11'-0"	9'-9"	11'-7"	10'-0"	8'-8"
250S125-33	12	33	19'-8"	15'-8"	13'-8"	17'-3"	13'-8"	11'-11"	15'-8"	12'-5"	10'-10"
	16		17'-11"	14'-3"	12'-5"	15'-8"	12'-5"	10'-10"	14'-3"	11'-3"	9'-10"
	24		15'-8"	12'-5"	10'-10"	13'-8"	10'-10"	9'-5"	12'-4"f	9'-10"	8'-4"
350S125-18	12	33	18'-3"f	16'-4"	14'-4"	14'-11"f	14'-4"	12'-6"	12'-11"f	12'-11"f	11'-4"
	16		15'-10"	14'-10"	13'-0"	12'-11"f	12'-11"f	11'-4"	11'-2"f	11'-2"f	10'-3"
	24		12'-11"f	12'11"f	11'-4"	10'-7"f	10'-7"f	9'-11"	9'-2"f	9'-2"f	9'-0"
350S125-30	12	33	22'-6"	17'-11"	15'-8"	19'-8"	15'-8"	13'-8"	17'-11"	14'-2"	12'-4"
	16		20'-6"	16'-3"	14'-2"	17'-11"	14'-2"	12'-4"	16'-3"	12'-11"	11'-1"
	24		17'-11"	14'-2"	12'-4"	15'-8"	12'-4"	10'-7"	13'-9"f	11'-1"	n/a
350S125-33	12	33	23'-0"	18'-3"	15'-11"	20'-1"	15'-11"	13'-11"	18'-3"	14'-6"	12'-8"
	16		20'-11"	16'-7"	14'-6"	18'-3"	14'-6"	12'-8"	16'-7"	13'-2"	11'-4"
	24		18'-3"	14'-6"	12'-8"	15'-11"	12'-8"	10'-10"	14'-4"f	11'-4"	9'-8"
362S125-18	12	33	18'-8"f	16'-8"	14'-7"	15'-3"	14'-7"	12'-9"	13'-2"f	13'-2"f	11'-6"
	16		16'-2"f	15'-2"	13'-3"	13'-2"f	13'-2"f	11'-6"	11'-5"f	11'-5"f	10'-4"
	24		13'-2"f	13'-2"f	11'-6"	10'-9"f	10'-9"f	9'-11"	9'-4"f	9'-4"f	8'-11"
362S125-30	12	33	22'-10"	18'-3"	16'-4"	19'-11"	16'-0"	14'-3"	18'-1"	14'-6"	12'-11"
	16		20'-8"	16'-7"	14'-10"	18'-1"	14'-6"	12'-11"	16'-5"	13'-2"	11'-6"
	24		18'-1"	14'-6"	12'-11"	15'-9"f	12'-8"	10'-11"	13'-8"f	11'-4"	n/a
362S125-33	12	33	24'-2"	19'-2"	16'-9"	21'-1"	16'-9"	14'-8"	19'-2"	15'-3"	13'-4"
	16		21'-1"	17'-5"	15'-3"	19'-2"	15'-3"	13'-4"	17'-5"	13'-10"	11'-11"
	24		19'-2"	15'-3"	13'-4"	16'-8"f	13'-4"	11'-4"	14'-5"f	11'-11"	10'-1"
400S125-18	12	33	19'3"f	17'-6"	15'-4"	15'-9"f	15'-4"	13'-4"	13'-8"f	13'-8"f	12'-2"
	16		16'-8"f	15'-11"	13'-11"	13'-8"f	13'-8"f	12'-2"	11'-10"f	11'-10"f	11'-0"
	24		13'-8"f	13'-8"f	12'-2"	11'-2"f	11'-2"f	10'-7"	9'-8"f	9'-8"f	10'-7"
400S125-30	12	33	24'-6"	19'-5"	17'-0"	21'-5"	17'-0"	14'-10"	19'-5"	15'-5"	13'-6"
	16		22'-3"	17'-8"	15'-5"	19'-5"	15'-5"	13'-6"	17'-5"f	14'-0"	12'-2"
	24		19'-5"	15'-5"	13'-6"	16'-5"f	13'-6"	11'-7"	14'-2"f	12'-2"	10'-4"
400S125-33	12	33	25"-3"	20'-1"	17'-6"	22'-1"	16'-9"	14'-8"	19'-2"	15'-3"	13'-4"
	16		21'-1"	17'-5"	15'-3"	19'-2"	15'-3"	13'-4"	17'-5"	13'-10"	11'-11"
	24		19'-2"	15'-3"	13'-4"	16'-8"f	13'-4"	11'-4"	14'-5"f	11'-11"	10'-1"
550S125-18	12	33	21'-11"f	21'-11"f	19'-6"	17'-10"f	17'-10"f	17'-0"	15'-6"f	15'-6"f	15'-6"f
	16		19'-0"f	19'-0"f	17'-9"	15'-6"f	15'-6"f	15'-6"f	13'-5"f	13'-5"f	13'-5"f
	24		15'-6"f	15"-6"f	15'-6"f	12'-8"f	12'-8"f	12'-8"f	n/a	n/a	n/a
550S125-30	12	33	30'-5"	24'-10"	22'-0"	27'-0"	22'-0"	19'-5"	24'-10"	20'-2"	17'-10"
	16		28'-0"	22'-9"	20'-2"	24'-10"f	20'-2"	17'-10"	21'-7"f	18'-6"	16'-2"
	24		24'-10"	20'-2"	17'-10"	20'-4"f	17'-10"	15'-7"	17'-7"f	16'-2"	n/a
600S125-18	12	33	23'-2"f	22'-9"	19'-11"	18'-11"f	18'-11"f	17'-5"	16'-4"f	16'-4"f	15'-10"
	16		20'-1"f	20'-1"f	18'-1"	16'-4"f	16'-4"f	15'-10"	14'-2"f	14'-2"f	14'-2"f
	24		16'-4"f	16'-4"f	15'-10"	13'-4"f	13'-4"f	13'-4"f	n/a	n/a	n/a
600S125-30	12	33	34'-2"	27'-1"	23'-8"	28'-11"f	23'-8"	20'-8"	25'-0"f	21'-6"	18'-9"
	16		30'-8"	24'-7"	21'-6"	25'-0"f	21'-6"	18'-9"	21'-8"f	19'-6"	17'-1"
	24		25'-0"f	21'-6"	18'-9"	20'-0"f	18'-9"	16'-5"	17'-8"f	17'-1"	n/a
600S125-33	12	33	35'-4"	28'-1"	24'-6"	30'-10"	24'-6"	21'-5"	27'-10"f	22'-3"	19'-5"
	16		32'-1"	25'-6"	22'-3"	27'-10"f	22'-3"	19'-5"	24'-1"f	20'-3"	17'-8"
	24		27'-10"f	22'-3"	19'-5"	22'-9"f	19'-5"	16'-11"	19'-8"f	17'-8"	n/a

'f' adjacent to the height value indicates that flexural stress controls the allowable wall height.