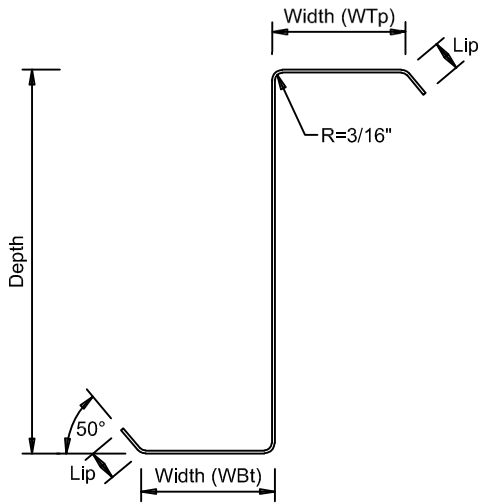




Section Properties Non-Standard Zees



TOLERANCE STANDARDS FOR THICKEST METALS

- Accumulation(±) 1/16"
 - Radii(±) 1/32"
 - Width(±) 1/16"
 - Flanges(±) 1/16"
 - Flare2x THK per side angles
 - Flange(±) 2 degrees
 - Lips(±) 3 degrees
 - Camber1/8" in 10'-0"
 - Ski1/8" in 10'-0"
 - Dive1/8" in 10'-0"
 - Twist1/8" in 10'-0"
 - (Zee Only)1/4" in 20'-0"
- Net variation for combined dimensions
Twist is measured with the Zee laying on a flat surface under its own weight

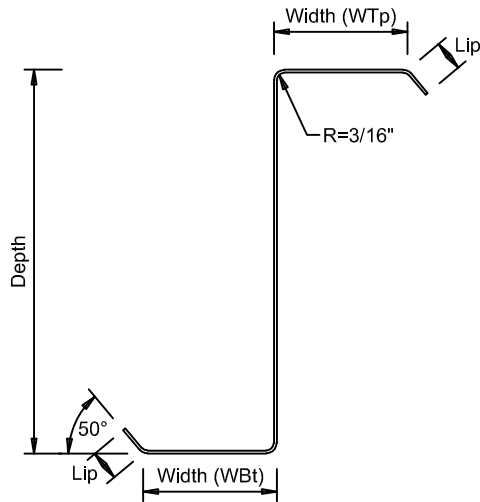
Sectional Properties

Name	Depth in	WTp in	WBt in	Thickness in	Lip in	Rad in	Deg deg	Area in ²	Wt lb/ft	Yp in	Ixx in ⁴	SxTop in ³	SxBot in ³	Rxx in	IycT in ⁴	IycB in ⁴	Syy in ³	Ryy in
4532Z16	4.50	3.25	3.25	0.060	0.69	0.188	50.000	0.720	2.450	2.250	2.584	1.148	1.148	1.894	1.13	1.13	0.62	1.77
4532Z14	4.50	3.25	3.25	0.075	0.72	0.188	50.000	0.900	3.060	2.250	3.204	1.424	1.424	1.887	1.42	1.42	0.77	1.78
4532Z12	4.50	3.25	3.25	0.105	0.77	0.188	50.000	1.260	4.290	2.250	4.414	1.962	1.962	1.872	2.02	2.02	1.09	1.79
635Z16	6.00	3.50	3.50	0.060	0.76	0.188	50.000	0.848	2.880	3.000	5.236	1.745	1.745	2.486	1.43	1.43	0.72	1.83
635Z14	6.00	3.50	3.50	0.075	0.78	0.188	50.000	1.059	3.600	3.000	6.507	2.169	2.169	2.478	1.79	1.79	0.90	1.84
635Z12	6.00	3.50	3.50	0.105	0.83	0.188	50.000	1.483	5.050	3.000	9.005	3.002	3.002	2.464	2.54	2.54	1.28	1.85
6522Z16	6.50	2.25	2.25	0.060	0.76	0.188	50.000	0.727	2.480	3.250	4.715	1.451	1.451	2.546	0.48	0.48	0.35	1.15
6522Z14	6.50	2.25	2.25	0.075	0.78	0.188	50.000	0.909	3.090	3.250	5.862	1.804	1.804	2.539	0.60	0.60	0.44	1.15
6522Z12	6.50	2.25	2.25	0.105	0.83	0.188	50.000	1.273	4.330	3.250	8.118	2.498	2.498	2.525	0.86	0.86	0.63	1.16
6532Z16	6.50	3.25	3.25	0.060	0.76	0.188	50.000	0.848	2.880	3.250	5.959	1.834	1.834	2.652	1.18	1.18	0.64	1.67
6532Z14	6.50	3.25	3.25	0.075	0.78	0.188	50.000	1.059	3.600	3.250	7.410	2.280	2.280	2.645	1.49	1.49	0.80	1.68
6532Z12	6.50	3.25	3.25	0.105	0.83	0.188	50.000	1.483	5.050	3.250	10.265	3.158	3.158	2.631	2.11	2.11	1.13	1.69
72Z16	7.00	2.00	2.00	0.060	0.76	0.188	50.000	0.727	2.480	3.500	5.247	1.499	1.499	2.686	0.36	0.36	0.30	1.00
72Z14	7.00	2.00	2.00	0.075	0.78	0.188	50.000	0.909	3.090	3.500	6.527	1.865	1.865	2.679	0.46	0.46	0.37	1.00
72Z12	7.00	2.00	2.00	0.105	0.83	0.188	50.000	1.273	4.330	3.500	9.046	2.585	2.585	2.666	0.65	0.65	0.52	1.01
73Z16	7.00	3.00	3.00	0.060	0.76	0.188	50.000	0.848	2.880	3.500	6.692	1.912	1.912	2.81	0.97	0.97	0.56	1.51
73Z14	7.00	3.00	3.00	0.075	0.78	0.188	50.000	1.059	3.600	3.500	8.325	2.379	2.379	2.803	1.22	1.22	0.70	1.52
73Z12	7.00	3.00	3.00	0.105	0.83	0.188	50.000	1.483	5.050	3.500	11.542	3.298	3.298	2.79	1.72	1.72	0.99	1.53
84Z16	8.00	4.00	4.00	0.060	0.76	0.188	50.000	1.028	3.500	4.000	10.993	2.748	2.748	3.271	2.01	2.01	0.90	1.98
84Z14	8.00	4.00	4.00	0.075	0.78	0.188	50.000	1.284	4.370	4.000	13.686	3.422	3.422	3.264	2.53	2.53	1.13	1.98
84Z12	8.00	4.00	4.00	0.105	0.83	0.188	50.000	1.798	6.120	4.000	19.005	4.751	4.751	3.251	3.58	3.58	1.60	2.00
8522Z16	8.50	2.25	2.25	0.060	0.76	0.188	50.000	0.847	2.880	4.250	8.872	2.087	2.087	3.235	0.48	0.48	0.35	1.06
8522Z14	8.50	2.25	2.25	0.075	0.78	0.188	50.000	1.059	3.600	4.250	11.048	2.599	2.599	3.229	0.60	0.60	0.44	1.07
8522Z12	8.50	2.25	2.25	0.105	0.83	0.188	50.000	1.483	5.050	4.250	15.348	3.611	3.611	3.217	0.86	0.86	0.63	1.08
8537Z16	8.50	3.75	3.75	0.060	0.76	0.188	50.000	1.028	3.500	4.250	12.077	2.842	2.842	3.428	1.70	1.70	0.81	1.82
8537Z14	8.50	3.75	3.75	0.075	0.78	0.188	50.000	1.284	4.370	4.250	15.040	3.539	3.539	3.422	2.14	2.14	1.02	1.83
8537Z12	8.50	3.75	3.75	0.105	0.83	0.188	50.000	1.798	6.120	4.250	20.898	4.917	4.917	3.409	3.03	3.03	1.43	1.84

*Thickness indicated represents design thickness. Minimum deliverable bare steel equals 0.095 x design thickness in accordance with section A3.4 of AISI Specification of minimum steel thickness in inches.



Section Properties Non-Standard Zees



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- Net variation for combined dimensions
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Sectional Properties

Name	Depth in	WTP in	WBT in	Thickness in	Lip in	Rad in	Deg deg	Area in ²	Wt lb/ft	Yp in	Ixx in ⁴	SxTop in ³	SxBot in ³	Rxx in	IycT in ⁴	IycB in ⁴	Syy in ³	Ryy in
92Z16	9.000	2.000	2.000	0.060	0.76	0.188	50.000	0.847	2.880	4.500	9.567	2.126	2.126	3.36	0.36	0.36	0.30	0.93
92Z14	9.000	2.000	2.000	0.075	0.78	0.188	50.000	1.059	3.600	4.500	11.916	2.648	2.648	3.354	0.46	0.46	0.37	0.93
92Z12	9.000	2.000	2.000	0.105	0.83	0.188	50.000	1.483	5.050	4.500	16.564	3.681	3.681	3.342	0.65	0.65	0.52	0.94
935Z16	9.000	3.500	3.500	0.060	0.76	0.188	50.000	1.028	3.500	4.500	13.163	2.925	2.925	3.579	1.43	1.43	0.72	1.67
935Z14	9.000	3.500	3.500	0.075	0.78	0.188	50.000	1.284	4.370	4.500	16.397	3.644	3.644	3.573	1.79	1.79	0.90	1.67
935Z12	9.000	3.500	3.500	0.105	0.83	0.188	50.000	1.798	6.120	4.500	22.795	5.065	5.065	3.56	2.54	2.54	1.28	1.68
104Z14	10.000	4.000	4.000	0.075	0.78	0.188	50.000	1.434	4.880	5.000	22.775	4.555	4.555	3.985	2.53	2.53	1.13	1.88
104Z12	10.000	4.000	4.000	0.105	0.83	0.188	50.000	2.008	6.830	5.000	31.690	6.338	6.338	3.972	3.58	3.58	1.60	1.89
11523Z16	11.500	2.375	2.375	0.060	0.63	0.188	50.000	1.028	3.500	5.750	18.445	3.208	3.208	4.237	0.49	0.49	0.35	0.97
11523Z14	11.500	2.375	2.375	0.075	0.66	0.188	50.000	1.284	4.370	5.750	23.002	4.000	4.000	4.232	0.61	0.61	0.45	0.98
11523Z12	11.500	2.375	2.375	0.105	0.71	0.188	50.000	1.798	6.120	5.750	32.048	5.574	5.574	4.222	0.87	0.87	0.63	0.99
122Z16	12.000	2.000	2.000	0.060	0.76	0.188	50.000	1.028	3.500	6.000	19.299	3.217	3.217	4.334	0.36	0.36	0.30	0.84
122Z14	12.000	2.000	2.000	0.075	0.78	0.188	50.000	1.284	4.370	6.000	24.067	4.011	4.011	4.329	0.46	0.46	0.37	0.84
122Z12	12.000	2.000	2.000	0.105	0.83	0.188	50.000	1.798	6.120	6.000	33.533	5.589	5.589	4.318	0.65	0.65	0.52	0.85
124Z14	12.000	4.000	4.000	0.075	0.78	0.188	50.000	1.584	5.390	6.000	34.733	5.789	5.789	4.682	2.53	2.53	1.13	1.79
124Z12	12.000	4.000	4.000	0.105	0.83	0.188	50.000	2.218	7.550	6.000	48.390	8.065	8.065	4.671	3.58	3.58	1.60	1.80
142Z14	14.000	2.000	2.000	0.075	0.78	0.188	50.000	1.434	4.880	7.000	35.317	5.045	5.045	4.962	0.46	0.46	0.37	0.80
142Z12	14.000	2.000	2.000	0.105	0.83	0.188	50.000	2.008	6.830	7.000	49.254	7.036	7.036	4.953	0.65	0.65	0.52	0.81
144Z14	14.000	4.000	4.000	0.075	0.78	0.188	50.000	1.734	5.900	7.000	49.860	7.123	7.123	5.362	2.53	2.53	1.13	1.71
144Z12	14.000	4.000	4.000	0.105	0.83	0.188	50.000	2.428	8.260	7.000	69.527	9.932	9.932	5.351	3.58	3.58	1.60	1.72

*Thickness indicated represents design thickness. Minimum deliverable bare steel equals 0.095 x design thickness in accordance with section A3.4 of AISI Specification of minimum steel thickness in inches.