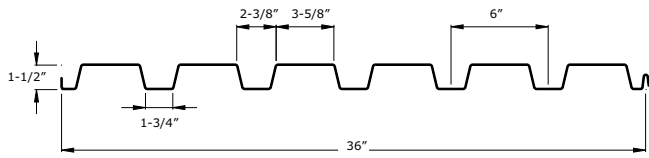
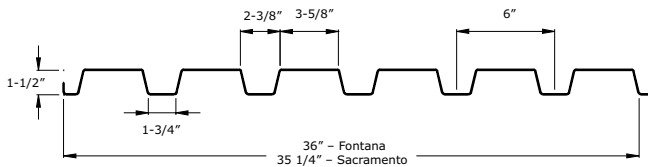


2.1 DGB-36, B-36 & BN-36

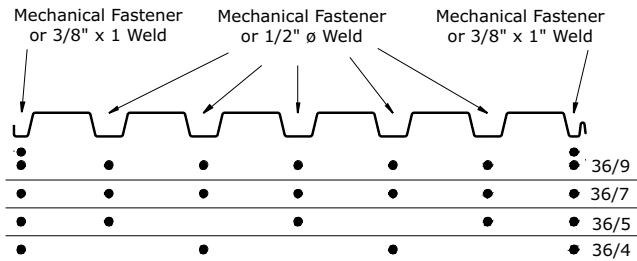
DGB-36 & B-36



BN-36 Nestable



Attachment Patterns



Note: Weld sizes are effective not visible. Refer to AISI S100-2007 or AWS D1.3 for additional welding requirements.

Panel Properties

Gage	Weight	Base Metal Thickness	Yield Strength	Tensile Strength	Gross Section Properties				
					Area	Moment of Inertia	Distance to N.A. from Bottom	Section Modulus	Radius of Gyration
	w psf	t in	F _y ksi	F _u ksi	A _g in ² /ft	I _g in ⁴ /ft	y _b in	S _g in ³ /ft	r in
22	1.67	0.0299	38	52	0.514	0.200	0.94	0.213	0.625
20	1.99	0.0359	38	52	0.615	0.240	0.94	0.253	0.623
18	2.63	0.0478	38	52	0.814	0.313	0.95	0.340	0.619
16	3.27	0.0598	38	52	1.012	0.383	0.95	0.404	0.615

Gage	Effective Section Modulus for Bending at F _y					Effective Moment of Inertia for Deflection at Service Load			
	Area	Section Modulus	Distance to N.A. from Bottom	Section Modulus	Distance to N.A. from Bottom	Moment of Inertia	Moment of Inertia	Uniform Load Only	
								I _d = (2I _e +I _g)/3	
	A _{e+} in ² /ft	S _{e+} in ³ /ft	y _b in	S _{e-} in ³ /ft	y _b in	I _{e+} in ⁴ /ft	I _{e-} in ⁴ /ft	I ₊ in ⁴ /ft	I ₋ in ⁴ /ft
22	0.397	0.187	0.77	0.195	0.97	0.163	0.200	0.175	0.200
20	0.522	0.233	0.80	0.246	0.95	0.207	0.240	0.218	0.240
18	0.720	0.316	0.87	0.329	0.94	0.300	0.313	0.304	0.313
16	0.936	0.397	0.91	0.404	0.95	0.383	0.383	0.383	0.383

Reactions at Supports (plf) Based on Web Crippling

Gage	Condition	Bearing Length of Webs							
		Allowable (R _n /Ω)				Factored (ΦR _n)			
		1"	1.5"	2"	3"	1"	1.5"	2"	3"
22	End	586	664	730	840	897	1016	1117	1285
	Interior	934	1038	1126	1273	1390	1544	1675	1894
20	End	822	927	1016	1164	1258	1418	1554	1781
	Interior	1320	1461	1579	1778	1964	2173	2349	2644
18	End	1393	1561	1701	1938	2132	2388	2603	2965
	Interior	2268	2491	2679	2994	3374	3705	3985	4454
16	End	2106	2345	2547	2885	3222	3588	3897	4415
	Interior	3462	3781	4050	4501	5150	5624	6065	6696

Web Crippling Constraints

h=1.32"

r=0.125"

θ=78.3°

DGB-36, B-36 & BN-36 2.1

Inward Allowable (f_b/Ω) and Factored (Φf_b) Distributed Load (lbs/ft²)

Gage	Span	Limit Condition	Panel Span (Support Spacing)								
			4' - 0"	5' - 0"	6' - 0"	7' - 0"	8' - 0"	9' - 0"	10' - 0"	11' - 0"	12' - 0"
22	SS	f_b / Ω	177	113	79	58	44	35	28	23	20
		Φf_b	281	180	125	92	70	56	45	37	31
		L/360	120	61	35	22	15	11	8	6	4
		L/240	-	92	53	34	22	16	11	9	7
		L/180	-	-	71	45	30	21	15	12	9
		L/120	-	-	-	-	-	32	23	17	13
	DS	f_b / Ω	185	118	82	60	46	37	30	24	21
		Φf_b	293	188	130	96	73	58	47	39	33
		L/360	-	-	-	54	36	25	18	14	11
		L/240	-	-	-	-	-	-	28	21	16
		L/180	-	-	-	-	-	-	-	-	-
		L/120	-	-	-	-	-	-	-	-	-
	TS	f_b / Ω	231	148	103	75	58	46	37	31	26
		Φf_b	367	235	163	120	92	72	59	48	41
		L/360	-	135	78	49	33	23	17	13	10
L/240		-	-	-	74	50	35	25	19	15	
L/180		-	-	-	-	-	-	34	25	20	
L/120		-	-	-	-	-	-	-	-	-	
20	SS	f_b / Ω	221	141	98	72	55	44	35	29	25
		Φf_b	350	224	156	114	88	69	56	46	39
		L/360	149	76	44	28	19	13	10	7	6
		L/240	-	114	66	42	28	20	14	11	8
		L/180	-	-	88	56	37	26	19	14	11
		L/120	-	-	-	-	-	39	29	21	17
	DS	f_b / Ω	233	149	104	76	58	46	37	31	26
		Φf_b	370	237	164	121	93	73	59	49	41
		L/360	-	-	-	67	45	31	23	17	13
		L/240	-	-	-	-	-	-	34	26	20
		L/180	-	-	-	-	-	-	-	-	-
		L/120	-	-	-	-	-	-	-	-	-
	TS	f_b / Ω	292	187	130	95	73	58	47	39	32
		Φf_b	463	296	206	151	116	91	74	61	51
		L/360	-	168	97	61	41	29	21	16	12
L/240		-	-	-	92	62	43	32	24	18	
L/180		-	-	-	-	-	-	42	32	24	
L/120		-	-	-	-	-	-	-	-	-	
18	SS	f_b / Ω	300	192	133	98	75	59	48	40	33
		Φf_b	475	304	211	155	119	94	76	63	53
		L/360	208	106	62	39	26	18	13	10	8
		L/240	-	160	92	58	39	27	20	15	12
		L/180	-	-	123	78	52	36	27	20	15
		L/120	-	-	-	-	-	55	40	30	23
	DS	f_b / Ω	312	200	139	102	78	62	50	41	35
		Φf_b	495	317	220	162	124	98	79	65	55
		L/360	-	-	-	93	63	44	32	24	19
		L/240	-	-	-	-	-	-	48	36	28
		L/180	-	-	-	-	-	-	-	-	-
		L/120	-	-	-	-	-	-	-	-	-
	TS	f_b / Ω	390	250	173	127	97	77	62	52	43
		Φf_b	619	396	275	202	155	122	99	82	69
		L/360	-	235	136	86	57	40	29	22	17
L/240		-	-	-	-	86	60	44	33	25	
L/180		-	-	-	-	-	-	59	44	34	
L/120		-	-	-	-	-	-	-	-	-	
16	SS	f_b / Ω	376	241	167	123	94	74	60	50	42
		Φf_b	597	382	265	195	149	118	96	79	66
		L/360	262	134	78	49	33	23	17	13	10
		L/240	-	201	116	73	49	34	25	19	15
		L/180	-	-	155	98	65	46	33	25	19
		L/120	-	-	-	-	-	69	50	38	29
	DS	f_b / Ω	383	245	170	125	96	76	61	51	43
		Φf_b	608	389	270	198	152	120	97	80	68
		L/360	-	-	-	118	79	55	40	30	23
		L/240	-	-	-	-	-	-	61	45	35
		L/180	-	-	-	-	-	-	-	-	-
		L/120	-	-	-	-	-	-	-	-	-
	TS	f_b / Ω	479	306	213	156	120	95	77	63	53
		Φf_b	760	486	338	248	190	150	122	100	84
		L/360	-	296	171	108	72	51	37	28	21
L/240		-	-	-	-	108	76	55	42	32	
L/180		-	-	-	-	-	-	74	56	43	
L/120		-	-	-	-	-	-	-	-	-	

B PANELS