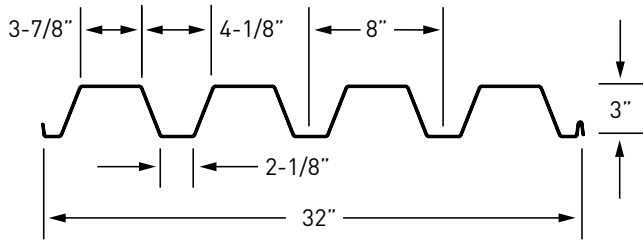
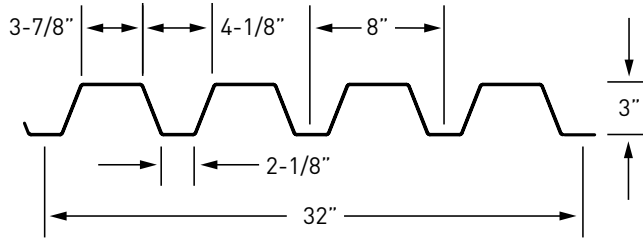


3.1 DGN-32, N-32 & NN-32

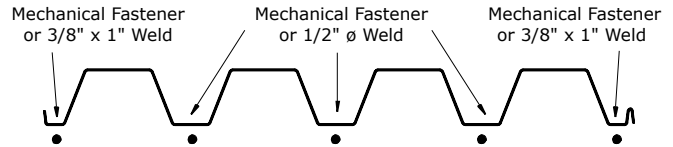
DGN-32 & N-32



NN-32 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
22	1.97	0.0299	50	65	0.569	0.814	1.68	0.483	1.195
20	2.35	0.0359	50	65	0.681	0.968	1.68	0.576	1.193
18	3.10	0.0478	50	65	0.902	1.275	1.69	0.755	1.189
16	3.86	0.0598	50	65	1.123	1.575	1.69	0.931	1.185

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	0.272	0.349	1.37	0.402	1.78	0.668	0.754	0.716	0.774
20	0.372	0.446	1.41	0.505	1.76	0.848	0.930	0.888	0.943
18	0.604	0.661	1.48	0.715	1.72	1.219	1.275	1.238	1.275
16	0.871	0.879	1.54	0.927	1.70	1.556	1.575	1.563	1.575

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	500	566	622	716	764	866	952	1095
	Interior	876	973	1056	1194	1303	1448	1570	1776
20	End	709	799	876	1004	1084	1223	1340	1536
	Interior	1240	1371	1482	1669	1844	2040	2205	2482
18	End	1221	1367	1490	1697	1868	2092	2280	2597
	Interior	2133	2343	2519	2816	3173	3485	3748	4189
16	End	1864	2076	2254	2554	2852	3176	3449	3907
	Interior	3260	3560	3814	4239	4849	5296	5673	6305

Web Crippling Constraints

$h=3.06''$

$r=0.125''$

$\theta=70.7^\circ$

DGN-32, N-32 & NN-32 3.1

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

Gage	Span	Limit Condition	Panel Span (Support Spacing)								
			4'-0"	6'-0"	8'-0"	10'-0"	12'-0"	14'-0"	16'-0"	18'-0"	20'-0"
22	SS	f_b / Ω	435	193	109	70	48	36	27	21	17
		Φf_b	690	307	173	110	77	56	43	34	28
		L/360	-	145	61	31	18	11	8	5	4
		L/240	-	-	92	47	27	17	11	8	6
		L/180	-	-	-	63	36	23	15	11	8
	L/120	-	-	-	-	-	34	23	16	12	
	DS	f_b / Ω	502	223	125	80	56	41	31	25	20
		Φf_b	796	354	199	127	88	65	50	39	32
		L/360	-	-	-	-	47	30	20	14	10
		L/240	-	-	-	-	-	-	30	21	15
		L/180	-	-	-	-	-	-	-	-	-
	L/120	-	-	-	-	-	-	-	-	-	
	TS	f_b / Ω	627	279	157	100	70	51	39	31	25
		Φf_b	995	442	249	159	111	81	62	49	40
		L/360	-	-	146	75	43	27	18	13	9
L/240		-	-	-	-	65	41	27	19	14	
L/180		-	-	-	-	-	-	36	26	19	
L/120	-	-	-	-	-	-	-	-	-		
20	SS	f_b / Ω	557	247	139	89	62	45	35	27	22
		Φf_b	883	393	221	141	98	72	55	44	35
		L/360	-	180	76	39	22	14	9	7	5
		L/240	-	-	114	58	34	21	14	10	7
		L/180	-	-	-	78	45	28	19	13	10
	L/120	-	-	-	-	-	42	28	20	15	
	DS	f_b / Ω	630	280	158	101	70	51	39	31	25
		Φf_b	1000	444	250	160	111	82	63	49	40
		L/360	-	-	-	99	57	36	24	17	12
		L/240	-	-	-	-	-	-	36	26	19
		L/180	-	-	-	-	-	-	-	-	25
	L/120	-	-	-	-	-	-	-	-	-	
	TS	f_b / Ω	788	350	197	126	88	64	49	39	32
		Φf_b	1250	556	313	200	139	102	78	62	50
		L/360	-	-	178	91	53	33	22	16	11
L/240		-	-	-	-	79	50	33	23	17	
L/180		-	-	-	-	-	-	44	31	23	
L/120	-	-	-	-	-	-	-	-	-		
18	SS	f_b / Ω	825	367	206	132	92	67	52	41	33
		Φf_b	1308	582	327	209	145	107	82	65	52
		L/360	-	250	106	54	31	20	13	9	7
		L/240	-	-	158	81	47	30	20	14	10
		L/180	-	-	-	108	63	39	26	19	14
	L/120	-	-	-	-	-	59	40	28	20	
	DS	f_b / Ω	892	396	223	143	99	73	56	44	36
		Φf_b	1415	629	354	226	157	116	88	70	57
		L/360	-	-	-	134	78	49	33	23	17
		L/240	-	-	-	-	-	-	49	35	25
		L/180	-	-	-	-	-	-	-	-	34
	L/120	-	-	-	-	-	-	-	-	-	
	TS	f_b / Ω	1115	496	279	178	124	91	70	55	45
		Φf_b	1769	786	442	283	197	144	111	87	71
		L/360	-	-	240	123	71	45	30	21	15
L/240		-	-	-	-	107	67	45	32	23	
L/180		-	-	-	-	-	90	60	42	31	
L/120	-	-	-	-	-	-	-	-	-		
16	SS	f_b / Ω	1097	487	274	175	122	90	69	54	44
		Φf_b	1740	773	435	278	193	142	109	86	70
		L/360	1067	316	133	68	40	25	17	12	9
		L/240	-	474	200	102	59	37	25	18	13
		L/180	-	-	267	137	79	50	33	23	17
	L/120	-	-	-	-	119	75	50	35	26	
	DS	f_b / Ω	1156	514	289	185	128	94	72	57	46
		Φf_b	1834	815	458	293	204	150	115	91	73
		L/360	-	-	-	166	96	60	40	28	21
		L/240	-	-	-	-	-	91	61	43	31
		L/180	-	-	-	-	-	-	-	57	41
	L/120	-	-	-	-	-	-	-	-	-	
	TS	f_b / Ω	1445	642	361	231	161	118	90	71	58
		Φf_b	2292	1019	573	367	255	187	143	113	92
		L/360	-	-	297	152	88	55	37	26	19
L/240		-	-	-	228	132	83	56	39	28	
L/180		-	-	-	-	-	111	74	52	38	
L/120	-	-	-	-	-	-	-	-	57		

N PANELS