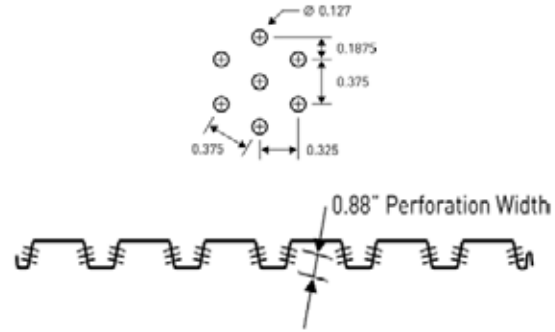
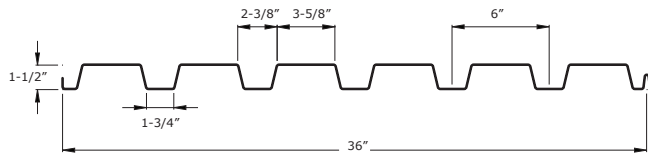


7.3 DGB-36AW & B-36AW

Web Perforated Acustadek®



Panel Properties

Gage	Weight w psf	Base Metal Thickness t in	Yield Strength F _y ksi	Tensile Strength F _u ksi	Gross Section Properties				
					Area A _g in ² /ft	Moment of Inertia I _g in ⁴ /ft	Distance to N.A. from Bottom y _b in	Section Modulus S _g in ³ /ft	Radius of Gyration r in
22	1.59	0.0299	50	65	0.468	0.199	0.96	0.203	0.625
20	1.91	0.0359	50	65	0.560	0.238	0.96	0.243	0.623
18	2.57	0.0478	50	65	0.755	0.311	0.96	0.317	0.619
16	3.13	0.0598	50	65	0.921	0.380	0.96	0.388	0.615

Gage	Effective Section Modulus for Bending at F _y					Effective Moment of Inertia for Deflection at Service Load			
	Area A _{e+} in ² /ft	Section Modulus S _{e+} in ³ /ft	Distance to N.A. from Bottom y _b in	Section Modulus S _{e-} in ³ /ft	Distance to N.A. from Bottom y _b in	Moment of Inertia I _{e+} in ⁴ /ft	Moment of Inertia I _{e-} in ⁴ /ft	Uniform Load Only	
								I _u = (2I _e +I _g)/3	
22	0.177	0.167	0.74	0.177	1.00	0.156	0.195	0.170	0.196
20	0.233	0.219	0.77	0.225	0.98	0.195	0.235	0.210	0.236
18	0.348	0.300	0.84	0.315	0.96	0.285	0.311	0.294	0.311
16	0.327	0.375	0.90	0.385	0.97	0.374	0.380	0.376	0.380

Reactions at Supports (plf) Based on Web Crippling

Gage	Condition	Bearing Length of Webs							
		ASD, R/Ω				LRFD, φR			
		1"	1.5"	2"	3"	1"	1.5"	2"	3"
22	End	772	874	960	1105	1180	1337	1469	1691
	Interior	1229	1366	1482	1675	1828	2032	2204	2492
20	End	1081	1220	1336	1532	1655	1866	2045	2344
	Interior	1737	1922	2078	2339	2584	2859	3091	3479
18	End	1834	2053	2239	2550	2805	3142	3425	3901
	Interior	2984	3277	3525	3940	4439	4875	5243	5860
16	End	2771	3086	3351	3796	4240	4721	5127	5809
	Interior	4555	4975	5329	5923	6776	7401	7927	8810

Constants h = 1.32" r = 0.125" θ = 78.3°

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

Gauge	Span	Limit Condition	Panel Span (Support Spacing)								
			4' - 0"	5' - 0"	6' - 0"	7' - 0"	8' - 0"	10' - 0"	12' - 0"	14' - 0"	16' - 0"
22	Single Span	f_b/Ω	208	133	92	68	52	33	23	17	13
		Φf_b	313	200	139	102	78	50	35	26	20
		L/360	116	59	34	22	15	7	4	3	2
		L/240	174	89	52	32	22	11	6	4	3
		L/180	232	119	69	43	29	15	9	5	4
	L/120	348	178	103	65	44	22	13	8	5	
	Double Span	f_b/Ω	221	141	98	72	55	35	25	18	14
		Φf_b	332	213	148	108	83	53	37	27	21
		L/360	280	143	83	52	35	18	10	7	4
		L/240	419	215	124	78	52	27	16	10	7
		L/180	559	286	166	104	70	36	21	13	9
	L/120	839	429	249	157	105	54	31	20	13	
	Triple Span	f_b/Ω	276	177	123	90	69	44	31	23	17
		Φf_b	415	266	185	136	104	66	46	34	26
		L/360	219	112	65	41	27	14	8	5	3
L/240		329	168	97	61	41	21	12	8	5	
L/180		438	224	130	82	55	28	16	10	7	
L/120	657	336	195	123	82	42	24	15	10		
20	Single Span	f_b/Ω	273	175	121	89	68	44	30	22	17
		Φf_b	411	263	182	134	103	66	46	34	26
		L/360	143	73	42	27	18	9	5	3	2
		L/240	215	110	64	40	27	14	8	5	3
		L/180	286	147	85	53	36	18	11	7	4
	L/120	429	220	127	80	54	27	16	10	7	
	Double Span	f_b/Ω	281	180	125	92	70	45	31	23	18
		Φf_b	422	270	188	138	106	68	47	34	26
		L/360	345	177	102	64	43	22	13	8	5
		L/240	517	265	153	97	65	33	19	12	8
		L/180	690	353	204	129	86	44	26	16	11
	L/120	1035	530	307	193	129	66	38	24	16	
	Triple Span	f_b/Ω	351	225	156	115	88	56	39	29	22
		Φf_b	528	338	235	172	132	84	59	43	33
		L/360	270	138	80	50	34	17	10	6	4
L/240		405	207	120	76	51	26	15	9	6	
L/180		540	277	160	101	68	35	20	13	8	
L/120	810	415	240	151	101	52	30	19	13		
18	Single Span	f_b/Ω	374	239	166	122	93	60	42	31	23
		Φf_b	562	360	250	183	140	90	62	46	35
		L/360	200	103	59	37	25	13	7	5	3
		L/240	301	154	89	56	38	19	11	7	5
		L/180	401	205	119	75	50	26	15	9	6
	L/120	601	308	178	112	75	38	22	14	9	
	Double Span	f_b/Ω	393	252	175	128	98	63	44	32	25
		Φf_b	591	378	263	193	148	95	66	48	37
		L/360	483	247	143	90	60	31	18	11	8
		L/240	724	371	215	135	91	46	27	17	11
		L/180	966	494	286	180	121	62	36	23	15
	L/120	1449	742	429	270	181	93	54	34	23	
	Triple Span	f_b/Ω	492	315	218	160	123	79	55	40	31
		Φf_b	739	473	328	241	185	118	82	60	46
		L/360	378	194	112	71	47	24	14	9	6
L/240		567	291	168	106	71	36	21	13	9	
L/180		757	387	224	141	95	48	28	18	12	
L/120	1135	581	336	212	142	73	42	26	18		
16	Single Span	f_b/Ω	468	300	208	153	117	75	52	38	29
		Φf_b	704	451	313	230	176	113	78	57	44
		L/360	257	132	76	48	32	16	10	6	4
		L/240	385	197	114	72	48	25	14	9	6
		L/180	514	263	152	96	64	33	19	12	8
	L/120	771	395	228	144	96	49	29	18	12	
	Double Span	f_b/Ω	480	307	214	157	120	77	53	39	30
		Φf_b	722	462	321	236	181	116	80	59	45
		L/360	619	317	183	115	77	40	23	14	10
		L/240	928	475	275	173	116	59	34	22	15
		L/180	1238	634	367	231	155	79	46	29	19
	L/120	1856	950	550	346	232	119	69	43	29	
	Triple Span	f_b/Ω	601	384	267	196	150	96	67	49	38
		Φf_b	903	578	401	295	226	144	100	74	56
		L/360	485	248	144	90	61	31	18	11	8
L/240		727	372	215	136	91	47	27	17	11	
L/180		969	496	287	181	121	62	36	23	15	
L/120	1454	745	431	271	182	93	54	34	23		