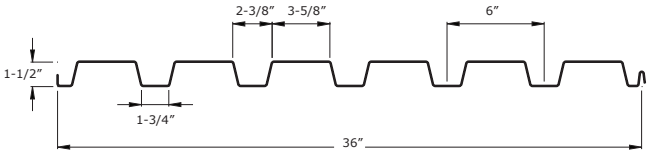
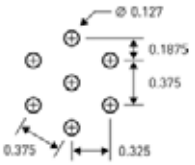
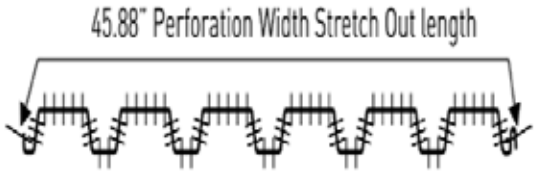
7.4 **DGB-36AT & B-36AT**

Total Perforated Acustadek®







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 in²/ft	I_g in⁴/ft	y_b in	S_g in³/ft	r in
22	1.22	0.0299	50	65	0.358	0.177	0.93	0.151	0.625
20	1.46	0.0359	50	65	0.428	0.212	0.93	0.181	0.623
18	1.96	0.0478	50	65	0.576	0.277	0.93	0.234	0.619
16	2.39	0.0598	50	65	0.701	0.338	0.93	0.285	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+ in²/ft	S_e+ in³/ft	y_b in	S_e- in³/ft	y_b in	I_e+ in⁴/ft	I_e- in⁴/ft	I+ in⁴/ft	I- in⁴/ft
22	0.152	0.119	0.73	0.126	0.98	0.131	0.174	0.146	0.175
20	0.200	0.155	0.76	0.163	0.95	0.166	0.209	0.182	0.210
18	0.298	0.220	0.83	0.232	0.92	0.277	0.277	0.277	0.277
16	0.280	0.277	0.89	0.283	0.93	0.331	0.338	0.333	0.338

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	148	95	66	48	37	24	16	12	9
		Φf_b	222	142	99	73	56	36	25	18	14
		L/360	100	51	30	19	12	6	4	2	2
		L/240	150	77	44	28	19	10	6	3	2
		L/180	199	102	59	37	25	13	7	5	3
		L/120	299	153	89	56	37	19	11	7	5
	Double Span	f_b/Ω	157	101	70	51	39	25	17	13	10
		Φf_b	236	151	105	77	59	38	26	19	15
		L/360	240	123	71	45	30	15	9	6	4
		L/240	360	185	107	67	45	23	13	8	6
		L/180	481	246	142	90	60	31	18	11	8
		L/120	721	369	214	134	90	46	27	17	11
	Triple Span	f_b/Ω	197	126	87	64	49	31	22	16	12
		Φf_b	296	189	131	97	74	47	33	24	18
		L/360	188	96	56	35	24	12	7	4	3
		L/240	282	145	84	53	35	18	10	7	4
		L/180	376	193	112	70	47	24	14	9	6
		L/120	565	289	167	105	71	36	21	13	9
20	Single Span	f_b/Ω	193	124	86	63	48	31	21	16	12
		Φf_b	290	186	129	95	73	46	32	24	18
		L/360	124	64	37	23	16	8	5	3	2
		L/240	186	95	55	35	23	12	7	4	3
		L/180	248	127	74	46	31	16	9	6	4
		L/120	372	191	110	69	47	24	14	9	6
	Double Span	f_b/Ω	203	130	90	66	51	32	23	17	13
		Φf_b	305	195	135	100	76	49	34	25	19
		L/360	299	153	89	56	37	19	11	7	5
		L/240	448	230	133	84	56	29	17	10	7
		L/180	598	306	177	112	75	38	22	14	9
		L/120	897	459	266	167	112	57	33	21	14
	Triple Span	f_b/Ω	253	162	113	83	63	41	28	21	16
		Φf_b	381	244	169	124	95	61	42	31	24
		L/360	234	120	69	44	29	15	9	5	4
		L/240	351	180	104	66	44	22	13	8	5
		L/180	468	240	139	87	59	30	17	11	7
		L/120	703	360	208	131	88	45	26	16	11
18	Single Span	f_b/Ω	275	176	122	90	69	44	31	22	17
		Φf_b	413	264	184	135	103	66	46	34	26
		L/360	189	97	56	35	24	12	7	4	3
		L/240	283	145	84	53	35	18	10	7	4
		L/180	378	193	112	70	47	24	14	9	6
		L/120	567	290	168	106	71	36	21	13	9
	Double Span	f_b/Ω	290	185	129	95	72	46	32	24	18
		Φf_b	435	279	193	142	109	70	48	36	27
		L/360	455	233	135	85	57	29	17	11	7
		L/240	682	349	202	127	85	44	25	16	11
		L/180	910	466	270	170	114	58	34	21	14
		L/120	1365	699	404	255	171	87	51	32	21
	Triple Span	f_b/Ω	362	232	161	118	90	58	40	30	23
		Φf_b	544	348	242	178	136	87	60	44	34
		L/360	356	182	106	67	45	23	13	8	6
		L/240	535	274	158	100	67	34	20	12	8
		L/180	713	365	211	133	89	46	26	17	11