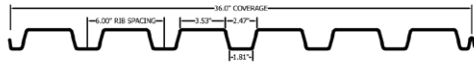
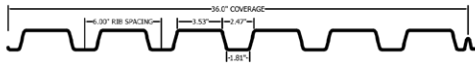


2.1 DGB-36, B-36, BS-36 & BN-36

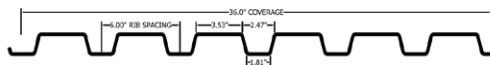
DGB-36 & B-36



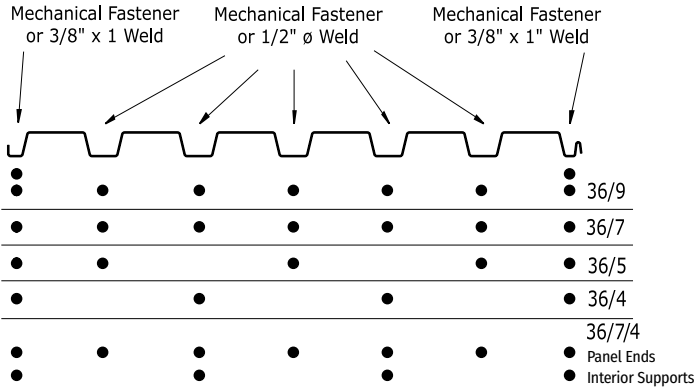
BS-36 Screwable Sidelap



BN-36 Nestable



Attachment Patterns



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

*Die Set (Swedge) ends are no longer standard but can be performed upon request

Panel Properties

Gauge	Weight	Base Metal Thickness	Yield Strength	Tensile Strength	Gross Section Properties				
					Area	Moment of Inertia	Distance to N.A. from Bottom	Section Modulus (Min.)	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	1.76	0.0299	50	65	0.503	0.190	0.93	0.205	0.614
21	1.93	0.0330	50	65	0.555	0.210	0.93	0.226	0.615
20	2.10	0.0359	50	65	0.604	0.227	0.93	0.245	0.615
19	2.44	0.0420	50	65	0.706	0.267	0.93	0.286	0.615
18	2.77	0.0478	50	65	0.805	0.303	0.94	0.325	0.615
16	3.45	0.0598	50	65	1.006	0.380	0.94	0.404	0.615

Gauge	Effective Section Properties at F _y for Bending Strength					Effective Section Properties at Service Load Load for Deflection			
	Area	Section Modulus (Min.)	Distance to N.A. from Bottom	Section Modulus (Min.)	Distance to N.A. from Bottom	Moment of Inertia	Moment of Inertia	Uniform Load Only	
								I _o = (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	0.389	0.175	0.75	0.185	0.96	0.167	0.190	0.174	0.190
21	0.437	0.203	0.76	0.210	0.95	0.190	0.210	0.197	0.210
20	0.487	0.224	0.79	0.234	0.94	0.210	0.227	0.216	0.227
19	0.602	0.269	0.83	0.284	0.94	0.257	0.267	0.260	0.267
18	0.724	0.313	0.87	0.324	0.94	0.297	0.303	0.299	0.303
16	0.979	0.400	0.92	0.404	0.94	0.380	0.380	0.380	0.380

Reactions at Supports (plf) Based on Web Crippling

Reactions at Supports based on Web Crippling									
Gauge	Condition	Bearing Length of Webs							
		ASD (Pn/Ω) (lbs/ft width)				LRFD (ϕPn) (lbs/ft width)			
		1"	1.5"	2"	3"	1"	1.5"	2"	3"
22	End	764	865	951	1094	1168	1324	1455	1674
	Interior	1185	1318	1429	1616	1763	1960	2125	2403
21	End	916	1036	1136	1305	1402	1585	1739	1997
	Interior	1431	1587	1718	1938	2129	2361	2556	2883
20	End	1071	1208	1323	1517	1638	1848	2024	2321
	Interior	1681	1860	2010	2263	2501	2766	2990	3366
19	End	1431	1607	1756	2006	2189	2459	2687	3069
	Interior	2267	2498	2693	3019	3372	3716	4005	4491
18	End	1816	2034	2217	2525	2779	3112	3393	3864
	Interior	2900	3185	3425	3828	4313	4737	5095	5694
16	End	2746	3058	3321	3762	4201	4678	5080	5755
	Interior	4439	4848	5193	5771	6603	7211	7724	8585
Constants		h = 1.23"		r = 0.156"		θ = 76.6°			

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

Inward Allowable (f_b/Ω) and Factored (Φf_b) Distributed Load (lbs/ft ²)											
Gauge	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	Single Span	f_b/Ω	219	140	97	71	55	43	35	29	24
		Φf_b	329	210	146	107	82	65	53	43	37
		L/360	119	61	35	22	15	10	8	6	4
		L/240	179	91	53	33	22	16	11	9	7
		L/180	238	122	71	44	30	21	15	11	9
		L/120	357	183	106	67	45	31	23	17	13
	Double Span	f_b/Ω	230	147	102	75	58	46	37	30	26
		Φf_b	346	222	154	113	87	68	55	46	38
		L/360	313	160	93	58	39	27	20	15	12
		L/240	469	240	139	87	59	41	30	23	17
		L/180	625	320	185	117	78	55	40	30	23
		L/120	938	480	278	175	117	82	60	45	35
	Triple Span	f_b/Ω	288	184	128	94	72	57	46	38	32
		Φf_b	433	277	192	141	108	85	69	57	48
		L/360	245	125	73	46	31	21	16	12	9
		L/240	367	188	109	69	46	32	24	18	14
		L/180	490	251	145	91	61	43	31	24	18
		L/120	735	376	218	137	92	64	47	35	27
20	Single Span	f_b/Ω	280	179	124	91	70	55	45	37	31
		Φf_b	421	269	187	137	105	83	67	56	47
		L/360	147	75	44	27	18	13	9	7	5
		L/240	221	113	65	41	28	19	14	11	8
		L/180	294	151	87	55	37	26	19	14	11
		L/120	442	226	131	82	55	39	28	21	16
	Double Span	f_b/Ω	292	187	130	95	73	58	47	39	32
		Φf_b	439	281	195	143	110	87	70	58	49
		L/360	373	191	110	70	47	33	24	18	14
		L/240	559	286	166	104	70	49	36	27	21
		L/180	746	382	221	139	93	65	48	36	28
		L/120	1119	573	331	209	140	98	72	54	41
	Triple Span	f_b/Ω	365	234	162	119	91	72	58	48	41
		Φf_b	548	351	244	179	137	108	88	73	61
		L/360	292	150	87	55	37	26	19	14	11
		L/240	438	224	130	82	55	38	28	21	16
		L/180	584	299	173	109	73	51	37	28	22
		L/120	876	449	260	164	110	77	56	42	32
18	Single Span	f_b/Ω	390	250	174	128	98	77	62	52	43
		Φf_b	587	376	261	192	147	116	94	78	65
		L/360	204	105	60	38	26	18	13	10	8
		L/240	306	157	91	57	38	27	20	15	11
		L/180	408	209	121	76	51	36	26	20	15
		L/120	612	314	181	114	77	54	39	29	23
	Double Span	f_b/Ω	404	258	179	132	101	80	65	53	45
		Φf_b	607	388	270	198	152	120	97	80	67
		L/360	499	255	148	93	62	44	32	24	18
		L/240	748	383	222	140	94	66	48	36	28
		L/180	998	511	296	186	125	88	64	48	37
		L/120	1497	766	444	279	187	131	96	72	55
	Triple Span	f_b/Ω	505	323	224	165	126	100	81	67	56
		Φf_b	759	486	337	248	190	150	121	100	84
		L/360	391	200	116	73	49	34	25	19	14
		L/240	586	300	174	109	73	51	38	28	22
		L/180	782	400	232	146	98	69	50	38	29
		L/120	1173	600	347	219	147	103	75	56	43
16	Single Span	f_b/Ω	499	320	222	163	125	99	80	66	55
		Φf_b	751	480	334	245	188	148	120	99	83
		L/360	259	133	77	48	32	23	17	12	10
		L/240	389	199	115	73	49	34	25	19	14
		L/180	519	266	154	97	65	46	33	25	19
		L/120	778	399	231	145	97	68	50	37	29
	Double Span	f_b/Ω	504	322	224	164	126	99	81	67	56
		Φf_b	757	484	336	247	189	150	121	100	84
		L/360	625	320	185	117	78	55	40	30	23
		L/240	938	480	278	175	117	82	60	45	35
		L/180	1250	640	370	233	156	110	80	60	46
		L/120	1875	960	556	350	234	165	120	90	69
	Triple Span	f_b/Ω	629	403	280	206	157	124	101	83	70
		Φf_b	946	606	420	309	237	187	151	125	105
		L/360	490	251	145	91	61	43	31	24	18
		L/240	735	376	218	137	92	64	47	35	27
		L/180	979	501	290	183	122	86	63	47	36
		L/120	1469	752	435	274	184	129	94	71	54

2.2 DGB-36

Allowable Wind Uplift Loads

B-36				Support Fastener Pattern: 36 / 4									
Allowable Wind Uplift Load (psf)													
Gauge	Fastener	Support Thickness	Fastener Capacity [lbs]	Span	Span (ft.-in.)								
					4	5	6	7	8	9	10	11	12
22	#12-14 ITW Buildex TEKS	16ga	165	Single Span	55	44	37	31	28	24	22	20	18
	#12-24 ITW Buildex TEKS	≥ 3/16"	280		93	75	62	53	47	41	37	31	26
	Hilti X-ENP-19 L15	≥ 1/4"	660		220	148	103	75	58	46	37	31	26
	Hilti X-HSN 24	1/8" - 3/8"	435		145	116	97	75	58	46	37	31	26
	1/2" Eff. Arc Spot Weld	≥ 1/8"	787		231	148	103	75	58	46	37	31	26
	Simpson XL Screws	≥ 1/8"	385		128	103	86	73	58	46	37	31	26
	#12-14 ITW Buildex TEKS	16ga	165	Double Span	55	44	37	31	28	24	22	20	18
	#12-24 ITW Buildex TEKS	≥ 3/16"	280		93	75	62	53	47	41	37	31	26
	Hilti X-ENP-19 L15	≥ 1/4"	660		220	148	103	75	58	46	37	31	26
	Hilti X-HSN 24	1/8" - 3/8"	435		145	116	97	75	58	46	37	31	26
	1/2" Eff. Arc Spot Weld	≥ 1/8"	787		231	148	103	75	58	46	37	31	26
	Simpson XL Screws	≥ 1/8"	385		128	103	86	73	58	46	37	31	26
	#12-14 ITW Buildex TEKS	16ga	165	Triple Span	55	44	37	31	28	24	22	20	18
	#12-24 ITW Buildex TEKS	≥ 3/16"	280		93	75	62	53	47	41	37	34	31
	Hilti X-ENP-19 L15	≥ 1/4"	660		220	176	128	94	72	57	46	38	32
	Hilti X-HSN 24	1/8" - 3/8"	435		145	116	97	83	72	57	46	38	32
	1/2" Eff. Arc Spot Weld	≥ 1/8"	787		262	185	128	94	72	57	46	38	32
	Simpson XL Screws	≥ 1/8"	385		128	103	86	73	64	57	46	38	32

B-36				Support Fastener Pattern: 36 / 4									
Allowable Wind Uplift Load (psf)													
Gauge	Fastener	Support Thickness	Fastener Capacity [lbs]	Span	Span (ft.-in.)								
					4	5	6	7	8	9	10	11	12
20	#12-14 ITW Buildex TEKS	16ga	165	Single Span	55	44	37	31	28	24	22	20	18
	#12-24 ITW Buildex TEKS	≥ 3/16"	336		112	90	75	64	56	50	45	39	33
	Hilti X-ENP-19 L15	≥ 1/4"	705		235	187	130	96	73	58	47	39	33
	Hilti X-HSN 24	1/8" - 3/8"	435		145	116	97	83	73	58	47	39	33
	1/2" Eff. Arc Spot Weld	≥ 1/8"	953		293	187	130	96	73	58	47	39	33
	Simpson XL Screws	≥ 1/8"	385		128	103	86	73	64	57	47	39	33
	#12-14 ITW Buildex TEKS	16ga	165	Double Span	55	44	37	31	28	24	22	20	18
	#12-24 ITW Buildex TEKS	≥ 3/16"	336		112	90	75	64	56	50	45	39	33
	Hilti X-ENP-19 L15	≥ 1/4"	705		235	187	130	96	73	58	47	39	33
	Hilti X-HSN 24	1/8" - 3/8"	435		145	116	97	83	73	58	47	39	33
	1/2" Eff. Arc Spot Weld	≥ 1/8"	953		293	187	130	96	73	58	47	39	33
	Simpson XL Screws	≥ 1/8"	385		128	103	86	73	64	57	47	39	33
	#12-14 ITW Buildex TEKS	16ga	165	Triple Span	55	44	37	31	28	24	22	20	18
	#12-24 ITW Buildex TEKS	≥ 3/16"	336		112	90	75	64	56	50	45	41	37
	Hilti X-ENP-19 L15	≥ 1/4"	705		235	188	157	119	91	72	59	48	41
	Hilti X-HSN 24	1/8" - 3/8"	435		145	116	97	83	73	64	58	48	41
	1/2" Eff. Arc Spot Weld	≥ 1/8"	953		318	234	163	119	91	72	59	48	41
	Simpson XL Screws	≥ 1/8"	385		128	103	86	73	64	57	51	47	41

Notes:

- Deck uplift table evaluates for the allowable bending stress of the panel and the allowable fastener capacity.
- Overall fastener capacities based on a minimum of: Fastener tensile capacity, Fastener pullout from substrate, and Deck pullover from fastener head.
- ITW Buildex TEKS fastener capacities per ICC-ES ESR1976 compliance report utilizing a min. substrate Fu=45ksi.
- Simpson XL fastener capacities per IAPMO-UES ER326 compliance report utilizing a min. substrate Fu=50ksi.
- Hilti X-HSN 24 and X-ENP-19 pin capacities per ICC-ES ESR-2197 compliance report utilizing a min substrate Fu=58ksi.
- Spot weld tensile capacities evaluated per AISI S100, Sec.J2.2.3 with a minimum effective weld diameter of 1/2".
- Shaded values represent conditions where panel capacity governs vs. fastener capacity.

B-36				Support Fastener Pattern: 36 / 4									
Allowable Wind Uplift Load (psf)													
Gauge	Fastener	Support Thickness	Fastener Capacity [lbs]	Span	Span (ft.-in.)								
					4	5	6	7	8	9	10	11	12
18	#12-14 ITW Buildex TEKS	16ga	165	Single Span	55	44	37	31	28	24	22	20	18
	#12-24 ITW Buildex TEKS	≥ 3/16"	448		149	119	100	85	75	66	60	53	45
	Hilti X-ENP-19 L15	≥ 1/4"	805		268	215	179	132	101	80	65	53	45
	Hilti X-HSN 24	1/8" - 3/8"	435		145	116	97	83	73	64	58	53	45
	1/2" Eff. Arc Spot Weld	≥ 1/8"	1292		405	259	180	132	101	80	65	53	45
	Simpson XL Screws	≥ 1/8"	385		128	103	86	73	64	57	51	47	43
	#12-14 ITW Buildex TEKS	16ga	165	Double Span	55	44	37	31	28	24	22	20	18
	#12-24 ITW Buildex TEKS	≥ 3/16"	448		149	119	100	85	75	66	60	53	45
	Hilti X-ENP-19 L15	≥ 1/4"	805		268	215	179	132	101	80	65	53	45
	Hilti X-HSN 24	1/8" - 3/8"	435		145	116	97	83	73	64	58	53	45
	1/2" Eff. Arc Spot Weld	≥ 1/8"	1292		405	259	180	132	101	80	65	53	45
	Simpson XL Screws	≥ 1/8"	385		128	103	86	73	64	57	51	47	43
	#12-14 ITW Buildex TEKS	16ga	165	Triple Span	55	44	37	31	28	24	22	20	18
	#12-24 ITW Buildex TEKS	≥ 3/16"	448		149	119	100	85	75	66	60	54	50
	Hilti X-ENP-19 L15	≥ 1/4"	805		268	215	179	153	126	100	81	67	56
	Hilti X-HSN 24	1/8" - 3/8"	435		145	116	97	83	73	64	58	53	48
	1/2" Eff. Arc Spot Weld	≥ 1/8"	1292		431	324	225	165	126	100	81	67	56
	Simpson XL Screws	≥ 1/8"	385		128	103	86	73	64	57	51	47	43

B-36				Support Fastener Pattern: 36 / 4									
Allowable Wind Uplift Load (psf)													
Gauge	Fastener	Support Thickness	Fastener Capacity [lbs]	Span	Span (ft.-in.)								
					4	5	6	7	8	9	10	11	12
16	#12-14 ITW Buildex TEKS	16ga	165	Single Span	55	44	37	31	28	24	22	20	18
	#12-24 ITW Buildex TEKS	≥ 3/16"	515		172	137	114	98	86	76	69	62	56
	Hilti X-ENP-19 L15	≥ 1/4"	880		293	235	196	165	126	100	81	67	56
	Hilti X-HSN 24	1/8" - 3/8"	435		145	116	97	83	73	64	58	53	48
	1/2" Eff. Arc Spot Weld	≥ 1/8"	1622		505	323	224	165	126	100	81	67	56
	Simpson XL Screws	≥ 1/8"	385		128	103	86	73	64	57	51	47	43
	#12-14 ITW Buildex TEKS	16ga	165	Double Span	55	44	37	31	28	24	22	20	18
	#12-24 ITW Buildex TEKS	≥ 3/16"	515		172	137	114	98	86	76	69	62	56
	Hilti X-ENP-19 L15	≥ 1/4"	880		293	235	196	165	126	100	81	67	56
	Hilti X-HSN 24	1/8" - 3/8"	435		145	116	97	83	73	64	58	53	48
	1/2" Eff. Arc Spot Weld	≥ 1/8"	1622		505	323	224	165	126	100	81	67	56
	Simpson XL Screws	≥ 1/8"	385		128	103	86	73	64	57	51	47	43
	#12-14 ITW Buildex TEKS	16ga	165	Triple Span	55	44	37	31	28	24	22	20	18
	#12-24 ITW Buildex TEKS	≥ 3/16"	515		172	137	114	98	86	76	69	62	57
	Hilti X-ENP-19 L15	≥ 1/4"	880		293	235	196	168	147	125	101	83	70
	Hilti X-HSN 24	1/8" - 3/8"	435		145	116	97	83	73	64	58	53	48
	1/2" Eff. Arc Spot Weld	≥ 1/8"	1622		541	404	280	206	158	125	101	83	70
	Simpson XL Screws	≥ 1/8"	385		128	103	86	73	64	57	51	47	43

Notes:

- Deck uplift table evaluates for the allowable bending stress of the panel and the allowable fastener capacity.
- Overall fastener capacities based on a minimum of: Fastener tensile capacity, Fastener pullout from substrate, and Deck pullover from fastener head.
- ITW Buildex TEKS fastener capacities per ICC-ES ESR1976 compliance report utilizing a min. substrate Fu=45ksi.
- Simpson XL fastener capacities per IAPMO-UES ER326 compliance report utilizing a min. substrate Fu=50ksi.
- Hilti X-HSN 24 and X-ENP-19 pin capacities per ICC-ES ESR-2197 compliance report utilizing a min substrate Fu=58ksi.
- Spot weld tensile capacities evaluated per AISI S100, Sec.J2.2.3 with a minimum effective weld diameter of 1/2".
- Shaded values represent conditions where panel capacity governs vs. fastener capacity.

2.2 DGB-36

Allowable Wind Uplift Loads



B-36				Support Fastener Pattern: 36 / 7									
Allowable Wind Uplift Load (psf)													
Gauge	Fastener	Support Thickness	Fastener Capacity [lbs]	Span	Span (ft.-in.)								
					4	5	6	7	8	9	10	11	12
22	#12-14 ITW Buildex TEKS	16ga	165	Single Span	96	77	64	55	48	43	37	31	26
	#12-24 ITW Buildex TEKS	≥ 3/16"	280		163	131	103	75	58	46	37	31	26
	Hilti X-ENP-19 L15	≥ 1/4"	660		231	148	103	75	58	46	37	31	26
	Hilti X-HSN 24	1/8" - 3/8"	435		231	148	103	75	58	46	37	31	26
	1/2" Eff. Arc Spot Weld	≥ 1/8"	787		231	148	103	75	58	46	37	31	26
	Simpson XL Screws	≥ 1/8"	385		225	148	103	75	58	46	37	31	26
	#12-14 ITW Buildex TEKS	16ga	165	Double Span	96	77	64	55	48	43	37	31	26
	#12-24 ITW Buildex TEKS	≥ 3/16"	280		163	131	103	75	58	46	37	31	26
	Hilti X-ENP-19 L15	≥ 1/4"	660		231	148	103	75	58	46	37	31	26
	Hilti X-HSN 24	1/8" - 3/8"	435		231	148	103	75	58	46	37	31	26
	1/2" Eff. Arc Spot Weld	≥ 1/8"	787		231	148	103	75	58	46	37	31	26
	Simpson XL Screws	≥ 1/8"	385		225	148	103	75	58	46	37	31	26
	#12-14 ITW Buildex TEKS	16ga	165	Triple Span	96	77	64	55	48	43	39	35	32
	#12-24 ITW Buildex TEKS	≥ 3/16"	280		163	131	109	93	72	57	46	38	32
	Hilti X-ENP-19 L15	≥ 1/4"	660		289	185	128	94	72	57	46	38	32
	Hilti X-HSN 24	1/8" - 3/8"	435		254	185	128	94	72	57	46	38	32
	1/2" Eff. Arc Spot Weld	≥ 1/8"	787		289	185	128	94	72	57	46	38	32
	Simpson XL Screws	≥ 1/8"	385		225	180	128	94	72	57	46	38	32

B-36				Support Fastener Pattern: 36 / 7									
Allowable Wind Uplift Load (psf)													
Gauge	Fastener	Support Thickness	Fastener Capacity [lbs]	Span	Span (ft.-in.)								
					4	5	6	7	8	9	10	11	12
20	#12-14 ITW Buildex TEKS	16ga	165	Single Span	96	77	64	55	48	43	39	35	32
	#12-24 ITW Buildex TEKS	≥ 3/16"	336		196	157	130	96	73	58	47	39	33
	Hilti X-ENP-19 L15	≥ 1/4"	705		293	187	130	96	73	58	47	39	33
	Hilti X-HSN 24	1/8" - 3/8"	435		254	187	130	96	73	58	47	39	33
	1/2" Eff. Arc Spot Weld	≥ 1/8"	953		293	187	130	96	73	58	47	39	33
	Simpson XL Screws	≥ 1/8"	385		225	180	130	96	73	58	47	39	33
	#12-14 ITW Buildex TEKS	16ga	165	Double Span	96	77	64	55	48	43	39	35	32
	#12-24 ITW Buildex TEKS	≥ 3/16"	336		196	157	130	96	73	58	47	39	33
	Hilti X-ENP-19 L15	≥ 1/4"	705		293	187	130	96	73	58	47	39	33
	Hilti X-HSN 24	1/8" - 3/8"	435		254	187	130	96	73	58	47	39	33
	1/2" Eff. Arc Spot Weld	≥ 1/8"	953		293	187	130	96	73	58	47	39	33
	Simpson XL Screws	≥ 1/8"	385		225	180	130	96	73	58	47	39	33
	#12-14 ITW Buildex TEKS	16ga	165	Triple Span	96	77	64	55	48	43	39	35	32
	#12-24 ITW Buildex TEKS	≥ 3/16"	336		196	157	131	112	91	72	59	48	41
	Hilti X-ENP-19 L15	≥ 1/4"	705		366	234	163	119	91	72	59	48	41
	Hilti X-HSN 24	1/8" - 3/8"	435		254	203	163	119	91	72	59	48	41
	1/2" Eff. Arc Spot Weld	≥ 1/8"	953		366	234	163	119	91	72	59	48	41
	Simpson XL Screws	≥ 1/8"	385		225	180	150	119	91	72	59	48	41

Notes:

- Deck uplift table evaluates for the allowable bending stress of the panel and the allowable fastener capacity.
- Overall fastener capacities based on a minimum of: Fastener tensile capacity, Fastener pullout from substrate, and Deck pullover from fastener head.
- ITW Buildex TEKS fastener capacities per ICC-ES ESR1976 compliance report utilizing a min. substrate Fu=45ksi.
- Simpson XL fastener capacities per IAPMO-UES ER326 compliance report utilizing a min. substrate Fu=50ksi.
- Hilti X-HSN 24 and X-ENP-19 pin capacities per ICC-ES ESR-2197 compliance report utilizing a min substrate Fu=58ksi.
- Spot weld tensile capacities evaluated per AISI S100, Sec.J2.2.3 with a minimum effective weld diameter of 1/2".
- Shaded values represent conditions where panel capacity governs vs. fastener capacity.

B-36				Support Fastener Pattern: 36 / 7									
Allowable Wind Uplift Load (psf)													
Gauge	Fastener	Support Thickness	Fastener Capacity [lbs]	Span	Span (ft.-in.)								
					4	5	6	7	8	9	10	11	12
18	#12-14 ITW Buildex TEKS	16ga	165	Single Span	96	77	64	55	48	43	39	35	32
	#12-24 ITW Buildex TEKS	≥ 3/16"	448		261	209	174	132	101	80	65	53	45
	Hilti X-ENP-19 L15	≥ 1/4"	805		405	259	180	132	101	80	65	53	45
	Hilti X-HSN 24	1/8" - 3/8"	435		254	203	169	132	101	80	65	53	45
	1/2" Eff. Arc Spot Weld	≥ 1/8"	1292		405	259	180	132	101	80	65	53	45
	Simpson XL Screws	≥ 1/8"	385		225	180	150	128	101	80	65	53	45
	#12-14 ITW Buildex TEKS	16ga	165	Double Span	96	77	64	55	48	43	39	35	32
	#12-24 ITW Buildex TEKS	≥ 3/16"	448		261	209	174	132	101	80	65	53	45
	Hilti X-ENP-19 L15	≥ 1/4"	805		405	259	180	132	101	80	65	53	45
	Hilti X-HSN 24	1/8" - 3/8"	435		254	203	169	132	101	80	65	53	45
	1/2" Eff. Arc Spot Weld	≥ 1/8"	1292		405	259	180	132	101	80	65	53	45
	Simpson XL Screws	≥ 1/8"	385		225	180	150	128	101	80	65	53	45
	#12-14 ITW Buildex TEKS	16ga	165	Triple Span	96	77	64	55	48	43	39	35	32
	#12-24 ITW Buildex TEKS	≥ 3/16"	448		261	209	174	149	126	100	81	67	56
	Hilti X-ENP-19 L15	≥ 1/4"	805		470	324	225	165	126	100	81	67	56
	Hilti X-HSN 24	1/8" - 3/8"	435		254	203	169	145	126	100	81	67	56
	1/2" Eff. Arc Spot Weld	≥ 1/8"	1292		506	324	225	165	126	100	81	67	56
	Simpson XL Screws	≥ 1/8"	385		225	180	150	128	112	100	81	67	56

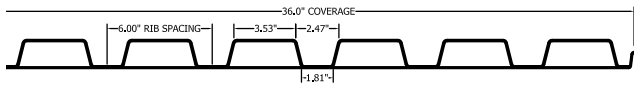
B-36				Support Fastener Pattern: 36 / 7									
Allowable Wind Uplift Load (psf)													
Gauge	Fastener	Support Thickness	Fastener Capacity [lbs]	Span	Span (ft.-in.)								
					4	5	6	7	8	9	10	11	12
16	#12-14 ITW Buildex TEKS	16ga	165	Single Span	96	77	64	55	48	43	39	35	32
	#12-24 ITW Buildex TEKS	≥ 3/16"	515		300	240	200	165	126	100	81	67	56
	Hilti X-ENP-19 L15	≥ 1/4"	880		505	323	224	165	126	100	81	67	56
	Hilti X-HSN 24	1/8" - 3/8"	435		254	203	169	145	126	100	81	67	56
	1/2" Eff. Arc Spot Weld	≥ 1/8"	1622		505	323	224	165	126	100	81	67	56
	Simpson XL Screws	≥ 1/8"	385		225	180	150	128	112	100	81	67	56
	#12-14 ITW Buildex TEKS	16ga	165	Double Span	96	77	64	55	48	43	39	35	32
	#12-24 ITW Buildex TEKS	≥ 3/16"	515		300	240	200	165	126	100	81	67	56
	Hilti X-ENP-19 L15	≥ 1/4"	880		505	323	224	165	126	100	81	67	56
	Hilti X-HSN 24	1/8" - 3/8"	435		254	203	169	145	126	100	81	67	56
	1/2" Eff. Arc Spot Weld	≥ 1/8"	1622		505	323	224	165	126	100	81	67	56
	Simpson XL Screws	≥ 1/8"	385		225	180	150	128	112	100	81	67	56
	#12-14 ITW Buildex TEKS	16ga	165	Triple Span	96	77	64	55	48	43	39	35	32
	#12-24 ITW Buildex TEKS	≥ 3/16"	515		300	240	200	172	150	125	101	83	70
	Hilti X-ENP-19 L15	≥ 1/4"	880		513	404	280	206	158	125	101	83	70
	Hilti X-HSN 24	1/8" - 3/8"	435		254	203	169	145	127	113	101	83	70
	1/2" Eff. Arc Spot Weld	≥ 1/8"	1622		631	404	280	206	158	125	101	83	70
	Simpson XL Screws	≥ 1/8"	385		225	180	150	128	112	100	90	82	70

Notes:

- Deck uplift table evaluates for the allowable bending stress of the panel and the allowable fastener capacity.
- Overall fastener capacities based on a minimum of: Fastener tensile capacity, Fastener pullout from substrate, and Deck pullover from fastener head.
- ITW Buildex TEKS fastener capacities per ICC-ES ESR1976 compliance report utilizing a min. substrate Fu=45ksi.
- Simpson XL fastener capacities per IAPMO-UES ER326 compliance report utilizing a min. substrate Fu=50ksi.
- Hilti X-HSN 24 and X-ENP-19 pin capacities per ICC-ES ESR-2197 compliance report utilizing a min substrate Fu=58ksi.
- Spot weld tensile capacities evaluated per AISI S100, Sec.J2.2.3 with a minimum effective weld diameter of 1/2".
- Shaded values represent conditions where panel capacity governs vs. fastener capacity.

2.3 DGBF-36 & BF-36

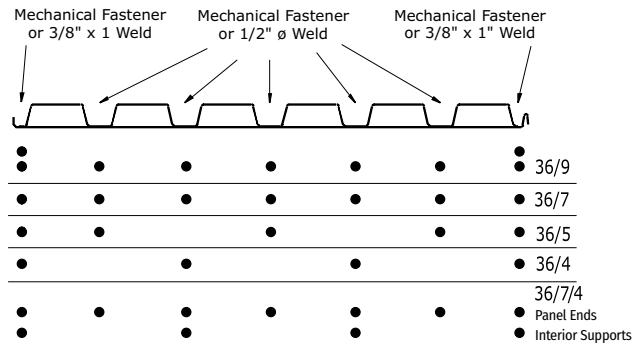
BF-36



Note: Weld sizes are effective not visible. Refer to AISI S100-2016 or AWS D1.3 for additional welding requirements.

*Die Set (Swedge) ends are no longer standard but can be performed upon request

Attachment Patterns



Panel Properties

Gauge	Weight	Base Metal Thickness	Yield Strength	Tensile Strength	Gross Section Properties				
					Area	Moment of Inertia	Distance to N.A. from Bottom	Section Modulus (Min.)	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
20/20	3.71	0.035/0.035	50	65	1.032	0.433	0.55	0.435	0.647
20/18	4.19	0.035/0.047	50	65	1.171	0.470	0.50	0.444	0.633
20/16	4.71	0.035/0.059	50	65	1.321	0.500	0.46	0.451	0.616
18/20	4.38	0.047/0.035	50	65	1.218	0.527	0.61	0.562	0.657
18/18	4.86	0.047/0.047	50	65	1.357	0.570	0.56	0.574	0.649
18/16	5.38	0.047/0.059	50	65	1.508	0.613	0.52	0.584	0.638
16/20	5.06	0.059/0.035	50	65	1.404	0.610	0.66	0.683	0.659
16/18	5.54	0.059/0.047	50	65	1.542	0.663	0.61	0.698	0.656
16/16	6.06	0.059/0.059	50	65	1.693	0.713	0.57	0.711	0.649

Gauge	Effective Section Properties at F _y for Bending Strength					Effective Section Properties at Service Load for Deflection			
	Area	Section Modulus (Min.)	Distance to N.A. from Bottom	Section Modulus (Min.)	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
20/20	0.912	0.270	0.42	0.404	0.77	0.387	0.373	0.402	0.393
20/18	1.050	0.276	0.38	0.428	0.63	0.417	0.437	0.434	0.448
20/16	1.201	0.280	0.35	0.445	0.51	0.443	0.490	0.462	0.493
18/20	1.100	0.404	0.52	0.487	0.80	0.503	0.443	0.511	0.471
18/18	1.239	0.412	0.47	0.546	0.71	0.547	0.520	0.554	0.537
18/16	1.389	0.420	0.43	0.573	0.59	0.587	0.590	0.596	0.598
16/20	1.305	0.555	0.59	0.554	0.83	0.607	0.513	0.608	0.546
16/18	1.443	0.566	0.55	0.658	0.77	0.657	0.600	0.659	0.621
16/16	1.594	0.577	0.51	0.693	0.65	0.707	0.677	0.709	0.689

Reactions at Supports (plf) Based on Web Crippling

Reactions at Supports based on Web Crippling									
Gauge	Condition	Bearing Length of Webs							
		ASD (Pn/Ω) (lbs/ft width)				LRFD (ΦPn) (lbs/ft width)			
		1"	1.5"	2"	3"	1"	1.5"	2"	3"
22	End	764	865	951	1094	1168	1324	1455	1674
	Interior	1185	1318	1429	1616	1763	1960	2125	2403
21	End	916	1036	1136	1305	1402	1585	1739	1997
	Interior	1431	1587	1718	1938	2129	2361	2556	2883
20	End	1071	1208	1323	1517	1638	1848	2024	2321
	Interior	1681	1860	2010	2263	2501	2766	2990	3366
19	End	1431	1607	1756	2006	2189	2459	2687	3069
	Interior	2267	2498	2693	3019	3372	3716	4005	4491
18	End	1816	2034	2217	2525	2779	3112	3393	3864
	Interior	2900	3185	3425	3828	4313	4737	5095	5694
16	End	2746	3058	3321	3762	4201	4678	5080	5755
	Interior	4439	4848	5193	5771	6603	7211	7724	8585
Constants		h = 1.23"		r = 0.156"		θ = 76.6°			

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

Inward Allowable (f_b/Ω) and Factored (Φf_b) Distributed Load (lbs/ft ²)											
Gauge	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"
20/20	Single Span	f_b/Ω	337	150	84	54	37	27	21	17	13
		Φf_b	506	225	127	81	56	41	32	25	20
		L/360	275	81	34	18	10	6	4	3	2
		L/240	412	122	51	26	15	10	6	5	3
		L/180	549	163	69	35	20	13	9	6	4
		L/120	824	244	103	53	31	19	13	9	7
	Double Span	f_b/Ω	504	224	126	81	56	41	31	25	20
		Φf_b	757	336	189	121	84	62	47	37	30
		L/360	647	192	81	41	24	15	10	7	5
		L/240	971	288	121	62	36	23	15	11	8
		L/180	1294	383	162	83	48	30	20	14	10
		L/120	1941	575	243	124	72	45	30	21	16
	Triple Span	f_b/Ω	526	234	132	84	58	43	33	26	21
		Φf_b	791	352	198	127	88	65	49	39	32
		L/360	507	150	63	32	19	12	8	6	4
		L/240	760	225	95	49	28	18	12	8	6
		L/180	1014	300	127	65	38	24	16	11	8
		L/120	1521	451	190	97	56	35	24	17	12
20/18	Single Span	f_b/Ω	344	153	86	55	38	28	21	17	14
		Φf_b	517	230	129	83	57	42	32	26	21
		L/360	297	88	37	19	11	7	5	3	2
		L/240	445	132	56	28	16	10	7	5	4
		L/180	593	176	74	38	22	14	9	7	5
		L/120	890	264	111	57	33	21	14	10	7
	Double Span	f_b/Ω	534	237	134	85	59	44	33	26	21
		Φf_b	803	357	201	129	89	66	50	40	32
		L/360	737	218	92	47	27	17	12	8	6
		L/240	1105	327	138	71	41	26	17	12	9
		L/180	1473	436	184	94	55	34	23	16	12
		L/120	2210	655	276	141	82	52	35	24	18
	Triple Span	f_b/Ω	537	239	134	86	60	44	34	27	21
		Φf_b	808	359	202	129	90	66	50	40	32
		L/360	577	171	72	37	21	13	9	6	5
		L/240	866	256	108	55	32	20	14	9	7
		L/180	1154	342	144	74	43	27	18	13	9
		L/120	1731	513	216	111	64	40	27	19	14
20/16	Single Span	f_b/Ω	350	155	87	56	39	29	22	17	14
		Φf_b	526	234	131	84	58	43	33	26	21
		L/360	316	94	39	20	12	7	5	3	3
		L/240	473	140	59	30	18	11	7	5	4
		L/180	631	187	79	40	23	15	10	7	5
		L/120	947	281	118	61	35	22	15	10	8
	Double Span	f_b/Ω	555	247	139	89	62	45	35	27	22
		Φf_b	834	371	209	134	93	68	52	41	33
		L/360	812	240	101	52	30	19	13	9	6
		L/240	1217	361	152	78	45	28	19	13	10
		L/180	1623	481	203	104	60	38	25	18	13
		L/120	2435	721	304	156	90	57	38	27	19
	Triple Span	f_b/Ω	546	243	137	87	61	45	34	27	22
		Φf_b	821	365	205	131	91	67	51	41	33
		L/360	636	188	79	41	24	15	10	7	5
		L/240	954	283	119	61	35	22	15	10	8
		L/180	1271	377	159	81	47	30	20	14	10
		L/120	1907	565	238	122	71	44	30	21	15

2.3 DGBF-36 & BF-36



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

Inward Allowable (f_b/Ω) and Factored (Φf_b) Distributed Load (lbs/ft ²)											
Gauge	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"
18/20	Single Span	f_b/Ω	504	224	126	81	56	41	31	25	20
		Φf_b	758	337	189	121	84	62	47	37	30
		L/360	349	103	44	22	13	8	5	4	3
		L/240	524	155	65	34	19	12	8	6	4
		L/180	698	207	87	45	26	16	11	8	6
		L/120	1047	310	131	67	39	24	16	11	8
	Double Span	f_b/Ω	607	270	152	97	67	50	38	30	24
		Φf_b	913	406	228	146	101	74	57	45	37
		L/360	775	230	97	50	29	18	12	9	6
		L/240	1162	344	145	74	43	27	18	13	9
		L/180	1550	459	194	99	57	36	24	17	12
		L/120	2325	689	291	149	86	54	36	26	19
	Triple Span	f_b/Ω	759	337	190	121	84	62	47	37	30
		Φf_b	1141	507	285	183	127	93	71	56	46
		L/360	607	180	76	39	22	14	9	7	5
		L/240	911	270	114	58	34	21	14	10	7
		L/180	1214	360	152	78	45	28	19	13	10
		L/120	1821	540	228	117	67	42	28	20	15
18/18	Single Span	f_b/Ω	514	229	129	82	57	42	32	25	21
		Φf_b	773	344	193	124	86	63	48	38	31
		L/360	379	112	47	24	14	9	6	4	3
		L/240	568	168	71	36	21	13	9	6	5
		L/180	757	224	95	48	28	18	12	8	6
		L/120	1136	337	142	73	42	26	18	12	9
	Double Span	f_b/Ω	681	303	170	109	76	56	43	34	27
		Φf_b	1023	455	256	164	114	84	64	51	41
		L/360	883	262	110	56	33	21	14	10	7
		L/240	1324	392	166	85	49	31	21	15	11
		L/180	1766	523	221	113	65	41	28	19	14
		L/120	2648	785	331	169	98	62	41	29	21
	Triple Span	f_b/Ω	804	357	201	129	89	66	50	40	32
		Φf_b	1208	537	302	193	134	99	76	60	48
		L/360	692	205	86	44	26	16	11	8	6
		L/240	1037	307	130	66	38	24	16	11	8
		L/180	1383	410	173	89	51	32	22	15	11
		L/120	2075	615	259	133	77	48	32	23	17
18/16	Single Span	f_b/Ω	524	233	131	84	58	43	33	26	21
		Φf_b	788	350	197	126	88	64	49	39	32
		L/360	407	120	51	26	15	9	6	4	3
		L/240	610	181	76	39	23	14	10	7	5
		L/180	813	241	102	52	30	19	13	9	7
		L/120	1220	361	153	78	45	28	19	13	10
	Double Span	f_b/Ω	715	318	179	114	79	58	45	35	29
		Φf_b	1074	478	269	172	119	88	67	53	43
		L/360	983	291	123	63	36	23	15	11	8
		L/240	1475	437	184	94	55	34	23	16	12
		L/180	1967	583	246	126	73	46	31	22	16
		L/120	2950	874	369	189	109	69	46	32	24
	Triple Span	f_b/Ω	819	364	205	131	91	67	51	40	33
		Φf_b	1230	547	308	197	137	100	77	61	49
		L/360	770	228	96	49	29	18	12	8	6
		L/240	1155	342	144	74	43	27	18	13	9
		L/180	1541	456	193	99	57	36	24	17	12
		L/120	2311	685	289	148	86	54	36	25	18

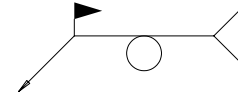
Inward Allowable (f_b/Ω) and Factored (Φf_b) Distributed Load (lbs/ft²)

Inward Allowable (f_b/Ω) and Factored (Φf_b) Distributed Load (lbs/ft ²)											
Gauge	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"
16/20	Single Span	f_b/Ω	692	308	173	111	77	56	43	34	28
		Φf_b	1040	462	260	166	116	85	65	51	42
		L/360	415	123	52	27	15	10	6	5	3
		L/240	623	184	78	40	23	15	10	7	5
		L/180	830	246	104	53	31	19	13	9	7
		L/120	1245	369	156	80	46	29	19	14	10
	Double Span	f_b/Ω	691	307	173	111	77	56	43	34	28
		Φf_b	1039	462	260	166	115	85	65	51	42
		L/360	897	266	112	57	33	21	14	10	7
		L/240	1346	399	168	86	50	31	21	15	11
		L/180	1795	532	224	115	66	42	28	20	14
		L/120	2692	798	337	172	100	63	42	30	22
	Triple Span	f_b/Ω	864	384	216	138	96	71	54	43	35
		Φf_b	1298	577	325	208	144	106	81	64	52
		L/360	703	208	88	45	26	16	11	8	6
		L/240	1055	312	132	67	39	25	16	12	8
		L/180	1406	417	176	90	52	33	22	15	11
		L/120	2109	625	264	135	78	49	33	23	17
16/18	Single Span	f_b/Ω	707	314	177	113	79	58	44	35	28
		Φf_b	1062	472	265	170	118	87	66	52	42
		L/360	450	133	56	29	17	10	7	5	4
		L/240	675	200	84	43	25	16	11	7	5
		L/180	900	267	112	58	33	21	14	10	7
		L/120	1350	400	169	86	50	31	21	15	11
	Double Span	f_b/Ω	821	365	205	131	91	67	51	41	33
		Φf_b	1234	549	309	198	137	101	77	61	49
		L/360	1022	303	128	65	38	24	16	11	8
		L/240	1533	454	192	98	57	36	24	17	12
		L/180	2043	605	255	131	76	48	32	22	16
		L/120	3065	908	383	196	114	71	48	34	25
	Triple Span	f_b/Ω	1027	456	257	164	114	84	64	51	41
		Φf_b	1543	686	386	247	171	126	96	76	62
		L/360	800	237	100	51	30	19	13	9	6
		L/240	1201	356	150	77	44	28	19	13	10
		L/180	1601	474	200	102	59	37	25	18	13
		L/120	2401	711	300	154	89	56	38	26	19
16/16	Single Span	f_b/Ω	719	320	180	115	80	59	45	36	29
		Φf_b	1081	481	270	173	120	88	68	53	43
		L/360	484	143	61	31	18	11	8	5	4
		L/240	726	215	91	46	27	17	11	8	6
		L/180	968	287	121	62	36	23	15	11	8
		L/120	1452	430	182	93	54	34	23	16	12
	Double Span	f_b/Ω	865	384	216	138	96	71	54	43	35
		Φf_b	1299	578	325	208	144	106	81	64	52
		L/360	1133	336	142	73	42	26	18	12	9
		L/240	1700	504	212	109	63	40	27	19	14
		L/180	2266	672	283	145	84	53	35	25	18
		L/120	3400	1007	425	218	126	79	53	37	27
	Triple Span	f_b/Ω	1081	480	270	173	120	88	68	53	43
		Φf_b	1624	722	406	260	180	133	102	80	65
		L/360	888	263	111	57	33	21	14	10	7
		L/240	1332	395	166	85	49	31	21	15	11
		L/180	1775	526	222	114	66	41	28	19	14
		L/120	2663	789	333	170	99	62	42	29	21

2.4 DGB-36 & DGBF-36

Arc Spot/Seam Welds to Supports with DeltaGrip® DG4™ Tool Side Seam Attachment

Diaphragm Shear in pounds per linear foot (plf)



*Die Set (Swedge) ends are no longer standard but can be performed upon request

Support Fastener Pattern	Gage	Seam Attach. Spacing	Allowable Shear (q _a) (plf), Factored Shear (q _f) (plf), and Flexibility Factor (G') (kip/in)																			
			Span →	4' - 0"		5' - 0"		6' - 0"		7' - 0"		8' - 0"		9' - 0"		10' - 0"		11' - 0"		12' - 0"		
36/4	16 ga	4"	q _a	q _f	2421	3994	2421	3994	2421	3994	2421	3994	2421	3994	2421	3994	2120	3393	1752	2804	1472	2356
			G'	342.4 +8.2R 340.6 +6.8R 339.3 +5.8R 338.4 +5.1R 337.8 +4.5R 337.2 +4.1R 336.8 +3.7R 336.4 +3.4R 336.2 +3.1R																		
		6"	q _a	q _f	2421	3994	2421	3994	2421	3994	2421	3994	2421	3994	2421	3994	2120	3393	1752	2804	1472	2356
			G'	304 +13.1R 301 +11R 299 +9.5R 297.5 +8.3R 296.4 +7.4R 295.5 +6.7R 294.8 +6.1R 294.2 +5.6R 293.7 +5.2R																		
		8"	q _a	q _f	2421	3994	2421	3994	2396	3953	2414	3983	2351	3879	2371	3913	2120	3393	1752	2804	1472	2356
			G'	275.7 +17.3R 278.2 +13.8R 268.9 +12.7R 271.8 +10.7R 265.3 +10R 268.1 +8.7R 263.1 +8.3R 265.7 +7.4R 261.7 +7R																		
		12"	q _a	q _f	2141	3533	2066	3409	2013	3321	1973	3255	1942	3204	1917	3164	1897	3131	1752	2804	1472	2356
			G'	236.7 +24.1R 230.9 +20.6R 227 +18R 224.1 +15.9R 221.8 +14.3R 220.1 +13R 218.7 +11.8R 217.5 +10.9R 216.5 +10.1R																		
		18"	q _a	q _f	1906	3533	1867	3081	1642	2710	1651	2724	1657	2734	1516	2501	1535	2533	1551	2559	1449	2356
			G'	211.1 +29R 209.9 +24R 188.5 +23.5R 191 +20.1R 192.9 +17.5R 179.4 +17.1R 182.2 +15.2R 184.4 +13.7R 174.6 +13.5R																		
		24"	q _a	q _f	1613	2661	1631	2690	1415	2335	1459	2407	1308	2158	1356	2237	1241	2048	1288	2125	1196	1973
			G'	179.7 +35.6R 185 +28.3R 164.6 +27.2R 171.1 +22.8R 156.6 +22R 162.8 +19R 151.7 +18.4R 157.4 +16.3R 148.3 +15.8R																		
	18 ga	4"	q _a	q _f	1900	3136	1900	3136	1900	3136	1900	3136	1900	3136	1869	2990	1514	2422	1251	2002	1051	1682
			G'	266.8 +8.2R 264.9 +6.8R 263.7 +5.9R 262.8 +5.2R 262.1 +4.6R 261.5 +4.1R 261.1 +3.8R 260.7 +3.5R 260.4 +3.2R																		
		6"	q _a	q _f	1900	3136	1900	3136	1900	3136	1900	3136	1900	3136	1869	2990	1514	2422	1251	2002	1051	1682
			G'	236.1 +12.7R 233.2 +10.7R 231.1 +9.3R 229.7 +8.2R 228.5 +7.3R 227.6 +6.6R 226.9 +6.1R 226.3 +5.6R 225.9 +5.2R																		
		8"	q _a	q _f	1900	3136	1900	3136	1891	3120	1900	3136	1857	3064	1869	2990	1514	2422	1251	2002	1051	1682
			G'	214 +16.5R 215.2 +13.3R 207.4 +12.3R 209.3 +10.4R 203.9 +9.7R 205.8 +8.5R 201.7 +8.1R 203.6 +7.2R 200.3 +6.9R																		
		12"	q _a	q _f	1691	2789	1632	2694	1591	2625	1560	2574	1536	2535	1517	2503	1501	2422	1251	2002	1051	1682
			G'	184.2 +22.3R 178.8 +19.2R 175 +16.9R 172.2 +15R 170.1 +13.5R 168.4 +12.3R 167 +11.3R 165.9 +10.4R 165 +9.7R																		
		18"	q _a	q _f	1505	2789	1476	2435	1299	2143	1306	2155	1312	2164	1200	1980	1216	2006	1229	2002	1051	1682
			G'	165.1 +26.4R 162.9 +22.1R 146 +21.6R 147.1 +18.6R 148 +16.3R 137.4 +15.9R 139.1 +14.3R 140.6 +12.9R 132.9 +12.6R																		
		24"	q _a	q _f	1273	2101	1289	2127	1119	1847	1154	1905	1036	1709	1074	1772	984	1623	1021	1684	948	1564
			G'	142 +31.7R 144.4 +25.7R 128.2 +24.7R 132.2 +20.9R 120.8 +20.1R 125 +17.5R 116.2 +16.9R 120.1 +15R 113.1 +14.6R																		
	20 ga	4"	q _a	q _f	1121	1850	1121	1850	1121	1850	1121	1850	1121	1850	1121	1850	982	1570	811	1298	682	1091
			G'	194 +8R 192.1 +6.8R 190.8 +5.9R 189.9 +5.2R 189.2 +4.6R 188.6 +4.2R 188.2 +3.8R 187.8 +3.5R 187.5 +3.2R																		
		6"	q _a	q _f	1121	1850	1121	1850	1121	1850	1121	1850	1121	1850	1121	1850	982	1570	811	1298	682	1091
			G'	171.3 +12R 168.4 +10.2R 166.4 +9R 165 +7.9R 163.9 +7.1R 163 +6.5R 162.3 +5.9R 161.7 +5.5R 161.2 +5.1R																		
		8"	q _a	q _f	1121	1850	1121	1850	1121	1850	1121	1850	1113	1837	1121	1850	982	1570	811	1298	682	1091
			G'	155.4 +15.1R 155.4 +12.4R 149.1 +11.5R 150 +9.9R 145.7 +9.3R 146.9 +8.2R 143.7 +7.7R 144.8 +7R 142.2 +6.6R																		
		12"	q _a	q _f	1013	1672	980	1617	957	1579	939	1550	926	1527	915	1509	906	1495	811	1298	682	1091
			G'	134.6 +19.8R 129.6 +17.3R 126.1 +15.4R 123.5 +13.8R 121.5 +12.5R 119.9 +11.4R 118.7 +10.5R 117.6 +9.7R 116.7 +9R																		
		18"	q _a	q _f	903	1672	887	1464	783	1291	788	1300	792	1307	726	1197	736	1214	744	1227	682	1091
			G'	121.6 +23R 118.7 +19.6R 106.1 +19.1R 106.1 +16.6R 106.1 +14.8R 98.3 +14.4R 99.1 +12.9R 99.8 +11.7R 94.1 +11.5R																		
		24"	q _a	q _f	764	1260	775	1279	674	1113	697	1150	626	1033	650	1072	595	982	618	1020	575	948
			G'	106.3 +27R 106.1 +22.4R 94.1 +21.5R 95.9 +18.4R 87.5 +17.7R 89.8 +15.6R 83.3 +15R 85.7 +13.5R 80.5 +13.1R																		
	22 ga	4"	q _a	q _f	805	1329	805	1329	805	1329	805	1329	805	1329	805	1329	750	1199	620	991	521	833
			G'	158.3 +7.8R 156.5 +6.6R 155.2 +5.8R 154.2 +5.1R 153.5 +4.6R 153 +4.2R 152.5 +3.8R 152.2 +3.5R 151.8 +3.2R																		
		6"	q _a	q _f	805	1329	805	1329	805	1329	805	1329	805	1329	805	1329	750	1199	620	991	521	833
			G'	139.8 +11.4R 137 +9.8R 135.1 +8.7R 133.6 +7.7R 132.5 +7R 131.7 +6.3R 131 +5.8R 130.4 +5.4R 129.9 +5R																		
		8"	q _a	q _f	805	1329	805	1329	804	1327	805	1329	790	1304	797	1315	750	1199	620	991	521	833
			G'	127.1 +14.2R 126.5 +11.8R 121 +11R 121.5 +9.5R 117.7 +8.9R 118.5 +7.9R 115.7 +7.5R 116.5 +6.7R 114.3 +6.4R																		
		12"	q _a	q _f	719	1187	695	1146	677	1118	664	1096	654	1080	646	1067	640	1056	620	991	521	833
			G'	110.7 +18.2R 106 +16.1R 102.7 +14.3R 100.2 +12.9R 98.3 +11.7R 96.8 +10.8R 95.6 +9.9R 94.6 +9.2R 93.7 +8.6R																		
		18"	q _a	q _f	641	1187	628	1037	553	913	557	919	559	923	512	844	519	856	524	865	490	808
			G'	100.6 +20.9R 97.4 +18R 87 +17.5R 86.5 +15.4R 86.1 +13.7R 79.7 +13.3R 80.1 +12.1R 80.4 +11R 75.8 +10.7R																		
		24"	q _a	q _f	542	894	549	906	477	787	492	812	441	728	458	756	419	692	435	718	404	667
			G'	88.9 +24.2R 87.8 +20.3R 77.8 +19.5R 78.6 +16.9R 71.7 +16.2R 73 +14.4R 67.8 +13.9R 69.3 +12.5R 65.1 +12.1R																		
DGB-36 36/4 Support Attachment: 0.5" Effective Dia. Arc Spot Weld Side Seam Attachment: DeltaGrip DG4™																						

DGB-36 36/4

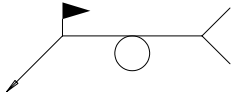
Support Attachment: 0.5" Effective Dia. Arc Spot Weld

Side Seam Attachment: DeltaGrip DG4™

Patent Number: 11,872,644

DGB-36 & DGBF-36 2.4

Arc Spot/Seam Welds to Supports with
DeltaGrip® DG4™ Tool Side Seam Attachment
Diaphragm Shear in pounds per linear foot (plf)



Support Fastener Pattern	Gage	Seam Attach. Spacing	Allowable Shear (q _a) (plf), Factored Shear (q _f) (plf), and Flexibility Factor (G') (kip/in)																			
			Span →	4' - 0"		5' - 0"		6' - 0"		7' - 0"		8' - 0"		9' - 0"		10' - 0"		11' - 0"		12' - 0"		
36/7/4	16 ga	4"	q _a	q _f	4406	7271	4354	7184	4318	7124	4291	6924	3313	5301	2618	4188	2120	3393	1752	2804	1472	2356
			G'		342.7 +15.4R		340.8 +13R		339.5 +11.2R		338.6 +9.9R		337.9 +8.8R		337.3 +7.9R		336.9 +7.2R		336.5 +6.7R		336.2 +6.1R	
		6"	q _a	q _f	3761	6206	3673	6060	3611	5958	3565	5882	3313	5301	2618	4188	2120	3393	1752	2804	1472	2356
			G'		304.7 +24.2R		301.5 +20.6R		299.3 +18R		297.7 +15.9R		296.6 +14.3R		295.6 +12.9R		294.9 +11.8R		294.3 +10.9R		293.8 +10.1R	
		8"	q _a	q _f	3287	5423	3283	5416	3092	5102	3118	5144	2988	4931	2618	4188	2120	3393	1752	2804	1472	2356
			G'		276.7 +31.7R		278.9 +25.7R		269.4 +23.9R		272.2 +20.3R		265.6 +19.1R		268.3 +16.8R		263.3 +15.9R		265.8 +14.3R		261.8 +13.6R	
		12"	q _a	q _f	2678	4418	2532	4179	2432	4013	2358	3891	2302	3798	2258	3725	2120	3393	1752	2804	1472	2356
			G'		238.3 +43.2R		232.1 +37.7R		227.8 +33.3R		224.7 +29.8R		222.4 +27R		220.5 +24.6R		219.1 +22.6R		217.8 +21R		216.8 +19.5R	
		18"	q _a	q _f	2317	4418	2235	3687	1908	3149	1905	3143	1903	3139	1712	2824	1729	2854	1744	2804	1472	2356
			G'		213.2 +51.5R		211.3 +43.5R		189.8 +43R		192 +37.3R		193.6 +32.9R		180.1 +32.3R		182.7 +28.9R		184.9 +26.2R		175 +25.8R	
		24"	q _a	q _f	1919	3167	1913	3156	1623	2677	1661	2741	1468	2423	1516	2502	1374	2267	1422	2347	1307	2156
			G'		182.5 +62.4R		186.9 +51R		166.2 +49.6R		172.3 +42.1R		157.7 +40.9R		163.6 +35.7R		152.4 +34.7R		157.9 +30.9R		148.8 +30.1R	
	18 ga	4"	q _a	q _f	3476	5735	3436	5669	3408	5623	3089	4943	2365	3784	1869	2990	1514	2422	1251	2002	1051	1682
			G'		267.2 +15.2R		265.2 +12.9R		263.9 +11.2R		262.9 +9.9R		262.2 +8.9R		261.6 +8R		261.2 +7.3R		260.8 +6.7R		260.5 +6.2R	
		6"	q _a	q _f	2972	4903	2903	4790	2855	4711	2820	4653	2365	3784	1869	2990	1514	2422	1251	2002	1051	1682
			G'		236.9 +23.1R		233.7 +19.9R		231.5 +17.5R		230 +15.5R		228.8 +14R		227.8 +12.7R		227.1 +11.7R		226.5 +10.8R		226 +10R	
		8"	q _a	q _f	2599	4288	2597	4284	2447	4038	2468	4072	2365	3784	1869	2990	1514	2422	1251	2002	1051	1682
			G'		215.1 +29.6R		216 +24.4R		208 +22.8R		209.7 +19.6R		204.2 +18.4R		206.1 +16.3R		202 +15.4R		203.8 +13.9R		200.5 +13.3R	
		12"	q _a	q _f	2118	3494	2004	3307	1926	3178	1868	3083	1825	3011	1790	2954	1514	2422	1251	2002	1051	1682
			G'		185.9 +39.4R		180 +34.7R		175.9 +30.9R		172.9 +27.9R		170.7 +25.3R		168.9 +23.2R		167.4 +21.4R		166.3 +19.9R		165.3 +18.5R	
		18"	q _a	q _f	1832	3494	1768	2918	1511	2493	1509	2490	1508	2488	1357	2239	1371	2263	1251	2002	1051	1682
			G'		167.2 +46.1R		164.4 +39.6R		147.3 +39.1R		148.1 +34.2R		148.7 +30.4R		138.1 +29.8R		139.7 +26.8R		141 +24.4R		133.3 +24R	
		24"	q _a	q _f	1516	2502	1513	2496	1284	2118	1315	2170	1163	1919	1202	1983	1087	1794	1128	1861	1037	1682
			G'		144.8 +54.8R		146.2 +45.6R		129.8 +44.4R		133.4 +38.1R		121.9 +37R		125.8 +32.6R		116.9 +31.7R		120.7 +28.4R		113.6 +27.6R	
	20 ga	4"	q _a	q _f	2078	3429	2056	3392	2040	3366	2003	3205	1534	2454	1212	1939	982	1570	811	1298	682	1091
			G'		194.4 +14.6R		192.4 +12.6R		191.1 +11R		190.1 +9.8R		189.3 +8.8R		188.8 +8R		188.3 +7.3R		187.9 +6.8R		187.6 +6.3R	
		6"	q _a	q _f	1785	2944	1746	2881	1719	2836	1699	2803	1534	2454	1212	1939	982	1570	811	1298	682	1091
			G'		172.1 +21.4R		169 +18.7R		166.9 +16.6R		165.3 +14.8R		164.1 +13.4R		163.2 +12.3R		162.5 +11.3R		161.9 +10.5R		161.4 +9.7R	
		8"	q _a	q _f	1564	2580	1565	2582	1477	2438	1491	2460	1431	2362	1212	1939	982	1570	811	1298	682	1091
			G'		156.6 +26.7R		156.2 +22.5R		149.7 +21.1R		150.5 +18.3R		146.2 +17.3R		147.2 +15.4R		143.9 +14.6R		145.1 +13.2R		142.5 +12.7R	
		12"	q _a	q _f	1276	2105	1210	1996	1165	1921	1131	1867	1106	1825	1086	1791	982	1570	811	1298	682	1091
			G'		136.3 +34.3R		130.9 +30.7R		127.1 +27.7R		124.3 +25.2R		122.2 +23R		120.5 +21.2R		119.1 +19.7R		118 +18.3R		117 +17.1R	
		18"	q _a	q _f	1103	2105	1067	1761	913	1506	913	1507	914	1508	823	1358	833	1374	811	1298	682	1091
			G'		123.7 +39.4R		120.2 +34.5R		107.4 +34R		107.1 +30.1R		106.9 +27R		99 +26.5R		99.7 +24R		100.3 +22R		94.6 +21.6R	
		24"	q _a	q _f	911	1503	912	1505	775	1278	795	1312	704	1161	728	1202	660	1089	685	1130	631	1041
			G'		108.9 +45.7R		108 +39R		95.7 +38R		97.1 +33.2R		88.6 +32.2R		90.6 +28.7R		84.1 +27.8R		86.3 +25.1R		81.1 +24.4R	
	22 ga	4"	q _a	q _f	1478	2438	1461	2411	1449	2392	1441	2377	1171	1874	926	1481	750	1199	620	991	521	833
			G'		158.8 +14.1R		156.8 +12.2R		155.4 +10.8R		154.5 +9.6R		153.7 +8.7R		153.1 +7.9R		152.6 +7.3R		152.3 +6.7R		151.9 +6.3R	
		6"	q _a	q _f	1265	2087	1236	2040	1216	2007	1201	1982	1171	1874	926	1481	750	1199	620	991	521	833
			G'		140.7 +20.1R		137.6 +17.7R		135.5 +15.8R		134 +14.3R		132.8 +13R		131.9 +11.9R		131.2 +11R		130.6 +10.2R		130.1 +9.5R	
		8"	q _a	q _f	1107	1826	1106	1825	1043	1721	1052	1736	1009	1665	926	1481	750	1199	620	991	521	833
G'			128.3 +24.7R		127.3 +21.1R		121.7 +19.8R		122 +17.4R		118.2 +16.4R		118.9 +14.7R		116 +14R		116.8 +12.7R		114.6 +12.2R			
12"		q _a	q _f	902	1488	854	1410	821	1355	797	1315	778	1284	764	1260	750	1199	620	991	521	833	
		G'		112.4 +31.1R		107.3 +28.1R		103.7 +25.5R		101 +23.3R		99 +21.5R		97.4 +19.9R		96.1 +18.5R		95 +17.2R		94.1 +16.2R		
18"		q _a	q _f	780	1488	754	1243	644	1063	644	1062	643	1061	579	955	585	966	590	974	521	833	
		G'		102.7 +35.3R		99 +31.3R		88.4 +30.9R		87.5 +27.6R		87 +24.9R		80.4 +24.4R		80.7 +22.2R		80.9 +20.4R		76.3 +20R		
24"		q _a	q _f	645	1065	645	1064	547	903	561	925	495	816	513	846	463	765	481	794	443	731	
		G'		91.4 +40.4R		89.6 +35R		79.4 +34.2R		79.8 +30.1R		72.7 +29.2R		73.9 +26.2R		68.5 +25.4R		70 +23.1R		65.7 +22.5R		
			DGB-36 36/7/4 Support Attachment: 0.5" Effective Dia. Arc Spot Weld Side Seam Attachment: DeltaGrip DG4™																			

2.5 DGB-36 & DGBF-36

No. 12 Self-Drilling Screws to Supports with DeltaGrip® DG4™ Tool Side Seam Attachment

Diaphragm Shear in pounds per linear foot (plf)



Support Fastener Pattern	Gage	Seam Attach. Spacing	Allowable Shear (q _a) (plf), Factored Shear (q _f) (plf), and Flexibility Factor (G') (kip/in)																	
			Span →	4' - 0"		5' - 0"		6' - 0"		7' - 0"		8' - 0"		9' - 0"		10' - 0"		11' - 0"		12' - 0"
36/4	16 ga	4"	q _a	q _f	817	1316	817	1316	817	1316	817	1316	817	1316	817	1316	817	1316	817	1316
			G'	341.4 +7.4R		339.7 +6.2R		338.6 +5.3R		337.8 +4.6R		337.2 +4.1R		336.7 +3.6R		336.4 +3.3R		336 +3R		335.8 +2.8R
		6"	q _a	q _f	817	1316	817	1316	817	1316	817	1316	817	1316	817	1316	817	1316	817	1316
			G'	302.3 +11.9R		299.6 +10R		297.8 +8.6R		296.4 +7.5R		295.4 +6.7R		294.7 +6R		294 +5.5R		293.5 +5R		293.1 +4.6R
		8"	q _a	q _f	817	1316	817	1316	817	1316	817	1316	817	1316	817	1316	817	1316	817	1316
			G'	273.4 +15.9R		276.5 +12.5R		267.2 +11.5R		270.5 +9.7R		264.1 +9R		267 +7.9R		262.1 +7.4R		264.8 +6.6R		260.8 +6.3R
		12"	q _a	q _f	817	1316	817	1316	817	1316	817	1316	817	1316	817	1316	817	1316	817	1316
			G'	233.4 +22.1R		228.2 +18.8R		224.6 +16.3R		222 +14.4R		220 +12.9R		218.5 +11.7R		217.2 +10.7R		216.2 +9.8R		215.3 +9.1R
		18"	q _a	q _f	817	1316	817	1316	817	1316	817	1316	817	1316	817	1316	817	1316	817	1316
			G'	207.1 +26.8R		206.7 +22R		185.4 +21.4R		188.4 +18.2R		190.6 +15.9R		177.2 +15.5R		180.3 +13.7R		182.7 +12.4R		172.9 +12.1R
		24"	q _a	q _f	817	1316	817	1316	817	1316	817	1316	817	1316	817	1316	817	1316	817	1316
			G'	174.6 +33R		181.2 +26R		161 +24.9R		168.1 +20.7R		153.8 +19.9R		160.4 +17.2R		149.3 +16.6R		155.3 +14.7R		146.3 +14.2R
	18 ga	4"	q _a	q _f	786	1265	786	1265	786	1265	786	1265	786	1265	786	1265	786	1265	786	1265
			G'	265.7 +7.4R		264.1 +6.2R		262.9 +5.3R		262.1 +4.6R		261.5 +4.1R		261 +3.7R		260.6 +3.4R		260.3 +3.1R		260 +2.8R
		6"	q _a	q _f	786	1265	786	1265	786	1265	786	1265	786	1265	786	1265	786	1265	786	1265
			G'	234.4 +11.6R		231.8 +9.8R		229.9 +8.4R		228.6 +7.4R		227.6 +6.6R		226.8 +6R		226.2 +5.4R		225.7 +5R		225.2 +4.6R
		8"	q _a	q _f	786	1265	786	1265	786	1265	786	1265	786	1265	786	1265	786	1265	786	1265
			G'	211.8 +15.1R		213.5 +12.1R		205.8 +11.1R		208 +9.4R		202.6 +8.8R		204.8 +7.7R		200.7 +7.3R		202.7 +6.5R		199.4 +6.2R
		12"	q _a	q _f	786	1265	786	1265	786	1265	786	1265	786	1265	786	1265	786	1265	786	1265
			G'	181.1 +20.6R		176.2 +17.6R		172.7 +15.4R		170.2 +13.7R		168.3 +12.3R		166.8 +11.1R		165.6 +10.2R		164.6 +9.4R		163.8 +8.7R
		18"	q _a	q _f	786	1265	786	1265	786	1265	786	1265	786	1265	786	1265	786	1265	786	1265
			G'	161.3 +24.5R		159.8 +20.3R		143 +19.8R		144.6 +16.9R		145.8 +14.8R		135.3 +14.4R		137.3 +12.9R		138.9 +11.6R		131.3 +11.4R
		24"	q _a	q _f	786	1265	786	1265	786	1265	786	1265	783	1261	786	1265	775	1247	786	1265
			G'	137.4 +29.6R		140.8 +23.7R		124.9 +22.7R		129.4 +19.1R		118.2 +18.3R		122.7 +15.9R		114 +15.3R		118.2 +13.6R		111.2 +13.2R
	20 ga	4"	q _a	q _f	592	953	592	953	592	953	592	953	592	953	592	953	592	953	592	953
			G'	192.9 +7.3R		191.2 +6.1R		190.1 +5.3R		189.2 +4.7R		188.6 +4.2R		188.1 +3.7R		187.7 +3.4R		187.4 +3.1R		187.1 +2.9R
		6"	q _a	q _f	592	953	592	953	592	953	592	953	592	953	592	953	592	953	592	953
			G'	169.7 +11R		167.1 +9.4R		165.3 +8.1R		164 +7.2R		163 +6.5R		162.2 +5.8R		161.5 +5.3R		161 +4.9R		160.6 +4.5R
		8"	q _a	q _f	592	953	592	953	592	953	592	953	592	953	592	953	592	953	592	953
			G'	153.3 +14R		153.7 +11.4R		147.6 +10.5R		148.8 +9R		144.5 +8.4R		145.9 +7.4R		142.7 +7R		144 +6.3R		141.4 +6R
		12"	q _a	q _f	592	953	592	953	592	953	592	953	592	953	592	953	592	953	592	953
			G'	131.8 +18.4R		127.2 +16R		124 +14.1R		121.7 +12.6R		119.9 +11.4R		118.5 +10.3R		117.3 +9.5R		116.4 +8.8R		115.6 +8.2R
		18"	q _a	q _f	592	953	592	953	592	953	592	953	592	953	592	953	592	953	592	953
			G'	118.3 +21.5R		115.9 +18.1R		103.4 +17.6R		103.8 +15.3R		104.1 +13.5R		96.4 +13.1R		97.4 +11.7R		98.2 +10.6R		92.7 +10.4R
		24"	q _a	q _f	578	930	592	953	554	892	578	931	541	871	563	906	533	858	552	889
			G'	102.2 +25.4R		102.9 +20.8R		91.1 +19.9R		93.4 +16.9R		85.1 +16.2R		87.7 +14.2R		81.4 +13.7R		83.9 +12.2R		78.8 +11.8R
	22 ga	4"	q _a	q _f	493	793	493	793	493	793	493	793	493	793	493	793	493	793	493	793
			G'	157.2 +7.2R		155.6 +6.1R		154.4 +5.3R		153.6 +4.6R		153 +4.1R		152.5 +3.7R		152.1 +3.4R		151.7 +3.1R		151.4 +2.9R
		6"	q _a	q _f	493	793	493	793	493	793	493	793	493	793	493	793	493	793	493	793
			G'	138.2 +10.5R		135.7 +9R		133.9 +7.9R		132.6 +7R		131.6 +6.3R		130.9 +5.7R		130.2 +5.2R		129.7 +4.8R		129.3 +4.5R
		8"	q _a	q _f	493	793	493	793	493	793	493	793	493	793	493	793	493	793	493	793
			G'	125 +13.2R		124.8 +10.9R		119.5 +10R		120.2 +8.6R		116.6 +8.1R		117.5 +7.1R		114.8 +6.7R		115.7 +6.1R		113.5 +5.8R
		12"	q _a	q _f	493	793	493	793	493	793	493	793	493	793	493	793	493	793	493	793
			G'	108 +17R		103.7 +14.9R		100.7 +13.2R		98.5 +11.8R		96.8 +10.7R		95.4 +9.8R		94.3 +9R		93.4 +8.3R		92.6 +7.8R
		18"	q _a	q _f	493	793	493	793	482	776	490	789	493	793	469	756	477	768	483	777
			G'	97.5 +19.6R		94.9 +16.7R		84.5 +16.2R		84.4 +14.2R		84.3 +12.6R		77.9 +12.2R		78.5 +11R		79 +10R		74.4 +9.7R
		24"	q _a	q _f	451	726	471	758	427	687	447	719	414	666	432	695	405	653	421	678
			G'	85.2 +22.8R		84.8 +18.9R		75 +18.1R		76.3 +15.6R		69.4 +14.9R		71.1 +13.2R		65.9 +12.7R		67.7 +11.4R		63.5 +11R
DGB-36 36/4				Support Attachment: #12 SD HWH Screw				Side Seam Attachment: DeltaGrip DG4™												

DGB-36 36/4

Support Attachment: #12 SD HWH Screw

Side Seam Attachment: DeltaGrip DG4™

Patent Number: 11,872,644

DGB-36 & DGBF-36 2.5

No. 12 Self-Drilling Screws to Supports with DeltaGrip® DG4™ Tool Side Seam Attachment

Diaphragm Shear in pounds per linear foot (plf)



Support Fastener Pattern	Gage	Seam Attach. Spacing	Allowable Shear (q _a) (plf), Factored Shear (q _f) (plf), and Flexibility Factor (G') (kip/in)																			
			Span →		4' - 0"		5' - 0"		6' - 0"		7' - 0"		8' - 0"		9' - 0"		10' - 0"		11' - 0"		12' - 0"	
			q _a	q _f	q _a	q _f	q _a	q _f	q _a	q _f	q _a	q _f	q _a	q _f	q _a	q _f	q _a	q _f	q _a	q _f	q _a	q _f
36/7/4	16 ga	4"	q _a	q _f	1635	2632	1635	2632	1635	2632	1635	2632	1635	2632	1635	2632	1635	2632	1635	2632	1472	2356
			G'	341.6 +14.1R 339.9 +11.8R 338.7 +10.1R 337.9 +8.9R 337.3 +7.9R 336.8 +7.1R 336.4 +6.5R 336.1 +6R 335.8 +5.5R																		
		6"	q _a	q _f	1635	2632	1635	2632	1635	2632	1635	2632	1635	2632	1635	2632	1635	2632	1635	2632	1472	2356
			G'	302.8 +22.2R 300 +18.8R 298.1 +16.3R 296.7 +14.4R 295.6 +12.9R 294.8 +11.6R 294.1 +10.6R 293.6 +9.8R 293.1 +9R																		
		8"	q _a	q _f	1635	2632	1635	2632	1635	2632	1635	2632	1635	2632	1635	2632	1635	2632	1635	2632	1472	2356
			G'	274.2 +29.2R 277 +23.5R 267.7 +21.8R 270.8 +18.5R 264.3 +17.3R 267.2 +15.2R 262.3 +14.4R 264.9 +12.9R 260.9 +12.3R																		
		12"	q _a	q _f	1603	2581	1592	2563	1584	2550	1578	2541	1574	2534	1570	2528	1567	2523	1565	2519	1472	2356
			G'	234.7 +40.1R 229.2 +34.7R 225.3 +30.5R 222.6 +27.2R 220.5 +24.5R 218.8 +22.3R 217.5 +20.5R 216.4 +18.9R 215.5 +17.6R																		
		18"	q _a	q _f	1470	2581	1486	2392	1372	2208	1401	2256	1422	2289	1345	2165	1369	2205	1389	2236	1330	2142
			G'	208.9 +48.1R 207.9 +40.3R 186.5 +39.6R 189.2 +34.1R 191.2 +30R 177.7 +29.4R 180.7 +26.3R 183.1 +23.7R 173.3 +23.3R																		
		24"	q _a	q _f	1250	2013	1327	2136	1198	1928	1266	2038	1169	1883	1228	1978	1152	1855	1203	1938	1140	1835
			G'	177 +58.6R 182.7 +47.3R 162.3 +45.8R 169.1 +38.6R 154.6 +37.4R 161.1 +32.5R 149.9 +31.6R 155.8 +28R 146.7 +27.3R																		
	18 ga	4"	q _a	q _f	1571	2530	1571	2530	1571	2530	1571	2530	1571	2530	1571	2530	1514	2422	1251	2002	1051	1682
			G'	266.1 +13.9R 264.3 +11.7R 263.1 +10.2R 262.2 +8.9R 261.6 +8R 261.1 +7.2R 260.7 +6.6R 260.4 +6R 260.1 +5.6R																		
		6"	q _a	q _f	1571	2530	1571	2530	1571	2530	1571	2530	1571	2530	1571	2530	1514	2422	1251	2002	1051	1682
			G'	235 +21.3R 232.2 +18.2R 230.3 +15.9R 228.9 +14.1R 227.8 +12.7R 227 +11.5R 226.3 +10.5R 225.8 +9.7R 225.3 +9R																		
		8"	q _a	q _f	1571	2530	1571	2530	1571	2530	1571	2530	1571	2530	1571	2530	1514	2422	1251	2002	1051	1682
			G'	212.7 +27.5R 214.1 +22.5R 206.3 +20.9R 208.3 +17.8R 202.9 +16.7R 205 +14.7R 200.9 +14R 202.9 +12.5R 199.6 +12R																		
		12"	q _a	q _f	1460	2351	1445	2326	1434	2309	1426	2297	1420	2287	1416	2279	1412	2273	1251	2002	1051	1682
			G'	182.5 +36.8R 177.2 +32.1R 173.5 +28.5R 170.8 +25.5R 168.8 +23.1R 167.2 +21.1R 165.9 +19.4R 164.9 +18R 164 +16.8R																		
		18"	q _a	q _f	1318	2351	1330	2141	1210	1948	1238	1992	1257	2024	1177	1895	1201	1934	1220	1964	1051	1682
			G'	163.2 +43.3R 161.1 +36.8R 144.1 +36.2R 145.5 +31.4R 146.5 +27.8R 135.9 +27.2R 137.8 +24.4R 139.3 +22.2R 131.6 +21.7R																		
		24"	q _a	q _f	1101	1772	1169	1882	1041	1676	1103	1776	1009	1624	1063	1711	989	1592	1036	1669	975	1570
			G'	139.8 +51.8R 142.3 +42.6R 126.2 +41.2R 130.4 +35.2R 119 +34R 123.4 +29.8R 114.6 +28.9R 118.7 +25.8R 111.6 +25.1R																		
	20 ga	4"	q _a	q _f	1183	1905	1183	1905	1183	1905	1183	1905	1183	1905	1183	1905	982	1570	811	1298	682	1091
			G'	193.3 +13.5R 191.5 +11.5R 190.3 +10R 189.4 +8.9R 188.7 +8R 188.2 +7.2R 187.8 +6.6R 187.5 +6.1R 187.2 +5.6R																		
		6"	q _a	q _f	1183	1905	1183	1905	1183	1905	1183	1905	1183	1905	1183	1905	982	1570	811	1298	682	1091
			G'	170.3 +19.9R 167.5 +17.2R 165.6 +15.2R 164.2 +13.6R 163.2 +12.2R 162.4 +11.2R 161.7 +10.2R 161.2 +9.5R 160.7 +8.8R																		
		8"	q _a	q _f	1165	1875	1176	1894	1151	1853	1162	1871	1144	1842	1154	1857	982	1570	811	1298	682	1091
			G'	154.3 +25R 154.4 +20.8R 148.1 +19.4R 149.1 +16.8R 144.9 +15.8R 146.1 +14R 142.9 +13.3R 144.1 +12R 141.6 +11.5R																		
		12"	q _a	q _f	1025	1651	1010	1626	999	1608	991	1595	984	1585	980	1577	976	1570	811	1298	682	1091
			G'	133.2 +32.4R 128.3 +28.7R 124.8 +25.7R 122.3 +23.2R 120.4 +21.1R 118.9 +19.4R 117.7 +17.9R 116.7 +16.7R 115.8 +15.6R																		
		18"	q _a	q _f	911	1651	916	1475	821	1322	840	1352	853	1373	791	1273	808	1300	811	1298	682	1091
			G'	120.1 +37.3R 117.2 +32.3R 104.6 +31.7R 104.7 +27.9R 104.8 +24.9R 97 +24.3R 97.9 +22R 98.7 +20.1R 93.1 +19.6R																		
		24"	q _a	q _f	750	1207	794	1278	697	1123	739	1190	670	1078	707	1138	652	1050	685	1103	641	1032
			G'	104.5 +43.5R 104.5 +36.7R 92.5 +35.5R 94.4 +30.8R 86 +29.8R 88.4 +26.4R 82 +25.5R 84.4 +23R 79.3 +22.3R																		
	22 ga	4"	q _a	q _f	986	1587	986	1587	986	1587	986	1587	986	1587	926	1481	750	1199	620	991	521	833
			G'	157.7 +13R 155.9 +11.2R 154.6 +9.9R 153.8 +8.8R 153.1 +7.9R 152.6 +7.2R 152.1 +6.6R 151.8 +6.1R 151.5 +5.6R																		
		6"	q _a	q _f	986	1587	986	1587	986	1587	984	1584	982	1581	926	1481	750	1199	620	991	521	833
			G'	138.9 +18.8R 136.2 +16.4R 134.3 +14.6R 132.9 +13.1R 131.9 +11.9R 131.1 +10.8R 130.4 +10R 129.9 +9.2R 129.4 +8.6R																		
		8"	q _a	q _f	923	1486	932	1501	907	1460	917	1476	899	1447	908	1461	750	1199	620	991	521	833
			G'	126 +23.2R 125.5 +19.6R 120.1 +18.4R 120.6 +16R 116.9 +15.1R 117.8 +13.4R 115 +12.8R 115.9 +11.6R 113.7 +11.1R																		
		12"	q _a	q _f	795	1281	779	1254	768	1236	759	1222	753	1212	748	1204	743	1197	620	991	521	833
			G'	109.5 +29.5R 104.8 +26.4R 101.5 +23.8R 99.1 +21.6R 97.3 +19.8R 95.9 +18.2R 94.7 +16.9R 93.7 +15.7R 92.9 +14.7R																		
		18"	q _a	q _f	698	1281	699	1126	619	996	632	1018	642	1033	590	950	603	970	613	987	521	833
			G'	99.3 +33.6R 96.2 +29.5R 85.7 +28.9R 85.3 +25.6R 85 +23R 78.5 +22.5R 79 +20.4R 79.4 +18.7R 74.8 +18.3R																		
		24"	q _a	q _f	570	918	600	966	522	841	552	889	497	800	524	843	481	774	505	813	470	757
			G'	87.4 +38.6R 86.3 +33.1R 76.3 +32.1R 77.3 +28.1R 70.3 +27.1R 71.8 +24.2R 66.6 +23.4R 68.2 +21.2R 64 +20.6R																		
DGB-36 36/7/4 Support Attachment: #12 SD HWH Screw Side Seam Attachment: DeltaGrip DG4™																						

DGB-36 36/7/4

Support Attachment: #12 SD HWH Screw

Side Seam Attachment: DeltaGrip DG4™

Patent Number: 11,872,644

No. 12 Self-Drilling Screws to Supports with DeltaGrip® DG4™ Side Seam Attachment

Patent Number: 11,872,644



DGB-36 & DGBF-36 2.6

Hilti X-HSN-24 Fasteners to Supports
with DeltaGrip® DG4™ Side Seam Attachment
Diaphragm Shear in pounds per linear foot (plf)



HILTI



Support Fastener Pattern	Gage	Seam Attach. Spacing	Allowable Shear (q_a) (plf), Factored Shear (q_f) (plf), and Flexibility Factor (G') (kip/in)																	
			Span →	4' - 0"		5' - 0"		6' - 0"		7' - 0"		8' - 0"		9' - 0"		10' - 0"		11' - 0"		12' - 0"
36/4	16 ga	4"	q_a	q_f	1271	2047	1271	2047	1271	2047	1271	2047	1271	2047	1271	2047	1271	2047	1271	2047
			G'	341.7 +7.7R		340 +6.4R		338.8 +5.4R		338 +4.7R		337.4 +4.2R		336.9 +3.8R		336.5 +3.4R		336.2 +3.1R		335.9 +2.9R
		6"	q_a	q_f	1271	2047	1271	2047	1271	2047	1271	2047	1271	2047	1271	2047	1271	2047	1271	2047
			G'	302.8 +12.3R		300 +10.3R		298.1 +8.8R		296.8 +7.7R		295.7 +6.9R		294.9 +6.2R		294.2 +5.7R		293.7 +5.2R		293.3 +4.8R
		8"	q_a	q_f	1271	2047	1271	2047	1271	2047	1271	2047	1271	2047	1271	2047	1271	2047	1271	2047
			G'	274.1 +16.3R		277 +12.9R		267.7 +11.9R		270.9 +10R		264.4 +9.3R		267.3 +8.1R		262.4 +7.7R		265 +6.8R		261.1 +6.5R
		12"	q_a	q_f	1271	2047	1271	2047	1271	2047	1271	2047	1271	2047	1271	2047	1271	2047	1271	2047
			G'	234.4 +22.7R		229 +19.4R		225.3 +16.8R		222.6 +14.9R		220.6 +13.3R		219 +12.1R		217.7 +11R		216.6 +10.2R		215.7 +9.4R
		18"	q_a	q_f	1271	2047	1271	2047	1271	2047	1271	2047	1271	2047	1271	2047	1271	2047	1271	2047
			G'	208.3 +27.5R		207.7 +22.6R		186.4 +22.1R		189.2 +18.8R		191.3 +16.4R		177.9 +16R		180.8 +14.2R		183.2 +12.8R		176.5 +12.5R
		24"	q_a	q_f	1220	1964	1271	2047	1166	1877	1217	1960	1136	1829	1183	1904	1117	1799	1159	1866
			G'	176.2 +33.8R		182.4 +26.7R		162.1 +25.6R		169 +21.4R		154.7 +20.6R		161.2 +17.7R		150 +17.2R		156 +15.2R		146.9 +14.7R
	18 ga	4"	q_a	q_f	1029	1657	1029	1657	1029	1657	1029	1657	1029	1657	1029	1657	1029	1657	1029	1657
			G'	266.1 +7.7R		264.3 +6.4R		263.2 +5.5R		262.3 +4.8R		261.7 +4.3R		261.2 +3.8R		260.8 +3.5R		260.4 +3.2R		260.2 +3R
		6"	q_a	q_f	1029	1657	1029	1657	1029	1657	1029	1657	1029	1657	1029	1657	1029	1657	1029	1657
			G'	235 +11.9R		232.2 +10.1R		230.3 +8.7R		228.9 +7.7R		227.9 +6.8R		227.1 +6.2R		226.4 +5.6R		225.9 +5.2R		225.4 +4.8R
		8"	q_a	q_f	1029	1657	1029	1657	1029	1657	1029	1657	1029	1657	1029	1657	1029	1657	1029	1657
			G'	212.5 +15.5R		214 +12.5R		206.3 +11.5R		208.4 +9.7R		203 +9.1R		205.1 +7.9R		201 +7.5R		203 +6.7R		199.7 +6.4R
		12"	q_a	q_f	1029	1657	1029	1657	1029	1657	1029	1657	1029	1657	1029	1657	1029	1657	1029	1657
			G'	182.1 +21.1R		177 +18.1R		173.4 +15.9R		170.8 +14.1R		168.9 +12.7R		167.3 +11.5R		166 +10.5R		165 +9.7R		164.1 +9R
		18"	q_a	q_f	1029	1657	1029	1657	1029	1657	1029	1657	1029	1657	1027	1653	1029	1657	1029	1657
			G'	162.5 +25.1R		160.8 +20.9R		143.9 +20.3R		145.4 +17.5R		146.5 +15.3R		135.9 +14.9R		137.9 +13.3R		139.4 +12R		131.8 +11.8R
		24"	q_a	q_f	982	1581	1024	1649	937	1509	979	1576	913	1469	950	1530	897	1444	931	1499
			G'	138.8 +30.3R		141.9 +24.3R		125.9 +23.3R		130.3 +19.6R		119 +18.9R		123.4 +16.4R		114.7 +15.8R		118.8 +14.1R		111.8 +13.6R
	20 ga	4"	q_a	q_f	783	1260	783	1260	783	1260	783	1260	783	1260	783	1260	783	1260	682	1091
			G'	193.2 +7.5R		191.5 +6.3R		190.3 +5.5R		189.4 +4.8R		188.8 +4.3R		188.3 +3.9R		187.9 +3.5R		187.5 +3.2R		187.2 +3R
		6"	q_a	q_f	783	1260	783	1260	783	1260	783	1260	783	1260	783	1260	783	1260	682	1091
			G'	170.2 +11.3R		167.5 +9.6R		165.6 +8.4R		164.3 +7.4R		163.2 +6.7R		162.4 +6R		161.8 +5.5R		161.2 +5.1R		160.8 +4.7R
		8"	q_a	q_f	783	1260	783	1260	783	1260	783	1260	783	1260	783	1260	783	1260	682	1091
			G'	153.9 +14.4R		154.2 +11.7R		148 +10.8R		149.1 +9.3R		144.9 +8.7R		146.2 +7.6R		143 +7.2R		144.2 +6.5R		141.7 +6.2R
		12"	q_a	q_f	783	1260	783	1260	783	1260	783	1260	783	1260	783	1260	783	1260	682	1091
			G'	132.7 +18.9R		127.9 +16.4R		124.7 +14.5R		122.2 +13R		120.4 +11.7R		118.9 +10.7R		117.7 +9.8R		116.7 +9.1R		115.9 +8.4R
		18"	q_a	q_f	783	1260	783	1260	736	1184	747	1203	756	1217	712	1147	724	1166	733	1180
			G'	119.3 +22R		116.8 +18.6R		104.3 +18.1R		104.5 +15.7R		104.7 +13.9R		97 +13.5R		97.9 +12.1R		98.7 +11R		93.1 +10.7R
		24"	q_a	q_f	689	1109	718	1156	647	1041	677	1089	624	1004	651	1048	609	980	634	1020
			G'	103.5 +25.9R		103.9 +21.3R		92.1 +20.4R		94.2 +17.4R		85.9 +16.7R		88.3 +14.6R		82 +14.1R		84.4 +12.6R		79.3 +12.2R
	22 ga	4"	q_a	q_f	656	1056	656	1056	656	1056	656	1056	656	1056	656	1056	656	1056	620	991
			G'	157.6 +7.4R		155.8 +6.2R		154.7 +5.4R		153.8 +4.8R		153.1 +4.3R		152.6 +3.9R		152.2 +3.5R		151.9 +3.3R		151.6 +3R
		6"	q_a	q_f	656	1056	656	1056	656	1056	656	1056	656	1056	656	1056	656	1056	620	991
			G'	138.7 +10.8R		136.1 +9.3R		134.3 +8.1R		132.9 +7.2R		131.9 +6.5R		131.1 +5.9R		130.5 +5.4R		129.9 +5R		129.5 +4.6R
		8"	q_a	q_f	656	1056	656	1056	656	1056	656	1056	656	1056	656	1056	656	1056	620	991
			G'	125.7 +13.5R		125.3 +11.2R		120 +10.3R		120.6 +8.9R		116.9 +8.3R		117.8 +7.4R		115.1 +7R		116 +6.3R		113.8 +6R
		12"	q_a	q_f	656	1056	656	1056	656	1056	656	1056	656	1056	656	1056	653	1052	620	991
			G'	108.9 +17.4R		104.4 +15.3R		101.3 +13.6R		99 +12.2R		97.2 +11R		95.8 +10.1R		94.7 +9.3R		93.8 +8.6R		93 +8R
		18"	q_a	q_f	627	1056	627	1009	569	916	577	930	584	940	545	877	554	892	561	904
			G'	98.5 +20R		95.7 +17.1R		85.3 +16.6R		85 +14.5R		84.8 +12.9R		78.5 +12.5R		79 +11.3R		79.4 +10.3R		74.8 +10R
		24"	q_a	q_f	536	863	556	895	495	797	517	833	472	761	494	795	458	738	478	769
			G'	86.4 +23.2R		85.7 +19.4R		75.9 +18.6R		77 +16R		70.1 +15.3R		71.7 +13.5R		66.5 +13R		68.2 +11.7R		64 +11.3R
DGB-36 36/4 Support Attachment: Hilti X-HSN 24 PAF Side Seam Attachment: DeltaGrip DG4™																				

DGB-36 36/4

Support Attachment: Hilti X-HSN 24 PAF

Side Seam Attachment: DeltaGrip DG4™

Patent Number: 11,872,644

2.6 DGB-36 & DGBF-36

Hilti X-HSN-24 Fasteners to Supports with DeltaGrip® DG4™ Tool Side Seam Attachment

Diaphragm Shear in pounds per linear foot (plf)



Support Fastener Pattern	Gage	Seam Attach. Spacing	Allowable Shear (q _a) (plf), Factored Shear (q _f) (plf), and Flexibility Factor (G') (kip/in)																			
			Span →		4' - 0"		5' - 0"		6' - 0"		7' - 0"		8' - 0"		9' - 0"		10' - 0"		11' - 0"		12' - 0"	
36/7/4	16 ga	4"	q _a	q _f	2542	4093	2542	4093	2542	4093	2542	4093	2542	4093	2542	4093	2120	3393	1752	2804	1472	2356
			G'		342 +14.5R		340.2 +12.2R		339 +10.5R		338.1 +9.2R		337.5 +8.2R		337 +7.4R		336.5 +6.7R		336.2 +6.2R		335.9 +5.7R	
		6"	q _a	q _f	2542	4093	2542	4093	2542	4093	2542	4093	2542	4093	2542	4093	2120	3393	1752	2804	1472	2356
			G'		303.4 +22.8R		300.4 +19.4R		298.4 +16.8R		297 +14.9R		295.9 +13.3R		295.1 +12R		294.4 +11R		293.8 +10.1R		293.3 +9.4R	
		8"	q _a	q _f	2470	3977	2495	4017	2438	3925	2462	3963	2420	3897	2442	3932	2120	3393	1752	2804	1472	2356
			G'		275 +30R		277.6 +24.2R		268.2 +22.4R		271.2 +19R		264.7 +17.9R		267.6 +15.7R		262.6 +14.9R		265.2 +13.3R		261.2 +12.7R	
		12"	q _a	q _f	2161	3480	2125	3422	2100	3381	2082	3351	2067	3328	2056	3310	2047	3295	1752	2804	1472	2356
			G'		235.8 +41.1R		230.1 +35.6R		226.1 +31.4R		223.2 +28R		221.1 +25.3R		219.3 +23R		218 +21.2R		216.9 +19.6R		215.9 +18.2R	
		18"	q _a	q _f	1913	3480	1923	3095	1716	2763	1755	2825	1783	2870	1648	2654	1684	2711	1712	2756	1472	2356
			G'		210.2 +49.2R		208.9 +41.3R		187.5 +40.7R		190 +35.1R		191.9 +30.9R		178.5 +30.3R		181.3 +27.1R		183.6 +24.5R		173.8 +24.1R	
		24"	q _a	q _f	1570	2528	1660	2672	1455	2342	1541	2481	1393	2243	1470	2367	1355	2182	1423	2291	1329	2140
			G'		178.7 +59.8R		184 +48.4R		163.5 +47R		170.1 +39.7R		155.6 +38.5R		161.9 +33.5R		150.7 +32.5R		156.5 +28.9R		147.4 +28.2R	
	18 ga	4"	q _a	q _f	2058	3314	2058	3314	2058	3314	2058	3314	2058	3314	1869	2990	1514	2422	1251	2002	1051	1682
			G'		266.4 +14.3R		264.6 +12.1R		263.3 +10.5R		262.5 +9.2R		261.8 +8.3R		261.3 +7.5R		260.8 +6.8R		260.5 +6.3R		260.2 +5.8R	
		6"	q _a	q _f	2058	3314	2058	3314	2058	3314	2058	3314	2058	3314	1869	2990	1514	2422	1251	2002	1051	1682
			G'		235.6 +21.9R		232.7 +18.8R		230.7 +16.4R		229.2 +14.6R		228.1 +13.1R		227.2 +11.9R		226.6 +10.9R		226 +10R		225.5 +9.3R	
		8"	q _a	q _f	1991	3205	2011	3237	1964	3162	1983	3193	1949	3138	1869	2990	1514	2422	1251	2002	1051	1682
			G'		213.4 +28.2R		214.6 +23.1R		206.8 +21.5R		208.8 +18.4R		203.3 +17.3R		205.4 +15.2R		201.3 +14.4R		203.1 +13R		199.8 +12.4R	
		12"	q _a	q _f	1739	2799	1709	2751	1688	2718	1673	2693	1661	2674	1651	2659	1514	2422	1251	2002	1051	1682
			G'		183.6 +37.6R		178 +33R		174.2 +29.3R		171.5 +26.3R		169.4 +23.8R		167.7 +21.8R		166.4 +20.1R		165.3 +18.6R		164.4 +17.3R	
		18"	q _a	q _f	1537	2799	1544	2486	1377	2217	1408	2266	1430	2302	1321	2127	1350	2173	1251	2002	1051	1682
			G'		164.4 +44.2R		162.1 +37.7R		145.1 +37.1R		146.3 +32.3R		147.2 +28.6R		136.6 +28R		138.4 +25.2R		139.8 +22.9R		132.2 +22.4R	
		24"	q _a	q _f	1261	2030	1332	2145	1166	1878	1235	1989	1116	1797	1178	1896	1085	1747	1139	1835	1051	1682
			G'		141.3 +52.8R		143.5 +43.6R		127.3 +42.2R		131.3 +36.1R		119.9 +35R		124.1 +30.7R		115.3 +29.8R		119.3 +26.6R		112.2 +25.9R	
	20 ga	4"	q _a	q _f	1565	2520	1565	2520	1565	2520	1565	2520	1534	2454	1212	1939	982	1570	811	1298	682	1091
			G'		193.6 +13.8R		191.8 +11.8R		190.5 +10.3R		189.6 +9.2R		188.9 +8.2R		188.4 +7.5R		187.9 +6.8R		187.6 +6.3R		187.3 +5.8R	
		6"	q _a	q _f	1544	2485	1533	2468	1526	2457	1521	2448	1516	2441	1212	1939	982	1570	811	1298	682	1091
			G'		170.9 +20.4R		168 +17.7R		166 +15.6R		164.6 +14R		163.5 +12.6R		162.6 +11.5R		161.9 +10.6R		161.4 +9.8R		160.9 +9.1R	
		8"	q _a	q _f	1418	2283	1433	2307	1389	2236	1405	2262	1373	2211	1212	1939	982	1570	811	1298	682	1091
			G'		155 +25.5R		154.9 +21.3R		148.6 +19.9R		149.6 +17.3R		145.3 +16.3R		146.5 +14.4R		143.2 +13.7R		144.4 +12.4R		141.9 +11.8R	
		12"	q _a	q _f	1209	1947	1180	1900	1160	1867	1145	1843	1133	1825	1124	1810	982	1570	811	1298	682	1091
			G'		134.2 +33R		129.1 +29.3R		125.5 +26.3R		122.9 +23.8R		120.9 +21.7R		119.4 +20R		118.1 +18.5R		117.1 +17.2R		116.2 +16R	
		18"	q _a	q _f	1056	1947	1054	1697	927	1492	945	1521	958	1543	878	1413	896	1443	811	1298	682	1091
			G'		121.2 +38R		118.1 +33R		105.5 +32.4R		105.4 +28.6R		105.4 +25.6R		97.6 +25R		98.5 +22.6R		99.2 +20.7R		93.5 +20.2R	
		24"	q _a	q _f	860	1385	901	1450	780	1256	823	1325	738	1188	777	1251	712	1146	747	1203	682	1091
			G'		105.9 +44.3R		105.6 +37.4R		93.5 +36.3R		95.2 +31.6R		86.8 +30.5R		89.1 +27.1R		82.6 +26.2R		85 +23.7R		79.8 +23R	
	22 ga	4"	q _a	q _f	1312	2112	1312	2112	1312	2112	1312	2112	1171	1874	926	1481	750	1199	620	991	521	833
			G'		158 +13.4R		156.2 +11.5R		154.9 +10.1R		154 +9R		153.3 +8.1R		152.7 +7.4R		152.3 +6.8R		151.9 +6.3R		151.6 +5.8R	
		6"	q _a	q _f	1229	1978	1216	1958	1208	1945	1202	1935	1171	1874	926	1481	750	1199	620	991	521	833
			G'		139.5 +19.2R		136.6 +16.9R		134.7 +15R		133.3 +13.5R		132.2 +12.2R		131.3 +11.2R		130.6 +10.3R		130.1 +9.5R		129.6 +8.9R	
		8"	q _a	q _f	1111	1789	1122	1806	1079	1738	1092	1758	1062	1710	926	1481	750	1199	620	991	521	833
			G'		126.7 +23.7R		126.1 +20.1R		120.6 +18.8R		121 +16.4R		117.3 +15.5R		118.1 +13.8R		115.3 +13.2R		116.2 +11.9R		114 +11.4R	
		12"	q _a	q _f	930	1498	901	1451	881	1419	866	1395	855	1376	846	1362	750	1199	620	991	521	833
			G'		110.4 +30R		105.6 +26.9R		102.2 +24.4R		99.7 +22.2R		97.8 +20.3R		96.3 +18.7R		95.1 +17.4R		94.1 +16.2R		93.3 +15.2R	
		18"	q _a	q _f	807	1498	799	1287	696	1120	707	1138	715	1151	650	1047	663	1067	620	991	521	833
			G'		100.4 +34.1R		97 +30R		86.5 +29.5R		86 +26.2R		85.6 +23.6R		79.1 +23.1R		79.5 +21R		79.9 +19.3R		75.3 +18.8R	
		24"	q _a	q _f	656	1057	680	1095	585	941	613	988	547	881	574	925	524	844	549	883	508	818
			G'		88.7 +39.2R		87.3 +33.7R		77.3 +32.7R		78 +28.7R		71.1 +27.8R		72.5 +24.8R		67.2 +24.1R		68.8 +21.8R		64.5 +21.2R	
DGB-36 36/7/4 Support Attachment: Hilti X-HSN 24 PAF Side Seam Attachment: DeltaGrip DG4™																						

DGB-36 36/7/4

Support Attachment: Hilti X-HSN 24 PAF

Side Seam Attachment: DeltaGrip DG4™

Patent Number: 11,872,644



DGB-36 & DGBF-36 2.6

Hilti X-HSN-24 Fasteners to Supports
with DeltaGrip® DG4™ Tool Side Seam Attachment
Diaphragm Shear in pounds per linear foot (plf)



HILTI



Support Fastener Pattern	Gage	Seam Attach. Spacing	Allowable Shear (q _a) (plf), Factored Shear (q _f) (plf), and Flexibility Factor (G') (kip/in)																			
			Span →		4' - 0"		5' - 0"		6' - 0"		7' - 0"		8' - 0"		9' - 0"		10' - 0"		11' - 0"		12' - 0"	
36/9	16 ga	4"	q _a	q _f	2542	4093	2542	4093	2542	4093	2542	4093	2542	4093	2542	4093	2120	3393	1752	2804	1472	2356
			G'	351.6 +14R		348.2 +12.1R		345.8 +10.6R		344.1 +9.4R		342.7 +8.5R		341.7 +7.7R		340.9 +7R		340.2 +6.5R		339.6 +6R		
		6"	q _a	q _f	2542	4093	2542	4093	2542	4093	2542	4093	2542	4093	2542	4093	2120	3393	1752	2804	1472	2356
			G'	318.7 +21.3R		313.3 +18.6R		309.5 +16.5R		306.7 +14.8R		304.6 +13.5R		302.8 +12.3R		301.5 +11.3R		300.3 +10.5R		299.4 +9.8R		
		8"	q _a	q _f	2542	4093	2542	4093	2542	4093	2542	4093	2542	4093	2542	4093	2120	3393	1752	2804	1472	2356
			G'	295.2 +27.2R		293.7 +22.9R		283.1 +21.6R		283.7 +18.7R		276.4 +17.8R		277.8 +15.8R		272.2 +15.1R		273.8 +13.6R		269.4 +13.1R		
		12"	q _a	q _f	2542	4093	2542	4093	2498	4022	2455	3952	2421	3897	2393	3853	2120	3393	1752	2804	1472	2356
			G'	264 +36.1R		254.1 +32.5R		247.1 +29.5R		241.8 +26.9R		237.7 +24.7R		234.5 +22.8R		231.8 +21.1R		229.6 +19.7R		227.7 +18.5R		
		18"	q _a	q _f	2359	4093	2321	3736	2053	3306	2068	3330	2079	3347	1909	3073	1935	3115	1752	2804	1472	2356
			G'	244.1 +42.3R		237 +37.2R		215 +37.4R		213.5 +33.1R		212.4 +29.7R		198.5 +29.4R		199.1 +26.7R		199.6 +24.4R		189.5 +24.1R		
		24"	q _a	q _f	2001	3221	2033	3272	1773	2854	1832	2949	1648	2653	1711	2755	1570	2528	1630	2625	1472	2356
			G'	220.3 +50.2R		217.1 +42.9R		195.4 +42.5R		196.7 +37R		181.2 +36.4R		184 +32.3R		172.1 +31.7R		175.4 +28.5R		165.8 +28R		
	18 ga	4"	q _a	q _f	2058	3314	2058	3314	2058	3314	2058	3314	2058	3314	1869	2990	1514	2422	1251	2002	1051	1682
			G'	276 +13.5R		272.6 +11.7R		270.2 +10.4R		268.5 +9.3R		267.1 +8.4R		266.1 +7.7R		265.2 +7.1R		264.5 +6.5R		263.9 +6.1R		
		6"	q _a	q _f	2058	3314	2058	3314	2058	3314	2058	3314	2058	3314	1869	2990	1514	2422	1251	2002	1051	1682
			G'	250.4 +19.9R		245.2 +17.6R		241.5 +15.8R		238.8 +14.3R		236.7 +13R		235 +11.9R		233.6 +11R		232.5 +10.3R		231.5 +9.6R		
		8"	q _a	q _f	2058	3314	2058	3314	2058	3314	2058	3314	2058	3314	1869	2990	1514	2422	1251	2002	1051	1682
			G'	232.7 +24.9R		230.2 +21.3R		221.1 +20.2R		220.9 +17.7R		214.7 +16.9R		215.3 +15.1R		210.7 +14.4R		211.6 +13.1R		207.9 +12.6R		
		12"	q _a	q _f	2058	3314	2056	3310	2008	3232	1972	3174	1944	3129	1869	2990	1514	2422	1251	2002	1051	1682
			G'	209.5 +32.1R		200.5 +29.3R		194 +26.8R		189 +24.7R		185.2 +22.8R		182.1 +21.1R		179.6 +19.7R		177.5 +18.4R		175.7 +17.3R		
		18"	q _a	q _f	1897	3314	1865	3002	1649	2654	1660	2672	1668	2685	1530	2464	1514	2422	1251	2002	1051	1682
			G'	195.2 +37R		187.9 +33R		170.3 +33.2R		168 +29.8R		166.3 +26.9R		155.2 +26.7R		155 +24.4R		154.9 +22.4R		146.9 +22.1R		
		24"	q _a	q _f	1609	2591	1633	2629	1423	2291	1470	2366	1322	2128	1372	2208	1258	2026	1251	2002	1051	1682
			G'	178.3 +43R		173.5 +37.5R		156.2 +37.3R		155.7 +32.9R		143.4 +32.4R		144.6 +29R		135.1 +28.5R		136.9 +25.8R		129.3 +25.3R		
	20 ga	4"	q _a	q _f	1565	2520	1565	2520	1565	2520	1565	2520	1534	2454	1212	1939	982	1570	811	1298	682	1091
			G'	203 +12.6R		199.7 +11.1R		197.4 +10R		195.6 +9R		194.3 +8.2R		193.2 +7.5R		192.4 +7R		191.7 +6.5R		191.1 +6R		
		6"	q _a	q _f	1565	2520	1565	2520	1565	2520	1565	2520	1534	2454	1212	1939	982	1570	811	1298	682	1091
			G'	184.9 +17.8R		180 +16.1R		176.5 +14.6R		173.9 +13.3R		171.8 +12.2R		170.2 +11.3R		168.9 +10.5R		167.7 +9.8R		166.8 +9.2R		
		8"	q _a	q _f	1565	2520	1565	2520	1565	2520	1565	2520	1534	2454	1212	1939	982	1570	811	1298	682	1091
			G'	172.7 +21.7R		169.5 +19R		162.1 +18.2R		161.1 +16.2R		156.1 +15.5R		156 +14R		152.3 +13.4R		152.5 +12.3R		149.6 +11.8R		
		12"	q _a	q _f	1487	2393	1424	2293	1380	2222	1347	2169	1322	2128	1212	1939	982	1570	811	1298	682	1091
			G'	157.3 +27R		149.3 +25.2R		143.5 +23.3R		139 +21.7R		135.5 +20.2R		132.7 +18.9R		130.4 +17.7R		128.4 +16.7R		126.8 +15.7R		
		18"	q _a	q _f	1323	2393	1286	2070	1124	1810	1124	1809	1124	1809	1024	1648	982	1570	811	1298	682	1091
			G'	148 +30.5R		141 +27.9R		127.8 +28.1R		124.9 +25.6R		122.7 +23.4R		114.4 +23.2R		113.6 +21.4R		112.9 +19.8R		106.9 +19.5R		
		24"	q _a	q _f	1125	1812	1125	1811	972	1565	994	1601	889	1431	917	1476	837	1348	811	1298	682	1091
			G'	137.3 +34.7R		131.7 +31.1R		118.6 +31R		116.8 +27.9R		107.5 +27.5R		107.3 +25R		100.2 +24.5R		100.8 +22.4R		95.1 +22R		
	22 ga	4"	q _a	q _f	1312	2112	1312	2112	1312	2112	1312	2112	1171	1874	926	1481	750	1199	620	991	521	833
			G'	167.1 +11.8R		163.9 +10.6R		161.7 +9.6R		160 +8.7R		158.6 +8R		157.6 +7.4R		156.7 +6.8R		156 +6.4R		155.4 +6R		
		6"	q _a	q _f	1312	2112	1312	2112	1312	2112	1312	2112	1171	1874	926	1481	750	1199	620	991	521	833
			G'	152.8 +16.3R		148.1 +14.9R		144.8 +13.7R		142.3 +12.6R		140.3 +11.6R		138.7 +10.8R		137.4 +10.1R		136.3 +9.4R		135.4 +8.9R		
		8"	q _a	q _f	1312	2112	1312	2112	1284	2067	1289	2075	1171	1874	926	1481	750	1199	620	991	521	833
			G'	143.3 +19.6R		139.9 +17.4R		133.4 +16.8R		132.1 +15.1R		127.7 +14.5R		127.3 +13.2R		124 +12.7R		124 +11.7R		121.5 +11.2R		
		12"	q _a	q _f	1156	1862	1097	1766	1055	1698	1023	1647	999	1608	926	1481	750	1199	620	991	521	833
			G'	131.6 +23.9R		124.3 +22.6R		118.9 +21.1R		114.8 +19.8R		111.5 +18.5R		108.9 +17.4R		106.7 +16.4R		104.9 +15.5R		103.3 +14.7R		
		18"	q _a	q _f	1029	1862	989	1592	858	1381	851	1370	846	1362	767	1235	750	1199	620	991	521	833
			G'	124.6 +26.7R		118 +24.8R		107 +25R		103.9 +23R		101.6 +21.2R		94.7 +21R		93.6 +19.5R		92.7 +18.2R		87.8 +17.9R		
		24"	q _a	q _f	880	1417	867	1395	745	1199	754	1214	672	1081	688	1107	626	1008	620	991	521	833
			G'	116.7 +29.9R		111 +27.3R		100 +27.4R		97.8 +24.9R		90.1 +24.6R		89.3 +22.5R		83.4 +22.1R		83.4 +20.3R		78.7 +19.9R		
DGB-36 36/9 Support Attachment: Hilti X-HSN 24 PAF Side Seam Attachment: DeltaGrip DG4™																						

DGB-36 36/9

Support Attachment: Hilti X-HSN 24 PAF

Side Seam Attachment: DeltaGrip DG4™

Patent Number: 11,872,644

2.6 DGB-36 & DGBF-36

Hilti X-ENP-19 Fasteners to Supports with DeltaGrip® DG4™ Tool Side Seam Attachment

Diaphragm Shear in pounds per linear foot (plf)



HILTI



Support Fastener Pattern	Gage	Seam Attach. Spacing	Allowable Shear (q _a) (plf), Factored Shear (q _f) (plf), and Flexibility Factor (G') (kip/in)																			
			Span →	4' - 0"		5' - 0"		6' - 0"		7' - 0"		8' - 0"		9' - 0"		10' - 0"		11' - 0"		12' - 0"		
36/4	16 ga	4"	q _a	q _f	1369	2204	1369	2204	1369	2204	1369	2204	1369	2204	1369	2204	1369	2204	1369	2204	1369	2204
			G'	347.1 +11.4R		344.4 +9.7R		342.6 +8.4R		341.3 +7.4R		340.3 +6.6R		339.5 +6R		338.8 +5.4R		338.3 +5R		337.9 +4.6R		
		6"	q _a	q _f	1369	2204	1369	2204	1369	2204	1369	2204	1369	2204	1369	2204	1369	2204	1369	2204	1369	2204
			G'	311.6 +17.7R		307.3 +15.2R		304.3 +13.3R		302.2 +11.8R		300.5 +10.6R		299.2 +9.7R		298.1 +8.8R		297.3 +8.2R		296.5 +7.6R		
		8"	q _a	q _f	1369	2204	1369	2204	1369	2204	1369	2204	1369	2204	1369	2204	1369	2204	1369	2204	1369	2204
			G'	285.8 +23.1R		286.2 +18.9R		276.1 +17.6R		277.9 +15.1R		270.9 +14.2R		273 +12.5R		267.7 +11.9R		269.8 +10.7R		265.5 +10.2R		
		12"	q _a	q _f	1369	2204	1369	2204	1369	2204	1369	2204	1369	2204	1369	2204	1369	2204	1369	2204	1369	2204
			G'	251 +31.2R		243 +27.4R		237.3 +24.4R		233.2 +22R		229.9 +20R		227.4 +18.3R		225.3 +16.8R		223.6 +15.6R		222.2 +14.5R		
		18"	q _a	q _f	1369	2204	1369	2204	1367	2202	1369	2204	1369	2204	1335	2149	1355	2181	1369	2204	1317	2120
			G'	228.5 +37R		224 +31.6R		202.2 +31.4R		202.6 +27.4R		202.9 +24.2R		189.1 +23.9R		190.8 +21.4R		192.2 +19.5R		182.2 +19.2R		
		24"	q _a	q _f	1279	2059	1334	2148	1216	1957	1270	2045	1181	1901	1231	1981	1159	1865	1203	1937	1144	1841
			G'	201.2 +44.7R		201.8 +36.9R		180.6 +36.1R		184.3 +30.8R		169.3 +30R		173.7 +26.3R		162.1 +25.6R		166.6 +22.9R		157.2 +22.4R		
	18 ga	4"	q _a	q _f	1103	1776	1103	1776	1103	1776	1103	1776	1103	1776	1103	1776	1103	1776	1103	1776	1051	1682
			G'	271.5 +11.1R		268.8 +9.5R		267 +8.3R		265.7 +7.4R		264.6 +6.6R		263.8 +6R		263.2 +5.5R		262.6 +5.1R		262.2 +4.7R		
		6"	q _a	q _f	1103	1776	1103	1776	1103	1776	1103	1776	1103	1776	1103	1776	1103	1776	1103	1776	1051	1682
			G'	243.6 +16.8R		239.4 +14.6R		236.5 +12.9R		234.3 +11.5R		232.7 +10.4R		231.4 +9.5R		230.3 +8.7R		229.4 +8R		228.7 +7.5R		
		8"	q _a	q _f	1103	1776	1103	1776	1103	1776	1103	1776	1103	1776	1103	1776	1103	1776	1103	1776	1051	1682
			G'	223.8 +21.4R		223 +17.8R		214.4 +16.7R		215.2 +14.4R		209.4 +13.6R		210.7 +12.1R		206.3 +11.5R		207.6 +10.4R		204.1 +9.9R		
		12"	q _a	q _f	1103	1776	1103	1776	1103	1776	1103	1776	1103	1776	1103	1776	1103	1776	1103	1776	1051	1682
			G'	197.6 +28.3R		190.1 +25.1R		184.8 +22.6R		180.9 +20.4R		177.8 +18.7R		175.4 +17.1R		173.4 +15.9R		171.8 +14.7R		170.4 +13.8R		
		18"	q _a	q _f	1103	1776	1103	1776	1097	1767	1103	1776	1103	1776	1070	1723	1087	1750	1099	1770	1051	1682
			G'	181.1 +33R		176 +28.6R		158.7 +28.4R		157.9 +25R		157.4 +22.3R		146.5 +21.9R		147.3 +19.8R		147.9 +18.1R		140 +17.8R		
		24"	q _a	q _f	1026	1652	1071	1724	975	1569	1019	1640	946	1523	986	1588	928	1494	964	1552	916	1474
			G'	161.4 +38.9R		159.7 +32.8R		142.8 +32.1R		144.4 +27.8R		132.5 +27.1R		135 +23.9R		125.9 +23.3R		128.7 +21R		121.3 +20.4R		
	20 ga	4"	q _a	q _f	841	1354	841	1354	841	1354	841	1354	841	1354	841	1354	841	1354	811	1298	682	1091
			G'	198.6 +10.6R		196 +9.2R		194.2 +8.1R		192.8 +7.2R		191.8 +6.5R		191 +6R		190.3 +5.5R		189.8 +5.1R		189.3 +4.7R		
		6"	q _a	q _f	841	1354	841	1354	841	1354	841	1354	841	1354	841	1354	841	1354	811	1298	682	1091
			G'	178.4 +15.4R		174.4 +13.6R		171.6 +12.1R		169.5 +10.9R		167.9 +9.9R		166.7 +9.1R		165.6 +8.4R		164.8 +7.8R		164 +7.3R		
		8"	q _a	q _f	841	1354	841	1354	841	1354	841	1354	841	1354	841	1354	841	1354	811	1298	682	1091
			G'	164.5 +19.1R		162.7 +16.3R		155.8 +15.4R		155.7 +13.4R		151 +12.7R		151.5 +11.4R		148 +10.8R		148.7 +9.8R		146 +9.4R		
		12"	q _a	q _f	841	1354	841	1354	841	1354	841	1354	841	1354	841	1354	841	1354	811	1298	682	1091
			G'	146.7 +24.4R		140 +22.1R		135.2 +20.1R		131.6 +18.3R		128.7 +16.9R		126.5 +15.6R		124.7 +14.5R		123.1 +13.5R		121.8 +12.7R		
		18"	q _a	q _f	837	1354	838	1349	767	1235	779	1254	788	1269	740	1191	752	1211	762	1226	682	1091
			G'	135.8 +27.9R		130.5 +24.7R		117.5 +24.5R		115.9 +21.9R		114.7 +19.7R		106.6 +19.4R		106.5 +17.6R		106.5 +16.2R		100.7 +15.9R		
		24"	q _a	q _f	719	1158	749	1205	671	1081	702	1131	645	1038	674	1084	628	1011	654	1053	617	993
			G'	123 +32.2R		119.7 +27.8R		107 +27.3R		106.8 +24R		97.9 +23.4R		98.8 +20.9R		92.1 +20.4R		93.4 +18.5R		88 +18R		
22 ga	4"	q _a	q _f	706	1137	706	1137	706	1137	706	1137	706	1137	706	1137	706	1137	620	991	521	833	
		G'	162.9 +10.2R		160.3 +8.9R		158.5 +7.9R		157.2 +7.1R		156.1 +6.4R		155.3 +5.9R		154.7 +5.4R		154.1 +5R		153.6 +4.7R			
	6"	q _a	q _f	706	1137	706	1137	706	1137	706	1137	706	1137	706	1137	706	1137	620	991	521	833	
		G'	146.6 +14.4R		142.8 +12.8R		140.1 +11.5R		138.1 +10.5R		136.5 +9.6R		135.3 +8.8R		134.3 +8.1R		133.4 +7.6R		132.7 +7.1R			
	8"	q _a	q _f	706	1137	706	1137	706	1137	706	1137	706	1137	706	1137	706	1137	620	991	521	833	
		G'	135.7 +17.6R		133.5 +15.2R		127.5 +14.4R		127 +12.7R		122.9 +12R		123 +10.8R		120 +10.3R		120.4 +9.4R		118 +9R			
	12"	q _a	q _f	706	1137	706	1137	703	1132	696	1121	690	1112	686	1104	682	1099	620	991	521	833	
		G'	121.9 +22R		115.7 +20.1R		111.2 +18.4R		107.8 +16.9R		105.2 +15.6R		103.1 +14.5R		101.3 +13.6R		99.9 +12.7R		98.6 +11.9R			
	18"	q _a	q _f	658	1137	655	1055	592	953	600	966	607	977	564	908	574	924	581	936	521	833	
		G'	113.6 +24.8R		108.4 +22.3R		97.6 +22.1R		95.6 +19.9R		94.2 +18.1R		87.5 +17.8R		87.1 +16.3R		86.7 +15R		82 +14.7R			
	24"	q _a	q _f	560	901	579	933	513	827	536	863	488	786	510	820	472	760	492	792	461	742	
		G'	104 +28.2R		100.2 +24.8R		88.7 +24.4R		88.3 +21.7R		81.3 +21.1R		81.5 +19.1R		75.9 +18.6R		76.6 +16.9R		72.1 +16.5R			
DGB-36 36/4 Support Attachment: Hilti X-ENP-19 PAF Side Seam Attachment: DeltaGrip DG4™																						

DGB-36 & DGBF-36 2.6

Hilti X-ENP-19 Fasteners to Supports with
DeltaGrip® DG4™ Tool Side Seam Attachment
Diaphragm Shear in pounds per linear foot (plf)



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Support Fastener Pattern	Gage	Seam Attach. Spacing	Allowable Shear (q _a) (plf), Factored Shear (q _f) (plf), and Flexibility Factor (G') (kip/in)																			
			Span →		4' - 0"		5' - 0"		6' - 0"		7' - 0"		8' - 0"		9' - 0"		10' - 0"		11' - 0"		12' - 0"	
			q _a	q _f																		
36/7/4	16 ga	4"	q _a	q _f	2738	4408	2738	4408	2738	4408	2738	4408	2618	4188	2120	3393	1752	2804	1472	2356		
			G'	347.8 +20.8R 344.9 +17.9R 343 +15.7R 341.5 +14R 340.5 +12.6R 339.7 +11.4R 339 +10.5R 338.4 +9.7R 338 +9R																		
		6"	q _a	q _f	2738	4408	2738	4408	2738	4408	2738	4408	2618	4188	2120	3393	1752	2804	1472	2356		
			G'	312.8 +31.6R 308.2 +27.7R 305 +24.6R 302.7 +22.1R 300.9 +20R 299.6 +18.3R 298.4 +16.8R 297.5 +15.6R 296.8 +14.5R																		
		8"	q _a	q _f	2605	4194	2632	4238	2566	4131	2592	4174	2544	4096	2569	4135	2120	3393	1752	2804	1472	2356
			G'	287.7 +40.4R 287.4 +33.9R 277.2 +32.1R 278.7 +27.8R 271.6 +26.4R 273.5 +23.5R 268.2 +22.4R 270.1 +20.3R 265.9 +19.5R																		
		12"	q _a	q _f	2260	3639	2217	3570	2187	3522	2166	3486	2149	3459	2135	3438	2120	3393	1752	2804	1472	2356
			G'	253.8 +53.6R 245.1 +48.3R 239 +43.7R 234.5 +39.9R 231 +36.6R 228.3 +33.8R 226.1 +31.4R 224.3 +29.3R 222.7 +27.4R																		
		18"	q _a	q _f	1991	3639	1997	3215	1773	2855	1812	2917	1840	2963	1696	2730	1732	2789	1752	2804	1472	2356
			G'	232.1 +62.8R 226.6 +55.2R 204.6 +55.4R 204.4 +49.1R 204.3 +44.1R 190.5 +43.7R 191.9 +39.6R 193.1 +36.2R 183 +35.8R																		
		24"	q _a	q _f	1629	2622	1717	2765	1499	2413	1586	2554	1430	2302	1508	2429	1387	2234	1457	2346	1358	2187
			G'	205.9 +74.6R 205 +63.6R 183.5 +63.1R 186.5 +55R 171.3 +54R 175.2 +47.9R 163.5 +47R 167.7 +42.3R 158.2 +41.5R																		
	18 ga	4"	q _a	q _f	2207	3553	2207	3553	2207	3553	2207	3553	2207	3553	1869	2990	1514	2422	1251	2002	1051	1682
			G'	272.3 +20R 269.4 +17.4R 267.4 +15.4R 266 +13.8R 264.9 +12.5R 264 +11.4R 263.3 +10.5R 262.8 +9.7R 262.3 +9R																		
		6"	q _a	q _f	2207	3553	2207	3553	2207	3553	2207	3553	2207	3553	1869	2990	1514	2422	1251	2002	1051	1682
			G'	244.9 +29.5R 240.4 +26.2R 237.2 +23.4R 234.9 +21.2R 233.2 +19.3R 231.8 +17.8R 230.7 +16.4R 229.7 +15.3R 229 +14.2R																		
		8"	q _a	q _f	2093	3369	2114	3404	2060	3316	2082	3351	2042	3288	1869	2990	1514	2422	1251	2002	1051	1682
			G'	225.7 +36.9R 224.3 +31.6R 215.5 +30R 216.1 +26.3R 210.1 +25.1R 211.2 +22.4R 206.8 +21.5R 208 +19.5R 204.5 +18.7R																		
		12"	q _a	q _f	1813	2919	1778	2862	1753	2823	1735	2794	1722	2772	1711	2754	1514	2422	1251	2002	1051	1682
			G'	200.4 +47.7R 192.3 +43.5R 186.5 +39.8R 182.3 +36.6R 179 +33.8R 176.4 +31.4R 174.2 +29.3R 172.5 +27.4R 171 +25.7R																		
		18"	q _a	q _f	1596	2919	1600	2576	1420	2286	1450	2335	1473	2372	1357	2184	1386	2231	1251	2002	1051	1682
			G'	184.6 +54.9R 178.6 +49R 161 +49.3R 159.8 +44.2R 158.9 +40R 147.9 +39.6R 148.4 +36.2R 148.8 +33.3R 140.9 +32.9R																		
		24"	q _a	q _f	1305	2101	1375	2214	1199	1931	1269	2043	1144	1841	1206	1942	1109	1786	1165	1875	1051	1682
			G'	165.8 +63.9R 162.9 +55.7R 145.7 +55.4R 146.6 +48.9R 134.5 +48.1R 136.6 +43.1R 127.3 +42.2R 129.9 +38.3R 122.4 +37.6R																		
	20 ga	4"	q _a	q _f	1682	2708	1682	2708	1682	2708	1682	2708	1534	2454	1212	1939	982	1570	811	1298	682	1091
			G'	199.5 +18.6R 196.6 +16.5R 194.6 +14.8R 193.2 +13.4R 192.1 +12.2R 191.2 +11.2R 190.5 +10.3R 189.9 +9.6R 189.5 +9R																		
		6"	q _a	q _f	1628	2621	1615	2600	1606	2586	1600	2575	1534	2454	1212	1939	982	1570	811	1298	682	1091
			G'	179.8 +26.4R 175.5 +23.8R 172.5 +21.6R 170.2 +19.8R 168.5 +18.2R 167.1 +16.8R 166 +15.6R 165.1 +14.6R 164.3 +13.7R																		
		8"	q _a	q _f	1487	2393	1502	2418	1452	2337	1468	2364	1433	2307	1212	1939	982	1570	811	1298	682	1091
			G'	166.5 +32.2R 164.1 +28.2R 157 +27R 156.7 +24R 151.8 +23R 152.2 +20.8R 148.6 +19.9R 149.2 +18.2R 146.4 +17.6R																		
		12"	q _a	q _f	1258	2025	1224	1971	1201	1933	1184	1906	1170	1884	1160	1867	982	1570	811	1298	682	1091
			G'	149.5 +40.2R 142.2 +37.4R 136.9 +34.7R 133 +32.2R 129.9 +30R 127.5 +28R 125.5 +26.3R 123.9 +24.8R 122.5 +23.4R																		
		18"	q _a	q _f	1095	2025	1090	1755	955	1537	972	1565	985	1586	900	1448	918	1478	811	1298	682	1091
			G'	139.1 +45.3R 133 +41.4R 119.8 +41.7R 117.7 +38R 116.2 +34.8R 108 +34.4R 107.7 +31.7R 107.5 +29.4R 101.6 +29R																		
		24"	q _a	q _f	891	1435	930	1497	803	1292	845	1361	756	1217	796	1281	727	1171	763	1228	682	1091
			G'	127.1 +51.6R 122.7 +46.2R 109.7 +46.1R 108.9 +41.4R 99.8 +40.8R 100.4 +37R 93.5 +36.3R 94.6 +33.3R 89.1 +32.6R																		
	22 ga	4"	q _a	q _f	1412	2274	1412	2274	1412	2274	1412	2274	1171	1874	926	1481	750	1199	620	991	521	833
			G'	163.8 +17.6R 161 +15.8R 159 +14.2R 157.6 +12.9R 156.5 +11.9R 155.6 +10.9R 154.9 +10.1R 154.3 +9.4R 153.8 +8.8R																		
		6"	q _a	q _f	1292	2081	1277	2057	1267	2040	1259	2028	1171	1874	926	1481	750	1199	620	991	521	833
			G'	148.1 +24.2R 143.9 +22.2R 141 +20.3R 138.8 +18.7R 137.1 +17.3R 135.8 +16.1R 134.7 +15R 133.8 +14R 133 +13.2R																		
		8"	q _a	q _f	1162	1870	1172	1887	1124	1810	1137	1831	1104	1777	926	1481	750	1199	620	991	521	833
			G'	137.6 +29.1R 134.9 +25.9R 128.7 +25R 127.9 +22.4R 123.7 +21.5R 123.7 +19.6R 120.6 +18.8R 120.9 +17.3R 118.4 +16.7R																		
		12"	q _a	q _f	967	1556	933	1503	910	1466	893	1438	880	1417	870	1401	750	1199	620	991	521	833
			G'	124.6 +35.6R 117.8 +33.5R 113 +31.4R 109.3 +29.4R 106.4 +27.5R 104.1 +25.9R 102.2 +24.4R 100.6 +23R 99.3 +21.8R																		
		18"	q _a	q _f	836	1556	826	1330	716	1153	726	1169	733	1181	666	1072	678	1092	620	991	521	833
			G'	116.7 +39.7R 110.9 +36.8R 99.8 +37.1R 97.5 +34.1R 95.7 +31.5R 88.9 +31.2R 88.2 +28.9R 87.7 +27R 82.9 +26.6R																		
		24"	q _a	q _f	681	1097	703	1131	602	970	630	1014	561	903	588	946	536	862	560	902	518	833
			G'	107.8 +44.6R 103.1 +40.6R 92.2 +40.6R 90.7 +37R 83.1 +36.4R 83 +33.4R 77.3 +32.7R 77.8 +30.2R 73.2 +29.6R																		
DGB-36 36/7/4 Support Attachment: Hilti X-ENP-19 PAF Side Seam Attachment: DeltaGrip DG4™																						

DGB-36 36/7/4

Support Attachment: Hilti X-ENP-19 PAF

Side Seam Attachment: DeltaGrip DG4™

Patent Number: 11,872,644

2.6 DGB-36 & DGBF-36

Hilti X-ENP-19 Fasteners to Supports with DeltaGrip® DG4™ Side Seam Attachment

Diaphragm Shear in pounds per linear foot (plf)



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Support Fastener Pattern	Gage	Seam Attach. Spacing	Allowable Shear (q _a) (plf), Factored Shear (q _f) (plf), and Flexibility Factor (G') (kip/in)																			
			Span →		4' - 0"		5' - 0"		6' - 0"		7' - 0"		8' - 0"		9' - 0"		10' - 0"		11' - 0"		12' - 0"	
36/9	16 ga	4"	q _a	q _f	2738	4408	2738	4408	2738	4408	2738	4408	2738	4408	2618	4188	2120	3393	1752	2804	1472	2356
			G'	361.9 +18.6R		356.9 +16.6R		353.4 +15R		350.8 +13.6R		348.7 +12.4R		347.1 +11.4R		345.8 +10.6R		344.7 +9.8R		343.8 +9.2R		
		6"	q _a	q _f	2738	4408	2738	4408	2738	4408	2738	4408	2738	4408	2618	4188	2120	3393	1752	2804	1472	2356
			G'	334.7 +26.9R		327.1 +24.6R		321.6 +22.5R		317.5 +20.7R		314.2 +19.1R		311.6 +17.7R		309.5 +16.5R		307.7 +15.5R		306.2 +14.5R		
		8"	q _a	q _f	2738	4408	2738	4408	2738	4408	2738	4408	2738	4408	2618	4188	2120	3393	1752	2804	1472	2356
			G'	315.9 +33.4R		310.8 +29.5R		299 +28.7R		297.4 +25.6R		289.3 +24.7R		289.1 +22.4R		283.1 +21.6R		283.5 +19.8R		278.7 +19.2R		
		12"	q _a	q _f	2738	4408	2668	4296	2601	4187	2550	4106	2511	4042	2479	3992	2120	3393	1752	2804	1472	2356
			G'	291.7 +42.4R		278.7 +40.1R		269.1 +37.7R		261.7 +35.4R		255.8 +33.2R		251 +31.3R		247.1 +29.5R		243.8 +27.9R		240.9 +26.4R		
		18"	q _a	q _f	2466	4408	2416	3890	2129	3428	2140	3446	2148	3458	1967	3166	1992	3206	1752	2804	1472	2356
			G'	276.8 +48.4R		265.2 +45R		243.2 +46.3R		238.2 +42.5R		234.3 +39.2R		220.1 +39.4R		218.6 +36.4R		217.3 +33.9R		206.9 +33.8R		
		24"	q _a	q _f	2092	3368	2115	3404	1838	2959	1894	3049	1700	2737	1762	2836	1614	2599	1674	2695	1472	2356
			G'	259.4 +55.8R		249.9 +50.8R		227.7 +51.8R		224.4 +46.9R		208.4 +47R		207.8 +42.8R		195.4 +42.5R		196.2 +39R		186.1 +38.7R		
	18 ga	4"	q _a	q _f	2207	3553	2207	3553	2207	3553	2207	3553	2207	3553	1869	2990	1514	2422	1251	2002	1051	1682
			G'	286 +17.3R		281.2 +15.7R		277.8 +14.3R		275.2 +13.1R		273.2 +12.1R		271.5 +11.2R		270.2 +10.4R		269.1 +9.7R		268.2 +9.1R		
		6"	q _a	q _f	2207	3553	2207	3553	2207	3553	2207	3553	2207	3553	1869	2990	1514	2422	1251	2002	1051	1682
			G'	265.5 +24.3R		258.4 +22.5R		253.2 +20.9R		249.2 +19.4R		246.1 +18R		243.6 +16.8R		241.5 +15.8R		239.8 +14.8R		238.3 +14R		
		8"	q _a	q _f	2207	3553	2207	3553	2207	3553	2207	3553	2207	3553	1869	2990	1514	2422	1251	2002	1051	1682
			G'	251.7 +29.4R		246.2 +26.5R		236.2 +26R		234 +23.5R		227.1 +22.8R		226.3 +20.9R		221.1 +20.2R		221 +18.6R		216.9 +18.1R		
		12"	q _a	q _f	2207	3553	2140	3445	2085	3356	2043	3290	2011	3238	1869	2990	1514	2422	1251	2002	1051	1682
			G'	234.4 +36.4R		222.9 +35R		214.2 +33.3R		207.5 +31.5R		202.1 +29.9R		197.7 +28.3R		194 +26.8R		190.9 +25.5R		188.2 +24.3R		
		18"	q _a	q _f	1978	3553	1937	3119	1706	2747	1714	2759	1720	2769	1574	2534	1514	2422	1251	2002	1051	1682
			G'	224 +40.8R		213.3 +38.7R		195.6 +39.9R		190.4 +37.2R		186.4 +34.6R		175 +34.8R		173 +32.5R		171.3 +30.4R		163 +30.3R		
		24"	q _a	q _f	1678	2702	1695	2729	1473	2371	1517	2442	1361	2191	1410	2270	1291	2079	1251	2002	1051	1682
			G'	212.1 +46.2R		202.5 +43R		184.8 +44.1R		180.6 +40.6R		167.8 +40.7R		166.2 +37.5R		156.2 +37.3R		155.9 +34.6R		147.8 +34.2R		
	20 ga	4"	q _a	q _f	1682	2708	1682	2708	1682	2708	1682	2708	1534	2454	1212	1939	982	1570	811	1298	682	1091
			G'	212.5 +15.4R		208 +14.3R		204.7 +13.2R		202.2 +12.3R		200.2 +11.4R		198.7 +10.6R		197.4 +10R		196.3 +9.4R		195.3 +8.8R		
		6"	q _a	q _f	1682	2708	1682	2708	1682	2708	1682	2708	1534	2454	1212	1939	982	1570	811	1298	682	1091
			G'	198.5 +20.7R		192.1 +19.6R		187.4 +18.5R		183.7 +17.4R		180.8 +16.4R		178.4 +15.4R		176.5 +14.6R		174.8 +13.8R		173.4 +13.1R		
		8"	q _a	q _f	1682	2708	1682	2708	1682	2708	1682	2708	1534	2454	1212	1939	982	1570	811	1298	682	1091
			G'	189.5 +24.4R		184 +22.7R		175.8 +22.4R		173.2 +20.7R		167.6 +20.2R		166.3 +18.7R		162.1 +18.2R		161.5 +16.9R		158.1 +16.5R		
		12"	q _a	q _f	1552	2499	1482	2386	1432	2305	1394	2244	1365	2198	1212	1939	982	1570	811	1298	682	1091
			G'	178.5 +29.2R		168.8 +28.7R		161.3 +27.8R		155.4 +26.7R		150.7 +25.5R		146.8 +24.4R		143.5 +23.3R		140.7 +22.3R		138.3 +21.4R		
		18"	q _a	q _f	1381	2499	1336	2151	1165	1875	1161	1869	1158	1865	1053	1696	982	1570	811	1298	682	1091
			G'	172 +32.2R		162.7 +31.2R		149.4 +32.4R		144.4 +30.7R		140.4 +29R		131.8 +29.2R		129.5 +27.6R		127.5 +26.1R		121.3 +26R		
		24"	q _a	q _f	1177	1895	1169	1883	1008	1623	1028	1654	917	1477	943	1519	860	1385	811	1298	682	1091
			G'	164.8 +35.7R		156 +34.2R		142.6 +35.2R		138.2 +33.1R		128.4 +33.3R		126.1 +31.1R		118.6 +31R		117.4 +29.1R		111.4 +28.9R		
22 ga	4"	q _a	q _f	1412	2274	1412	2274	1412	2274	1412	2274	1171	1874	926	1481	750	1199	620	991	521	833	
		G'	176.2 +14.1R		171.9 +13.2R		168.8 +12.4R		166.4 +11.6R		164.5 +10.8R		162.9 +10.2R		161.7 +9.6R		160.6 +9.1R		159.7 +8.6R			
	6"	q _a	q _f	1412	2274	1412	2274	1412	2274	1412	2274	1171	1874	926	1481	750	1199	620	991	521	833	
		G'	165.4 +18.4R		159.6 +17.7R		155.1 +16.9R		151.7 +16R		148.9 +15.2R		146.7 +14.4R		144.8 +13.7R		143.2 +13R		141.8 +12.4R			
	8"	q _a	q _f	1412	2274	1410	2270	1336	2151	1340	2158	1171	1874	926	1481	750	1199	620	991	521	833	
		G'	158.6 +21.4R		153.3 +20.2R		146.2 +20.2R		143.5 +18.8R		138.6 +18.4R		137.1 +17.2R		133.4 +16.8R		132.6 +15.7R		129.7 +15.4R			
	12"	q _a	q _f	1208	1945	1141	1837	1094	1761	1058	1704	1031	1660	926	1481	750	1199	620	991	521	833	
		G'	150.5 +25.1R		141.9 +25R		135.2 +24.4R		129.9 +23.7R		125.6 +22.8R		122 +22R		118.9 +21.1R		116.3 +20.3R		114.1 +19.5R			
	18"	q _a	q _f	1075	1945	1029	1656	890	1433	880	1417	873	1405	790	1272	750	1199	620	991	521	833	
		G'	145.8 +27.4R		137.4 +27R		126.4 +28.1R		121.6 +26.9R		117.8 +25.7R		110.6 +25.9R		108.3 +24.6R		106.3 +23.4R		101.1 +23.3R			
	24"	q _a	q _f	923	1486	903	1454	775	1247	781	1258	695	1118	709	1142	645	1039	620	991	521	833	
		G'	140.6 +29.8R		132.5 +29.2R		121.4 +30.3R		117 +28.7R		108.9 +29R		106.3 +22.4R		100 +27.4R		98.6 +25.8R		93.5 +25.6R			
DGB-36 36/9					Support Attachment: Hilti X-ENP-19 PAF					Side Seam Attachment: DeltaGrip DG4™												

DGB-36 36/9

Support Attachment: Hilti X-ENP-19 PAF

Side Seam Attachment: DeltaGrip DG4™

Patent Number: 11,872,644

DGB-36 & DGBF-36 2.7

Pneutek SDK61 Fasteners to Supports with
DeltaGrip® DG4™ Side Seam Attachment
Diaphragm Shear in pounds per linear foot (plf)



PNEUTEK®



Support Fastener Pattern	Gage	Seam Attach. Spacing	Allowable Shear (q_a) (plf), Factored Shear (q_f) (plf), and Flexibility Factor (G') (kip/in)															
			Span →		4' - 0"		5' - 0"		6' - 0"		7' - 0"		8' - 0"		9' - 0"		10' - 0"	
			q_a	q_f	q_a	q_f	q_a	q_f	q_a	q_f	q_a	q_f	q_a	q_f	q_a	q_f	q_a	q_f
36/4	16 ga	4"	q_a	q_f	827	1332	827	1332	827	1332	827	1332	827	1332	827	1332	827	1332
			G'		336.6 +3.6R		335.9 +2.9R		335.4 +2.4R		335 +2.1R		334.8 +1.9R		334.6 +1.7R		334.4 +1.5R	
		6"	q_a	q_f	827	1332	827	1332	827	1332	827	1332	827	1332	827	1332	827	1332
			G'		294.5 +5.9R		293.3 +4.8R		292.4 +4R		291.8 +3.5R		291.4 +3.1R		291 +2.8R		290.7 +2.5R	
		8"	q_a	q_f	827	1332	827	1332	827	1332	827	1332	827	1332	827	1332	827	1332
			G'		262.8 +8R		268.3 +6.1R		259.9 +5.5R		264.4 +4.6R		258.5 +4.2R		262.2 +3.6R		257.6 +3.4R	
	18 ga	12"	q_a	q_f	827	1332	827	1332	827	1332	827	1332	827	1332	827	1332	827	1332
			G'		218.1 +11.4R		215.7 +9.4R		214 +8R		212.8 +6.9R		211.9 +6.1R		211.2 +5.5R		210.6 +5R	
		18"	q_a	q_f	827	1332	827	1332	827	1332	827	1332	827	1332	827	1332	827	1332
			G'		188.3 +14.1R		191.8 +11.1R		171.2 +10.7R		176.6 +8.9R		180.5 +7.6R		167.4 +7.4R		171.7 +6.5R	
		24"	q_a	q_f	827	1332	827	1332	827	1332	827	1332	827	1332	827	1332	827	1332
			G'		150.8 +17.8R		163.4 +13.3R		144.3 +12.6R		154.6 +10.2R		140.9 +9.7R		149.5 +8.2R		138.8 +7.9R	
	20 ga	4"	q_a	q_f	661	1065	661	1065	661	1065	661	1065	661	1065	661	1065	661	1065
			G'		260.9 +3.6R		260.2 +3R		259.6 +2.5R		259.3 +2.2R		259 +1.9R		258.8 +1.7R		258.6 +1.5R	
		6"	q_a	q_f	661	1065	661	1065	661	1065	661	1065	661	1065	661	1065	661	1065
			G'		226.7 +5.8R		225.4 +4.8R		224.6 +4R		224 +3.5R		223.5 +3.1R		223.2 +2.8R		222.9 +2.5R	
		8"	q_a	q_f	661	1065	661	1065	661	1065	661	1065	661	1065	661	1065	661	1065
			G'		201.4 +7.8R		205.5 +6R		198.6 +5.4R		202 +4.5R		197.1 +4.2R		200 +3.6R		196.3 +3.4R	
	22 ga	12"	q_a	q_f	661	1065	661	1065	661	1065	661	1065	661	1065	661	1065	661	1065
			G'		166.5 +10.9R		164.1 +9R		162.5 +7.7R		161.4 +6.7R		160.5 +5.9R		159.8 +5.3R		159.2 +4.8R	
		18"	q_a	q_f	661	1065	661	1065	661	1065	661	1065	661	1065	661	1065	661	1065
			G'		143.6 +13.2R		145.8 +10.5R		129.6 +10R		133.4 +8.4R		136.2 +7.2R		126 +7R		129.1 +6.2R	
		24"	q_a	q_f	661	1065	661	1065	661	1065	661	1065	661	1065	661	1065	661	1065
			G'		115.4 +16.4R		124.1 +12.4R		109.3 +11.7R		116.7 +9.5R		106.1 +9.1R		112.4 +7.7R		104.2 +7.4R	
36/4	20 ga	4"	q_a	q_f	498	802	498	802	498	802	498	802	498	802	498	802	498	802
			G'		188 +3.7R		187.2 +3R		186.7 +2.5R		186.3 +2.2R		186 +1.9R		185.8 +1.7R		185.6 +1.6R	
		6"	q_a	q_f	498	802	498	802	498	802	498	802	498	802	498	802	498	802
			G'		162 +5.7R		160.8 +4.7R		159.9 +4R		159.3 +3.5R		158.9 +3.1R		158.5 +2.8R		158.2 +2.5R	
		8"	q_a	q_f	498	802	498	802	498	802	498	802	498	802	498	802	498	802
			G'		143.3 +7.5R		145.9 +5.8R		140.6 +5.3R		142.9 +4.4R		139.2 +4.1R		141.2 +3.5R		138.3 +3.3R	
	22 ga	12"	q_a	q_f	498	802	498	802	498	802	498	802	498	802	498	802	498	802
			G'		118.2 +10.1R		115.9 +8.4R		114.4 +7.2R		113.3 +6.3R		112.4 +5.6R		111.8 +5R		111.2 +4.6R	
		18"	q_a	q_f	498	802	498	802	498	802	498	802	498	802	498	802	498	802
			G'		102.1 +12.1R		102.9 +9.7R		91.2 +9.2R		93.5 +7.8R		95.2 +6.7R		87.8 +6.5R		89.8 +5.7R	
		24"	q_a	q_f	498	802	498	802	498	802	498	802	490	789	498	802	485	781
			G'		82.6 +14.6R		87.8 +11.3R		77.1 +10.5R		81.8 +8.7R		74.2 +8.2R		78.3 +7.1R		72.4 +6.7R	
36/4	22 ga	4"	q_a	q_f	415	668	415	668	415	668	415	668	415	668	415	668	415	668
			G'		152.4 +3.7R		151.6 +3R		151 +2.6R		150.7 +2.2R		150.4 +2R		150.1 +1.8R		150 +1.6R	
		6"	q_a	q_f	415	668	415	668	415	668	415	668	415	668	415	668	415	668
			G'		130.7 +5.6R		129.5 +4.6R		128.6 +3.9R		128 +3.4R		127.6 +3R		127.2 +2.7R		127 +2.5R	
		8"	q_a	q_f	415	668	415	668	415	668	415	668	415	668	415	668	415	668
			G'		115.4 +7.2R		117.3 +5.7R		112.7 +5.1R		114.5 +4.3R		111.3 +4R		112.9 +3.5R		110.5 +3.2R	
	24 ga	12"	q_a	q_f	415	668	415	668	415	668	415	668	415	668	415	668	415	668
			G'		95.1 +9.6R		93 +8R		91.5 +6.9R		90.4 +6R		89.6 +5.4R		89 +4.8R		88.5 +4.4R	
		18"	q_a	q_f	415	668	415	668	415	668	415	668	415	668	415	668	415	668
			G'		82.3 +11.3R		82.6 +9.1R		73 +8.6R		74.6 +7.3R		75.8 +6.4R		69.8 +6.1R		71.3 +5.4R	
		24"	q_a	q_f	404	651	415	668	388	624	405	651	378	609	394	634	373	600
			G'		67.1 +13.4R		70.7 +10.5R		61.9 +9.8R		65.4 +8.1R		59.2 +7.7R		62.3 +6.6R		57.5 +6.3R	

DGB-36 36/4

Support Attachment: Pneutek SDK61 PAF

Side Seam Attachment: DeltaGrip DG4™

Patent Number: 11,872,644

2.7 DGB-36 & DGBF-36

Pneutek SDK61 Fasteners to Supports with
DeltaGrip® DG4™ Tool Side Seam Attachment

Diaphragm Shear in pounds per linear foot (plf)



PNEUTEK®



Support Fastener Pattern	Gage	Seam Attach. Spacing	Allowable Shear (q _a) (plf), Factored Shear (q _f) (plf), and Flexibility Factor (G') (kip/in)																			
			Span →		4' - 0"		5' - 0"		6' - 0"		7' - 0"		8' - 0"		9' - 0"		10' - 0"		11' - 0"		12' - 0"	
			q _a	q _f																		
36/7/4	16 ga	4"	q _a	q _f	1654	2663	1654	2663	1654	2663	1654	2663	1654	2663	1654	2663	1654	2663	1654	2663	1472	2356
			G'	336.7	+7R	335.9	+5.7R	335.4	+4.8R	335.1	+4.2R	334.8	+3.7R	334.6	+3.3R	334.4	+3R	334.3	+2.7R	334.1	+2.5R	
		6"	q _a	q _f	1654	2663	1654	2663	1654	2663	1654	2663	1654	2663	1654	2663	1654	2663	1654	2663	1472	2356
			G'	294.6	+11.4R	293.3	+9.4R	292.5	+8R	291.9	+6.9R	291.4	+6.1R	291	+5.5R	290.8	+5R	290.5	+4.5R	290.3	+4.2R	
		8"	q _a	q _f	1654	2663	1654	2663	1654	2663	1654	2663	1654	2663	1654	2663	1654	2663	1654	2663	1472	2356
			G'	263	+15.4R	268.5	+11.9R	260	+10.8R	264.5	+9R	258.5	+8.3R	262.2	+7.2R	257.6	+6.8R	260.8	+6R	257	+5.7R	
		12"	q _a	q _f	1617	2604	1606	2585	1597	2572	1591	2562	1587	2555	1583	2549	1580	2544	1578	2540	1472	2356
			G'	218.5	+21.9R	215.9	+18.2R	214.2	+15.5R	212.9	+13.6R	212	+12R	211.3	+10.8R	210.7	+9.8R	210.2	+9R	209.8	+8.3R	
		18"	q _a	q _f	1482	2604	1497	2410	1381	2223	1411	2271	1432	2305	1353	2179	1378	2219	1398	2250	1339	2155
			G'	188.8	+26.8R	192.1	+21.4R	171.5	+20.7R	176.8	+17.3R	180.6	+14.9R	167.5	+14.5R	171.8	+12.8R	175.1	+11.4R	165.5	+11.1R	
		24"	q _a	q _f	1259	2026	1336	2150	1205	1939	1273	2050	1176	1893	1235	1989	1158	1864	1210	1948	1145	1844
			G'	151.5	+33.6R	163.7	+25.6R	144.6	+24.2R	154.8	+19.8R	141.1	+18.9R	149.6	+16.1R	139	+15.5R	146.3	+13.6R	137.6	+13.2R	
	18 ga	4"	q _a	q _f	1322	2129	1322	2129	1322	2129	1322	2129	1322	2129	1322	2129	1322	2129	1251	2002	1051	1682
			G'	261	+7.1R	260.2	+5.8R	259.7	+4.9R	259.3	+4.3R	259	+3.8R	258.8	+3.4R	258.6	+3.1R	258.5	+2.8R	258.4	+2.6R	
		6"	q _a	q _f	1322	2129	1322	2129	1322	2129	1322	2129	1322	2129	1322	2129	1322	2129	1251	2002	1051	1682
			G'	226.8	+11.3R	225.5	+9.3R	224.7	+7.9R	224	+6.9R	223.6	+6.1R	223.2	+5.5R	222.9	+5R	222.7	+4.5R	222.5	+4.2R	
		8"	q _a	q _f	1322	2129	1322	2129	1322	2129	1322	2129	1322	2129	1322	2129	1322	2129	1251	2002	1051	1682
			G'	201.6	+14.9R	205.6	+11.7R	198.7	+10.6R	202.1	+8.8R	197.2	+8.2R	200.1	+7.1R	196.3	+6.7R	198.8	+5.9R	195.7	+5.6R	
		12"	q _a	q _f	1292	2080	1282	2064	1276	2054	1271	2046	1267	2040	1264	2035	1262	2031	1251	2002	1051	1682
			G'	166.9	+20.7R	164.4	+17.3R	162.7	+14.9R	161.5	+13R	160.6	+11.6R	159.9	+10.4R	159.3	+9.5R	158.8	+8.7R	158.4	+8R	
		18"	q _a	q _f	1183	2080	1195	1924	1102	1774	1126	1813	1143	1840	1080	1739	1100	1771	1116	1796	1051	1682
			G'	144.1	+25R	146.1	+20.1R	129.9	+19.3R	133.6	+16.3R	136.4	+14.1R	126.2	+13.7R	129.2	+12.1R	131.7	+10.8R	124.3	+10.5R	
		24"	q _a	q _f	1004	1617	1066	1716	961	1547	1016	1636	938	1510	986	1587	924	1487	965	1554	914	1471
			G'	116.1	+30.7R	124.6	+23.7R	109.6	+22.4R	117	+18.4R	106.3	+17.6R	112.6	+15.1R	104.4	+14.5R	109.7	+12.7R	103	+12.3R	
	20 ga	4"	q _a	q _f	996	1604	996	1604	996	1604	996	1604	996	1604	996	1604	982	1570	811	1298	682	1091
			G'	188.1	+7.1R	187.3	+5.8R	186.8	+5R	186.4	+4.3R	186.1	+3.8R	185.8	+3.4R	185.7	+3.1R	185.5	+2.9R	185.4	+2.6R	
		6"	q _a	q _f	996	1604	996	1604	996	1604	996	1604	996	1604	996	1604	982	1570	811	1298	682	1091
			G'	162.2	+10.9R	160.9	+9.1R	160	+7.8R	159.4	+6.8R	158.9	+6R	158.6	+5.4R	158.3	+4.9R	158	+4.5R	157.8	+4.2R	
		8"	q _a	q _f	996	1604	996	1604	996	1604	996	1604	996	1604	996	1604	982	1570	811	1298	682	1091
			G'	143.6	+14.2R	146.1	+11.2R	140.7	+10.2R	143	+8.6R	139.2	+7.9R	141.2	+6.9R	138.4	+6.5R	140.1	+5.8R	137.8	+5.5R	
		12"	q _a	q _f	917	1476	906	1459	899	1448	894	1439	890	1433	887	1428	884	1424	811	1298	682	1091
			G'	118.6	+19R	116.2	+16R	114.6	+13.9R	113.4	+12.2R	112.6	+10.9R	111.9	+9.8R	111.3	+8.9R	110.9	+8.2R	110.5	+7.6R	
		18"	q _a	q _f	825	1476	832	1340	755	1216	773	1244	785	1264	734	1182	749	1206	761	1225	682	1091
			G'	102.6	+22.5R	103.3	+18.4R	91.5	+17.5R	93.7	+14.9R	95.3	+13R	87.9	+12.5R	89.9	+11.1R	91.5	+10R	86.2	+9.7R	
		24"	q _a	q _f	687	1107	730	1175	648	1044	687	1106	628	1010	662	1065	615	990	644	1038	606	975
			G'	83.3	+27R	88.3	+21.3R	77.4	+20R	82.1	+16.7R	74.4	+15.8R	78.5	+13.7R	72.6	+13.1R	76.1	+11.6R	71.3	+11.2R	
	22 ga	4"	q _a	q _f	830	1337	830	1337	830	1337	830	1337	830	1337	830	1337	750	1199	620	991	521	833
			G'	152.5	+7R	151.6	+5.8R	151.1	+5R	150.7	+4.3R	150.4	+3.9R	150.2	+3.5R	150	+3.1R	149.8	+2.9R	149.7	+2.7R	
		6"	q _a	q _f	830	1337	830	1337	830	1337	830	1337	830	1337	830	1337	750	1199	620	991	521	833
			G'	130.9	+10.6R	129.6	+8.9R	128.7	+7.6R	128.1	+6.7R	127.6	+6R	127.3	+5.4R	127	+4.9R	126.7	+4.5R	126.5	+4.1R	
		8"	q _a	q _f	816	1313	824	1326	806	1298	814	1310	801	1289	808	1300	750	1199	620	991	521	833
			G'	115.7	+13.6R	117.4	+10.8R	112.8	+9.8R	114.6	+8.3R	111.4	+7.7R	113	+6.7R	110.5	+6.3R	111.9	+5.7R	110	+5.4R	
		12"	q _a	q _f	718	1155	706	1137	699	1125	693	1116	689	1109	685	1103	682	1098	620	991	521	833
			G'	95.6	+17.9R	93.3	+15.2R	91.7	+13.2R	90.6	+11.6R	89.7	+10.4R	89.1	+9.4R	88.6	+8.6R	88.1	+7.9R	87.8	+7.3R	
		18"	q _a	q _f	637	1155	641	1032	574	924	587	945	596	960	552	889	564	908	574	924	521	833
			G'	82.9	+20.9R	83	+17.2R	73.3	+16.4R	74.8	+14R	76	+12.3R	70	+11.8R	71.4	+10.5R	72.6	+9.5R	68.3	+9.2R	
		24"	q _a	q _f	524	844	555	893	487	785	516	831	468	753	494	795	456	733	478	770	447	720
			G'	67.8	+24.7R	71.1	+19.7R	62.3	+18.5R	65.6	+15.5R	59.4	+14.7R	62.5	+12.8R	57.7	+12.2R	60.4	+10.9R	56.5	+10.4R	
DGB-36 36/7/4 Support Attachment: Pneutek SDK61 PAF Side Seam Attachment: DeltaGrip DG4™																						

DGB-36 36/7/4

Support Attachment: Pneutek SDK61 PAF

Side Seam Attachment: DeltaGrip DG4™

Patent Number: 11,872,644

DGB-36 & DGBF-36 2.7

Pneutek SDK61 Fasteners to Supports with
DeltaGrip® DG4™ Tool Side Seam Attachment
Diaphragm Shear in pounds per linear foot (plf)



PNEUTEK®



Support Fastener Pattern	Gage	Seam Attach. Spacing	Allowable Shear (q _a) (plf), Factored Shear (q _f) (plf), and Flexibility Factor (G') (kip/in)																			
			Span →	4' - 0"		5' - 0"		6' - 0"		7' - 0"		8' - 0"		9' - 0"		10' - 0"		11' - 0"		12' - 0"		
36/9	16 ga	4"	q _a	q _f	1654	2663	1654	2663	1654	2663	1654	2663	1654	2663	1654	2663	1654	2663	1472	2356		
			G'	341.2 +7.3R		339.6 +6R		338.5 +5.1R		337.7 +4.5R		337.1 +4R		336.6 +3.6R		336.3 +3.2R		336 +3R		335.7 +2.7R		
		6"	q _a	q _f	1654	2663	1654	2663	1654	2663	1654	2663	1654	2663	1654	2663	1654	2663	1654	2663	1472	2356
			G'	302 +11.7R		299.4 +9.8R		297.6 +8.4R		296.3 +7.3R		295.3 +6.5R		294.5 +5.9R		293.9 +5.3R		293.4 +4.9R		293 +4.5R		
		8"	q _a	q _f	1654	2663	1654	2663	1654	2663	1654	2663	1654	2663	1654	2663	1654	2663	1654	2663	1472	2356
			G'	272.9 +15.6R		276.1 +12.3R		266.9 +11.3R		270.2 +9.5R		263.8 +8.8R		266.8 +7.7R		261.9 +7.3R		264.6 +6.5R		260.6 +6.2R		
		12"	q _a	q _f	1654	2663	1654	2663	1654	2663	1654	2663	1654	2663	1654	2663	1654	2663	1654	2663	1472	2356
			G'	232.8 +21.8R		227.7 +18.5R		224.2 +16R		221.6 +14.1R		219.7 +12.6R		218.2 +11.4R		216.9 +10.4R		215.9 +9.6R		215.1 +8.9R		
		18"	q _a	q _f	1654	2663	1654	2663	1643	2646	1654	2663	1654	2663	1577	2539	1602	2580	1623	2613	1472	2356
			G'	206.4 +26.3R		206.1 +21.6R		184.9 +21R		187.9 +17.9R		190.2 +15.5R		176.8 +15.2R		179.9 +13.5R		182.4 +12.1R		172.6 +11.9R		
		24"	q _a	q _f	1550	2496	1607	2588	1435	2310	1498	2412	1371	2207	1431	2304	1331	2143	1386	2231	1303	2098
			G'	173.7 +32.5R		180.5 +25.5R		160.3 +24.5R		167.6 +20.3R		153.3 +19.6R		160 +16.8R		148.9 +16.3R		155 +14.4R		145.9 +13.9R		
	18 ga	4"	q _a	q _f	1322	2129	1322	2129	1322	2129	1322	2129	1322	2129	1322	2129	1322	2129	1251	2002	1051	1682
			G'	265.5 +7.3R		263.9 +6.1R		262.8 +5.2R		262 +4.5R		261.4 +4R		260.9 +3.6R		260.5 +3.3R		260.2 +3R		260 +2.8R		
		6"	q _a	q _f	1322	2129	1322	2129	1322	2129	1322	2129	1322	2129	1322	2129	1322	2129	1251	2002	1051	1682
			G'	234.1 +11.4R		231.5 +9.6R		229.7 +8.3R		228.4 +7.3R		227.5 +6.5R		226.7 +5.8R		226.1 +5.3R		225.5 +4.9R		225.1 +4.5R		
		8"	q _a	q _f	1322	2129	1322	2129	1322	2129	1322	2129	1322	2129	1322	2129	1322	2129	1251	2002	1051	1682
			G'	211.4 +14.9R		213.2 +11.9R		205.5 +10.9R		207.7 +9.2R		202.4 +8.6R		204.6 +7.5R		200.5 +7.1R		202.5 +6.4R		199.3 +6.1R		
		12"	q _a	q _f	1322	2129	1322	2129	1322	2129	1322	2129	1322	2129	1322	2129	1322	2129	1251	2002	1051	1682
			G'	180.5 +20.2R		175.7 +17.3R		172.3 +15.1R		169.9 +13.4R		168 +12R		166.5 +10.9R		165.4 +10R		164.4 +9.2R		163.5 +8.5R		
		18"	q _a	q _f	1322	2129	1322	2129	1312	2112	1322	2129	1322	2129	1258	2026	1279	2059	1251	2002	1051	1682
			G'	160.7 +24.1R		159.3 +20R		142.5 +19.4R		144.2 +16.6R		145.5 +14.6R		134.9 +14.2R		137 +12.6R		138.6 +11.4R		131 +11.1R		
		24"	q _a	q _f	1237	1992	1283	2066	1145	1843	1196	1925	1094	1761	1142	1838	1062	1709	1106	1780	1040	1674
			G'	136.5 +29.2R		140.1 +23.3R		124.3 +22.3R		128.9 +18.7R		117.7 +18R		122.3 +15.6R		113.6 +15R		117.9 +13.3R		110.9 +12.9R		
	20 ga	4"	q _a	q _f	996	1604	996	1604	996	1604	996	1604	996	1604	996	1604	982	1570	811	1298	682	1091
			G'	192.7 +7.2R		191.1 +6R		189.9 +5.2R		189.1 +4.6R		188.5 +4.1R		188 +3.7R		187.6 +3.3R		187.3 +3.1R		187 +2.8R		
		6"	q _a	q _f	996	1604	996	1604	996	1604	996	1604	996	1604	996	1604	982	1570	811	1298	682	1091
			G'	169.4 +10.8R		166.8 +9.2R		165 +8R		163.8 +7.1R		162.8 +6.3R		162 +5.7R		161.4 +5.2R		160.9 +4.8R		160.5 +4.5R		
		8"	q _a	q _f	996	1604	996	1604	996	1604	996	1604	996	1604	996	1604	982	1570	811	1298	682	1091
			G'	152.9 +13.8R		153.4 +11.2R		147.3 +10.3R		148.5 +8.8R		144.3 +8.2R		145.7 +7.2R		142.5 +6.8R		143.8 +6.1R		141.3 +5.8R		
		12"	q _a	q _f	996	1604	996	1604	996	1604	996	1604	996	1604	996	1604	982	1570	811	1298	682	1091
			G'	131.3 +18.2R		126.8 +15.7R		123.6 +13.9R		121.3 +12.4R		119.6 +11.1R		118.2 +10.2R		117.1 +9.3R		116.1 +8.6R		115.4 +8R		
		18"	q _a	q _f	996	1604	996	1604	899	1447	910	1464	918	1477	850	1369	863	1390	811	1298	682	1091
			G'	117.6 +21.2R		115.4 +17.9R		103 +17.3R		103.4 +15R		103.8 +13.2R		96 +12.8R		97.1 +11.5R		98 +10.4R		92.4 +10.2R		
		24"	q _a	q _f	858	1382	883	1421	778	1253	810	1304	734	1183	766	1233	707	1138	736	1185	682	1091
			G'	101.5 +25R		102.4 +20.5R		90.6 +19.5R		92.9 +16.6R		84.7 +15.9R		87.3 +14R		81 +13.4R		83.6 +12R		78.5 +11.6R		
	22 ga	4"	q _a	q _f	830	1337	830	1337	830	1337	830	1337	830	1337	830	1337	750	1199	620	991	521	833
			G'	157.1 +7R		155.4 +6R		154.3 +5.2R		153.5 +4.5R		152.9 +4.1R		152.4 +3.7R		152 +3.3R		151.6 +3.1R		151.4 +2.8R		
		6"	q _a	q _f	830	1337	830	1337	830	1337	830	1337	830	1337	830	1337	750	1199	620	991	521	833
			G'	137.9 +10.4R		135.4 +8.9R		133.7 +7.8R		132.4 +6.9R		131.5 +6.2R		130.7 +5.6R		130.1 +5.1R		129.6 +4.7R		129.2 +4.4R		
		8"	q _a	q _f	830	1337	830	1337	830	1337	830	1337	830	1337	830	1337	750	1199	620	991	521	833
			G'	124.7 +13R		124.5 +10.7R		119.3 +9.9R		120 +8.5R		116.4 +7.9R		117.3 +7R		114.6 +6.6R		115.5 +6R		113.4 +5.7R		
		12"	q _a	q _f	830	1337	830	1337	830	1337	818	1317	807	1300	799	1286	750	1199	620	991	521	833
			G'	107.5 +16.8R		103.3 +14.7R		100.3 +13R		98.2 +11.6R		96.5 +10.5R		95.1 +9.6R		94.1 +8.8R		93.2 +8.2R		92.4 +7.6R		
		18"	q _a	q _f	784	1337	773	1244	685	1103	691	1113	695	1119	639	1029	648	1044	620	991	521	833
			G'	96.9 +19.3R		94.4 +16.5R		84.1 +16R		84 +13.9R		83.9 +12.3R		77.6 +12R		78.2 +10.8R		78.7 +9.8R		74.2 +9.5R		
		24"	q _a	q _f	665	1070	677	1090	592	953	613	986	552	889	573	923	527	848	547	881	510	821
			G'	84.5 +22.5R		84.3 +18.7R		74.5 +17.8R		75.8 +15.3R		69 +14.7R		70.8 +12.9R		65.6 +12.4R		67.4 +11.2R		63.3 +10.8R		
DGB-36 36/9 Support Attachment: Pnutek SDK61 PAF Side Seam Attachment: DeltaGrip DG4™																						

DGB-36 36/9

Support Attachment: Pneutek SDK61 PAF

Side Seam Attachment: DeltaGrip DG4™

Patent Number: 11,872,644

2.7 DGB-36 & DGBF-36

Pneutek SDK63 Fasteners to Supports with
DeltaGrip® DG4™ Tool Side Seam Attachment

Diaphragm Shear in pounds per linear foot (plf)



PNEUTEK®



Support Fastener Pattern	Gage	Seam Attach. Spacing	Allowable Shear (q _a) (plf), Factored Shear (q _f) (plf), and Flexibility Factor (G') (kip/in)																			
			Span →		4' - 0"		5' - 0"		6' - 0"		7' - 0"		8' - 0"		9' - 0"		10' - 0"		11' - 0"		12' - 0"	
			q _a	q _f	q _a	q _f	q _a	q _f	q _a	q _f	q _a	q _f	q _a	q _f	q _a	q _f	q _a	q _f	q _a	q _f	q _a	q _f
36/4	16 ga	4"	q _a	q _f	1217	1959	1217	1959	1217	1959	1217	1959	1217	1959	1217	1959	1217	1959	1217	1959	1217	1959
			G'	336.6	+3.6R	335.9	+2.9R	335.4	+2.4R	335	+2.1R	334.8	+1.9R	334.6	+1.7R	334.4	+1.5R	334.3	+1.4R	334.1	+1.3R	
		6"	q _a	q _f	1217	1959	1217	1959	1217	1959	1217	1959	1217	1959	1217	1959	1217	1959	1217	1959	1217	1959
			G'	294.5	+5.9R	293.3	+4.8R	292.4	+4R	291.8	+3.5R	291.4	+3.1R	291	+2.8R	290.7	+2.5R	290.5	+2.3R	290.3	+2.1R	
		8"	q _a	q _f	1217	1959	1217	1959	1217	1959	1217	1959	1217	1959	1217	1959	1217	1959	1217	1959	1217	1959
			G'	262.8	+8R	268.3	+6.1R	259.9	+5.5R	264.4	+4.6R	258.5	+4.2R	262.2	+3.6R	257.6	+3.4R	260.8	+3R	257	+2.9R	
		12"	q _a	q _f	1217	1959	1217	1959	1217	1959	1217	1959	1217	1959	1217	1959	1217	1959	1217	1959	1217	1959
			G'	218.1	+11.4R	215.7	+9.4R	214	+8R	212.8	+6.9R	211.9	+6.1R	211.2	+5.5R	210.6	+5R	210.1	+4.6R	209.8	+4.2R	
		18"	q _a	q _f	1217	1959	1217	1959	1217	1959	1217	1959	1217	1959	1217	1959	1217	1959	1217	1959	1217	1959
			G'	188.3	+14.1R	191.8	+11.1R	171.2	+10.7R	176.6	+8.9R	180.5	+7.6R	167.4	+7.4R	171.7	+6.5R	175.1	+5.8R	165.5	+5.6R	
		24"	q _a	q _f	1186	1909	1217	1959	1137	1830	1186	1910	1110	1787	1154	1858	1093	1759	1132	1823	1081	1740
			G'	150.8	+17.8R	163.4	+13.3R	144.3	+12.6R	154.6	+10.2R	140.9	+9.7R	149.5	+8.2R	138.8	+7.9R	146.2	+6.9R	137.5	+6.7R	
	18 ga	4"	q _a	q _f	1011	1628	1011	1628	1011	1628	1011	1628	1011	1628	1011	1628	1011	1628	1011	1628	1011	1628
			G'	260.9	+3.6R	260.2	+3R	259.6	+2.5R	259.3	+2.2R	259	+1.9R	258.8	+1.7R	258.6	+1.5R	258.5	+1.4R	258.3	+1.3R	
		6"	q _a	q _f	1011	1628	1011	1628	1011	1628	1011	1628	1011	1628	1011	1628	1011	1628	1011	1628	1011	1628
			G'	226.7	+5.8R	225.4	+4.8R	224.6	+4R	224	+3.5R	223.5	+3.1R	223.2	+2.8R	222.9	+2.5R	222.6	+2.3R	222.4	+2.1R	
		8"	q _a	q _f	1011	1628	1011	1628	1011	1628	1011	1628	1011	1628	1011	1628	1011	1628	1011	1628	1011	1628
			G'	201.4	+7.8R	205.5	+6R	198.6	+5.4R	202	+4.5R	197.1	+4.2R	200	+3.6R	196.3	+3.4R	198.7	+3R	195.7	+2.8R	
		12"	q _a	q _f	1011	1628	1011	1628	1011	1628	1011	1628	1011	1628	1011	1628	1011	1628	1011	1628	1011	1628
			G'	166.5	+10.9R	164.1	+9R	162.5	+7.7R	161.4	+6.7R	160.5	+5.9R	159.8	+5.3R	159.2	+4.8R	158.8	+4.4R	158.4	+4.1R	
		18"	q _a	q _f	1011	1628	1011	1628	1011	1628	1011	1628	1011	1628	1011	1628	1011	1628	1011	1628	1004	1617
			G'	143.6	+13.2R	145.8	+10.5R	129.6	+10R	133.4	+8.4R	136.2	+7.2R	126	+7R	129.1	+6.2R	131.6	+5.5R	124.2	+5.4R	
		24"	q _a	q _f	971	1563	1011	1628	928	1494	969	1560	904	1456	941	1515	889	1432	922	1485	879	1415
			G'	115.4	+16.4R	124.1	+12.4R	109.3	+11.7R	116.7	+9.5R	106.1	+9.1R	112.4	+7.7R	104.2	+7.4R	109.6	+6.5R	102.9	+6.3R	
	20 ga	4"	q _a	q _f	761	1226	761	1226	761	1226	761	1226	761	1226	761	1226	761	1226	761	1226	682	1091
			G'	188	+3.7R	187.2	+3R	186.7	+2.5R	186.3	+2.2R	186	+1.9R	185.8	+1.7R	185.6	+1.6R	185.5	+1.4R	185.4	+1.3R	
		6"	q _a	q _f	761	1226	761	1226	761	1226	761	1226	761	1226	761	1226	761	1226	761	1226	682	1091
			G'	162	+5.7R	160.8	+4.7R	159.9	+4R	159.3	+3.5R	158.9	+3.1R	158.5	+2.8R	158.2	+2.5R	158	+2.3R	157.8	+2.1R	
		8"	q _a	q _f	761	1226	761	1226	761	1226	761	1226	761	1226	761	1226	761	1226	761	1226	682	1091
			G'	143.3	+7.5R	145.9	+5.8R	140.6	+5.3R	142.9	+4.4R	139.2	+4.1R	141.2	+3.5R	138.3	+3.3R	140.1	+2.9R	137.7	+2.8R	
		12"	q _a	q _f	761	1226	761	1226	761	1226	761	1226	761	1226	761	1226	761	1226	761	1226	682	1091
			G'	118.2	+10.1R	115.9	+8.4R	114.4	+7.2R	113.3	+6.3R	112.4	+5.6R	111.8	+5R	111.2	+4.6R	110.8	+4.2R	110.5	+3.9R	
		18"	q _a	q _f	761	1226	761	1226	724	1165	736	1184	744	1198	702	1130	713	1148	722	1163	682	1091
			G'	102.1	+12.1R	102.9	+9.7R	91.2	+9.2R	93.5	+7.8R	95.2	+6.7R	87.8	+6.5R	89.8	+5.7R	91.4	+5.1R	86.1	+5R	
		24"	q _a	q _f	677	1091	706	1137	638	1026	667	1074	616	991	643	1035	602	969	626	1008	592	953
			G'	82.6	+14.6R	87.8	+11.3R	77.1	+10.5R	81.8	+8.7R	74.2	+8.2R	78.3	+7.1R	72.4	+6.7R	76	+5.9R	71.2	+5.7R	
	22 ga	4"	q _a	q _f	634	1022	634	1022	634	1022	634	1022	634	1022	634	1022	634	1022	620	991	521	833
			G'	152.4	+3.7R	151.6	+3R	151	+2.6R	150.7	+2.2R	150.4	+2R	150.1	+1.8R	150	+1.6R	149.8	+1.5R	149.7	+1.3R	
		6"	q _a	q _f	634	1022	634	1022	634	1022	634	1022	634	1022	634	1022	634	1022	620	991	521	833
			G'	130.7	+5.6R	129.5	+4.6R	128.6	+3.9R	128	+3.4R	127.6	+3R	127.2	+2.7R	127	+2.5R	126.7	+2.3R	126.5	+2.1R	
		8"	q _a	q _f	634	1022	634	1022	634	1022	634	1022	634	1022	634	1022	634	1022	620	991	521	833
			G'	115.4	+7.2R	117.3	+5.7R	112.7	+5.1R	114.5	+4.3R	111.3	+4R	112.9	+3.5R	110.5	+3.2R	111.9	+2.9R	109.9	+2.7R	
		12"	q _a	q _f	634	1022	634	1022	634	1022	634	1022	634	1022	634	1022	634	1022	620	991	521	833
			G'	95.1	+9.6R	93	+8R	91.5	+6.9R	90.4	+6R	89.6	+5.4R	89	+4.8R	88.5	+4.4R	88	+4R	87.7	+3.7R	
		18"	q _a	q _f	614	1022	614	988	559	899	567	913	574	923	536	863	545	878	552	889	521	833
			G'	82.3	+11.3R	82.6	+9.1R	73	+8.6R	74.6	+7.3R	75.8	+6.4R	69.8	+6.1R	71.3	+5.4R	72.5	+4.9R	68.2	+4.7R	
		24"	q _a	q _f	526	846	546	879	487	784	509	820	466	750	486	783	452	728	471	759	443	713
			G'	67.1	+13.4R	70.7	+10.5R	61.9	+9.8R	65.4	+8.1R	59.2	+7.7R	62.3	+6.6R	57.5	+6.3R	60.3	+5.6R	56.4	+5.4R	
DGB-36 36/4 Support Attachment: Pneutek SDK63 PAF Side Seam Attachment: DeltaGrip DG4™																						

DGB-36 36/4

Support Attachment: Pneutek SDK63 PAF

Side Seam Attachment: DeltaGrip DG4™

Patent Number: 11,872,644

DGB-36 & DGBF-36 2.7

Pneutek SDK63 Fasteners to Supports with
DeltaGrip® DG4™ Tool Side Seam Attachment

Diaphragm Shear in pounds per linear foot (plf)



PNEUTEK®



Support Fastener Pattern	Gage	Seam Attach. Spacing	Allowable Shear (q _a) (plf), Factored Shear (q _f) (plf), and Flexibility Factor (G') (kip/in)																			
			Span →		4' - 0"		5' - 0"		6' - 0"		7' - 0"		8' - 0"		9' - 0"		10' - 0"		11' - 0"		12' - 0"	
36/7/4	16 ga	4"	q _a	q _f	2434	3919	2434	3919	2434	3919	2434	3919	2434	3919	2434	3919	2120	3393	1752	2804	1472	2356
			G'	336.7 +7R		335.9 +5.7R		335.4 +4.8R		335.1 +4.2R		334.8 +3.7R		334.6 +3.3R		334.4 +3R		334.3 +2.7R		334.1 +2.5R		
		6"	q _a	q _f	2434	3919	2434	3919	2434	3919	2434	3919	2434	3919	2434	3919	2120	3393	1752	2804	1472	2356
			G'	294.6 +11.4R		293.3 +9.4R		292.5 +8R		291.9 +6.9R		291.4 +6.1R		291 +5.5R		290.8 +5R		290.5 +4.5R		290.3 +4.2R		
		8"	q _a	q _f	2392	3851	2415	3889	2363	3805	2386	3841	2348	3781	2368	3813	2120	3393	1752	2804	1472	2356
			G'	263 +15.4R		268.5 +11.9R		260 +10.8R		264.5 +9R		258.5 +8.3R		262.2 +7.2R		257.6 +6.8R		260.8 +6R		257 +5.7R		
		12"	q _a	q _f	2104	3387	2071	3335	2049	3298	2032	3271	2019	3251	2009	3234	2001	3221	1752	2804	1472	2356
			G'	218.5 +21.9R		215.9 +18.2R		214.2 +15.5R		212.9 +13.6R		212 +12R		211.3 +10.8R		210.7 +9.8R		210.2 +9R		209.8 +8.3R		
		18"	q _a	q _f	1868	3387	1879	3025	1682	2709	1721	2770	1748	2815	1620	2608	1655	2664	1682	2708	1472	2356
			G'	188.8 +26.8R		192.1 +21.4R		171.5 +20.7R		176.8 +17.3R		180.6 +14.9R		167.5 +14.5R		171.8 +12.8R		175.1 +11.4R		165.5 +11.1R		
		24"	q _a	q _f	1537	2475	1627	2619	1429	2301	1514	2438	1372	2208	1447	2330	1336	2151	1403	2259	1312	2112
			G'	151.5 +33.6R		163.7 +25.6R		144.6 +24.2R		154.8 +19.8R		141.1 +18.9R		149.6 +16.1R		139 +15.5R		146.3 +13.6R		137.6 +13.2R		
	18 ga	4"	q _a	q _f	2022	3256	2022	3256	2022	3256	2022	3256	2022	3256	1869	2990	1514	2422	1251	2002	1051	1682
			G'	261 +7.1R		260.2 +5.8R		259.7 +4.9R		259.3 +4.3R		259 +3.8R		258.8 +3.4R		258.6 +3.1R		258.5 +2.8R		258.4 +2.6R		
		6"	q _a	q _f	2022	3256	2022	3256	2022	3256	2022	3256	2022	3256	1869	2990	1514	2422	1251	2002	1051	1682
			G'	226.8 +11.3R		225.5 +9.3R		224.7 +7.9R		224 +6.9R		223.6 +6.1R		223.2 +5.5R		222.9 +5R		222.7 +4.5R		222.5 +4.2R		
		8"	q _a	q _f	1965	3164	1985	3196	1940	3123	1959	3154	1926	3101	1869	2990	1514	2422	1251	2002	1051	1682
			G'	201.6 +14.9R		205.6 +11.7R		198.7 +10.6R		202.1 +8.8R		197.2 +8.2R		200.1 +7.1R		196.3 +6.7R		198.8 +5.9R		195.7 +5.6R		
		12"	q _a	q _f	1720	2769	1691	2723	1671	2691	1657	2667	1645	2649	1636	2635	1514	2422	1251	2002	1051	1682
			G'	166.9 +20.7R		164.4 +17.3R		162.7 +14.9R		161.5 +13R		160.6 +11.6R		159.9 +10.4R		159.3 +9.5R		158.8 +8.7R		158.4 +8R		
		18"	q _a	q _f	1523	2769	1530	2464	1366	2199	1397	2249	1419	2285	1312	2113	1340	2158	1251	2002	1051	1682
			G'	144.1 +25R		146.1 +20.1R		129.9 +19.3R		133.6 +16.3R		136.4 +14.1R		126.2 +13.7R		129.2 +12.1R		131.7 +10.8R		124.3 +10.5R		
		24"	q _a	q _f	1250	2012	1321	2127	1158	1864	1227	1975	1109	1786	1170	1884	1079	1737	1133	1824	1051	1682
			G'	116.1 +30.7R		124.6 +23.7R		109.6 +22.4R		117 +18.4R		106.3 +17.6R		112.6 +15.1R		104.4 +14.5R		109.7 +12.7R		103 +12.3R		
	20 ga	4"	q _a	q _f	1523	2452	1523	2452	1523	2452	1523	2452	1523	2452	1212	1939	982	1570	811	1298	682	1091
			G'	188.1 +7.1R		187.3 +5.8R		186.8 +5R		186.4 +4.3R		186.1 +3.8R		185.8 +3.4R		185.7 +3.1R		185.5 +2.9R		185.4 +2.6R		
		6"	q _a	q _f	1512	2435	1503	2419	1496	2408	1491	2400	1487	2394	1212	1939	982	1570	811	1298	682	1091
			G'	162.2 +10.9R		160.9 +9.1R		160 +7.8R		159.4 +6.8R		158.9 +6R		158.6 +5.4R		158.3 +4.9R		158 +4.5R		157.8 +4.2R		
		8"	q _a	q _f	1393	2242	1407	2266	1365	2198	1381	2223	1351	2175	1212	1939	982	1570	811	1298	682	1091
			G'	143.6 +14.2R		146.1 +11.2R		140.7 +10.2R		143 +8.6R		139.2 +7.9R		141.2 +6.9R		138.4 +6.5R		140.1 +5.8R		137.8 +5.5R		
		12"	q _a	q _f	1191	1917	1163	1873	1144	1842	1130	1819	1119	1802	1110	1788	982	1570	811	1298	682	1091
			G'	118.6 +19R		116.2 +16R		114.6 +13.9R		113.4 +12.2R		112.6 +10.9R		111.9 +9.8R		111.3 +8.9R		110.9 +8.2R		110.5 +7.6R		
		18"	q _a	q _f	1041	1917	1040	1675	916	1475	935	1505	948	1527	869	1400	888	1429	811	1298	682	1091
			G'	102.6 +22.5R		103.3 +18.4R		91.5 +17.5R		93.7 +14.9R		95.3 +13R		87.9 +12.5R		89.9 +11.1R		91.5 +10R		86.2 +9.7R		
		24"	q _a	q _f	849	1366	890	1433	772	1242	815	1312	731	1177	770	1240	706	1137	741	1193	682	1091
			G'	83.3 +27R		88.3 +21.3R		77.4 +20R		82.1 +16.7R		74.4 +15.8R		78.5 +13.7R		72.6 +13.1R		76.1 +11.6R		71.3 +11.2R		
	22 ga	4"	q _a	q _f	1269	2043	1269	2043	1269	2043	1269	2043	1171	1874	926	1481	750	1199	620	991	521	833
			G'	152.5 +7R		151.6 +5.8R		151.1 +5R		150.7 +4.3R		150.4 +3.9R		150.2 +3.5R		150 +3.1R		149.8 +2.9R		149.7 +2.7R		
		6"	q _a	q _f	1201	1933	1189	1915	1182	1902	1176	1893	1171	1874	926	1481	750	1199	620	991	521	833
			G'	130.9 +10.6R		129.6 +8.9R		128.7 +7.6R		128.1 +6.7R		127.6 +6R		127.3 +5.4R		127 +4.9R		126.7 +4.5R		126.5 +4.1R		
		8"	q _a	q _f	1089	1753	1099	1770	1059	1706	1072	1726	1043	1680	926	1481	750	1199	620	991	521	833
			G'	115.7 +13.6R		117.4 +10.8R		112.8 +9.8R		114.6 +8.3R		111.4 +7.7R		113 +6.7R		110.5 +6.3R		111.9 +5.7R		110 +5.4R		
12"		q _a	q _f	914	1472	887	1428	868	1398	854	1375	843	1358	835	1344	750	1199	620	991	521	833	
		G'	95.6 +17.9R		93.3 +15.2R		91.7 +13.2R		90.6 +11.6R		89.7 +10.4R		89.1 +9.4R		88.6 +8.6R		88.1 +7.9R		87.8 +7.3R			
18"		q _a	q _f	794	1472	787	1268	687	1105	698	1124	706	1137	643	1036	656	1056	620	991	521	833	
		G'	82.9 +20.9R		83 +17.2R		73.3 +16.4R		74.8 +14R		76 +12.3R		70 +11.8R		71.4 +10.5R		72.6 +9.5R		68.3 +9.2R			
24"		q _a	q _f	646	1040	670	1079	577	929	606	976	541	871	568	915	519	835	544	875	504	811	
		G'	67.8 +24.7R		71.1 +19.7R		62.3 +18.5R		65.6 +15.5R		59.4 +14.7R		62.5 +12.8R		57.7 +12.2R		60.4 +10.9R		56.5 +10.4R			
DGB-36 36/7/4 Support Attachment: Pneutek SDK63 PAF Side Seam Attachment: DeltaGrip DG4™																						

2.7 DGB-36 & DGBF-36

Pneutek SDK63 Fasteners to Supports with
DeltaGrip® DG4™ Side Seam Attachment
Diaphragm Shear in pounds per linear foot (plf)



PNEUTEK®



Support Fastener Pattern	Gage	Seam Attach. Spacing	Allowable Shear (q _a) (plf), Factored Shear (q _f) (plf), and Flexibility Factor (G') (kip/in)																			
			Span →		4' - 0"		5' - 0"		6' - 0"		7' - 0"		8' - 0"		9' - 0"		10' - 0"		11' - 0"		12' - 0"	
			q _a	q _f																		
36/9	16 ga	4"	q _a	q _f	2434	3919	2434	3919	2434	3919	2434	3919	2434	3919	2120	3393	1752	2804	1472	2356		
			G'	341.2 +7.3R		339.6 +6R		338.5 +5.1R		337.7 +4.5R		337.1 +4R		336.6 +3.6R		336.3 +3.2R		336 +3R		335.7 +2.7R		
		6"	q _a	q _f	2434	3919	2434	3919	2434	3919	2434	3919	2434	3919	2120	3393	1752	2804	1472	2356		
			G'	302 +11.7R		299.4 +9.8R		297.6 +8.4R		296.3 +7.3R		295.3 +6.5R		294.5 +5.9R		293.9 +5.3R		293.4 +4.9R		293 +4.5R		
		8"	q _a	q _f	2434	3919	2434	3919	2434	3919	2434	3919	2434	3919	2120	3393	1752	2804	1472	2356		
			G'	272.9 +15.6R		276.1 +12.3R		266.9 +11.3R		270.2 +9.5R		263.8 +8.8R		266.8 +7.7R		261.9 +7.3R		264.6 +6.5R		260.6 +6.2R		
		12"	q _a	q _f	2434	3919	2434	3919	2434	3919	2399	3862	2368	3812	2343	3772	2120	3393	1752	2804	1472	2356
			G'	232.8 +21.8R		227.7 +18.5R		224.2 +16R		221.6 +14.1R		219.7 +12.6R		218.2 +11.4R		216.9 +10.4R		215.9 +9.6R		215.1 +8.9R		
		18"	q _a	q _f	2298	3919	2265	3647	2010	3236	2026	3263	2039	3283	1875	3018	1901	3061	1752	2804	1472	2356
			G'	206.4 +26.3R		206.1 +21.6R		184.9 +21R		187.9 +17.9R		190.2 +15.5R		176.8 +15.2R		179.9 +13.5R		182.4 +12.1R		172.6 +11.9R		
		24"	q _a	q _f	1950	3139	1986	3197	1735	2794	1796	2892	1618	2605	1682	2708	1545	2488	1605	2585	1472	2356
			G'	173.7 +32.5R		180.5 +25.5R		160.3 +24.5R		167.6 +20.3R		153.3 +19.6R		160 +16.8R		148.9 +16.3R		155 +14.4R		145.9 +13.9R		
	18 ga	4"	q _a	q _f	2022	3256	2022	3256	2022	3256	2022	3256	2022	3256	1869	2990	1514	2422	1251	2002	1051	1682
			G'	265.5 +7.3R		263.9 +6.1R		262.8 +5.2R		262 +4.5R		261.4 +4R		260.9 +3.6R		260.5 +3.3R		260.2 +3R		260 +2.8R		
		6"	q _a	q _f	2022	3256	2022	3256	2022	3256	2022	3256	2022	3256	1869	2990	1514	2422	1251	2002	1051	1682
			G'	234.1 +11.4R		231.5 +9.6R		229.7 +8.3R		228.4 +7.3R		227.5 +6.5R		226.7 +5.8R		226.1 +5.3R		225.5 +4.9R		225.1 +4.5R		
		8"	q _a	q _f	2022	3256	2022	3256	2022	3256	2022	3256	2022	3256	1869	2990	1514	2422	1251	2002	1051	1682
			G'	211.4 +14.9R		213.2 +11.9R		205.5 +10.9R		207.7 +9.2R		202.4 +8.6R		204.6 +7.5R		200.5 +7.1R		202.5 +6.4R		199.3 +6.1R		
		12"	q _a	q _f	2022	3256	2022	3256	1988	3201	1954	3145	1927	3102	1869	2990	1514	2422	1251	2002	1051	1682
			G'	180.5 +20.2R		175.7 +17.3R		172.3 +15.1R		169.9 +13.4R		168 +12R		166.5 +10.9R		165.4 +10R		164.4 +9.2R		163.5 +8.5R		
		18"	q _a	q _f	1878	3256	1847	2973	1634	2631	1646	2650	1655	2664	1519	2446	1514	2422	1251	2002	1051	1682
			G'	160.7 +24.1R		159.3 +20R		142.5 +19.4R		144.2 +16.6R		145.5 +14.6R		134.9 +14.2R		137 +12.6R		138.6 +11.4R		131 +11.1R		
		24"	q _a	q _f	1592	2564	1618	2605	1411	2271	1458	2348	1312	2112	1362	2193	1250	2013	1251	2002	1051	1682
			G'	136.5 +29.2R		140.1 +23.3R		124.3 +22.3R		128.9 +18.7R		117.7 +18R		122.3 +15.6R		113.6 +15R		117.9 +13.3R		110.9 +12.9R		
	20 ga	4"	q _a	q _f	1523	2452	1523	2452	1523	2452	1523	2452	1523	2452	1212	1939	982	1570	811	1298	682	1091
			G'	192.7 +7.2R		191.1 +6R		189.9 +5.2R		189.1 +4.6R		188.5 +4.1R		188 +3.7R		187.6 +3.3R		187.3 +3.1R		187 +2.8R		
		6"	q _a	q _f	1523	2452	1523	2452	1523	2452	1523	2452	1523	2452	1212	1939	982	1570	811	1298	682	1091
			G'	169.4 +10.8R		166.8 +9.2R		165 +8R		163.8 +7.1R		162.8 +6.3R		162 +5.7R		161.4 +5.2R		160.9 +4.8R		160.5 +4.5R		
		8"	q _a	q _f	1523	2452	1523	2452	1523	2452	1523	2452	1523	2452	1212	1939	982	1570	811	1298	682	1091
			G'	152.9 +13.8R		153.4 +11.2R		147.3 +10.3R		148.5 +8.8R		144.3 +8.2R		145.7 +7.2R		142.5 +6.8R		143.8 +6.1R		141.3 +5.8R		
		12"	q _a	q _f	1462	2354	1403	2259	1361	2191	1330	2141	1305	2101	1212	1939	982	1570	811	1298	682	1091
			G'	131.3 +18.2R		126.8 +15.7R		123.6 +13.9R		121.3 +12.4R		119.6 +11.1R		118.2 +10.2R		117.1 +9.3R		116.1 +8.6R		115.4 +8R		
		18"	q _a	q _f	1302	2354	1267	2040	1109	1786	1110	1787	1111	1788	1013	1630	982	1570	811	1298	682	1091
			G'	117.6 +21.2R		115.4 +17.9R		103 +17.3R		103.4 +15R		103.8 +13.2R		96 +12.8R		97.1 +11.5R		98 +10.4R		92.4 +10.2R		
		24"	q _a	q _f	1107	1782	1108	1784	959	1543	982	1581	879	1414	907	1460	829	1334	811	1298	682	1091
			G'	101.5 +25R		102.4 +20.5R		90.6 +19.5R		92.9 +16.6R		84.7 +15.9R		87.3 +14R		81 +13.4R		83.6 +12R		78.5 +11.6R		
	22 ga	4"	q _a	q _f	1269	2043	1269	2043	1269	2043	1269	2043	1171	1874	926	1481	750	1199	620	991	521	833
			G'	157.1 +7R		155.4 +6R		154.3 +5.2R		153.5 +4.5R		152.9 +4.1R		152.4 +3.7R		152 +3.3R		151.6 +3.1R		151.4 +2.8R		
		6"	q _a	q _f	1269	2043	1269	2043	1269	2043	1269	2043	1171	1874	926	1481	750	1199	620	991	521	833
			G'	137.9 +10.4R		135.4 +8.9R		133.7 +7.8R		132.4 +6.9R		131.5 +6.2R		130.7 +5.6R		130.1 +5.1R		129.6 +4.7R		129.2 +4.4R		
		8"	q _a	q _f	1269	2043	1269	2043	1261	2030	1266	2039	1171	1874	926	1481	750	1199	620	991	521	833
G'			124.7 +13R		124.5 +10.7R		119.3 +9.9R		120 +8.5R		116.4 +7.9R		117.3 +7R		114.6 +6.6R		115.5 +6R		113.4 +5.7R			
12"		q _a	q _f	1134	1826	1078	1735	1038	1671	1008	1623	985	1585	926	1481	750	1199	620	991	521	833	
		G'	107.5 +16.8R		103.3 +14.7R		100.3 +13R		98.2 +11.6R		96.5 +10.5R		95.1 +9.6R		94.1 +8.8R		93.2 +8.2R		92.4 +7.6R			
18"		q _a	q _f	1009	1826	971	1564	844	1358	838	1350	834	1343	757	1219	750	1199	620	991	521	833	
		G'	96.9 +19.3R		94.4 +16.5R		84.1 +16R		84 +13.9R		83.9 +12.3R		77.6 +12R		78.2 +10.8R		78.7 +9.8R		74.2 +9.5R			
24"		q _a	q _f	862	1388	851	1370	732	1178	743	1196	662	1065	679	1092	618	995	620	991	521	833	
		G'	84.3 +22.5R		84.3 +18.7R		74.5 +17.8R		75.8 +15.3R		69 +14.7R		70.8 +12.9R		65.6 +12.4R		67.4 +11.2R		63.3 +10.8R			
DGB-36 36/9 Support Attachment: Pneutek SDK63 PAF Side Seam Attachment: DeltaGrip DG4™																						



DGB-36 & DGBF-36 2.7

Pneutek K64 Fasteners to Supports with
DeltaGrip® DG4™ Side Seam Attachment
Diaphragm Shear in pounds per linear foot (plf)



PNEUTEK®



Support Fastener Pattern	Gage	Seam Attach. Spacing	Allowable Shear (q _a) (plf), Factored Shear (q _f) (plf), and Flexibility Factor (G') (kip/in)																			
			Span →		4' - 0"		5' - 0"		6' - 0"		7' - 0"		8' - 0"		9' - 0"		10' - 0"		11' - 0"		12' - 0"	
			q _a	q _f	q _a	q _f	q _a	q _f	q _a	q _f	q _a	q _f	q _a	q _f	q _a	q _f	q _a	q _f	q _a	q _f	q _a	q _f
36/4	16 ga	4"	q _a	q _f	1265	2037	1265	2037	1265	2037	1265	2037	1265	2037	1265	2037	1265	2037	1265	2037	1265	2037
			G'	336.6	+3.6R	335.9	+2.9R	335.4	+2.4R	335	+2.1R	334.8	+1.9R	334.6	+1.7R	334.4	+1.5R	334.3	+1.4R	334.1	+1.3R	
		6"	q _a	q _f	1265	2037	1265	2037	1265	2037	1265	2037	1265	2037	1265	2037	1265	2037	1265	2037	1265	2037
			G'	294.5	+5.9R	293.3	+4.8R	292.4	+4R	291.8	+3.5R	291.4	+3.1R	291	+2.8R	290.7	+2.5R	290.5	+2.3R	290.3	+2.1R	
		8"	q _a	q _f	1265	2037	1265	2037	1265	2037	1265	2037	1265	2037	1265	2037	1265	2037	1265	2037	1265	2037
			G'	262.8	+8R	268.3	+6.1R	259.9	+5.5R	264.4	+4.6R	258.5	+4.2R	262.2	+3.6R	257.6	+3.4R	260.8	+3R	257	+2.9R	
		12"	q _a	q _f	1265	2037	1265	2037	1265	2037	1265	2037	1265	2037	1265	2037	1265	2037	1265	2037	1265	2037
			G'	218.1	+11.4R	215.7	+9.4R	214	+8R	212.8	+6.9R	211.9	+6.1R	211.2	+5.5R	210.6	+5R	210.1	+4.6R	209.8	+4.2R	
		18"	q _a	q _f	1265	2037	1265	2037	1265	2037	1265	2037	1265	2037	1265	2037	1265	2037	1265	2037	1258	2026
			G'	188.3	+14.1R	191.8	+11.1R	171.2	+10.7R	176.6	+8.9R	180.5	+7.6R	167.4	+7.4R	171.7	+6.5R	175.1	+5.8R	165.5	+5.6R	
		24"	q _a	q _f	1216	1958	1265	2037	1163	1872	1214	1954	1133	1824	1179	1899	1115	1794	1156	1861	1102	1774
			G'	150.8	+17.8R	163.4	+13.3R	144.3	+12.6R	154.6	+10.2R	140.9	+9.7R	149.5	+8.2R	138.8	+7.9R	146.2	+6.9R	137.5	+6.7R	
	18 ga	4"	q _a	q _f	1011	1628	1011	1628	1011	1628	1011	1628	1011	1628	1011	1628	1011	1628	1011	1628	1011	1628
			G'	260.9	+3.6R	260.2	+3R	259.6	+2.5R	259.3	+2.2R	259	+1.9R	258.8	+1.7R	258.6	+1.5R	258.5	+1.4R	258.3	+1.3R	
		6"	q _a	q _f	1011	1628	1011	1628	1011	1628	1011	1628	1011	1628	1011	1628	1011	1628	1011	1628	1011	1628
			G'	226.7	+5.8R	225.4	+4.8R	224.6	+4R	224	+3.5R	223.5	+3.1R	223.2	+2.8R	222.9	+2.5R	222.6	+2.3R	222.4	+2.1R	
		8"	q _a	q _f	1011	1628	1011	1628	1011	1628	1011	1628	1011	1628	1011	1628	1011	1628	1011	1628	1011	1628
			G'	201.4	+7.8R	205.5	+6R	198.6	+5.4R	202	+4.5R	197.1	+4.2R	200	+3.6R	196.3	+3.4R	198.7	+3R	195.7	+2.8R	
		12"	q _a	q _f	1011	1628	1011	1628	1011	1628	1011	1628	1011	1628	1011	1628	1011	1628	1011	1628	1011	1628
			G'	166.5	+10.9R	164.1	+9R	162.5	+7.7R	161.4	+6.7R	160.5	+5.9R	159.8	+5.3R	159.2	+4.8R	158.8	+4.4R	158.4	+4.1R	
		18"	q _a	q _f	1011	1628	1011	1628	1011	1628	1011	1628	1011	1628	1011	1628	1011	1628	1011	1628	1004	1617
			G'	143.6	+13.2R	145.8	+10.5R	129.6	+10R	133.4	+8.4R	136.2	+7.2R	126	+7R	129.1	+6.2R	131.6	+5.5R	124.2	+5.4R	
		24"	q _a	q _f	971	1563	1011	1628	928	1494	969	1560	904	1456	941	1515	889	1432	922	1485	879	1415
			G'	115.4	+16.4R	124.1	+12.4R	109.3	+11.7R	116.7	+9.5R	106.1	+9.1R	112.4	+7.7R	104.2	+7.4R	109.6	+6.5R	102.9	+6.3R	
	20 ga	4"	q _a	q _f	761	1226	761	1226	761	1226	761	1226	761	1226	761	1226	761	1226	761	1226	682	1091
			G'	188	+3.7R	187.2	+3R	186.7	+2.5R	186.3	+2.2R	186	+1.9R	185.8	+1.7R	185.6	+1.6R	185.5	+1.4R	185.4	+1.3R	
		6"	q _a	q _f	761	1226	761	1226	761	1226	761	1226	761	1226	761	1226	761	1226	761	1226	682	1091
			G'	162	+5.7R	160.8	+4.7R	159.9	+4R	159.3	+3.5R	158.9	+3.1R	158.5	+2.8R	158.2	+2.5R	158	+2.3R	157.8	+2.1R	
		8"	q _a	q _f	761	1226	761	1226	761	1226	761	1226	761	1226	761	1226	761	1226	761	1226	682	1091
			G'	143.3	+7.5R	145.9	+5.8R	140.6	+5.3R	142.9	+4.4R	139.2	+4.1R	141.2	+3.5R	138.3	+3.3R	140.1	+2.9R	137.7	+2.8R	
		12"	q _a	q _f	761	1226	761	1226	761	1226	761	1226	761	1226	761	1226	761	1226	761	1226	682	1091
			G'	118.2	+10.1R	115.9	+8.4R	114.4	+7.2R	113.3	+6.3R	112.4	+5.6R	111.8	+5R	111.2	+4.6R	110.8	+4.2R	110.5	+3.9R	
		18"	q _a	q _f	761	1226	761	1226	724	1165	736	1184	744	1198	702	1130	713	1148	722	1163	682	1091
			G'	102.1	+12.1R	102.9	+9.7R	91.2	+9.2R	93.5	+7.8R	95.2	+6.7R	87.8	+6.5R	89.8	+5.7R	91.4	+5.1R	86.1	+5R	
		24"	q _a	q _f	677	1091	706	1137	638	1026	667	1074	616	991	643	1035	602	969	626	1008	592	953
			G'	82.6	+14.6R	87.8	+11.3R	77.1	+10.5R	81.8	+8.7R	74.2	+8.2R	78.3	+7.1R	72.4	+6.7R	76	+5.9R	71.2	+5.7R	
	22 ga	4"	q _a	q _f	634	1022	634	1022	634	1022	634	1022	634	1022	634	1022	634	1022	620	991	521	833
			G'	152.4	+3.7R	151.6	+3R	151	+2.6R	150.7	+2.2R	150.4	+2R	150.1	+1.8R	150	+1.6R	149.8	+1.5R	149.7	+1.3R	
		6"	q _a	q _f	634	1022	634	1022	634	1022	634	1022	634	1022	634	1022	634	1022	620	991	521	833
			G'	130.7	+5.6R	129.5	+4.6R	128.6	+3.9R	128	+3.4R	127.6	+3R	127.2	+2.7R	127	+2.5R	126.7	+2.3R	126.5	+2.1R	
		8"	q _a	q _f	634	1022	634	1022	634	1022	634	1022	634	1022	634	1022	634	1022	620	991	521	833
			G'	115.4	+7.2R	117.3	+5.7R	112.7	+5.1R	114.5	+4.3R	111.3	+4R	112.9	+3.5R	110.5	+3.2R	111.9	+2.9R	109.9	+2.7R	
		12"	q _a	q _f	634	1022	634	1022	634	1022	634	1022	634	1022	634	1022	634	1022	620	991	521	833
			G'	95.1	+9.6R	93	+8R	91.5	+6.9R	90.4	+6R	89.6	+5.4R	89	+4.8R	88.5	+4.4R	88	+4R	87.7	+3.7R	
		18"	q _a	q _f	614	1022	614	988	559	899	567	913	574	923	536	863	545	878	552	889	521	833
			G'	82.3	+11.3R	82.6	+9.1R	73	+8.6R	74.6	+7.3R	75.8	+6.4R	69.8	+6.1R	71.3	+5.4R	72.5	+4.9R	68.2	+4.7R	
		24"	q _a	q _f	526	846	546	879	487	784	509	820	466	750	486	783	452	728	471	759	443	713
			G'	67.1	+13.4R	70.7	+10.5R	61.9	+9.8R	65.4	+8.1R	59.2	+7.7R	62.3	+6.6R	57.5	+6.3R	60.3	+5.6R	56.4	+5.4R	
DGB-36 36/4 Support Attachment: Pneutek K64 PAF Side Seam Attachment: DeltaGrip DG4™																						

DGB-36 36/4

Support Attachment: Pneutek K64 PAF

Side Seam Attachment: DeltaGrip DG4™

Patent Number: 11,872,644

2.7 DGB-36 & DGBF-36

Pneutek K64 Fasteners to Supports with DeltaGrip® DG4™ Tool Side Seam Attachment

Diaphragm Shear in pounds per linear foot (plf)



PNEUTEK®



Support Fastener Pattern	Gage	Seam Attach. Spacing	Allowable Shear (q _a) (plf), Factored Shear (q _f) (plf), and Flexibility Factor (G') (kip/in)																			
			Span →	4' - 0"		5' - 0"		6' - 0"		7' - 0"		8' - 0"		9' - 0"		10' - 0"		11' - 0"		12' - 0"		
36/7/4	16 ga	4"	q _a	q _f	2530	4073	2530	4073	2530	4073	2530	4073	2530	4073	2530	4073	2120	3393	1752	2804	1472	2356
			G'	336.7 +7R		335.9 +5.7R		335.4 +4.8R		335.1 +4.2R		334.8 +3.7R		334.6 +3.3R		334.4 +3R		334.3 +2.7R		334.1 +2.5R		
		6"	q _a	q _f	2530	4073	2530	4073	2530	4073	2530	4073	2530	4073	2530	4073	2120	3393	1752	2804	1472	2356
			G'	294.6 +11.4R		293.3 +9.4R		292.5 +8R		291.9 +6.9R		291.4 +6.1R		291 +5.5R		290.8 +5R		290.5 +4.5R		290.3 +4.2R		
		8"	q _a	q _f	2461	3963	2486	4002	2429	3911	2453	3950	2412	3884	2434	3918	2120	3393	1752	2804	1472	2356
			G'	263 +15.4R		268.5 +11.9R		260 +10.8R		264.5 +9R		258.5 +8.3R		262.2 +7.2R		257.6 +6.8R		260.8 +6R		257 +5.7R		
	18 ga	12"	q _a	q _f	2155	3469	2119	3412	2094	3372	2076	3342	2062	3320	2051	3302	2042	3287	1752	2804	1472	2356
			G'	218.5 +21.9R		215.9 +18.2R		214.2 +15.5R		212.9 +13.6R		212 +12R		211.3 +10.8R		210.7 +9.8R		210.2 +9R		209.8 +8.3R		
		18"	q _a	q _f	1908	3469	1918	3088	1712	2757	1751	2819	1779	2864	1645	2649	1681	2706	1709	2751	1472	2356
			G'	188.8 +26.8R		192.1 +21.4R		171.5 +20.7R		176.8 +17.3R		180.6 +14.9R		167.5 +14.5R		171.8 +12.8R		175.1 +11.4R		165.5 +11.1R		
		24"	q _a	q _f	1567	2522	1656	2666	1452	2337	1538	2476	1391	2239	1468	2363	1353	2178	1421	2288	1327	2137
			G'	151.5 +33.6R		163.7 +25.6R		144.6 +24.2R		154.8 +19.8R		141.1 +18.9R		149.6 +16.1R		139 +15.5R		146.3 +13.6R		137.6 +13.2R		
	20 ga	4"	q _a	q _f	2022	3256	2022	3256	2022	3256	2022	3256	2022	3256	1869	2990	1514	2422	1251	2002	1051	1682
			G'	261 +7.1R		260.2 +5.8R		259.7 +4.9R		259.3 +4.3R		259 +3.8R		258.8 +3.4R		258.6 +3.1R		258.5 +2.8R		258.4 +2.6R		
		6"	q _a	q _f	2022	3256	2022	3256	2022	3256	2022	3256	2022	3256	1869	2990	1514	2422	1251	2002	1051	1682
			G'	226.8 +11.3R		225.5 +9.3R		224.7 +7.9R		224 +6.9R		223.6 +6.1R		223.2 +5.5R		222.9 +5R		222.7 +4.5R		222.5 +4.2R		
		8"	q _a	q _f	1965	3164	1985	3196	1940	3123	1959	3154	1926	3101	1869	2990	1514	2422	1251	2002	1051	1682
			G'	201.6 +14.9R		205.6 +11.7R		198.7 +10.6R		202.1 +8.8R		197.2 +8.2R		200.1 +7.1R		196.3 +6.7R		198.8 +5.9R		195.7 +5.6R		
	22 ga	12"	q _a	q _f	1720	2769	1691	2723	1671	2691	1657	2667	1645	2649	1636	2635	1514	2422	1251	2002	1051	1682
			G'	166.9 +20.7R		164.4 +17.3R		162.7 +14.9R		161.5 +13R		160.6 +11.6R		159.9 +10.4R		159.3 +9.5R		158.8 +8.7R		158.4 +8R		
		18"	q _a	q _f	1523	2769	1530	2464	1366	2199	1397	2249	1419	2285	1312	2113	1340	2158	1251	2002	1051	1682
			G'	144.1 +25R		146.1 +20.1R		129.9 +19.3R		133.6 +16.3R		136.4 +14.1R		126.2 +13.7R		129.2 +12.1R		131.7 +10.8R		124.3 +10.5R		
		24"	q _a	q _f	1250	2012	1321	2127	1158	1864	1227	1975	1109	1786	1170	1884	1079	1737	1133	1824	1051	1682
			G'	116.1 +30.7R		124.6 +23.7R		109.6 +22.4R		117 +18.4R		106.3 +17.6R		112.6 +15.1R		104.4 +14.5R		109.7 +12.7R		103 +12.3R		
	24 ga	4"	q _a	q _f	1523	2452	1523	2452	1523	2452	1523	2452	1523	2452	1212	1939	982	1570	811	1298	682	1091
			G'	188.1 +7.1R		187.3 +5.8R		186.8 +5R		186.4 +4.3R		186.1 +3.8R		185.8 +3.4R		185.7 +3.1R		185.5 +2.9R		185.4 +2.6R		
		6"	q _a	q _f	1512	2435	1503	2419	1496	2408	1491	2400	1487	2394	1212	1939	982	1570	811	1298	682	1091
			G'	162.2 +10.9R		160.9 +9.1R		160 +7.8R		159.4 +6.8R		158.9 +6R		158.6 +5.4R		158.3 +4.9R		158 +4.5R		157.8 +4.2R		
		8"	q _a	q _f	1393	2242	1407	2266	1365	2198	1381	2223	1351	2175	1212	1939	982	1570	811	1298	682	1091
			G'	143.6 +14.2R		146.1 +11.2R		140.7 +10.2R		143 +8.6R		139.2 +7.9R		141.2 +6.9R		138.4 +6.5R		140.1 +5.8R		137.8 +5.5R		
	26 ga	12"	q _a	q _f	1191	1917	1163	1873	1144	1842	1130	1819	1119	1802	1110	1788	982	1570	811	1298	682	1091
			G'	118.6 +19R		116.2 +16R		114.6 +13.9R		113.4 +12.2R		112.6 +10.9R		111.9 +9.8R		111.3 +8.9R		110.9 +8.2R		110.5 +7.6R		
		18"	q _a	q _f	1041	1917	1040	1675	916	1475	935	1505	948	1527	869	1400	888	1429	811	1298	682	1091
			G'	102.6 +22.5R		103.3 +18.4R		91.5 +17.5R		93.7 +14.9R		95.3 +13R		87.9 +12.5R		89.9 +11.1R		91.5 +10R		86.2 +9.7R		
		24"	q _a	q _f	849	1366	890	1433	772	1242	815	1312	731	1177	770	1240	706	1137	741	1193	682	1091
			G'	83.3 +27R		88.3 +21.3R		77.4 +20R		82.1 +16.7R		74.4 +15.8R		78.5 +13.7R		72.6 +13.1R		76.1 +11.6R		71.3 +11.2R		
30 ga	4"	q _a	q _f	1269	2043	1269	2043	1269	2043	1269	2043	1171	1874	926	1481	750	1199	620	991	521	833	
		G'	152.5 +7R		151.6 +5.8R		151.1 +5R		150.7 +4.3R		150.4 +3.9R		150.2 +3.5R		150 +3.1R		149.8 +2.9R		149.7 +2.7R			
	6"	q _a	q _f	1201	1933	1189	1915	1182	1902	1176	1893	1171	1874	926	1481	750	1199	620	991	521	833	
		G'	130.9 +10.6R		129.6 +8.9R		128.7 +7.6R		128.1 +6.7R		127.6 +6R		127.3 +5.4R		127 +4.9R		126.7 +4.5R		126.5 +4.1R			
	8"	q _a	q _f	1089	1753	1099	1770	1059	1706	1072	1726	1043	1680	926	1481	750	1199	620	991	521	833	
		G'	115.7 +13.6R		117.4 +10.8R		112.8 +9.8R		114.6 +8.3R		111.4 +7.7R		113 +6.7R		110.5 +6.3R		111.9 +5.7R		110 +5.4R			
36 ga	12"	q _a	q _f	914	1472	887	1428	868	1398	854	1375	843	1358	835	1344	750	1199	620	991	521	833	
		G'	95.6 +17.9R		93.3 +15.2R		91.7 +13.2R		90.6 +11.6R		89.7 +10.4R		89.1 +9.4R		88.6 +8.6R		88.1 +7.9R		87.8 +7.3R			
	18"	q _a	q _f	794	1472	787	1268	687	1105	698	1124	706	1137	643	1036	656	1056	620	991	521	833	
		G'	82.9 +20.9R		83 +17.2R		73.3 +16.4R		74.8 +14R		76 +12.3R		70 +11.8R		71.4 +10.5R		72.6 +9.5R		68.3 +9.2R			
	24"	q _a	q _f	646	1040	670	1079	577	929	606	976	541	871	568	915	519	835	544	875	504	811	
		G'	67.8 +24.7R		71.1 +19.7R		62.3 +18.5R		65.6 +15.5R		59.4 +14.8R		62.5 +12.8R		57.7 +12.2R		60.4 +10.9R		56.5 +10.4R			
DGB-36 36/7/4 Support Attachment: Pneutek K64 PAF Side Seam Attachment: DeltaGrip DG4™																						

DGB-36 & DGBF-36 2.7

Pneutek K64 Fasteners to Supports with
DeltaGrip® DG4™ Tool Side Seam Attachment
Diaphragm Shear in pounds per linear foot (plf)



PNEUTEK®



Support Fastener Pattern	Gage	Seam Attach. Spacing	Allowable Shear (q _a) (plf), Factored Shear (q _f) (plf), and Flexibility Factor (G') (kip/in)																			
			Span →		4' - 0"		5' - 0"		6' - 0"		7' - 0"		8' - 0"		9' - 0"		10' - 0"		11' - 0"		12' - 0"	
36/9	16 ga	4"	q _a	q _f	2530	4073	2530	4073	2530	4073	2530	4073	2530	4073	2530	4073	2120	3393	1752	2804	1472	2356
			G'		341.2	+7.3R	339.6	+6R	338.5	+5.1R	337.7	+4.5R	337.1	+4R	336.6	+3.6R	336.3	+3.2R	336	+3R	335.7	+2.7R
		6"	q _a	q _f	2530	4073	2530	4073	2530	4073	2530	4073	2530	4073	2530	4073	2120	3393	1752	2804	1472	2356
			G'		302	+11.7R	299.4	+9.8R	297.6	+8.4R	296.3	+7.3R	295.3	+6.5R	294.5	+5.9R	293.9	+5.3R	293.4	+4.9R	293	+4.5R
		8"	q _a	q _f	2530	4073	2530	4073	2530	4073	2530	4073	2530	4073	2530	4073	2120	3393	1752	2804	1472	2356
			G'		272.9	+15.6R	276.1	+12.3R	266.9	+11.3R	270.2	+9.5R	263.8	+8.8R	266.8	+7.7R	261.9	+7.3R	264.6	+6.5R	260.6	+6.2R
		12"	q _a	q _f	2530	4073	2530	4073	2492	4012	2448	3942	2415	3888	2388	3844	2120	3393	1752	2804	1472	2356
			G'		232.8	+21.8R	227.7	+18.5R	224.2	+16R	221.6	+14.1R	219.7	+12.6R	218.2	+11.4R	216.9	+10.4R	215.9	+9.6R	215.1	+8.9R
		18"	q _a	q _f	2352	4073	2314	3726	2049	3298	2063	3322	2075	3340	1905	3067	1931	3109	1752	2804	1472	2356
			G'		206.4	+26.3R	206.1	+21.6R	184.9	+21R	187.9	+17.9R	190.2	+15.5R	176.8	+15.2R	179.9	+13.5R	182.4	+12.1R	172.6	+11.9R
		24"	q _a	q _f	1995	3212	2027	3264	1768	2847	1828	2943	1645	2648	1708	2749	1567	2524	1628	2621	1472	2356
			G'		173.7	+32.5R	180.5	+25.5R	160.3	+24.5R	167.6	+20.3R	153.3	+19.6R	160	+16.8R	148.9	+16.3R	155	+14.4R	145.9	+13.9R
	18 ga	4"	q _a	q _f	2022	3256	2022	3256	2022	3256	2022	3256	2022	3256	1869	2990	1514	2422	1251	2002	1051	1682
			G'		265.5	+7.3R	263.9	+6.1R	262.8	+5.2R	262	+4.5R	261.4	+4R	260.9	+3.6R	260.5	+3.3R	260.2	+3R	260	+2.8R
		6"	q _a	q _f	2022	3256	2022	3256	2022	3256	2022	3256	2022	3256	1869	2990	1514	2422	1251	2002	1051	1682
			G'		234.1	+11.4R	231.5	+9.6R	229.7	+8.3R	228.4	+7.3R	227.5	+6.5R	226.7	+5.8R	226.1	+5.3R	225.5	+4.9R	225.1	+4.5R
		8"	q _a	q _f	2022	3256	2022	3256	2022	3256	2022	3256	2022	3256	1869	2990	1514	2422	1251	2002	1051	1682
			G'		211.4	+14.9R	213.2	+11.9R	205.5	+10.9R	207.7	+9.2R	202.4	+8.6R	204.6	+7.5R	200.5	+7.1R	202.5	+6.4R	199.3	+6.1R
		12"	q _a	q _f	2022	3256	2022	3256	1988	3201	1954	3145	1927	3102	1869	2990	1514	2422	1251	2002	1051	1682
			G'		180.5	+20.2R	175.7	+17.3R	172.3	+15.1R	169.9	+13.4R	168	+12R	166.5	+10.9R	165.4	+10R	164.4	+9.2R	163.5	+8.5R
		18"	q _a	q _f	1878	3256	1847	2973	1634	2631	1646	2650	1655	2664	1519	2446	1514	2422	1251	2002	1051	1682
			G'		160.7	+24.1R	159.3	+20R	142.5	+19.4R	144.2	+16.6R	145.5	+14.6R	134.9	+14.2R	137	+12.6R	138.6	+11.4R	131	+11.1R
		24"	q _a	q _f	1592	2564	1618	2605	1411	2271	1458	2348	1312	2112	1362	2193	1250	2013	1251	2002	1051	1682
			G'		136.5	+29.2R	140.1	+23.3R	124.3	+22.3R	128.9	+18.7R	117.7	+18R	122.3	+15.6R	113.6	+15R	117.9	+13.3R	110.9	+12.9R
	20 ga	4"	q _a	q _f	1523	2452	1523	2452	1523	2452	1523	2452	1523	2452	1212	1939	982	1570	811	1298	682	1091
			G'		192.7	+7.2R	191.1	+6R	189.9	+5.2R	189.1	+4.6R	188.5	+4.1R	188	+3.7R	187.6	+3.3R	187.3	+3.1R	187	+2.8R
		6"	q _a	q _f	1523	2452	1523	2452	1523	2452	1523	2452	1523	2452	1212	1939	982	1570	811	1298	682	1091
			G'		169.4	+10.8R	166.8	+9.2R	165	+8R	163.8	+7.1R	162.8	+6.3R	162	+5.7R	161.4	+5.2R	160.9	+4.8R	160.5	+4.5R
		8"	q _a	q _f	1523	2452	1523	2452	1523	2452	1523	2452	1523	2452	1212	1939	982	1570	811	1298	682	1091
			G'		152.9	+13.8R	153.4	+11.2R	147.3	+10.3R	148.5	+8.8R	144.3	+8.2R	145.7	+7.2R	142.5	+6.8R	143.8	+6.1R	141.3	+5.8R
		12"	q _a	q _f	1462	2354	1403	2259	1361	2191	1330	2141	1305	2101	1212	1939	982	1570	811	1298	682	1091
			G'		131.3	+18.2R	126.8	+15.7R	123.6	+13.9R	121.3	+12.4R	119.6	+11.1R	118.2	+10.2R	117.1	+9.3R	116.1	+8.6R	115.4	+8R
		18"	q _a	q _f	1302	2354	1267	2040	1109	1786	1110	1787	1111	1788	1013	1630	982	1570	811	1298	682	1091
			G'		117.6	+21.2R	115.4	+17.9R	103	+17.3R	103.4	+15R	103.8	+13.2R	96	+12.8R	97.1	+11.5R	98	+10.4R	92.4	+10.2R
		24"	q _a	q _f	1107	1782	1108	1784	959	1543	982	1581	879	1414	907	1460	829	1334	811	1298	682	1091
			G'		101.5	+25R	102.4	+20.5R	90.6	+19.5R	92.9	+16.6R	84.7	+15.9R	87.3	+14R	81	+13.4R	83.6	+12R	78.5	+11.6R
	22 ga	4"	q _a	q _f	1269	2043	1269	2043	1269	2043	1269	2043	1171	1874	926	1481	750	1199	620	991	521	833
			G'		157.1	+7R	155.4	+6R	154.3	+5.2R	153.5	+4.5R	152.9	+4.1R	152.4	+3.7R	152	+3.3R	151.6	+3.1R	151.4	+2.8R
		6"	q _a	q _f	1269	2043	1269	2043	1269	2043	1269	2043	1171	1874	926	1481	750	1199	620	991	521	833
			G'		137.9	+10.4R	135.4	+8.9R	133.7	+7.8R	132.4	+6.9R	131.5	+6.2R	130.7	+5.6R	130.1	+5.1R	129.6	+4.7R	129.2	+4.4R
		8"	q _a	q _f	1269	2043	1269	2043	1261	2030	1266	2039	1171	1874	926	1481	750	1199	620	991	521	833
			G'		124.7	+13R	124.5	+10.7R	119.3	+9.9R	120	+8.5R	116.4	+7.9R	117.3	+7R	114.6	+6.6R	115.5	+6R	113.4	+5.7R
		12"	q _a	q _f	1134	1826	1078	1735	1038	1671	1008	1623	985	1585	926	1481	750	1199	620	991	521	833
			G'		107.5	+16.8R	103.3	+14.7R	100.3	+13R	98.2	+11.6R	96.5	+10.5R	95.1	+9.6R	94.1	+8.8R	93.2	+8.2R	92.4	+7.6R
		18"	q _a	q _f	1009	1826	971	1564	844	1358	838	1350	834	1343	757	1219	750	1199	620	991	521	833
			G'		96.9	+19.3R	94.4	+16.5R	84.1	+16R	84	+13.9R	83.9	+12.3R	77.6	+12R	78.2	+10.8R	78.7	+9.8R	74.2	+9.5R
		24"	q _a	q _f	862	1388	851	1370	732	1178	743	1196	662	1065	679	1092	618	995	620	991	521	833
			G'		84.5	+22.5R	84.3	+18.7R	74.5	+17.8R	75.8	+15.3R	69	+14.7R	70.8	+12.9R	65.6	+12.4R	67.4	+11.2R	63.3	+10.8R
DGB-36 36/9 Support Attachment: Neutek K64 PAF Side Seam Attachment: DeltaGrip DG4™																						

DGB-36 36/9

Support Attachment: Pneutek K64 PAF

Side Seam Attachment: DeltaGrip DG4™

Patent Number: 11,872,644

2.7 DGB-36 & DGBF-36

Pneutek K66 Fasteners to Supports with DeltaGrip® DG4™ Side Seam Attachment

Diaphragm Shear in pounds per linear foot (plf)



Support Fastener Pattern	Gage	Seam Attach. Spacing	Allowable Shear (q _a) (plf), Factored Shear (q _f) (plf), and Flexibility Factor (G') (kip/in)																			
			Span →		4' - 0"		5' - 0"		6' - 0"		7' - 0"		8' - 0"		9' - 0"		10' - 0"		11' - 0"		12' - 0"	
36/4	16 ga	4"	q _a	q _f	1265	2037	1265	2037	1265	2037	1265	2037	1265	2037	1265	2037	1265	2037	1265	2037	1265	2037
			G'	336.6 +3.6R		335.9 +2.9R		335.4 +2.4R		335 +2.1R		334.8 +1.9R		334.6 +1.7R		334.4 +1.5R		334.3 +1.4R		334.1 +1.3R		
		6"	q _a	q _f	1265	2037	1265	2037	1265	2037	1265	2037	1265	2037	1265	2037	1265	2037	1265	2037	1265	2037
			G'	294.5 +5.9R		293.3 +4.8R		292.4 +4R		291.8 +3.5R		291.4 +3.1R		291 +2.8R		290.7 +2.5R		290.5 +2.3R		290.3 +2.1R		
		8"	q _a	q _f	1265	2037	1265	2037	1265	2037	1265	2037	1265	2037	1265	2037	1265	2037	1265	2037	1265	2037
			G'	262.8 +8R		268.3 +6.1R		259.9 +5.5R		264.4 +4.6R		258.5 +4.2R		262.2 +3.6R		257.6 +3.4R		260.8 +3R		257 +2.9R		
		12"	q _a	q _f	1265	2037	1265	2037	1265	2037	1265	2037	1265	2037	1265	2037	1265	2037	1265	2037	1265	2037
			G'	218.1 +11.4R		215.7 +9.4R		214 +8R		212.8 +6.9R		211.9 +6.1R		211.2 +5.5R		210.6 +5R		210.1 +4.6R		209.8 +4.2R		
		18"	q _a	q _f	1265	2037	1265	2037	1265	2037	1265	2037	1265	2037	1265	2037	1265	2037	1265	2037	1258	2026
			G'	188.3 +14.1R		191.8 +11.1R		171.2 +10.7R		176.6 +8.9R		180.5 +7.6R		167.4 +7.4R		171.7 +6.5R		175.1 +5.8R		165.5 +5.6R		
		24"	q _a	q _f	1216	1958	1265	2037	1163	1872	1214	1954	1133	1824	1179	1899	1115	1794	1156	1861	1102	1774
			G'	150.8 +17.8R		163.4 +13.3R		144.3 +12.6R		154.6 +10.2R		140.9 +9.7R		149.5 +8.2R		138.8 +7.9R		146.2 +6.9R		137.5 +6.7R		
	18 ga	4"	q _a	q _f	1011	1628	1011	1628	1011	1628	1011	1628	1011	1628	1011	1628	1011	1628	1011	1628	1011	1628
			G'	260.9 +3.6R		260.2 +3R		259.6 +2.5R		259.3 +2.2R		259 +1.9R		258.8 +1.7R		258.6 +1.5R		258.5 +1.4R		258.3 +1.3R		
		6"	q _a	q _f	1011	1628	1011	1628	1011	1628	1011	1628	1011	1628	1011	1628	1011	1628	1011	1628	1011	1628
			G'	226.7 +5.8R		225.4 +4.8R		224.6 +4R		224 +3.5R		223.5 +3.1R		223.2 +2.8R		222.9 +2.5R		222.6 +2.3R		222.4 +2.1R		
		8"	q _a	q _f	1011	1628	1011	1628	1011	1628	1011	1628	1011	1628	1011	1628	1011	1628	1011	1628	1011	1628
			G'	201.4 +7.8R		205.5 +6R		198.6 +5.4R		202 +4.5R		197.1 +4.2R		200 +3.6R		196.3 +3.4R		198.7 +3R		195.7 +2.8R		
		12"	q _a	q _f	1011	1628	1011	1628	1011	1628	1011	1628	1011	1628	1011	1628	1011	1628	1011	1628	1011	1628
			G'	166.5 +10.9R		164.1 +9R		162.5 +7.7R		161.4 +6.7R		160.5 +5.9R		159.8 +5.3R		159.2 +4.8R		158.8 +4.4R		158.4 +4.1R		
		18"	q _a	q _f	1011	1628	1011	1628	1011	1628	1011	1628	1011	1628	1011	1628	1011	1628	1011	1628	1004	1617
			G'	143.6 +13.2R		145.8 +10.5R		129.6 +10R		133.4 +8.4R		136.2 +7.2R		126 +7R		129.1 +6.2R		131.6 +5.5R		124.2 +5.4R		
		24"	q _a	q _f	971	1563	1011	1628	928	1494	969	1560	904	1456	941	1515	889	1432	922	1485	879	1415
			G'	115.4 +16.4R		124.1 +12.4R		109.3 +11.7R		116.7 +9.5R		106.1 +9.1R		112.4 +7.7R		104.2 +7.4R		109.6 +6.5R		102.9 +6.3R		
	20 ga	4"	q _a	q _f	761	1226	761	1226	761	1226	761	1226	761	1226	761	1226	761	1226	761	1226	682	1091
			G'	188 +3.7R		187.2 +3R		186.7 +2.5R		186.3 +2.2R		186 +1.9R		185.8 +1.7R		185.6 +1.6R		185.5 +1.4R		185.4 +1.3R		
		6"	q _a	q _f	761	1226	761	1226	761	1226	761	1226	761	1226	761	1226	761	1226	761	1226	682	1091
			G'	162 +5.7R		160.8 +4.7R		159.9 +4R		159.3 +3.5R		158.9 +3.1R		158.5 +2.8R		158.2 +2.5R		158 +2.3R		157.8 +2.1R		
		8"	q _a	q _f	761	1226	761	1226	761	1226	761	1226	761	1226	761	1226	761	1226	761	1226	682	1091
			G'	143.3 +7.5R		145.9 +5.8R		140.6 +5.3R		142.9 +4.4R		139.2 +4.1R		141.2 +3.5R		138.3 +3.3R		140.1 +2.9R		137.7 +2.8R		
		12"	q _a	q _f	761	1226	761	1226	761	1226	761	1226	761	1226	761	1226	761	1226	761	1226	682	1091
			G'	118.2 +10.1R		115.9 +8.4R		114.4 +7.2R		113.3 +6.3R		112.4 +5.6R		111.8 +5R		111.2 +4.6R		110.8 +4.2R		110.5 +3.9R		
		18"	q _a	q _f	761	1226	761	1226	724	1165	736	1184	744	1198	702	1130	713	1148	722	1163	682	1091
			G'	102.1 +12.1R		102.9 +9.7R		91.2 +9.2R		93.5 +7.8R		95.2 +6.7R		87.8 +6.5R		89.8 +5.7R		91.4 +5.1R		86.1 +5R		
		24"	q _a	q _f	677	1091	706	1137	638	1026	667	1074	616	991	643	1035	602	969	626	1008	592	953
			G'	82.6 +14.6R		87.8 +11.3R		77.1 +10.5R		81.8 +8.7R		74.2 +8.2R		78.3 +7.1R		72.4 +6.7R		76 +5.9R		71.2 +5.7R		
	22 ga	4"	q _a	q _f	634	1022	634	1022	634	1022	634	1022	634	1022	634	1022	634	1022	620	991	521	833
			G'	152.4 +3.7R		151.6 +3R		151 +2.6R		150.7 +2.2R		150.4 +2R		150.1 +1.8R		150 +1.6R		149.8 +1.5R		149.7 +1.3R		
		6"	q _a	q _f	634	1022	634	1022	634	1022	634	1022	634	1022	634	1022	634	1022	620	991	521	833
			G'	130.7 +5.6R		129.5 +4.6R		128.6 +3.9R		128 +3.4R		127.6 +3R		127.2 +2.7R		127 +2.5R		126.7 +2.3R		126.5 +2.1R		
		8"	q _a	q _f	634	1022	634	1022	634	1022	634	1022	634	1022	634	1022	634	1022	620	991	521	833
			G'	115.4 +7.2R		117.3 +5.7R		112.7 +5.1R		114.5 +4.3R		111.3 +4R		112.9 +3.5R		110.5 +3.2R		111.9 +2.9R		109.9 +2.7R		
		12"	q _a	q _f	634	1022	634	1022	634	1022	634	1022	634	1022	634	1022	634	1022	620	991	521	833
			G'	95.1 +9.6R		93 +8R		91.5 +6.9R		90.4 +6R		89.6 +5.4R		89 +4.8R		88.5 +4.4R		88 +4R		87.7 +3.7R		
		18"	q _a	q _f	614	1022	614	988	559	899	567	913	574	923	536	863	545	878	552	889	521	833
			G'	82.3 +11.3R		82.6 +9.1R		73 +8.6R		74.6 +7.3R		75.8 +6.4R		69.8 +6.1R		71.3 +5.4R		72.5 +4.9R		68.2 +4.7R		
		24"	q _a	q _f	526	846	546	879	487	784	509	820	466	750	486	783	452	728	471	759	443	713
			G'	67.1 +13.4R		70.7 +10.5R		61.9 +9.8R		65.4 +8.1R		59.2 +7.7R		62.3 +6.6R		57.5 +6.3R		60.3 +5.6R		56.4 +5.4R		
				DGB-36 36/4				Support Attachment: Pnutek K66 PAF				Side Seam Attachment: DeltaGrip DG4™										

DGB-36 36/4

Support Attachment: Pneutek K66 PAF

Side Seam Attachment: DeltaGrip DG4™

Patent Number: 11,872,644

DGB-36 & DGBF-36 2.7

Pneutek K66 Fasteners to Supports with DeltaGrip® DG4™ Side Seam Attachment
Diaphragm Shear in pounds per linear foot (plf)



PNEUTEK®



Support Fastener Pattern	Gage	Seam Attach. Spacing	Allowable Shear (q _a) (plf), Factored Shear (q _f) (plf), and Flexibility Factor (G') (kip/in)																			
			Span →		4' - 0"		5' - 0"		6' - 0"		7' - 0"		8' - 0"		9' - 0"		10' - 0"		11' - 0"		12' - 0"	
36/7/4	16 ga	4"	q _a	q _f	2530	4073	2530	4073	2530	4073	2530	4073	2530	4073	2530	4073	2120	3393	1752	2804	1472	2356
			G'		336.7	+7R	335.9	+5.7R	335.4	+4.8R	335.1	+4.2R	334.8	+3.7R	334.6	+3.3R	334.4	+3R	334.3	+2.7R	334.1	+2.5R
		6"	q _a	q _f	2530	4073	2530	4073	2530	4073	2530	4073	2530	4073	2530	4073	2120	3393	1752	2804	1472	2356
			G'		294.6	+11.4R	293.3	+9.4R	292.5	+8R	291.9	+6.9R	291.4	+6.1R	291	+5.5R	290.8	+5R	290.5	+4.5R	290.3	+4.2R
		8"	q _a	q _f	2461	3963	2486	4002	2429	3911	2453	3950	2412	3884	2434	3918	2120	3393	1752	2804	1472	2356
			G'		263	+15.4R	268.5	+11.9R	260	+10.8R	264.5	+9R	258.5	+8.3R	262.2	+7.2R	257.6	+6.8R	260.8	+6R	257	+5.7R
		12"	q _a	q _f	2155	3469	2119	3412	2094	3372	2076	3342	2062	3320	2051	3302	2042	3287	1752	2804	1472	2356
			G'		218.5	+21.9R	215.9	+18.2R	214.2	+15.5R	212.9	+13.6R	212	+12R	211.3	+10.8R	210.7	+9.8R	210.2	+9R	209.8	+8.3R
		18"	q _a	q _f	1908	3469	1918	3088	1712	2757	1751	2819	1779	2864	1645	2649	1681	2706	1709	2751	1472	2356
			G'		188.8	+26.8R	192.1	+21.4R	171.5	+20.7R	176.8	+17.3R	180.6	+14.9R	167.5	+14.5R	171.8	+12.8R	175.1	+11.4R	165.5	+11.1R
		24"	q _a	q _f	1567	2522	1656	2666	1452	2337	1538	2476	1391	2239	1468	2363	1353	2178	1421	2288	1327	2137
			G'		151.5	+33.6R	163.7	+25.6R	144.6	+24.2R	154.8	+19.8R	141.1	+18.9R	149.6	+16.1R	139	+15.5R	146.3	+13.6R	137.6	+13.2R
	18 ga	4"	q _a	q _f	2022	3256	2022	3256	2022	3256	2022	3256	2022	3256	1869	2990	1514	2422	1251	2002	1051	1682
			G'		261	+7.1R	260.2	+5.8R	259.7	+4.9R	259.3	+4.3R	259	+3.8R	258.8	+3.4R	258.6	+3.1R	258.5	+2.8R	258.4	+2.6R
		6"	q _a	q _f	2022	3256	2022	3256	2022	3256	2022	3256	2022	3256	1869	2990	1514	2422	1251	2002	1051	1682
			G'		226.8	+11.3R	225.5	+9.3R	224.7	+7.9R	224	+6.9R	223.6	+6.1R	223.2	+5.5R	222.9	+5R	222.7	+4.5R	222.5	+4.2R
		8"	q _a	q _f	1965	3164	1985	3196	1940	3123	1959	3154	1926	3101	1869	2990	1514	2422	1251	2002	1051	1682
			G'		201.6	+14.9R	205.6	+11.7R	198.7	+10.6R	202.1	+8.8R	197.2	+8.2R	200.1	+7.1R	196.3	+6.7R	198.8	+5.9R	195.7	+5.6R
		12"	q _a	q _f	1720	2769	1691	2723	1671	2691	1657	2667	1645	2649	1636	2635	1514	2422	1251	2002	1051	1682
			G'		166.9	+20.7R	164.4	+17.3R	162.7	+14.9R	161.5	+13R	160.6	+11.6R	159.9	+10.4R	159.3	+9.5R	158.8	+8.7R	158.4	+8R
		18"	q _a	q _f	1523	2769	1530	2464	1366	2199	1397	2249	1419	2285	1312	2113	1340	2158	1251	2002	1051	1682
			G'		144.1	+25R	146.1	+20.1R	129.9	+19.3R	133.6	+16.3R	136.4	+14.1R	126.2	+13.7R	129.2	+12.1R	131.7	+10.8R	124.3	+10.5R
		24"	q _a	q _f	1250	2012	1321	2127	1158	1864	1227	1975	1109	1786	1170	1884	1079	1737	1133	1824	1051	1682
			G'		116.1	+30.7R	124.6	+23.7R	109.6	+22.4R	117	+18.4R	106.3	+17.6R	112.6	+15.1R	104.4	+14.5R	109.7	+12.7R	103	+12.3R
	20 ga	4"	q _a	q _f	1523	2452	1523	2452	1523	2452	1523	2452	1523	2452	1212	1939	982	1570	811	1298	682	1091
			G'		188.1	+7.1R	187.3	+5.8R	186.8	+5R	186.4	+4.3R	186.1	+3.8R	185.8	+3.4R	185.7	+3.1R	185.5	+2.9R	185.4	+2.6R
		6"	q _a	q _f	1512	2435	1503	2419	1496	2408	1491	2400	1487	2394	1212	1939	982	1570	811	1298	682	1091
			G'		162.2	+10.9R	160.9	+9.1R	160	+7.8R	159.4	+6.8R	158.9	+6R	158.6	+5.4R	158.3	+4.9R	158	+4.5R	157.8	+4.2R
		8"	q _a	q _f	1393	2242	1407	2266	1365	2198	1381	2223	1351	2175	1212	1939	982	1570	811	1298	682	1091
			G'		143.6	+14.2R	146.1	+11.2R	140.7	+10.2R	143	+8.6R	139.2	+7.9R	141.2	+6.9R	138.4	+6.5R	140.1	+5.8R	137.8	+5.5R
		12"	q _a	q _f	1191	1917	1163	1873	1144	1842	1130	1819	1119	1802	1110	1788	982	1570	811	1298	682	1091
			G'		118.6	+19R	116.2	+16R	114.6	+13.9R	113.4	+12.2R	112.6	+10.9R	111.9	+9.8R	111.3	+8.9R	110.9	+8.2R	110.5	+7.6R
		18"	q _a	q _f	1041	1917	1040	1675	916	1475	935	1505	948	1527	869	1400	888	1429	811	1298	682	1091
			G'		102.6	+22.5R	103.3	+18.4R	91.5	+17.5R	93.7	+14.9R	95.3	+13R	87.9	+12.5R	89.9	+11.1R	91.5	+10R	86.2	+9.7R
		24"	q _a	q _f	849	1366	890	1433	772	1242	815	1312	731	1177	770	1240	706	1137	741	1193	682	1091
			G'		83.3	+27R	88.3	+21.3R	77.4	+20R	82.1	+16.7R	74.4	+15.8R	78.5	+13.7R	72.6	+13.1R	76.1	+11.6R	71.3	+11.2R
	22 ga	4"	q _a	q _f	1269	2043	1269	2043	1269	2043	1269	2043	1171	1874	926	1481	750	1199	620	991	521	833
			G'		152.5	+7R	151.6	+5.8R	151.1	+5R	150.7	+4.3R	150.4	+3.9R	150.2	+3.5R	150	+3.1R	149.8	+2.9R	149.7	+2.7R
		6"	q _a	q _f	1201	1933	1189	1915	1182	1902	1176	1893	1171	1874	926	1481	750	1199	620	991	521	833
			G'		130.9	+10.6R	129.6	+8.9R	128.7	+7.6R	128.1	+6.7R	127.6	+6R	127.3	+5.4R	127	+4.9R	126.7	+4.5R	126.5	+4.1R
		8"	q _a	q _f	1089	1753	1099	1770	1059	1706	1072	1726	1043	1680	926	1481	750	1199	620	991	521	833
			G'		115.7	+13.6R	117.4	+10.8R	112.8	+9.8R	114.6	+8.3R	111.4	+7.7R	113	+6.7R	110.5	+6.3R	111.9	+5.7R	110	+5.4R
		12"	q _a	q _f	914	1472	887	1428	868	1398	854	1375	843	1358	835	1344	750	1199	620	991	521	833
			G'		95.6	+17.9R	93.3	+15.2R	91.7	+13.2R	90.6	+11.6R	89.7	+10.4R	89.1	+9.4R	88.6	+8.6R	88.1	+7.9R	87.8	+7.3R
		18"	q _a	q _f	794	1472	787	1268	687	1105	698	1124	706	1137	643	1036	656	1056	620	991	521	833
			G'		82.9	+20.9R	83	+17.2R	73.3	+16.4R	74.8	+14R	76	+12.3R	70	+11.8R	71.4	+10.5R	72.6	+9.5R	68.3	+9.2R
		24"	q _a	q _f	646	1040	670	1079	577	929	606	976	541	871	568	915	519	835	544	875	504	811
			G'		67.8	+24.7R	71.1	+19.7R	62.3	+18.5R	65.6	+15.9R	59.4	+14.7R	62.5	+12.8R	57.7	+12.2R	60.4	+10.9R	56.5	+10.4R
DGB-36 36/7/4 Support Attachment: Pneutek K66 PAF Side Seam Attachment: DeltaGrid DG4™																						

DGB-36 36/7/4

Support Attachment: Pneutek K66 PAF

Side Seam Attachment: DeltaGrip DG4™

Patent Number: 11,872,644

2.7 DGB-36 & DGBF-36

Pneutek K66 Fasteners to Supports with DeltaGrip® DG4™ Side Seam Attachment

Diaphragm Shear in pounds per linear foot (plf)



PNEUTEK



Support Fastener Pattern	Gage	Seam Attach. Spacing	Allowable Shear (q _a) (plf), Factored Shear (q _f) (plf), and Flexibility Factor (G') (kip/in)																			
			Span →		4' - 0"		5' - 0"		6' - 0"		7' - 0"		8' - 0"		9' - 0"		10' - 0"		11' - 0"		12' - 0"	
			q _a	q _f																		
36/9	16 ga	4"	q _a	q _f	2530	4073	2530	4073	2530	4073	2530	4073	2530	4073	2530	4073	2120	3393	1752	2804	1472	2356
			G'	341.2 +7.3R		339.6 +6R		338.5 +5.1R		337.7 +4.5R		337.1 +4R		336.6 +3.6R		336.3 +3.2R		336 +3R		335.7 +2.7R		
		6"	q _a	q _f	2530	4073	2530	4073	2530	4073	2530	4073	2530	4073	2530	4073	2120	3393	1752	2804	1472	2356
			G'	302 +11.7R		299.4 +9.8R		297.6 +8.4R		296.3 +7.3R		295.3 +6.5R		294.5 +5.9R		293.9 +5.3R		293.4 +4.9R		293 +4.5R		
		8"	q _a	q _f	2530	4073	2530	4073	2530	4073	2530	4073	2530	4073	2530	4073	2120	3393	1752	2804	1472	2356
			G'	272.9 +15.6R		276.1 +12.3R		266.9 +11.3R		270.2 +9.5R		263.8 +8.8R		266.8 +7.7R		261.9 +7.3R		264.6 +6.5R		260.6 +6.2R		
		12"	q _a	q _f	2530	4073	2530	4073	2492	4012	2448	3942	2415	3888	2388	3844	2120	3393	1752	2804	1472	2356
			G'	232.8 +21.8R		227.7 +18.5R		224.2 +16R		221.6 +14.1R		219.7 +12.6R		218.2 +11.4R		216.9 +10.4R		215.9 +9.6R		215.1 +8.9R		
		18"	q _a	q _f	2352	4073	2314	3726	2049	3298	2063	3322	2075	3340	1905	3067	1931	3109	1752	2804	1472	2356
			G'	206.4 +26.3R		206.1 +21.6R		184.9 +21R		187.9 +17.9R		190.2 +15.5R		176.8 +15.2R		179.9 +13.5R		182.4 +12.1R		172.6 +11.9R		
		24"	q _a	q _f	1995	3212	2027	3264	1768	2847	1828	2943	1645	2648	1708	2749	1567	2524	1628	2621	1472	2356
			G'	173.7 +32.5R		180.5 +25.5R		160.3 +24.5R		167.6 +20.3R		153.3 +19.6R		160 +16.8R		148.9 +16.3R		155 +14.4R		145.9 +13.9R		
	18 ga	4"	q _a	q _f	2022	3256	2022	3256	2022	3256	2022	3256	2022	3256	1869	2990	1514	2422	1251	2002	1051	1682
			G'	265.5 +7.3R		263.9 +6.1R		262.8 +5.2R		262 +4.5R		261.4 +4R		260.9 +3.6R		260.5 +3.3R		260.2 +3R		260 +2.8R		
		6"	q _a	q _f	2022	3256	2022	3256	2022	3256	2022	3256	2022	3256	1869	2990	1514	2422	1251	2002	1051	1682
			G'	234.1 +11.4R		231.5 +9.6R		229.7 +8.3R		228.4 +7.3R		227.5 +6.5R		226.7 +5.8R		226.1 +5.3R		225.5 +4.9R		225.1 +4.5R		
		8"	q _a	q _f	2022	3256	2022	3256	2022	3256	2022	3256	2022	3256	1869	2990	1514	2422	1251	2002	1051	1682
			G'	211.4 +14.9R		213.2 +11.9R		205.5 +10.9R		207.7 +9.2R		202.4 +8.6R		204.6 +7.5R		200.5 +7.1R		202.5 +6.4R		199.3 +6.1R		
		12"	q _a	q _f	2022	3256	2022	3256	1988	3201	1954	3145	1927	3102	1869	2990	1514	2422	1251	2002	1051	1682
			G'	180.5 +20.2R		175.7 +17.3R		172.3 +15.1R		169.9 +13.4R		168 +12R		166.5 +10.9R		165.4 +10R		164.4 +9.2R		163.5 +8.5R		
		18"	q _a	q _f	1878	3256	1847	2973	1634	2631	1646	2650	1655	2664	1519	2446	1514	2422	1251	2002	1051	1682
			G'	160.7 +24.1R		159.3 +20R		142.5 +19.4R		144.2 +16.6R		145.5 +14.6R		134.9 +14.2R		137 +12.6R		138.6 +11.4R		131 +11.1R		
		24"	q _a	q _f	1592	2564	1618	2605	1411	2271	1458	2348	1312	2112	1362	2193	1250	2013	1251	2002	1051	1682
			G'	136.5 +29.2R		140.1 +23.3R		124.3 +22.3R		128.9 +18.7R		117.7 +18R		122.3 +15.6R		113.6 +15R		117.9 +13.3R		110.9 +12.9R		
	20 ga	4"	q _a	q _f	1523	2452	1523	2452	1523	2452	1523	2452	1523	2452	1212	1939	982	1570	811	1298	682	1091
			G'	192.7 +7.2R		191.1 +6R		189.9 +5.2R		189.1 +4.6R		188.5 +4.1R		188 +3.7R		187.6 +3.3R		187.3 +3.1R		187 +2.8R		
		6"	q _a	q _f	1523	2452	1523	2452	1523	2452	1523	2452	1523	2452	1212	1939	982	1570	811	1298	682	1091
			G'	169.4 +10.8R		166.8 +9.2R		165 +8R		163.8 +7.1R		162.8 +6.3R		162 +5.7R		161.4 +5.2R		160.9 +4.8R		160.5 +4.5R		
		8"	q _a	q _f	1523	2452	1523	2452	1523	2452	1523	2452	1523	2452	1212	1939	982	1570	811	1298	682	1091
			G'	152.9 +13.8R		153.4 +11.2R		147.3 +10.3R		148.5 +8.8R		144.3 +8.2R		145.7 +7.2R		142.5 +6.8R		143.8 +6.1R		141.3 +5.8R		
		12"	q _a	q _f	1462	2354	1403	2259	1361	2191	1330	2141	1305	2101	1212	1939	982	1570	811	1298	682	1091
			G'	131.3 +18.2R		126.8 +15.7R		123.6 +13.9R		121.3 +12.4R		119.6 +11.1R		118.2 +10.2R		117.1 +9.3R		116.1 +8.6R		115.4 +8R		
		18"	q _a	q _f	1302	2354	1267	2040	1109	1786	1110	1787	1111	1788	1013	1630	982	1570	811	1298	682	1091
			G'	117.6 +21.2R		115.4 +17.9R		103 +17.3R		103.4 +15R		103.8 +13.2R		96 +12.8R		97.1 +11.5R		98 +10.4R		92.4 +10.2R		
		24"	q _a	q _f	1107	1782	1108	1784	959	1543	982	1581	879	1414	907	1460	829	1334	811	1298	682	1091
			G'	101.5 +25R		102.4 +20.5R		90.6 +19.5R		92.9 +16.6R		84.7 +15.9R		87.3 +14R		81 +13.4R		83.6 +12R		78.5 +11.6R		
	22 ga	4"	q _a	q _f	1269	2043	1269	2043	1269	2043	1269	2043	1171	1874	926	1481	750	1199	620	991	521	833
			G'	157.1 +7R		155.4 +6R		154.3 +5.2R		153.5 +4.5R		152.9 +4.1R		152.4 +3.7R		152 +3.3R		151.6 +3.1R		151.4 +2.8R		
		6"	q _a	q _f	1269	2043	1269	2043	1269	2043	1269	2043	1171	1874	926	1481	750	1199	620	991	521	833
			G'	137.9 +10.4R		135.4 +8.9R		133.7 +7.8R		132.4 +6.9R		131.5 +6.2R		130.7 +5.6R		130.1 +5.1R		129.6 +4.7R		129.2 +4.4R		
		8"	q _a	q _f	1269	2043	1269	2043	1261	2030	1266	2039	1171	1874	926	1481	750	1199	620	991	521	833
G'			124.7 +13R		124.5 +10.7R		119.3 +9.9R		120 +8.5R		116.4 +7.9R		117.3 +7R		114.6 +6.6R		115.5 +6R		113.4 +5.7R			
12"		q _a	q _f	1134	1826	1078	1735	1038	1671	1008	1623	985	1585	926	1481	750	1199	620	991	521	833	
		G'	107.5 +16.8R		103.3 +14.7R		100.3 +13R		98.2 +11.6R		96.5 +10.5R		95.1 +9.6R		94.1 +8.8R		93.2 +8.2R		92.4 +7.6R			
18"		q _a	q _f	1009	1826	971	1564	844	1358	838	1350	834	1343	757	1219	750	1199	620	991	521	833	
		G'	96.9 +19.3R		94.4 +16.5R		84.1 +16R		84 +13.9R		83.9 +12.3R		77.6 +12R		78.2 +10.8R		78.7 +9.8R		74.2 +9.5R			
24"		q _a	q _f	862	1388	851	1370	732	1178	743	1196	662	1065	679	1092	618	995	620	991	521	833	
		G'	84.5 +22.5R		84.3 +18.7R		74.5 +17.8R		75.8 +15.3R		69 +14.7R		70.8 +12.9R		65.6 +12.4R		67.4 +11.2R		63.3 +10.8R			
DGB-36 36/9 Support Attachment: Pneutek K66 PAF Side Seam Attachment: DeltaGrip DG4™																						



2.8 BN-36 / BS-36

No. 12 Screws to Supports with No. 10 Screws Side Seam Attachment

Diaphragm Shear in pounds per linear foot (plf)



Support Fastener Pattern	Gage	Seam Attach. Spacing	Allowable Shear (q _a) (plf), Factored Shear (q _f) (plf), and Flexibility Factor (G') (kip/in)																			
			Span →	4' - 0"		5' - 0"		6' - 0"		7' - 0"		8' - 0"		9' - 0"		10' - 0"		11' - 0"		12' - 0"		
				q _a	q _f																	
36/4	16 ga	4"	q _a	q _f	817	1316	817	1316	817	1316	817	1316	817	1316	817	1316	817	1316	817	1316	817	1316
			G'	304.8 +11.6R		302.2 +9.7R		300.4 +8.3R		299.1 +7.3R		298.2 +6.5R		297.4 +5.8R		296.8 +5.3R		296.3 +4.9R		295.9 +4.5R		
		6"	q _a	q _f	817	1316	817	1316	817	1316	817	1316	817	1316	817	1316	817	1316	817	1316	817	1316
			G'	264.1 +17.2R		260.1 +14.5R		257.4 +12.6R		255.4 +11R		253.9 +9.9R		252.7 +8.9R		251.8 +8.1R		251 +7.5R		250.3 +6.9R		
		8"	q _a	q _f	817	1316	817	1316	817	1316	817	1316	817	1316	817	1316	817	1316	817	1316	816	1314
			G'	235.8 +21.7R		237.2 +17.5R		227.2 +16R		229.5 +13.6R		222.7 +12.6R		225.1 +11.1R		219.9 +10.4R		222.2 +9.4R		218.1 +8.9R		
		12"	q _a	q _f	755	1216	732	1179	716	1153	704	1134	695	1119	687	1107	681	1097	676	1089	672	1082
			G'	199.2 +28.2R		192.4 +24.2R		187.7 +21.1R		184.3 +18.7R		181.7 +16.8R		179.6 +15.2R		178 +13.9R		176.6 +12.9R		175.4 +11.9R		
		18"	q _a	q _f	674	1216	664	1069	588	947	593	955	597	960	548	882	556	895	562	905	526	848
			G'	176.5 +32.6R		173.6 +27.2R		153.8 +26R		155 +22.4R		155.9 +19.7R		143.7 +18.9R		145.6 +17R		147.2 +15.4R		138.5 +14.9R		
		24"	q _a	q _f	570	918	581	935	507	816	525	845	472	760	491	790	450	725	468	754	436	701
			G'	149.8 +38.2R		152.2 +30.9R		133.8 +29.1R		138.1 +24.7R		125.3 +23.4R		129.8 +20.5R		120 +19.6R		124.3 +17.5R		116.4 +16.8R		
	18 ga	4"	q _a	q _f	786	1265	786	1265	786	1265	786	1265	786	1265	786	1265	786	1265	786	1265	786	1265
			G'	253.6 +8.9R		251.5 +7.5R		250.1 +6.4R		249.1 +5.6R		248.4 +5R		247.8 +4.5R		247.3 +4.1R		246.9 +3.8R		246.6 +3.5R		
		6"	q _a	q _f	786	1265	786	1265	786	1265	786	1265	786	1265	786	1265	786	1265	784	1263	782	1259
			G'	221.7 +13.5R		218.6 +11.4R		216.4 +9.9R		214.9 +8.7R		213.7 +7.8R		212.7 +7R		212 +6.4R		211.4 +5.9R		210.8 +5.5R		
		8"	q _a	q _f	755	1216	755	1215	722	1163	727	1170	704	1133	710	1143	692	1115	698	1125	684	1102
			G'	199.3 +17.2R		200.4 +13.9R		192.4 +12.8R		194.3 +10.9R		188.8 +10.1R		190.7 +8.9R		186.6 +8.4R		188.4 +7.5R		185.1 +7.1R		
		12"	q _a	q _f	646	1040	617	994	597	962	582	937	571	919	561	904	554	892	548	882	542	873
			G'	169.8 +22.8R		164.3 +19.6R		160.5 +17.1R		157.7 +15.2R		155.5 +13.7R		153.8 +12.5R		152.5 +11.4R		151.3 +10.5R		150.4 +9.8R		
		18"	q _a	q _f	573	1040	556	895	485	780	484	779	484	779	440	708	444	715	447	720	416	670
			G'	151.3 +26.6R		148.9 +22.2R		132.6 +21.4R		133.5 +18.5R		134.3 +16.2R		124.1 +15.7R		125.7 +14.1R		127 +12.7R		119.7 +12.4R		
		24"	q _a	q _f	487	784	486	782	419	674	428	689	382	615	393	634	359	578	371	597	343	553
			G'	129.2 +31.4R		131.2 +25.5R		115.9 +24.2R		119.4 +20.5R		108.7 +19.6R		112.5 +17.1R		104.2 +16.4R		107.8 +14.6R		101.2 +14.1R		
	20 ga	4"	q _a	q _f	592	953	592	953	592	953	592	953	592	953	592	953	592	953	592	953	592	953
			G'	199.6 +6.4R		198.1 +5.3R		197.1 +4.6R		196.4 +4R		195.9 +3.6R		195.4 +3.2R		195.1 +2.9R		194.8 +2.7R		194.6 +2.5R		
		6"	q _a	q _f	592	953	585	942	576	928	570	917	565	909	561	903	558	898	555	893	552	890
			G'	176.6 +9.8R		174.3 +8.3R		172.7 +7.2R		171.5 +6.4R		170.6 +5.7R		169.9 +5.2R		169.4 +4.7R		168.9 +4.3R		168.5 +4R		
		8"	q _a	q _f	539	868	536	864	510	821	512	825	494	795	497	801	484	779	488	785	477	767
			G'	160 +12.7R		160.8 +10.3R		154.9 +9.5R		156.3 +8.1R		152.2 +7.6R		153.6 +6.6R		150.5 +6.3R		151.9 +5.6R		149.4 +5.4R		
		12"	q _a	q _f	458	737	434	699	418	672	405	652	396	637	388	625	382	614	377	606	372	599
			G'	137.9 +17.1R		133.6 +14.8R		130.7 +13R		128.6 +11.6R		126.9 +10.5R		125.6 +9.5R		124.6 +8.7R		123.7 +8.1R		123 +7.5R		
		18"	q _a	q _f	407	737	391	629	339	545	336	541	334	538	303	488	305	491	306	493	284	458
			G'	123.7 +20.2R		121.8 +17R		109.1 +16.6R		109.9 +14.3R		110.5 +12.6R		102.5 +12.3R		103.8 +11R		104.8 +9.9R		99 +9.7R		
		24"	q _a	q _f	347	559	342	551	294	473	298	479	265	426	271	437	247	398	254	409	235	378
			G'	106.6 +24.3R		108.1 +19.7R		96 +18.9R		98.8 +16R		90.3 +15.4R		93.3 +13.5R		86.8 +13R		89.6 +11.6R		84.3 +11.2R		
	22 ga	4"	q _a	q _f	493	793	493	793	493	793	493	793	493	793	493	793	493	793	493	793	493	793
			G'	170.8 +5.1R		169.7 +4.3R		168.9 +3.7R		168.3 +3.2R		167.9 +2.9R		167.5 +2.6R		167.3 +2.4R		167 +2.2R		166.8 +2R		
		6"	q _a	q _f	482	777	471	758	463	745	457	735	452	728	448	722	445	717	443	713	440	709
			G'	152.3 +8R		150.4 +6.8R		149.1 +5.9R		148.1 +5.2R		147.4 +4.7R		146.9 +4.2R		146.4 +3.9R		146 +3.5R		145.7 +3.3R		
		8"	q _a	q _f	433	698	430	692	407	655	408	657	392	631	395	636	383	617	386	622	377	606
			G'	138.7 +10.4R		139.4 +8.4R		134.5 +7.8R		135.6 +6.6R		132.2 +6.2R		133.4 +5.5R		130.8 +5.2R		132 +4.6R		129.9 +4.4R		
12"		q _a	q _f	367	591	346	558	332	534	321	517	312	503	306	492	300	483	296	476	292	470	
		G'	120.3 +14.2R		116.8 +12.3R		114.4 +10.9R		112.5 +9.7R		111.2 +8.8R		110.1 +8R		109.2 +7.3R		108.4 +6.8R		107.8 +6.3R			
18"		q _a	q _f	326	591	312	502	269	434	266	429	264	425	239	384	240	386	240	387	223	359	
		G'	108.5 +16.9R		106.9 +14.2R		96.2 +14R		96.8 +12.1R		97.3 +10.6R		90.5 +10.4R		91.6 +9.3R		92.4 +8.4R		87.5 +8.3R			
24"		q _a	q _f	280	450	273	440	234	377	236	380	210	337	214	345	194	312	200	322	184	296	
		G'	84 +20.5R		95.3 +16.6R		84.9 +16.1R		87.4 +13.6R		80 +13.2R		82.6 +11.5R		77 +11.2R		79.4 +9.9R		74.9 +9.7R			
BS-36 36/4 Support Attachment: #12 SD HWH Screw Side Seam Attachment: #10 SD HWH Screw																						



Support Fastener Pattern	Gage	Seam Attach. Spacing	Allowable Shear (q _a) (plf), Factored Shear (q _f) (plf), and Flexibility Factor (G') (kip/in)																			
			Span →	4' - 0"		5' - 0"		6' - 0"		7' - 0"		8' - 0"		9' - 0"		10' - 0"		11' - 0"		12' - 0"		
			q _a	q _f																		
36/7/4	16 ga	4"	q _a	q _f	1542	2483	1527	2459	1517	2443	1510	2431	1504	2421	1499	2414	1496	2408	1493	2403	1472	2356
			G'	305.3 +21.6R		302.6 +18.3R		300.7 +15.9R		299.3 +14R		298.3 +12.5R		297.5 +11.3R		296.9 +10.3R		296.4 +9.5R		295.9 +8.8R		
		6"	q _a	q _f	1333	2147	1307	2104	1288	2074	1275	2052	1264	2036	1256	2022	1249	2012	1244	2003	1239	1995
			G'	265 +31.6R		260.8 +27.1R		257.9 +23.7R		255.8 +21R		254.2 +18.9R		253 +17.1R		252 +15.7R		251.1 +14.5R		250.5 +13.4R		
		8"	q _a	q _f	1172	1887	1175	1892	1112	1791	1123	1808	1080	1739	1093	1759	1060	1707	1073	1727	1047	1685
			G'	237.1 +39.4R		238.1 +32.5R		227.9 +29.9R		230.1 +25.7R		223.1 +24.1R		225.4 +21.3R		220.2 +20.1R		222.4 +18.1R		218.3 +17.2R		
		12"	q _a	q _f	958	1542	911	1467	879	1416	856	1378	838	1348	823	1326	812	1307	802	1292	794	1279
			G'	201.1 +50.5R		193.8 +44.1R		188.8 +39.1R		185.1 +35R		182.3 +31.7R		180.2 +29R		178.4 +26.6R		177 +24.7R		175.8 +22.9R		
		18"	q _a	q _f	828	1542	804	1294	689	1109	691	1112	692	1115	624	1005	632	1018	639	1029	591	951
			G'	178.8 +58R		175.2 +49.4R		155.3 +47.7R		156.1 +41.6R		156.7 +37R		144.5 +35.7R		146.2 +32.2R		147.7 +29.3R		138.9 +28.5R		
		24"	q _a	q _f	681	1097	686	1104	583	939	601	967	532	856	552	888	501	806	520	837	479	772
			G'	152.8 +67.2R		154.2 +55.8R		135.5 +53.1R		139.3 +45.7R		126.4 +43.7R		130.6 +38.5R		120.7 +37R		124.9 +33.3R		117 +32.1R		
	18 ga	4"	q _a	q _f	1339	2155	1317	2120	1301	2095	1290	2076	1281	2062	1274	2051	1268	2042	1251	2002	1051	1682
			G'	254 +16.6R		251.8 +14.1R		250.4 +12.3R		249.3 +10.8R		248.5 +9.7R		247.9 +8.8R		247.4 +8R		247 +7.4R		246.7 +6.8R		
		6"	q _a	q _f	1122	1807	1088	1751	1064	1713	1046	1685	1033	1663	1022	1646	1014	1632	1006	1620	1000	1611
			G'	222.5 +24.7R		219.1 +21.2R		216.8 +18.6R		215.2 +16.5R		213.9 +14.9R		212.9 +13.5R		212.2 +12.4R		211.5 +11.4R		211 +10.6R		
		8"	q _a	q _f	973	1567	965	1554	902	1452	906	1459	864	1391	872	1404	841	1354	849	1367	825	1328
			G'	200.4 +31.1R		201.1 +25.7R		193 +23.8R		194.7 +20.5R		189.2 +19.2R		191 +17R		186.8 +16.1R		188.6 +14.5R		185.2 +13.8R		
		12"	q _a	q _f	792	1275	742	1194	707	1138	681	1097	662	1065	646	1041	634	1021	624	1004	615	991
			G'	171.4 +40.5R		165.5 +35.5R		161.4 +31.6R		158.4 +28.4R		156.1 +25.7R		154.3 +23.5R		152.8 +21.7R		151.7 +20.1R		150.7 +18.7R		
		18"	q _a	q _f	689	1275	656	1056	558	898	552	889	548	882	492	792	495	796	497	800	458	737
			G'	153.3 +46.8R		150.3 +40.1R		133.8 +39R		134.5 +34.1R		135 +30.3R		124.8 +29.5R		126.3 +26.6R		127.5 +24.2R		120.1 +23.6R		
		24"	q _a	q _f	577	929	566	910	478	770	484	779	424	683	435	701	390	629	403	650	370	595
			G'	131.8 +54.8R		133 +45.6R		117.3 +43.8R		120.5 +37.7R		109.7 +36.3R		113.2 +32R		104.9 +30.9R		108.4 +27.7R		101.7 +26.8R		
	20 ga	4"	q _a	q _f	950	1530	930	1498	916	1475	906	1459	898	1446	892	1436	887	1428	811	1298	682	1091
			G'	199.9 +11.8R		198.3 +10R		197.3 +8.7R		196.5 +7.7R		196 +6.9R		195.5 +6.3R		195.1 +5.7R		194.9 +5.3R		194.6 +4.9R		
		6"	q _a	q _f	787	1267	758	1221	738	1188	723	1164	712	1146	703	1132	696	1120	690	1111	682	1091
			G'	177.1 +17.9R		174.7 +15.4R		173 +13.6R		171.8 +12.1R		170.8 +10.9R		170.1 +9.9R		169.5 +9.1R		169 +8.4R		168.6 +7.8R		
		8"	q _a	q _f	681	1096	670	1079	622	1002	623	1003	592	953	596	959	573	922	578	930	560	902
			G'	160.9 +22.8R		161.4 +18.9R		155.3 +17.6R		156.6 +15.1R		152.5 +14.3R		153.8 +12.6R		150.7 +12R		152 +10.8R		149.5 +10.3R		
		12"	q _a	q _f	555	894	515	830	488	785	468	753	453	729	441	709	431	694	423	681	416	670
			G'	139.2 +30.2R		134.6 +26.7R		131.4 +23.8R		129.1 +21.5R		127.4 +19.5R		126 +17.9R		124.9 +16.5R		124 +15.4R		123.2 +14.3R		
		18"	q _a	q _f	485	894	458	737	388	624	381	614	376	606	335	539	336	541	338	544	310	498
			G'	125.3 +35.3R		123 +30.4R		110.2 +30R		110.7 +26.3R		111.1 +23.4R		103.1 +22.9R		104.2 +20.7R		105.2 +18.8R		99.4 +18.5R		
		24"	q _a	q _f	411	661	397	639	332	535	333	537	290	467	296	476	266	428	274	441	251	404
			G'	108.7 +41.8R		109.6 +34.9R		97.3 +34R		99.8 +29.3R		91.1 +28.4R		93.9 +25R		87.3 +24.3R		90.1 +21.8R		84.7 +21.2R		
	22 ga	4"	q _a	q _f	761	1225	742	1195	729	1174	720	1159	713	1148	707	1138	702	1131	620	991	521	833
			G'	171.1 +9.4R		169.9 +8R		169 +7R		168.4 +6.2R		168 +5.6R		167.6 +5R		167.3 +4.6R		167.1 +4.2R		166.9 +3.9R		
		6"	q _a	q _f	626	1008	601	967	583	938	570	917	560	901	552	889	546	878	540	870	521	833
			G'	152.7 +14.5R		150.7 +12.5R		149.3 +11R		148.3 +9.8R		147.6 +8.9R		147 +8.1R		146.5 +7.4R		146.1 +6.8R		145.8 +6.4R		
		8"	q _a	q _f	541	871	530	854	491	790	490	789	464	747	466	751	448	721	451	726	437	703
			G'	139.4 +18.6R		139.9 +15.4R		134.9 +14.4R		135.9 +12.4R		132.5 +11.7R		133.6 +10.4R		131 +9.9R		132.1 +8.9R		130 +8.5R		
12"		q _a	q _f	442	712	408	658	385	620	368	593	355	572	345	555	337	542	330	531	324	522	
		G'	121.5 +24.9R		117.6 +22.1R		115 +19.8R		113.1 +17.9R		111.6 +16.3R		110.4 +15R		109.5 +13.8R		108.7 +12.9R		108 +12R			
18"		q _a	q _f	388	712	364	586	308	495	300	483	295	474	262	421	262	422	263	423	241	388	
		G'	109.9 +29.3R		107.9 +25.3R		97.1 +25.2R		97.5 +22.1R		97.8 +19.7R		91 +19.4R		92 +17.5R		92.8 +15.9R		87.8 +15.7R			
24"		q _a	q _f	331	533	317	511	263	424	262	422	228	367	232	373	209	336	214	344	196	316	
		G'	95.9 +35R		96.6 +29.3R		86.1 +28.8R		88.2 +24.8R		80.8 +24.2R		83.2 +21.3R		77.5 +20.8R		79.9 +18.6R		75.3 +18.2R			
BS-36 36/7/4 Support Attachment: #12 SD HWH Screw Side Seam Attachment: #10 SD HWH Screw																						

2.8 BN-36

No. 12 Screws to Supports with No. 10 Screws Side Seam Attachment

Diaphragm Shear in pounds per linear foot (plf)



Support Fastener Pattern	Gage	Seam Attach. Spacing	Allowable Shear (q_a) (plf), Factored Shear (q_f) (plf), and Flexibility Factor (G') (kip/in)																			
			Span →	4' - 0"		5' - 0"		6' - 0"		7' - 0"		8' - 0"		9' - 0"		10' - 0"		11' - 0"		12' - 0"		
			q_a	q_f																		
36/7	16 ga	4"	q_a	q_f	1554	2502	1538	2476	1526	2457	1518	2443	1511	2433	1506	2424	1501	2417	1498	2412	1472	2356
			G'		311.2 +15.7R		307.5 +13.4R		304.9 +11.6R		303 +10.3R		301.6 +9.2R		300.5 +8.4R		299.6 +7.6R		298.8 +7R		298.2 +6.5R	
		6"	q_a	q_f	1355	2181	1325	2134	1304	2100	1289	2075	1277	2056	1267	2041	1260	2028	1253	2018	1248	2009
			G'		273.7 +22.8R		268.1 +19.7R		264.2 +17.3R		261.3 +15.4R		259.2 +13.9R		257.5 +12.6R		256.1 +11.6R		254.9 +10.7R		254 +9.9R	
		8"	q_a	q_f	1201	1934	1198	1929	1134	1825	1141	1837	1097	1766	1107	1783	1074	1729	1085	1747	1058	1704
			G'		248 +28.4R		246.9 +23.5R		236 +21.8R		236.9 +18.8R		229.5 +17.6R		231.1 +15.6R		225.5 +14.8R		227.2 +13.3R		222.8 +12.7R	
		12"	q_a	q_f	996	1604	944	1519	907	1460	880	1417	859	1383	843	1357	830	1336	819	1318	809	1303
			G'		215.2 +36.2R		205.9 +31.8R		199.4 +28.3R		194.5 +25.5R		190.8 +23.1R		187.9 +21.2R		185.5 +19.5R		183.5 +18.1R		181.8 +16.9R	
		18"	q_a	q_f	871	1604	839	1351	721	1161	719	1157	717	1154	647	1041	652	1050	657	1058	608	979
			G'		195.1 +41.4R		188.9 +35.6R		168.3 +34.5R		167.3 +30.2R		166.6 +26.9R		154 +26.1R		154.8 +23.6R		155.5 +21.5R		146.4 +20.9R	
		24"	q_a	q_f	730	1175	725	1167	618	994	630	1015	559	899	575	926	522	841	539	869	498	801
			G'		171.8 +47.7R		169.7 +40R		150.1 +38.3R		151.7 +33.1R		138.1 +31.7R		140.9 +28.1R		130.6 +27R		133.7 +24.4R		125.4 +23.5R	
	18 ga	4"	q_a	q_f	1357	2184	1332	2144	1314	2116	1302	2095	1292	2079	1284	2067	1277	2056	1251	2002	1051	1682
			G'		258.5 +12.1R		255.6 +10.3R		253.6 +9R		252.2 +8R		251.1 +7.1R		250.2 +6.5R		249.5 +5.9R		248.9 +5.4R		248.4 +5R	
		6"	q_a	q_f	1150	1852	1112	1790	1085	1746	1064	1714	1049	1689	1037	1669	1027	1653	1019	1640	1012	1629
			G'		229.3 +17.8R		224.9 +15.4R		221.8 +13.6R		219.6 +12.1R		217.9 +10.9R		216.5 +9.9R		215.4 +9.1R		214.5 +8.4R		213.7 +7.8R	
		8"	q_a	q_f	1008	1623	993	1599	927	1493	928	1494	884	1423	889	1432	857	1380	864	1391	839	1350
			G'		209 +22.4R		208.1 +18.6R		199.4 +17.3R		200.2 +14.9R		194.3 +14.1R		195.5 +12.5R		191.1 +11.8R		192.4 +10.7R		188.9 +10.2R	
		12"	q_a	q_f	834	1343	777	1250	737	1186	707	1139	685	1103	667	1075	653	1052	641	1033	631	1017
			G'		182.8 +28.9R		175.3 +25.6R		170 +22.8R		166 +20.6R		163 +18.8R		160.6 +17.2R		158.6 +15.9R		157 +14.8R		155.6 +13.8R	
		18"	q_a	q_f	734	1343	694	1117	591	952	581	935	573	923	515	829	515	829	515	830	476	766
			G'		166.5 +33.3R		161.4 +28.8R		144.5 +28.1R		143.7 +24.7R		143.2 +22.1R		132.7 +21.5R		133.4 +19.4R		133.9 +17.7R		126.4 +17.3R	
		24"	q_a	q_f	626	1008	605	974	513	826	514	827	453	730	461	742	414	666	425	684	389	627
			G'		147.5 +38.8R		145.7 +32.6R		129.5 +31.5R		130.8 +27.3R		119.5 +26.3R		121.8 +23.3R		113.2 +22.5R		115.8 +20.3R		108.8 +19.7R	
	20 ga	4"	q_a	q_f	967	1556	944	1520	928	1495	917	1476	908	1461	901	1450	895	1441	811	1298	682	1091
			G'		203.1 +8.6R		201 +7.3R		199.6 +6.4R		198.6 +5.7R		197.8 +5.1R		197.1 +4.6R		196.6 +4.2R		196.2 +3.9R		195.9 +3.6R	
		6"	q_a	q_f	811	1306	778	1253	755	1216	739	1189	726	1168	715	1152	707	1138	700	1127	682	1091
			G'		182.1 +12.9R		178.9 +11.2R		176.6 +9.9R		175 +8.8R		173.7 +8R		172.7 +7.3R		171.9 +6.7R		171.2 +6.2R		170.7 +5.7R	
		8"	q_a	q_f	709	1141	693	1116	643	1035	641	1032	608	979	610	982	586	943	590	950	571	919
			G'		167.2 +16.4R		166.6 +13.6R		160.1 +12.8R		160.7 +11R		156.3 +10.4R		157.2 +9.2R		153.9 +8.8R		154.9 +7.9R		152.2 +7.6R	
		12"	q_a	q_f	588	947	543	874	511	823	488	786	471	758	457	736	446	718	437	703	429	691
			G'		147.7 +21.5R		142 +19.1R		138 +17.2R		135 +15.6R		132.6 +14.2R		130.8 +13.1R		129.3 +12.1R		128 +11.3R		127 +10.5R	
		18"	q_a	q_f	521	947	487	784	413	666	403	649	396	637	354	570	353	569	352	567	324	522
			G'		135.4 +25R		131.5 +21.7R		118.5 +21.5R		117.9 +19R		117.4 +16.9R		109.3 +16.6R		109.8 +15.1R		110.2 +13.8R		104.3 +13.5R	
		24"	q_a	q_f	448	722	428	688	362	582	358	577	312	502	315	507	283	456	290	466	265	427
			G'		120.8 +29.5R		119.4 +24.9R		106.7 +24.4R		107.8 +21.1R		98.9 +20.5R		100.7 +18.2R		93.9 +17.7R		95.9 +15.9R		90.4 +15.5R	
	22 ga	4"	q_a	q_f	776	1249	755	1216	741	1192	730	1175	722	1162	715	1151	710	1142	620	991	521	833
			G'		173.7 +6.8R		172 +5.9R		170.9 +5.1R		170 +4.5R		169.4 +4.1R		168.9 +3.7R		168.5 +3.4R		168.2 +3.1R		167.9 +2.9R	
		6"	q_a	q_f	647	1042	618	996	598	963	583	939	572	921	563	906	555	894	549	884	521	833
			G'		156.7 +10.4R		154.1 +9.1R		152.3 +8R		151 +7.2R		149.9 +6.5R		149.1 +5.9R		148.5 +5.4R		147.9 +5R		147.4 +4.7R	
		8"	q_a	q_f	566	911	550	886	508	818	505	813	478	769	479	771	459	739	461	743	446	718
			G'		144.7 +13.3R		144.1 +11.1R		138.8 +10.5R		139.2 +9R		135.6 +8.6R		136.4 +7.6R		133.6 +7.2R		134.4 +6.5R		132.3 +6.3R	
		12"	q_a	q_f	471	758	432	696	405	652	386	621	371	597	359	578	349	563	342	550	335	539
			G'		128.6 +17.7R		123.8 +15.8R		120.4 +14.3R		117.9 +12.9R		116 +11.8R		114.4 +10.9R		113.2 +10.1R		112.1 +9.4R		111.2 +8.8R	
		18"	q_a	q_f	418	758	388	625	329	530	320	515	313	503	278	447	277	446	276	444	253	407
			G'		118.3 +20.7R		115 +18.1R		104.1 +18.1R		103.6 +15.9R		103.2 +14.2R		96.2 +14.1R		96.7 +12.7R		97 +11.6R		92 +11.5R	
		24"	q_a	q_f	363	584	343	552	287	463	283	455	246	396	248	399	223	359	227	366	208	335
			G'		106.1 +24.6R		104.9 +20.8R		94.1 +20.6R		95 +17.8R		87.4 +17.4R		89 +15.4R		83.1 +15.1R		84.9 +13.6R		80.1 +13.3R	
BS-36 36/7 Support Attachment: #12 SD HWH Screw Side Seam Attachment: #10 SD HWH Screw																						

BS-36 36/7

Support Attachment: #12 SD HWH Screw

Side Seam Attachment: #10 SD HWH Screw



Support Fastener Pattern	Gage	Seam Attach. Spacing	Allowable Shear (q _a) (plf), Factored Shear (q _f) (plf), and Flexibility Factor (G') (kip/in)																			
			Span →	4' - 0"		5' - 0"		6' - 0"		7' - 0"		8' - 0"		9' - 0"		10' - 0"		11' - 0"		12' - 0"		
				q _a	q _f																	
36/9	16 ga	4"	q _a	q _f	1635	2632	1635	2632	1635	2632	1635	2632	1635	2632	1635	2632	1635	2632	1472	2356		
			G'	319.8 +20.3R		314.7 +17.7R		311.1 +15.7R		308.5 +14.1R		306.4 +12.7R		304.8 +11.6R		303.5 +10.7R		302.5 +9.9R		301.6 +9.2R		
		6"	q _a	q _f	1632	2627	1573	2533	1532	2466	1501	2416	1477	2377	1457	2346	1442	2321	1429	2300	1418	2282
			G'	286.4 +28.7R		278.9 +25.5R		273.6 +22.8R		269.6 +20.6R		266.5 +18.8R		264.1 +17.2R		262.1 +15.9R		260.5 +14.8R		259.1 +13.8R		
		8"	q _a	q _f	1455	2342	1424	2292	1330	2141	1324	2132	1261	2031	1264	2036	1218	1961	1225	1972	1189	1914
			G'	264 +35R		259.9 +30R		247.9 +28.3R		247.1 +24.9R		239 +23.6R		239.4 +21.2R		233.3 +20.2R		234.2 +18.4R		229.4 +17.6R		
		12"	q _a	q _f	1235	1988	1145	1843	1081	1741	1034	1665	998	1607	969	1561	946	1523	927	1492	911	1466
			G'	235.9 +43.6R		223.8 +39.6R		215 +36.1R		208.5 +33.1R		203.3 +30.5R		199.2 +28.3R		195.9 +26.3R		193.1 +24.6R		190.7 +23.1R		
		18"	q _a	q _f	1106	1988	1036	1668	888	1430	865	1393	848	1365	763	1229	759	1222	756	1217	698	1124
			G'	219 +49.1R		209 +43.8R		187.5 +43.3R		184 +38.8R		181.3 +35.2R		168.1 +34.4R		167.5 +31.5R		167 +29R		157.6 +28.3R		
		24"	q _a	q _f	966	1555	919	1480	783	1261	775	1247	686	1104	690	1111	619	997	629	1013	575	926
			G'	199.5 +55.8R		192.4 +48.8R		171.6 +47.6R		170.1 +42.2R		155.6 +41R		156.2 +36.9R		145.2 +35.8R		146.8 +32.6R		138 +31.7R		
	18 ga	4"	q _a	q _f	1571	2530	1571	2530	1548	2492	1521	2449	1500	2415	1484	2388	1470	2367	1251	2002	1051	1682
			G'	265.1 +15.5R		261.2 +13.6R		258.4 +12.1R		256.4 +10.8R		254.8 +9.8R		253.6 +9R		252.6 +8.2R		251.7 +7.6R		251 +7.1R		
		6"	q _a	q _f	1393	2243	1323	2130	1273	2049	1235	1989	1206	1942	1184	1905	1165	1875	1149	1850	1051	1682
			G'	239.3 +22.2R		233.4 +19.8R		229.2 +17.8R		226.1 +16.1R		223.7 +14.7R		221.8 +13.5R		220.2 +12.5R		218.9 +11.6R		217.8 +10.9R		
		8"	q _a	q _f	1239	1995	1192	1919	1099	1769	1083	1743	1022	1645	1018	1638	974	1568	975	1569	941	1515
			G'	221.7 +27.3R		218.5 +23.5R		208.9 +22.3R		208.3 +19.7R		201.8 +18.7R		202.1 +16.8R		197.3 +16R		198 +14.6R		194.2 +14R		
		12"	q _a	q _f	1060	1707	965	1554	898	1446	849	1367	811	1306	781	1258	757	1219	737	1186	720	1159
			G'	199.4 +34.4R		189.7 +31.5R		182.7 +28.8R		177.4 +26.5R		173.2 +24.5R		169.9 +22.8R		167.1 +21.3R		164.8 +19.9R		162.9 +18.7R		
		18"	q _a	q _f	960	1707	881	1418	750	1208	719	1158	696	1121	618	995	607	977	600	965	550	885
			G'	185.9 +39R		177.8 +35R		160.4 +34.9R		157.5 +31.4R		155.3 +28.5R		144.4 +28.1R		143.9 +25.7R		143.4 +23.7R		135.7 +23.3R		
		24"	q _a	q _f	854	1375	792	1276	671	1081	648	1044	563	907	558	898	499	803	501	807	460	740
			G'	170.2 +44.6R		164.4 +39.2R		147.3 +38.7R		146 +34.4R		134 +33.6R		134.6 +30.3R		125.4 +29.5R		126.7 +26.9R		119.4 +26.3R		
	20 ga	4"	q _a	q _f	1164	1874	1121	1804	1090	1754	1066	1717	1048	1688	1034	1665	982	1570	811	1298	682	1091
			G'	207.8 +10.9R		205 +9.6R		203 +8.5R		201.6 +7.7R		200.5 +7R		199.6 +6.4R		198.8 +5.9R		198.2 +5.4R		197.7 +5.1R		
		6"	q _a	q _f	989	1592	931	1499	890	1433	859	1383	836	1345	817	1315	802	1291	789	1270	682	1091
			G'	189.3 +15.9R		185.1 +14.2R		182 +12.8R		179.7 +11.7R		178 +10.7R		176.6 +9.8R		175.4 +9.1R		174.5 +8.5R		173.7 +7.9R		
		8"	q _a	q _f	881	1418	839	1351	768	1237	753	1212	707	1139	702	1129	669	1077	668	1075	643	1036
			G'	176.6 +19.7R		174.2 +17.1R		167.2 +16.3R		166.7 +14.4R		161.9 +13.8R		162.1 +12.4R		158.5 +11.9R		159.1 +10.8R		156.2 +10.4R		
		12"	q _a	q _f	758	1221	684	1101	632	1018	594	956	564	909	541	871	522	841	507	816	494	795
			G'	160.2 +25.2R		152.9 +23.3R		147.6 +21.4R		143.6 +19.8R		140.4 +18.4R		137.9 +17.1R		135.8 +16R		134.1 +15.1R		132.6 +14.2R		
		18"	q _a	q _f	691	1221	628	1010	533	858	503	811	481	775	425	684	417	672	411	662	377	607
			G'	150.1 +28.8R		144 +26.1R		130.7 +26.3R		128.5 +23.8R		126.8 +21.7R		118.4 +21.5R		118 +19.7R		117.6 +18.2R		111.6 +18R		
		24"	q _a	q _f	621	999	569	916	474	764	453	730	393	633	386	621	347	559	347	559	318	513
			G'	138.2 +33.3R		133.8 +29.4R		120.7 +29.4R		119.7 +26.2R		110.3 +25.9R		110.7 +23.3R		103.6 +22.9R		104.6 +20.9R		98.8 +20.5R		
	22 ga	4"	q _a	q _f	935	1506	896	1443	868	1398	847	1364	831	1338	818	1318	750	1199	620	991	521	833
			G'	177.5 +8.7R		175.2 +7.7R		173.6 +6.8R		172.5 +6.1R		171.6 +5.6R		170.9 +5.1R		170.3 +4.7R		169.8 +4.4R		169.4 +4.1R		
		6"	q _a	q _f	793	1277	743	1196	707	1139	681	1096	660	1063	644	1036	631	1015	620	991	521	833
			G'	162.6 +12.8R		159.2 +11.5R		156.7 +10.4R		154.8 +9.4R		153.4 +8.7R		152.3 +8R		151.3 +7.4R		150.6 +6.9R		149.9 +6.5R		
		8"	q _a	q _f	708	1140	670	1079	611	984	597	960	559	900	553	890	526	848	524	844	504	812
			G'	152.3 +16R		150.3 +13.8R		144.6 +13.3R		144.2 +11.7R		140.3 +11.3R		140.4 +10.1R		137.5 +9.7R		137.9 +8.9R		135.6 +8.5R		
		12"	q _a	q _f	612	986	549	885	505	814	473	761	446	719	426	685	410	660	397	639	386	622
			G'	138.9 +20.6R		132.9 +19.1R		128.5 +17.7R		125.1 +16.4R		122.5 +15.2R		120.4 +14.2R		118.6 +13.3R		117.2 +12.5R		115.9 +11.8R		
		18"	q _a	q _f	561	986	506	814	425	684	399	642	380	611	337	542	330	531	324	522	297	478
			G'	130.5 +23.6R		125.5 +21.5R		114.4 +21.9R		112.5 +19.8R		111.1 +18.1R		104 +18R		103.6 +16.5R		103.3 +15.3R		98.2 +15.2R		
		24"	q _a	q _f	506	815	461	742	380	612	361	581	313	503	307	494	276	445	275	443	252	406
			G'	120.7 +27.4R		117 +24.4R		105.9 +24.6R		105.1 +21.9R		97.2 +21.8R		97.5 +19.6R		91.4 +19.4R		92.3 +17.7R		87.3 +17.4R		
BS-36 36/9 Support Attachment: #12 SD HWH Screw Side Seam Attachment: #10 SD HWH Screw																						

BS-36 36/9

Support Attachment: #12 SD HWH Screw

Side Seam Attachment: #10 SD HWH Screw

2.8 BN-36

No. 12 Self-Drilling Screws to Supports with

No. 12 Screws Side Seam Attachment

Diaphragm Shear in pounds per linear foot (plf)



Support Fastener Pattern	Gage	Seam Attach. Spacing	Allowable Shear (q _a) (plf), Factored Shear (q _f) (plf), and Flexibility Factor (G') (kip/in)																			
			Span →		4' - 0"		5' - 0"		6' - 0"		7' - 0"		8' - 0"		9' - 0"		10' - 0"		11' - 0"		12' - 0"	
			q _a	q _f	q _a	q _f	q _a	q _f	q _a	q _f	q _a	q _f	q _a	q _f	q _a	q _f	q _a	q _f	q _a	q _f	q _a	q _f
36/4	16 ga	4"	q _a	q _f	817	1316	817	1316	817	1316	817	1316	817	1316	817	1316	817	1316	817	1316	817	1316
			G'	304.8 +11.6R	302.2 +9.7R	300.4 +8.3R	299.1 +7.3R	298.2 +6.5R	297.4 +5.8R	296.8 +5.3R	296.3 +4.9R	295.9 +4.5R	295.4 +4.1R	294.9 +3.7R	294.4 +3.3R	293.9 +2.9R	293.4 +2.5R	292.9 +2.1R	292.4 +1.7R			
		6"	q _a	q _f	817	1316	817	1316	817	1316	817	1316	817	1316	817	1316	817	1316	817	1316	817	1316
			G'	264.1 +17.2R	260.1 +14.5R	257.4 +12.6R	255.4 +11R	253.9 +9.9R	252.7 +8.9R	251.8 +8.1R	251 +7.5R	250.3 +6.9R	249.6 +6.3R	248.9 +5.7R	248.2 +5.1R	247.5 +4.5R	246.8 +3.9R	246.1 +3.3R	245.4 +2.7R			
		8"	q _a	q _f	817	1316	817	1316	817	1316	817	1316	817	1316	817	1316	817	1316	817	1316	817	1316
			G'	235.8 +21.7R	237.2 +17.5R	227.2 +16R	229.5 +13.6R	222.7 +12.6R	225.1 +11.1R	219.9 +10.4R	222.2 +9.4R	218.1 +8.9R	214.1 +8.4R	210.1 +7.9R	206.1 +7.4R	202.1 +6.9R	198.1 +6.4R	194.1 +5.9R	190.1 +5.4R			
		12"	q _a	q _f	773	1245	752	1211	737	1187	726	1168	717	1154	710	1143	704	1134	700	1126	696	1120
			G'	199.2 +28.2R	192.4 +24.2R	187.7 +21.1R	184.3 +18.7R	181.7 +16.8R	179.6 +15.2R	178 +13.9R	176.6 +12.9R	175.4 +11.9R	174.2 +10.9R	173 +9.9R	171.8 +8.9R	170.6 +7.9R	169.4 +6.9R	168.2 +5.9R	167 +4.9R			
		18"	q _a	q _f	692	1245	684	1101	607	978	614	988	618	995	569	916	578	930	584	941	548	883
			G'	176.5 +32.6R	173.6 +27.2R	153.8 +26R	155 +22.4R	155.9 +19.7R	143.7 +18.9R	145.6 +17R	147.2 +15.4R	138.5 +14.9R	134.5 +13.4R	130.5 +11.9R	126.5 +10.4R	122.5 +8.9R	118.5 +7.4R	114.5 +5.9R	110.5 +4.4R			
		24"	q _a	q _f	585	943	599	964	524	843	544	875	490	789	510	821	469	755	488	786	455	732
			G'	149.8 +38.2R	152.2 +30.9R	133.8 +29.1R	138.1 +24.7R	125.3 +23.4R	129.8 +20.5R	120 +19.6R	124.3 +17.5R	116.4 +16.8R	112.4 +15.3R	108.4 +13.8R	104.4 +12.3R	100.4 +10.8R	96.4 +9.3R	92.4 +7.8R	88.4 +6.3R			
	18 ga	4"	q _a	q _f	786	1265	786	1265	786	1265	786	1265	786	1265	786	1265	786	1265	786	1265	786	1265
			G'	253.6 +8.9R	251.5 +7.5R	250.1 +6.4R	249.1 +5.6R	248.4 +5R	247.8 +4.5R	247.3 +4.1R	246.9 +3.8R	246.6 +3.5R	246.3 +3.2R	246 +2.9R	245.7 +2.6R	245.4 +2.3R	245.1 +2R	244.8 +1.7R	244.5 +1.4R			
		6"	q _a	q _f	786	1265	786	1265	786	1265	786	1265	786	1265	786	1265	786	1265	786	1265	786	1265
			G'	221.7 +13.5R	218.6 +11.4R	216.4 +9.9R	214.9 +8.7R	213.7 +7.8R	212.7 +7R	212 +6.4R	211.4 +5.9R	210.8 +5.5R	210.2 +5.1R	209.6 +4.7R	209 +4.3R	208.4 +3.9R	207.8 +3.5R	207.2 +3.1R	206.6 +2.7R			
		8"	q _a	q _f	773	1244	773	1245	742	1195	747	1203	725	1167	731	1177	714	1150	720	1160	707	1138
			G'	199.3 +17.2R	200.4 +13.9R	192.4 +12.8R	194.3 +10.9R	188.8 +10.1R	190.7 +8.9R	186.6 +8.4R	188.4 +7.5R	185.1 +7.1R	181.1 +6.6R	177.1 +6.1R	173.1 +5.6R	169.1 +5.1R	165.1 +4.6R	161.1 +4.1R	157.1 +3.6R			
		12"	q _a	q _f	663	1067	636	1024	617	993	602	970	591	952	582	938	575	926	569	916	564	908
			G'	169.8 +22.8R	164.3 +19.6R	160.5 +17.1R	157.7 +15.2R	155.5 +13.7R	153.8 +12.5R	152.5 +11.4R	151.3 +10.5R	150.4 +9.8R	149.5 +9.1R	148.6 +8.4R	147.7 +7.7R	146.8 +7R	145.9 +6.3R	145 +5.6R	144.1 +4.9R			
		18"	q _a	q _f	589	1067	573	923	501	807	502	808	502	808	457	737	462	744	466	751	434	700
			G'	151.3 +26.6R	148.9 +22.2R	132.6 +21.4R	133.5 +18.5R	134.3 +16.2R	124.1 +15.7R	125.7 +14.1R	127 +12.7R	119.7 +12.4R	115.7 +10.9R	111.7 +9.4R	107.7 +7.9R	103.7 +6.4R	99.7 +4.9R	95.7 +3.4R	91.7 +1.9R			
		24"	q _a	q _f	499	804	500	805	432	696	443	714	396	638	409	659	374	602	387	623	358	577
			G'	129.2 +31.4R	131.2 +25.5R	115.9 +24.2R	119.4 +20.5R	108.7 +19.6R	112.5 +17.1R	104.2 +16.4R	107.8 +14.6R	101.2 +14.1R	95.2 +12.6R	89.2 +11.1R	83.2 +9.6R	77.2 +8.1R	71.2 +6.6R	65.2 +5.1R	59.2 +3.6R			
	20 ga	4"	q _a	q _f	592	953	592	953	592	953	592	953	592	953	592	953	592	953	592	953	592	953
			G'	199.6 +6.4R	198.1 +5.3R	197.1 +4.6R	196.4 +4R	195.9 +3.6R	195.4 +3.2R	195.1 +2.9R	194.8 +2.7R	194.6 +2.5R	194.4 +2.3R	194.2 +2.1R	194 +1.9R	193.8 +1.7R	193.6 +1.5R	193.4 +1.3R	193.2 +1.1R			
		6"	q _a	q _f	592	953	592	953	591	951	585	941	580	934	576	928	573	923	571	919	569	916
			G'	176.6 +9.8R	174.3 +8.3R	172.7 +7.2R	171.5 +6.4R	170.6 +5.7R	169.9 +5.2R	169.4 +4.7R	168.9 +4.3R	168.5 +4R	168.1 +3.7R	167.7 +3.4R	167.3 +3.1R	166.9 +2.8R	166.5 +2.5R	166.1 +2.2R	165.7 +1.9R			
		8"	q _a	q _f	552	889	551	886	525	845	528	850	510	821	514	827	500	805	505	812	494	795
			G'	160 +12.7R	160.8 +10.3R	154.9 +9.5R	156.3 +8.1R	152.2 +7.6R	153.6 +6.6R	150.5 +6.3R	151.9 +5.6R	149.4 +5.4R	146.9 +5.1R	144.4 +4.8R	141.9 +4.5R	139.4 +4.2R	136.9 +3.9R	134.4 +3.6R	131.9 +3.3R			
		12"	q _a	q _f	470	757	448	721	432	695	420	676	410	661	403	649	397	639	392	631	388	624
			G'	137.9 +17.1R	133.6 +14.8R	130.7 +13R	128.6 +11.6R	126.9 +10.5R	125.6 +9.5R	124.6 +8.7R	123.7 +8.1R	123 +7.5R	122.3 +6.9R	121.6 +6.3R	120.9 +5.7R	120.2 +5.1R	119.5 +4.5R	118.8 +3.9R	118.1 +3.3R			
		18"	q _a	q _f	417	757	403	649	350	563	348	561	347	559	315	507	318	511	319	514	297	478
			G'	123.7 +20.2R	121.8 +17R	109.1 +16.6R	109.9 +14.3R	110.5 +12.6R	102.5 +12.3R	103.8 +11R	104.8 +9.9R	99 +9.7R	93.2 +9.4R	87.4 +9.1R	81.6 +8.8R	75.8 +8.5R	70 +8.2R	64.2 +7.9R	58.4 +7.6R			
		24"	q _a	q _f	355	572	352	567	303	488	308	496	275	442	282	454	257	414	265	426	245	394
			G'	106.6 +24.3R	108.1 +19.7R	96 +18.9R	98.8 +16R	90.3 +15.4R	93.3 +13.5R	86.8 +13R	89.6 +11.6R	84.3 +11.2R	78.5 +10.9R	72.7 +10.6R	66.9 +10.3R	61.1 +10R	55.3 +9.7R	49.5 +9.4R	43.7 +9.1R			
	22 ga	4"	q _a	q _f	493	793	493	793	493	793	493	793	493	793	493	793	493	793	493	793	493	793
			G'	170.8 +5.1R	169.7 +4.3R	168.9 +3.7R	168.3 +3.2R	167.9 +2.9R	167.5 +2.6R	167.3 +2.4R	167 +2.2R	166.8 +2R	166.5 +1.8R	166.2 +1.6R	165.9 +1.4R	165.6 +1.2R	165.3 +1R	165 +0.8R	164.7 +0.6R			
		6"	q _a	q _f	493	793	482	777	475	765	469	756	465	749	462	743	459	738	456	735	454	731
			G'	152.3 +8R	150.4 +6.8R	149.1 +5.9R	148.1 +5.2R	147.4 +4.7R	146.9 +4.2R	146.4 +3.9R	146 +3.5R	145.7 +3.3R	145.4 +3.1R	145.1 +2.9R	144.8 +2.7R	144.5 +2.5R	144.2 +2.3R	143.9 +2.1R	143.6 +1.9R			
		8"	q _a	q _f	444	715	442	711	419	675	421	678	406	653	409	658	397	639	400	644	391	629
			G'	138.7 +10.4R	139.4 +8.4R	134.5 +7.8R	135.6 +6.6R	132.2 +6.2R	133.4 +5.5R	130.8 +5.2R	132 +4.6R	129.9 +4.4R	129.7 +4.2R	129.5 +4R	129.3 +3.8R	129.1 +3.6R	128.9 +3.4R	128.7 +3.2R	128.5 +3R			
		12"	q _a	q _f	377	607	357	575	343	552	332	535	324	522	318	512	313	503	308	496	305	490
			G'	120.3 +14.2R	116.8 +12.3R	114.4 +10.9R	112.5 +9.7R	111.2 +8.8R	110.1 +8R	109.2 +7.3R	108.4 +6.8R	107.8 +6.3R	107.2 +5.8R	106.6 +5.3R	106 +4.8R	105.4 +4.3R	104.8 +3.8R	104.2 +3.3R	103.6 +2.8R			
		18"	q _a	q _f	335	607	321	517	278	448	276	444	274	441	248	400	250	402	251	404	232	374
			G'	108.5 +16.9R	106.9 +14.2R	96.2 +14R	96.8 +12.1R	97.3 +10.6R	90.5 +10.4R	91.6 +9.3R	92.4 +8.4R	87.5 +8.3R	82.6 +8.2R	77.7 +8.1R	72.8 +8R	67.9 +7.9R	63 +7.8R	58.1 +7.7R	53.2 +7.6R			
24"		q _a	q _f	286	461	281	453	241	389	244	393	217	350	222	358	202	326	208	335	192	310	
		G'	84 +20.5R	95.3 +16.6R	84.9 +16.1R	87.4 +13.6R	80 +13.2R	82.6 +11.5R	77 +11.2R	79.4 +9.9R	74.9 +9.7R	69.4 +9.6R	63.9 +9.5R	58.4 +9.4R	52.9 +9.3R	47.4 +9.2R	41.9 +9.1R	36.4 +9R				
BS-36 36/4 Support Attachment: #12 SD HWH Screw Side Seam Attachment: #12 SD HWH Screw																						

No. 12 Self-Drilling Screws to Supports with
No. 12 Screws Side Seam Attachment
Diaphragm Shear in pounds per linear foot (plf)



Support Fastener Pattern	Gage	Seam Attach. Spacing	Allowable Shear (q _a) (plf), Factored Shear (q _f) (plf), and Flexibility Factor (G') (kip/in)																			
			Span →		4' - 0"		5' - 0"		6' - 0"		7' - 0"		8' - 0"		9' - 0"		10' - 0"		11' - 0"		12' - 0"	
			q _a	q _f																		
36/7/4	16 ga	4"	q _a	q _f	1571	2530	1558	2508	1549	2494	1542	2483	1537	2475	1533	2468	1530	2463	1527	2458	1472	2356
			G'	305.3 +21.6R		302.6 +18.3R		300.7 +15.9R		299.3 +14R		298.3 +12.5R		297.5 +11.3R		296.9 +10.3R		296.4 +9.5R		295.9 +8.8R		
		6"	q _a	q _f	1368	2203	1344	2164	1327	2137	1314	2116	1305	2101	1297	2089	1291	2079	1286	2070	1282	2063
			G'	265 +31.6R		260.8 +27.1R		257.9 +23.7R		255.8 +21R		254.2 +18.9R		253 +17.1R		252 +15.7R		251.1 +14.5R		250.5 +13.4R		
		8"	q _a	q _f	1208	1945	1213	1953	1151	1854	1164	1873	1121	1805	1134	1826	1102	1775	1115	1795	1089	1754
			G'	237.1 +39.4R		238.1 +32.5R		227.9 +29.9R		230.1 +25.7R		223.1 +24.1R		225.4 +21.3R		220.2 +20.1R		222.4 +18.1R		218.3 +17.2R		
		12"	q _a	q _f	990	1594	945	1521	914	1471	891	1434	873	1406	860	1384	848	1366	839	1351	831	1339
			G'	201.1 +50.5R		193.8 +44.1R		188.8 +39.1R		185.1 +35R		182.3 +31.7R		180.2 +29R		178.4 +26.6R		177 +24.7R		175.8 +22.9R		
		18"	q _a	q _f	855	1594	833	1342	716	1152	720	1158	722	1163	652	1050	661	1065	669	1077	619	997
			G'	178.8 +58R		175.2 +49.4R		155.3 +47.7R		156.1 +41.6R		156.7 +37R		144.5 +35.7R		146.2 +32.2R		147.7 +29.3R		138.9 +28.5R		
		24"	q _a	q _f	702	1130	710	1143	605	974	625	1007	554	892	576	927	523	842	544	876	502	808
			G'	152.8 +67.2R		154.2 +55.8R		135.5 +53.1R		139.3 +45.7R		126.4 +43.7R		130.6 +38.5R		120.7 +37R		124.9 +33.3R		117 +32.1R		
	18 ga	4"	q _a	q _f	1371	2208	1351	2175	1337	2153	1327	2136	1319	2123	1312	2113	1307	2105	1251	2002	1051	1682
			G'	254 +16.6R		251.8 +14.1R		250.4 +12.3R		249.3 +10.8R		248.5 +9.7R		247.9 +8.8R		247.4 +8R		247 +7.4R		246.7 +6.8R		
		6"	q _a	q _f	1157	1862	1124	1810	1102	1773	1085	1747	1072	1726	1062	1710	1054	1697	1047	1686	1041	1677
			G'	222.5 +24.7R		219.1 +21.2R		216.8 +18.6R		215.2 +16.5R		213.9 +14.9R		212.9 +13.5R		212.2 +12.4R		211.5 +11.4R		211 +10.6R		
		8"	q _a	q _f	1005	1619	1000	1609	937	1508	942	1517	900	1450	909	1464	878	1413	887	1428	862	1388
			G'	200.4 +31.1R		201.1 +25.7R		193 +23.8R		194.7 +20.5R		189.2 +19.2R		191 +17R		186.8 +16.1R		188.6 +14.5R		185.2 +13.8R		
		12"	q _a	q _f	818	1317	769	1237	734	1182	709	1142	690	1112	675	1087	663	1068	653	1052	645	1038
			G'	171.4 +40.5R		165.5 +35.5R		161.4 +31.6R		158.4 +28.4R		156.1 +25.7R		154.3 +23.5R		152.8 +21.7R		151.7 +20.1R		150.7 +18.7R		
		18"	q _a	q _f	710	1317	679	1094	578	931	574	925	571	920	513	826	517	832	520	837	480	772
			G'	153.3 +46.8R		150.3 +40.1R		133.8 +39R		134.5 +34.1R		135 +30.3R		124.8 +29.5R		126.3 +26.6R		127.5 +24.2R		120.1 +23.6R		
		24"	q _a	q _f	592	954	584	940	494	796	502	809	442	712	455	733	408	657	423	681	388	624
			G'	131.8 +54.8R		133 +45.6R		117.3 +43.8R		120.5 +37.7R		109.7 +36.3R		113.2 +32R		104.9 +30.9R		108.4 +27.7R		101.7 +26.8R		
	20 ga	4"	q _a	q _f	976	1571	957	1542	945	1521	935	1505	928	1494	922	1484	917	1477	811	1298	682	1091
			G'	199.9 +11.8R		198.3 +10R		197.3 +8.7R		196.5 +7.7R		196 +6.9R		195.5 +6.3R		195.1 +5.7R		194.9 +5.3R		194.6 +4.9R		
		6"	q _a	q _f	812	1308	785	1263	766	1233	751	1210	741	1192	732	1179	725	1167	719	1158	682	1091
			G'	177.1 +17.9R		174.7 +15.4R		173 +13.6R		171.8 +12.1R		170.8 +10.9R		170.1 +9.9R		169.5 +9.1R		169 +8.4R		168.6 +7.8R		
		8"	q _a	q _f	703	1132	695	1118	647	1042	649	1044	617	994	622	1001	599	964	604	973	586	944
			G'	160.9 +22.8R		161.4 +18.9R		155.3 +17.6R		156.6 +15.1R		152.5 +14.3R		153.8 +12.6R		150.7 +12R		152 +10.8R		149.5 +10.3R		
		12"	q _a	q _f	573	922	534	859	507	816	487	784	472	760	460	741	451	726	443	713	436	703
			G'	139.2 +30.2R		134.6 +26.7R		131.4 +23.8R		129.1 +21.5R		127.4 +19.5R		126 +17.9R		124.9 +16.5R		124 +15.4R		123.2 +14.3R		
		18"	q _a	q _f	499	922	473	762	402	646	396	638	392	631	350	564	352	567	353	569	325	523
			G'	125.3 +35.3R		123 +30.4R		110.2 +30R		110.7 +26.3R		111.1 +23.4R		103.1 +22.9R		104.2 +20.7R		105.2 +18.8R		99.4 +18.5R		
		24"	q _a	q _f	421	678	409	659	344	554	347	558	302	486	308	497	277	447	286	461	263	423
			G'	108.7 +41.8R		109.6 +34.9R		97.3 +34R		99.8 +29.3R		91.1 +28.4R		93.9 +25R		87.3 +24.3R		90.1 +21.8R		84.7 +21.2R		
	22 ga	4"	q _a	q _f	782	1260	765	1232	753	1213	744	1198	738	1188	732	1179	728	1172	620	991	521	833
			G'	171.1 +9.4R		169.9 +8R		169 +7R		168.4 +6.2R		168 +5.6R		167.6 +5R		167.3 +4.6R		167.1 +4.2R		166.9 +3.9R		
		6"	q _a	q _f	647	1041	622	1002	605	974	593	954	583	939	575	926	569	916	564	908	521	833
			G'	152.7 +14.5R		150.7 +12.5R		149.3 +11R		148.3 +9.8R		147.6 +8.9R		147 +8.1R		146.5 +7.4R		146.1 +6.8R		145.8 +6.4R		
		8"	q _a	q _f	559	900	550	885	510	821	510	821	484	779	487	784	468	754	472	760	457	736
			G'	139.4 +18.6R		139.9 +15.4R		134.9 +14.4R		135.9 +12.4R		132.5 +11.7R		133.6 +10.4R		131 +9.9R		132.1 +8.9R		130 +8.5R		
		12"	q _a	q _f	456	735	423	681	400	644	383	617	370	596	360	580	352	567	345	556	340	547
			G'	121.5 +24.9R		117.6 +22.1R		115 +19.8R		113.1 +17.9R		111.6 +16.3R		110.4 +15R		109.5 +13.8R		108.7 +12.9R		108 +12R		
		18"	q _a	q _f	399	735	376	605	318	513	313	503	308	496	273	440	275	442	275	444	253	407
			G'	109.9 +29.3R		107.9 +25.3R		97.1 +25.2R		97.5 +22.1R		97.8 +19.7R		91 +19.4R		92 +17.5R		92.8 +15.9R		87.8 +15.7R		
		24"	q _a	q _f	339	545	327	526	272	438	272	438	237	381	242	389	217	350	224	360	205	330
			G'	95.9 +35R		96.6 +29.3R		86.1 +28.8R		88.2 +24.8R		80.8 +24.2R		83.2 +21.3R		77.5 +20.8R		79.9 +18.6R		75.3 +18.2R		
BS-36 36/7/4 Support Attachment: #12 SD HWH Screw Side Seam Attachment: #12 SD HWH Screw																						

2.8 BN-36

No. 12 Self-Drilling Screws to Supports with

No. 12 Screws Side Seam Attachment

Diaphragm Shear in pounds per linear foot (plf)



Support Fastener Pattern	Gage	Seam Attach. Spacing	Allowable Shear (q _a) (plf), Factored Shear (q _f) (plf), and Flexibility Factor (G') (kip/in)																			
			Span →	4' - 0"		5' - 0"		6' - 0"		7' - 0"		8' - 0"		9' - 0"		10' - 0"		11' - 0"		12' - 0"		
			q _a	q _f																		
36/7	16 ga	4"	q _a	q _f	1582	2547	1567	2523	1557	2506	1549	2494	1543	2485	1539	2477	1535	2471	1532	2466	1472	2356
			G'	311.2 +15.7R		307.5 +13.4R		304.9 +11.6R		303 +10.3R		301.6 +9.2R		300.5 +8.4R		299.6 +7.6R		298.8 +7R		298.2 +6.5R		
		6"	q _a	q _f	1388	2235	1361	2191	1342	2160	1327	2137	1316	2119	1308	2105	1301	2094	1295	2084	1290	2076
			G'	273.7 +22.8R		268.1 +19.7R		264.2 +17.3R		261.3 +15.4R		259.2 +13.9R		257.5 +12.6R		256.1 +11.6R		254.9 +10.7R		254 +9.9R		
		8"	q _a	q _f	1236	1989	1235	1988	1172	1886	1181	1901	1137	1830	1148	1849	1115	1796	1127	1814	1100	1772
			G'	248 +28.4R		246.9 +23.5R		236 +21.8R		236.9 +18.8R		229.5 +17.6R		231.1 +15.6R		225.5 +14.8R		227.2 +13.3R		222.8 +12.7R		
		12"	q _a	q _f	1027	1653	976	1572	941	1514	914	1472	894	1440	879	1414	866	1394	855	1377	846	1362
			G'	215.2 +36.2R		205.9 +31.8R		199.4 +28.3R		194.5 +25.5R		190.8 +23.1R		187.9 +21.2R		185.5 +19.5R		183.5 +18.1R		181.8 +16.9R		
		18"	q _a	q _f	897	1653	868	1398	747	1203	747	1202	746	1202	674	1086	681	1097	687	1106	636	1025
			G'	195.1 +41.4R		188.9 +35.6R		168.3 +34.5R		167.3 +30.2R		166.6 +26.9R		154 +26.1R		154.8 +23.6R		155.5 +21.5R		146.4 +20.9R		
		24"	q _a	q _f	750	1207	748	1205	639	1028	654	1053	580	934	599	965	544	877	563	907	520	837
			G'	171.8 +47.7R		169.7 +40R		150.1 +38.3R		151.7 +33.1R		138.1 +31.7R		140.9 +28.1R		130.6 +27R		133.7 +24.4R		125.4 +23.5R		
	18 ga	4"	q _a	q _f	1388	2235	1365	2198	1349	2172	1337	2153	1328	2139	1321	2127	1315	2117	1251	2002	1051	1682
			G'	258.5 +12.1R		255.6 +10.3R		253.6 +9R		252.2 +8R		251.1 +7.1R		250.2 +6.5R		249.5 +5.9R		248.9 +5.4R		248.4 +5R		
		6"	q _a	q _f	1183	1905	1147	1846	1121	1805	1102	1774	1087	1751	1076	1732	1067	1717	1059	1705	1051	1682
			G'	229.3 +17.8R		224.9 +15.4R		221.8 +13.6R		219.6 +12.1R		217.9 +10.9R		216.5 +9.9R		215.4 +9.1R		214.5 +8.4R		213.7 +7.8R		
		8"	q _a	q _f	1039	1672	1027	1653	961	1547	963	1551	919	1480	926	1491	893	1438	901	1451	876	1410
			G'	209 +22.4R		208.1 +18.6R		199.4 +17.3R		200.2 +14.9R		194.3 +14.1R		195.5 +12.5R		191.1 +11.8R		192.4 +10.7R		188.9 +10.2R		
		12"	q _a	q _f	859	1383	803	1293	764	1230	735	1184	713	1149	696	1121	682	1098	671	1080	661	1064
			G'	182.8 +28.9R		175.3 +25.6R		170 +22.8R		166 +20.6R		163 +18.8R		160.6 +17.2R		158.6 +15.9R		157 +14.8R		155.6 +13.8R		
		18"	q _a	q _f	755	1383	716	1153	611	984	603	970	596	960	536	863	537	865	538	867	497	800
			G'	166.5 +33.3R		161.4 +28.8R		144.5 +28.1R		143.7 +24.7R		143.2 +22.1R		132.7 +21.5R		133.4 +19.4R		133.9 +17.7R		126.4 +17.3R		
		24"	q _a	q _f	641	1032	623	1003	529	851	532	856	470	757	479	771	432	695	444	715	407	655
			G'	147.5 +38.8R		145.7 +32.6R		129.5 +31.5R		130.8 +27.3R		119.5 +26.3R		121.8 +23.3R		113.2 +22.5R		115.8 +20.3R		108.8 +19.7R		
	20 ga	4"	q _a	q _f	991	1596	970	1562	956	1539	945	1521	937	1508	930	1497	925	1489	811	1298	682	1091
			G'	203.1 +8.6R		201 +7.3R		199.6 +6.4R		198.6 +5.7R		197.8 +5.1R		197.1 +4.6R		196.6 +4.2R		196.2 +3.9R		195.9 +3.6R		
		6"	q _a	q _f	835	1344	804	1294	782	1259	766	1233	754	1213	744	1198	736	1185	729	1174	682	1091
			G'	182.1 +12.9R		178.9 +11.2R		176.6 +9.9R		175 +8.8R		173.7 +8R		172.7 +7.3R		171.9 +6.7R		171.2 +6.2R		170.7 +5.7R		
		8"	q _a	q _f	731	1176	717	1154	667	1074	666	1072	633	1019	636	1024	612	985	616	992	597	961
			G'	167.2 +16.4R		166.6 +13.6R		160.1 +12.8R		160.7 +11R		156.3 +10.4R		157.2 +9.2R		153.9 +8.8R		154.9 +7.9R		152.2 +7.6R		
		12"	q _a	q _f	605	974	561	903	530	853	507	817	490	789	477	767	466	749	456	735	449	723
			G'	147.7 +21.5R		142 +19.1R		138 +17.2R		135 +15.6R		132.6 +14.2R		130.8 +13.1R		129.3 +12.1R		128 +11.3R		127 +10.5R		
		18"	q _a	q _f	534	974	502	808	427	687	418	673	411	662	369	594	368	593	368	592	339	546
			G'	135.4 +25R		131.5 +21.7R		118.5 +21.5R		117.9 +19R		117.4 +16.9R		109.3 +16.6R		109.8 +15.1R		110.2 +13.8R		104.3 +13.5R		
		24"	q _a	q _f	458	738	440	708	372	599	371	597	324	521	328	528	295	475	302	487	277	446
			G'	120.8 +29.5R		119.4 +24.9R		106.7 +24.4R		107.8 +21.1R		98.9 +20.5R		100.7 +18.2R		93.9 +17.7R		95.9 +15.9R		90.4 +15.5R		
	22 ga	4"	q _a	q _f	796	1282	777	1251	764	1229	754	1213	746	1201	740	1191	735	1183	620	991	521	833
			G'	173.7 +6.8R		172 +5.9R		170.9 +5.1R		170 +4.5R		169.4 +4.1R		168.9 +3.7R		168.5 +3.4R		168.2 +3.1R		167.9 +2.9R		
		6"	q _a	q _f	667	1074	639	1029	620	998	606	975	595	957	586	943	579	932	573	922	521	833
			G'	156.7 +10.4R		154.1 +9.1R		152.3 +8R		151 +7.2R		149.9 +6.5R		149.1 +5.9R		148.5 +5.4R		147.9 +5R		147.4 +4.7R		
		8"	q _a	q _f	583	938	569	916	527	849	525	845	498	801	499	804	479	771	482	776	467	751
			G'	144.7 +13.3R		144.1 +11.1R		138.8 +10.5R		139.2 +9R		135.6 +8.6R		136.4 +7.6R		133.6 +7.2R		134.4 +6.5R		132.3 +6.3R		
12"		q _a	q _f	484	779	446	718	420	676	400	645	386	621	374	602	365	587	357	575	350	564	
		G'	128.6 +17.7R		123.8 +15.8R		120.4 +14.3R		117.9 +12.9R		116 +11.8R		114.4 +10.9R		113.2 +10.1R		112.1 +9.4R		111.2 +8.8R			
18"		q _a	q _f	429	779	400	644	340	547	331	533	324	522	290	466	289	465	288	464	265	426	
		G'	118.3 +20.7R		115 +18.1R		104.1 +18.1R		103.6 +15.9R		103.2 +14.2R		96.2 +14.1R		96.7 +12.7R		97 +11.6R		92 +11.5R			
24"		q _a	q _f	370	596	352	567	296	477	293	472	255	410	258	415	232	374	237	381	217	350	
		G'	106.1 +24.6R		104.9 +20.8R		94.1 +20.6R		95 +17.8R		87.4 +17.4R		89 +15.4R		83.1 +15.1R		84.9 +13.6R		80.1 +13.3R			
BS-36 36/7 Support Attachment: #12 SD HWH Screw Side Seam Attachment: #12 SD HWH Screw																						

No. 12 Self-Drilling Screws to Supports with
No. 12 Screws Side Seam Attachment
Diaphragm Shear in pounds per linear foot (plf)



Support Fastener Pattern	Gage	Seam Attach. Spacing	Allowable Shear (q _a) (plf), Factored Shear (q _f) (plf), and Flexibility Factor (G') (kip/in)																			
			Span →		4' - 0"		5' - 0"		6' - 0"		7' - 0"		8' - 0"		9' - 0"		10' - 0"		11' - 0"		12' - 0"	
36/9	16 ga	4"	q _a	q _f	1635	2632	1635	2632	1635	2632	1635	2632	1635	2632	1635	2632	1635	2632	1635	2632	1472	2356
			G'	319.8 +20.3R		314.7 +17.7R		311.1 +15.7R		308.5 +14.1R		306.4 +12.7R		304.8 +11.6R		303.5 +10.7R		302.5 +9.9R		301.6 +9.2R		
		6"	q _a	q _f	1635	2632	1617	2604	1578	2541	1549	2493	1526	2457	1508	2428	1493	2404	1481	2384	1470	2356
			G'	286.4 +28.7R		278.9 +25.5R		273.6 +22.8R		269.6 +20.6R		266.5 +18.8R		264.1 +17.2R		262.1 +15.9R		260.5 +14.8R		259.1 +13.8R		
		8"	q _a	q _f	1493	2404	1466	2360	1374	2212	1370	2206	1308	2106	1312	2113	1266	2039	1274	2051	1238	1993
			G'	264 +35R		259.9 +30R		247.9 +28.3R		247.1 +24.9R		239 +23.6R		239.4 +21.2R		233.3 +20.2R		234.2 +18.4R		229.4 +17.6R		
		12"	q _a	q _f	1267	2039	1179	1898	1117	1799	1071	1725	1036	1668	1008	1623	985	1586	966	1556	950	1530
			G'	235.9 +43.6R		223.8 +39.6R		215 +36.1R		208.5 +33.1R		203.3 +30.5R		199.2 +28.3R		195.9 +26.3R		193.1 +24.6R		190.7 +23.1R		
		18"	q _a	q _f	1133	2039	1066	1716	915	1473	894	1440	879	1415	792	1275	789	1271	787	1267	728	1171
			G'	219 +49.1R		209 +43.8R		187.5 +43.3R		184 +38.8R		181.3 +35.2R		168.1 +34.4R		167.5 +31.5R		167 +29R		157.6 +28.3R		
		24"	q _a	q _f	985	1586	943	1519	804	1295	799	1286	708	1140	715	1150	644	1038	657	1057	600	966
			G'	199.5 +55.8R		192.4 +48.8R		171.6 +47.6R		170.1 +42.2R		155.6 +41R		156.2 +36.9R		145.2 +35.8R		146.8 +32.6R		138 +31.7R		
	18 ga	4"	q _a	q _f	1571	2530	1571	2530	1571	2530	1567	2523	1548	2492	1532	2467	1514	2422	1251	2002	1051	1682
			G'	265.1 +15.5R		261.2 +13.6R		258.4 +12.1R		256.4 +10.8R		254.8 +9.8R		253.6 +9R		252.6 +8.2R		251.7 +7.6R		251 +7.1R		
		6"	q _a	q _f	1430	2302	1363	2194	1315	2116	1279	2059	1251	2014	1229	1979	1211	1950	1196	1926	1051	1682
			G'	239.3 +22.2R		233.4 +19.8R		229.2 +17.8R		226.1 +16.1R		223.7 +14.7R		221.8 +13.5R		220.2 +12.5R		218.9 +11.6R		217.8 +10.9R		
		8"	q _a	q _f	1272	2048	1228	1978	1135	1828	1122	1806	1061	1708	1058	1703	1014	1632	1016	1636	982	1581
			G'	221.7 +27.3R		218.5 +23.5R		208.9 +22.3R		208.3 +19.7R		201.8 +18.7R		202.1 +16.8R		197.3 +16R		198 +14.6R		194.2 +14R		
		12"	q _a	q _f	1085	1747	992	1597	926	1491	878	1413	840	1353	811	1306	787	1267	767	1235	751	1209
			G'	199.4 +34.4R		189.7 +31.5R		182.7 +28.8R		177.4 +26.5R		173.2 +24.5R		169.9 +22.8R		167.1 +21.3R		164.8 +19.9R		162.9 +18.7R		
		18"	q _a	q _f	981	1747	903	1455	770	1240	741	1194	719	1158	642	1033	632	1018	626	1007	574	923
			G'	185.9 +39R		177.8 +35R		160.4 +34.9R		157.5 +31.4R		155.3 +28.5R		144.4 +28.1R		143.9 +25.7R		143.4 +23.7R		135.7 +23.3R		
		24"	q _a	q _f	869	1399	810	1305	688	1107	669	1077	581	936	578	930	517	832	521	839	477	769
			G'	170.2 +44.6R		164.4 +39.2R		147.3 +38.7R		146 +34.4R		134 +33.6R		134.6 +30.3R		125.4 +29.5R		126.7 +26.9R		119.4 +26.3R		
	20 ga	4"	q _a	q _f	1183	1905	1152	1855	1123	1808	1101	1773	1084	1745	1070	1723	982	1570	811	1298	682	1091
			G'	207.8 +10.9R		205 +9.6R		203 +8.5R		201.6 +7.7R		200.5 +7R		199.6 +6.4R		198.8 +5.9R		198.2 +5.4R		197.7 +5.1R		
		6"	q _a	q _f	1015	1634	959	1544	919	1480	890	1433	867	1396	849	1367	834	1343	811	1298	682	1091
			G'	189.3 +15.9R		185.1 +14.2R		182 +12.8R		179.7 +11.7R		178 +10.7R		176.6 +9.8R		175.4 +9.1R		174.5 +8.5R		173.7 +7.9R		
		8"	q _a	q _f	903	1454	864	1392	794	1278	780	1255	734	1182	729	1174	697	1122	696	1121	671	1081
			G'	176.6 +19.7R		174.2 +17.1R		167.2 +16.3R		166.7 +14.4R		161.9 +13.8R		162.1 +12.4R		158.5 +11.9R		159.1 +10.8R		156.2 +10.4R		
		12"	q _a	q _f	775	1248	702	1131	651	1048	613	987	584	940	561	904	543	874	527	849	514	828
			G'	160.2 +25.2R		152.9 +23.3R		147.6 +21.4R		143.6 +19.8R		140.4 +18.4R		137.9 +17.1R		135.8 +16R		134.1 +15.1R		132.6 +14.2R		
		18"	q _a	q _f	705	1248	643	1035	547	880	520	837	499	803	440	709	434	698	428	690	393	632
			G'	150.1 +28.8R		144 +26.1R		130.7 +26.3R		128.5 +23.8R		126.8 +21.7R		118.4 +21.5R		118 +19.7R		117.6 +18.2R		111.6 +18R		
		24"	q _a	q _f	630	1015	581	935	486	783	466	751	405	652	399	642	359	577	360	580	330	531
			G'	138.2 +33.3R		133.8 +29.4R		120.7 +29.4R		119.7 +26.2R		110.3 +25.9R		110.7 +23.3R		103.6 +22.9R		104.6 +20.9R		98.8 +20.5R		
	22 ga	4"	q _a	q _f	959	1545	922	1485	896	1442	876	1410	861	1385	848	1366	750	1199	620	991	521	833
			G'	177.5 +8.7R		175.2 +7.7R		173.6 +6.8R		172.5 +6.1R		171.6 +5.6R		170.9 +5.1R		170.3 +4.7R		169.8 +4.4R		169.4 +4.1R		
		6"	q _a	q _f	814	1311	765	1232	731	1177	705	1135	685	1103	669	1078	656	1057	620	991	521	833
			G'	162.6 +12.8R		159.2 +11.5R		156.7 +10.4R		154.8 +9.4R		153.4 +8.7R		152.3 +8R		151.3 +7.4R		150.6 +6.9R		149.9 +6.5R		
		8"	q _a	q _f	726	1169	690	1111	631	1016	618	994	580	934	575	925	548	882	547	880	521	833
			G'	152.3 +16R		150.3 +13.8R		144.6 +13.3R		144.2 +11.7R		140.3 +11.3R		140.4 +10.1R		137.5 +9.7R		137.9 +8.9R		135.6 +8.5R		
		12"	q _a	q _f	626	1007	563	907	520	837	488	786	463	746	443	714	428	689	415	668	404	650
			G'	138.9 +20.6R		132.9 +19.1R		128.5 +17.7R		125.1 +16.4R		122.5 +15.2R		120.4 +14.2R		118.6 +13.3R		117.2 +12.5R		115.9 +11.8R		
		18"	q _a	q _f	571	1007	518	833	437	703	412	663	393	632	348	561	342	551	337	542	309	497
			G'	130.5 +23.6R		125.5 +21.5R		114.4 +21.9R		112.5 +19.8R		111.1 +18.1R		104 +18R		103.6 +16.5R		103.3 +15.3R		98.2 +15.2R		
		24"	q _a	q _f	514	827	470	756	389	626	371	597	322	518	317	510	285	459	285	459	261	421
			G'	120.7 +27.4R		117 +24.4R		105.9 +24.6R		105.1 +21.9R		97.2 +21.8R		97.5 +19.6R		91.4 +19.4R		92.3 +17.7R		87.3 +17.4R		
BS-36 36/9 Support Attachment: #12 SD HWH Screw Side Seam Attachment: #12 SD HWH Screw																						

BS-36 36/9

Support Attachment: #12 SD HWH Screw

Side Seam Attachment: #12 SD HWH Screw

2.9 BN-36

Hilti X-HSN-24 Fasteners to Supports with No. 10 Screws Side Seam Attachment

Diaphragm Shear in pounds per linear foot (plf)



Support Fastener Pattern	Gage	Seam Attach. Spacing	Allowable Shear (q _a) (plf), Factored Shear (q _f) (plf), and Flexibility Factor (G') (kip/in)																			
			Span →	4' - 0"		5' - 0"		6' - 0"		7' - 0"		8' - 0"		9' - 0"		10' - 0"		11' - 0"		12' - 0"		
				q _a	q _f																	
36/4	16 ga	4"	q _a	q _f	1271	2047	1271	2047	1271	2047	1271	2047	1271	2047	1271	2047	1271	2047	1271	2047		
			G'	305.3 +12R		302.6 +10R		300.8 +8.6R		299.4 +7.5R		298.4 +6.7R		297.6 +6R		297 +5.5R		296.5 +5R		296 +4.6R		
		6"	q _a	q _f	1271	2047	1257	2024	1239	1994	1225	1972	1214	1954	1205	1940	1198	1929	1192	1920	1187	1912
			G'	264.9 +17.7R		260.7 +15R		257.9 +13R		255.9 +11.4R		254.3 +10.2R		253.1 +9.2R		252.1 +8.4R		251.3 +7.7R		250.6 +7.1R		
		8"	q _a	q _f	1158	1865	1153	1856	1096	1764	1101	1772	1061	1709	1069	1721	1039	1673	1048	1687	1024	1649
			G'	236.8 +22.3R		238 +18.1R		227.9 +16.5R		230.1 +14.1R		223.3 +13.1R		225.6 +11.5R		220.4 +10.8R		222.6 +9.7R		218.5 +9.2R		
		12"	q _a	q _f	984	1584	933	1503	898	1445	871	1402	850	1369	834	1342	820	1321	809	1303	800	1288
			G'	200.5 +29R		193.5 +24.9R		188.7 +21.7R		185.1 +19.3R		182.4 +17.3R		180.3 +15.8R		178.6 +14.4R		177.1 +13.3R		175.9 +12.3R		
		18"	q _a	q _f	874	1584	840	1352	728	1172	723	1163	719	1157	651	1048	655	1055	659	1060	611	984
			G'	178 +33.5R		174.9 +28R		155 +26.7R		156 +23.1R		156.8 +20.3R		144.5 +19.6R		146.4 +17.5R		147.9 +15.9R		139.1 +15.4R		
		24"	q _a	q _f	746	1201	735	1183	631	1016	640	1030	569	917	583	939	531	855	546	880	505	813
			G'	151.6 +39.1R		153.6 +31.8R		135.1 +29.9R		139.2 +25.4R		126.3 +24.1R		130.7 +21.1R		120.9 +20.2R		125 +18.1R		117.1 +17.4R		
	18 ga	4"	q _a	q _f	1029	1657	1029	1657	1029	1657	1029	1657	1029	1657	1029	1657	1029	1657	1029	1657	1029	1657
			G'	253.9 +9.2R		251.9 +7.7R		250.4 +6.6R		249.4 +5.8R		248.6 +5.2R		248 +4.7R		247.5 +4.3R		247.1 +3.9R		246.7 +3.6R		
		6"	q _a	q _f	996	1603	971	1563	953	1535	940	1513	930	1497	922	1484	915	1473	909	1464	905	1457
			G'	222.4 +13.9R		219.1 +11.8R		216.9 +10.2R		215.2 +9R		214 +8.1R		213 +7.3R		212.3 +6.6R		211.6 +6.1R		211.1 +5.7R		
		8"	q _a	q _f	893	1438	885	1425	836	1347	838	1350	805	1296	810	1304	785	1264	791	1274	772	1242
			G'	200.1 +17.7R		201 +14.3R		193 +13.2R		194.8 +11.2R		189.2 +10.5R		191.1 +9.2R		186.9 +8.7R		188.7 +7.8R		185.4 +7.4R		
		12"	q _a	q _f	756	1218	712	1147	681	1097	658	1059	640	1031	626	1008	614	989	605	974	597	961
			G'	170.9 +23.3R		165.2 +20.1R		161.2 +17.6R		158.3 +15.7R		156.1 +14.1R		154.4 +12.9R		152.9 +11.8R		151.8 +10.9R		150.8 +10.1R		
		18"	q _a	q _f	673	1218	641	1032	553	891	546	879	541	871	489	787	490	789	491	791	455	733
			G'	152.5 +27.2R		149.9 +22.8R		133.5 +22R		134.4 +19R		135 +16.8R		124.8 +16.2R		126.3 +14.5R		127.6 +13.2R		120.3 +12.8R		
		24"	q _a	q _f	577	929	563	906	482	775	485	780	430	693	439	706	397	639	409	658	375	604
			G'	130.8 +32.1R		132.4 +26.1R		117 +24.9R		120.4 +21.1R		109.6 +20.2R		113.2 +17.6R		105 +16.9R		108.5 +15.1R		101.8 +14.6R		
	20 ga	4"	q _a	q _f	783	1260	783	1260	783	1260	783	1260	783	1260	781	1258	778	1252	775	1247	682	1091
			G'	199.8 +6.6R		198.3 +5.5R		197.3 +4.7R		196.6 +4.2R		196 +3.7R		195.6 +3.4R		195.2 +3.1R		194.9 +2.8R		194.7 +2.6R		
		6"	q _a	q _f	715	1151	693	1115	677	1090	665	1071	656	1056	648	1044	642	1034	637	1026	633	1019
			G'	177 +10.1R		174.6 +8.6R		173 +7.5R		171.8 +6.6R		170.9 +5.9R		170.2 +5.3R		169.6 +4.9R		169.1 +4.5R		168.7 +4.2R		
		8"	q _a	q _f	638	1027	628	1011	589	948	588	947	562	905	564	909	545	878	549	883	533	859
			G'	160.6 +13.1R		161.3 +10.6R		155.3 +9.8R		156.6 +8.3R		152.5 +7.8R		153.9 +6.9R		150.8 +6.5R		152.1 +5.8R		149.6 +5.5R		
		12"	q _a	q _f	539	869	503	810	478	769	459	739	444	715	433	697	423	682	416	669	409	659
			G'	138.7 +17.5R		134.3 +15.2R		131.3 +13.4R		129.1 +12R		127.4 +10.8R		126 +9.8R		124.9 +9R		124 +8.3R		123.3 +7.8R		
		18"	q _a	q _f	481	869	454	731	390	628	382	615	376	605	339	546	338	545	338	544	312	503
			G'	124.7 +20.7R		122.6 +17.4R		109.9 +17R		110.5 +14.7R		111 +13R		103.1 +12.7R		104.3 +11.3R		105.2 +10.3R		99.5 +10.1R		
		24"	q _a	q _f	417	671	401	645	342	550	340	548	298	480	302	486	272	437	279	449	256	412
			G'	107.8 +24.8R		109 +20.2R		96.9 +19.4R		99.6 +16.5R		91 +15.9R		93.9 +13.9R		87.3 +13.4R		90.1 +12R		84.8 +11.6R		
	22 ga	4"	q _a	q _f	656	1056	655	1055	646	1040	639	1029	634	1020	629	1013	626	1007	620	991	521	833
			G'	171.1 +5.3R		169.9 +4.4R		169 +3.8R		168.5 +3.4R		168 +3R		167.6 +2.7R		167.4 +2.5R		167.1 +2.3R		166.9 +2.1R		
		6"	q _a	q _f	577	929	557	896	542	872	531	855	522	841	516	830	510	821	506	814	502	808
			G'	152.6 +8.2R		150.7 +7R		149.3 +6.1R		148.4 +5.4R		147.6 +4.8R		147 +4.4R		146.6 +4R		146.2 +3.7R		145.8 +3.4R		
		8"	q _a	q _f	514	827	503	810	470	756	468	753	446	717	447	719	430	693	433	697	420	676
			G'	139.2 +10.7R		139.8 +8.7R		134.8 +8.1R		135.9 +6.9R		132.5 +6.4R		133.6 +5.6R		131.1 +5.4R		132.2 +4.8R		130.1 +4.6R		
		12"	q _a	q _f	435	700	403	649	381	613	364	587	352	566	342	550	334	537	327	526	321	517
			G'	121 +14.5R		117.4 +12.7R		114.9 +11.2R		113 +10R		111.6 +9R		110.4 +8.2R		109.5 +7.6R		108.7 +7R		108.1 +6.5R		
		18"	q _a	q _f	389	700	364	586	312	502	304	490	298	480	267	431	267	430	266	428	245	395
			G'	109.3 +17.3R		107.6 +14.6R		96.8 +14.4R		97.3 +12.4R		97.7 +11R		91 +10.8R		92 +9.6R		92.8 +8.7R		87.9 +8.6R		
		24"	q _a	q _f	338	545	323	519	273	440	270	435	235	378	238	383	214	344	219	352	201	323
			G'	95 +20.9R		96.1 +17R		85.7 +16.5R		88 +14R		80.6 +13.6R		83.1 +11.9R		77.5 +11.5R		79.9 +10.2R		75.3 +10R		
BS-36 36/4 Support Attachment: Hilti X-HSN 24 PAF Side Seam Attachment: #10 SD HWH Screw																						

BS-36 36/4

Support Attachment: Hilti X-HSN 24 PAF

Side Seam Attachment: #10 SD HWH Screw

Hilti X-HSN-24 Fasteners to Supports with
No. 10 Screws Side Seam Attachment
Diaphragm Shear in pounds per linear foot (plf)



HILTI



Support Fastener Pattern	Gage	Seam Attach. Spacing	Allowable Shear (q_a) (plf), Factored Shear (q_f) (plf), and Flexibility Factor (G') (kip/in)											
			Span →	4' - 0"	5' - 0"	6' - 0"	7' - 0"	8' - 0"	9' - 0"	10' - 0"	11' - 0"	12' - 0"		
			q_a q_f	q_a q_f	q_a q_f	q_a q_f	q_a q_f	q_a q_f	q_a q_f	q_a q_f	q_a q_f	q_a q_f	q_a q_f	q_a q_f
36/7/4	16 ga	4"	2042	3288	1999	3219	1969	3171	1947	3135	1931	3108	1917	3087
			305.9 +22.2R		303 +18.9R		301.1 +16.4R		299.7 +14.5R		298.6 +12.9R		297.1 +10.7R	
		6"	1692	2724	1630	2624	1586	2554	1555	2503	1530	2464	1511	2433
			265.9 +32.4R		261.4 +27.9R		258.4 +24.4R		256.3 +21.7R		254.6 +19.5R		253.4 +17.7R	
		8"	1463	2355	1440	2319	1338	2154	1339	2156	1272	2048	1281	2062
			238.2 +40.4R		238.9 +33.4R		228.7 +30.8R		230.7 +26.5R		223.7 +24.8R		225.9 +22R	
		12"	1193	1921	1107	1783	1048	1688	1005	1619	973	1566	947	1525
			202.5 +51.7R		195 +45.2R		189.8 +40.1R		186 +36R		183.1 +32.7R		180.9 +29.8R	
		18"	1043	1921	983	1583	834	1342	819	1319	809	1302	725	1167
			180.5 +59.2R		176.6 +50.6R		156.5 +48.9R		157.1 +42.8R		157.6 +38R		145.3 +36.8R	
		24"	883	1421	853	1374	720	1160	722	1163	630	1014	641	1033
			154.7 +68.5R		155.7 +57.1R		136.9 +54.5R		140.5 +46.9R		127.5 +44.9R		131.6 +39.7R	
	18 ga	4"	1565	2520	1526	2456	1498	2412	1478	2379	1462	2354	1450	2334
			254.4 +17.1R		252.2 +14.5R		250.7 +12.6R		249.6 +11.2R		248.7 +10R		248.1 +9.1R	
		6"	1287	2071	1232	1983	1194	1922	1166	1878	1145	1843	1128	1816
			223.2 +25.3R		219.7 +21.8R		217.3 +19.2R		215.6 +17.1R		214.3 +15.4R		213.3 +14R	
		8"	1111	1789	1087	1750	1004	1617	1002	1613	948	1527	953	1534
			201.3 +31.9R		201.8 +26.4R		193.6 +24.5R		195.2 +21.1R		189.6 +19.8R		191.4 +17.5R	
		12"	910	1465	838	1350	789	1271	753	1213	726	1169	705	1135
			172.6 +41.4R		166.4 +36.4R		162.2 +32.4R		159.1 +29.2R		156.7 +26.5R		154.9 +24.3R	
		18"	799	1465	747	1203	632	1018	617	994	606	976	537	865
			154.7 +47.8R		151.4 +41R		134.9 +40R		135.4 +35.1R		135.8 +31.2R		125.5 +30.4R	
		24"	683	1100	653	1051	546	878	542	873	472	760	477	769
			133.5 +55.8R		134.2 +46.6R		118.5 +44.9R		121.5 +38.7R		110.6 +37.3R		114 +32.9R	
	20 ga	4"	1107	1782	1072	1726	1048	1687	1030	1659	1017	1637	1006	1619
			200.2 +12.1R		198.6 +10.3R		197.5 +9R		196.7 +8R		196.1 +7.1R		195.6 +6.5R	
		6"	904	1455	859	1382	827	1332	804	1295	787	1267	773	1245
			177.6 +18.3R		175.1 +15.8R		173.3 +13.9R		172.1 +12.4R		171.1 +11.2R		170.3 +10.2R	
		8"	781	1258	757	1219	695	1120	690	1111	650	1047	651	1048
			161.5 +23.4R		161.9 +19.4R		155.8 +18.1R		157 +15.6R		152.8 +14.7R		154.1 +13R	
		12"	644	1037	588	947	549	885	521	840	500	805	484	778
			140.1 +30.8R		135.3 +27.3R		132.1 +24.4R		129.7 +22.1R		127.9 +20.1R		126.4 +18.5R	
		18"	570	1037	527	849	442	711	426	686	415	668	367	591
			126.4 +36R		123.9 +31.1R		111 +30.7R		111.4 +26.9R		111.7 +24R		103.7 +23.5R	
		24"	493	794	463	745	383	617	376	605	327	526	328	528
			110 +42.5R		110.6 +35.7R		98.2 +34.8R		100.6 +30R		91.9 +29.1R		94.6 +25.7R	
	22 ga	4"	885	1424	853	1374	831	1339	815	1313	803	1293	793	1277
			171.4 +9.7R		170.1 +8.3R		169.2 +7.2R		168.6 +6.4R		168.1 +5.7R		167.7 +5.2R	
		6"	721	1160	681	1096	654	1052	634	1020	618	995	606	976
			153.1 +14.8R		151 +12.9R		149.6 +11.3R		148.6 +10.1R		147.8 +9.1R		147.2 +8.3R	
		8"	624	1004	601	968	550	885	543	875	511	823	510	822
			140 +19R		140.3 +15.8R		135.2 +14.8R		136.2 +12.8R		132.8 +12.1R		133.9 +10.7R	
		12"	517	832	469	755	436	703	413	664	393	632	378	609
			122.2 +25.4R		118.3 +22.6R		115.5 +20.3R		113.5 +18.4R		112 +16.8R		110.8 +15.4R	
		18"	460	832	422	680	350	564	336	541	326	524	289	465
			110.8 +29.8R		108.7 +25.9R		97.8 +25.8R		98.1 +22.6R		98.3 +20.2R		91.5 +19.9R	
		24"	400	644	370	596	306	492	298	480	259	417	233	376
			97 +35.6R		97.4 +29.9R		86.9 +29.4R		88.9 +25.4R		81.4 +24.8R		83.7 +21.9R	

BS-36 36/7/4

Support Attachment: Hilti X-HSN 24 PAF

Side Seam Attachment: #10 SD HWH Screw

2.9 BN-36

Hilti X-ENP-19 Fasteners to Supports with No. 10 Screws Side Seam Attachment

Diaphragm Shear in pounds per linear foot (plf)



HILTI



Support Fastener Pattern	Gage	Seam Attach. Spacing	Allowable Shear (q _a) (plf), Factored Shear (q _f) (plf), and Flexibility Factor (G') (kip/in)																			
			Span →		4' - 0"		5' - 0"		6' - 0"		7' - 0"		8' - 0"		9' - 0"		10' - 0"		11' - 0"		12' - 0"	
			q _a	q _f																		
36/7	16 ga	4"	q _a	q _f	2077	3344	2029	3267	1995	3212	1970	3172	1951	3141	1936	3116	1923	3096	1752	2804	1472	2356
			G'		311.9 +16.2R		308.1 +13.8R		305.4 +12R		303.5 +10.6R		302 +9.5R		300.8 +8.6R		299.9 +7.9R		299.1 +7.3R		298.5 +6.7R	
		6"	q _a	q _f	1743	2806	1673	2693	1624	2614	1587	2556	1560	2511	1537	2475	1520	2446	1505	2423	1472	2356
			G'		274.8 +23.4R		269 +20.2R		265 +17.8R		262 +15.9R		259.8 +14.3R		258 +13R		256.6 +11.9R		255.4 +11R		254.4 +10.2R	
		8"	q _a	q _f	1523	2453	1490	2399	1382	2225	1377	2217	1306	2103	1311	2111	1259	2028	1268	2041	1227	1976
			G'		249.4 +29R		248 +24.2R		237 +22.4R		237.8 +19.4R		230.3 +18.2R		231.7 +16.1R		226.2 +15.2R		227.8 +13.8R		223.3 +13.1R	
		12"	q _a	q _f	1264	2035	1167	1878	1099	1770	1050	1690	1012	1630	982	1582	958	1543	939	1511	922	1484
			G'		217 +36.9R		207.4 +32.6R		200.7 +29.1R		195.7 +26.2R		191.9 +23.8R		188.8 +21.8R		186.3 +20.1R		184.3 +18.7R		182.5 +17.4R	
		18"	q _a	q _f	1119	2035	1046	1684	889	1431	867	1396	850	1369	763	1228	760	1223	757	1219	697	1122
			G'		197.2 +42.2R		190.6 +36.4R		169.9 +35.3R		168.8 +31.1R		167.9 +27.7R		155.2 +26.9R		155.9 +24.3R		156.4 +22.2R		147.4 +21.6R	
		24"	q _a	q _f	964	1551	919	1479	777	1251	771	1241	677	1090	683	1100	613	987	624	1005	571	919
			G'		174.2 +48.6R		171.6 +40.9R		151.9 +39.2R		153.3 +34R		139.6 +32.6R		142.2 +28.9R		131.8 +27.8R		134.8 +25.1R		126.5 +24.2R	
	18 ga	4"	q _a	q _f	1598	2572	1553	2501	1522	2450	1499	2413	1481	2384	1467	2361	1455	2343	1251	2002	1051	1682
			G'		259 +12.4R		256.1 +10.6R		254 +9.3R		252.5 +8.2R		251.4 +7.4R		250.5 +6.7R		249.7 +6.1R		249.1 +5.6R		248.6 +5.2R	
		6"	q _a	q _f	1331	2144	1270	2044	1227	1975	1195	1924	1171	1885	1151	1853	1136	1828	1123	1807	1051	1682
			G'		230.1 +18.3R		225.6 +15.8R		222.4 +14R		220.1 +12.5R		218.3 +11.3R		216.9 +10.3R		215.8 +9.4R		214.9 +8.7R		214.1 +8.1R	
		8"	q _a	q _f	1163	1873	1129	1818	1042	1678	1034	1665	978	1574	979	1575	938	1510	942	1517	910	1466
			G'		210.1 +22.9R		209 +19.1R		200.2 +17.8R		200.9 +15.4R		194.9 +14.5R		196 +12.8R		191.6 +12.2R		192.9 +11R		189.3 +10.5R	
		12"	q _a	q _f	969	1560	888	1429	832	1339	790	1272	759	1222	734	1182	714	1150	698	1123	684	1101
			G'		184.3 +29.5R		176.5 +26.1R		171 +23.4R		167 +21.2R		163.8 +19.3R		161.3 +17.7R		159.3 +16.4R		157.6 +15.2R		156.2 +14.2R	
		18"	q _a	q _f	862	1560	799	1286	677	1091	656	1057	641	1031	571	920	566	912	563	907	516	831
			G'		168.2 +33.9R		162.9 +29.4R		145.9 +28.8R		144.9 +25.4R		144.2 +22.7R		133.7 +22.1R		134.2 +20R		134.7 +18.3R		127.2 +17.9R	
		24"	q _a	q _f	749	1207	706	1137	596	960	586	943	510	821	511	823	458	738	465	748	426	686
			G'		149.5 +39.4R		147.3 +33.3R		131 +32.2R		132.1 +28R		120.7 +27R		122.9 +23.9R		114.2 +23.2R		116.7 +20.9R		109.7 +20.3R	
	20 ga	4"	q _a	q _f	1136	1828	1096	1765	1069	1721	1049	1688	1033	1663	1021	1643	982	1570	811	1298	682	1091
			G'		203.5 +8.8R		201.3 +7.5R		199.9 +6.6R		198.8 +5.8R		198 +5.3R		197.3 +4.8R		196.8 +4.4R		196.4 +4R		196 +3.7R	
		6"	q _a	q _f	941	1515	890	1433	854	1376	828	1333	808	1301	792	1275	779	1254	769	1237	682	1091
			G'		182.7 +13.2R		179.4 +11.5R		177.1 +10.1R		175.4 +9.1R		174.1 +8.2R		173 +7.5R		172.2 +6.9R		171.5 +6.4R		170.9 +5.9R	
		8"	q _a	q _f	823	1325	792	1275	726	1168	716	1153	674	1085	672	1082	642	1033	643	1036	620	998
			G'		168.1 +16.7R		167.2 +14R		160.7 +13.1R		161.2 +11.3R		156.7 +10.7R		157.6 +9.5R		154.2 +9.1R		155.2 +8.2R		152.5 +7.8R	
		12"	q _a	q _f	691	1112	627	1009	583	938	550	886	526	847	506	815	491	790	478	770	467	752
			G'		148.8 +21.9R		142.9 +19.6R		138.8 +17.6R		135.7 +16R		133.3 +14.6R		131.4 +13.5R		129.8 +12.5R		128.5 +11.6R		127.4 +10.8R	
		18"	q _a	q _f	619	1112	567	914	480	773	459	740	444	715	393	632	388	625	385	620	353	568
			G'		136.7 +25.4R		132.6 +22.2R		119.5 +22R		118.8 +19.4R		118.2 +17.4R		110 +17.1R		110.5 +15.5R		110.8 +14.2R		104.9 +13.9R	
		24"	q _a	q _f	544	876	506	815	422	679	409	659	356	573	354	569	318	512	321	517	294	474
			G'		122.4 +29.9R		120.6 +25.4R		107.9 +24.9R		108.8 +21.6R		99.9 +21.1R		101.6 +18.7R		94.7 +18.2R		96.7 +16.4R		91.1 +16R	
	22 ga	4"	q _a	q _f	911	1466	875	1409	850	1369	832	1339	818	1317	807	1299	750	1199	620	991	521	833
			G'		174 +7R		172.3 +6R		171.1 +5.3R		170.3 +4.7R		169.6 +4.2R		169.1 +3.8R		168.7 +3.5R		168.3 +3.2R		168 +3R	
		6"	q _a	q _f	753	1213	708	1141	677	1090	654	1053	637	1025	623	1003	612	985	602	970	521	833
			G'		157.2 +10.6R		154.6 +9.3R		152.7 +8.2R		151.3 +7.4R		150.2 +6.7R		149.4 +6.1R		148.7 +5.6R		148.1 +5.2R		147.6 +4.8R	
		8"	q _a	q _f	660	1063	631	1016	576	927	566	911	531	855	528	851	504	811	504	811	485	781
			G'		145.3 +13.6R		144.6 +11.4R		139.3 +10.7R		139.7 +9.3R		136 +8.8R		136.7 +7.8R		133.9 +7.5R		134.7 +6.7R		132.5 +6.5R	
		12"	q _a	q _f	557	897	502	809	465	748	437	704	416	670	400	644	387	622	376	605	367	590
			G'		129.5 +18R		124.6 +16.2R		121.1 +14.6R		118.5 +13.3R		116.5 +12.2R		114.9 +11.2R		113.6 +10.4R		112.5 +9.7R		111.6 +9.1R	
		18"	q _a	q _f	502	897	457	735	383	616	364	586	350	564	311	500	306	493	303	487	278	447
			G'		119.4 +21R		115.9 +18.4R		105 +18.4R		104.3 +16.3R		103.8 +14.6R		96.9 +14.4R		97.3 +13.1R		97.6 +12R		92.5 +11.8R	
		24"	q _a	q _f	444	715	409	659	338	545	326	525	283	456	281	452	253	407	254	409	233	375
			G'		107.4 +24.9R		105.9 +21.2R		95.2 +21R		95.9 +18.2R		88.3 +17.9R		89.7 +15.8R		83.8 +15.5R		85.5 +13.9R		80.7 +13.6R	
BS-36 36/7 Support Attachment: Hilti X-HSN 24 PAF Side Seam Attachment: #10 SD HWH Screw																						

BS-36 36/7

Support Attachment: Hilti X-HSN 24 PAF

Side Seam Attachment: #10 SD HWH Screw

Hilti X-HSN-24 Fasteners to Supports with
No. 10 Screws Side Seam Attachment
Diaphragm Shear in pounds per linear foot (plf)



HILTI®



Support Fastener Pattern	Gage	Seam Attach. Spacing	Allowable Shear (q _a) (plf), Factored Shear (q _f) (plf), and Flexibility Factor (G') (kip/in)																			
			Span →	4' - 0"		5' - 0"		6' - 0"		7' - 0"		8' - 0"		9' - 0"		10' - 0"		11' - 0"		12' - 0"		
				q _a	q _f																	
36/9	16 ga	4"	q _a	q _f	2502	4028	2408	3878	2342	3770	2292	3690	2253	3627	2222	3578	2120	3393	1752	2804	1472	2356
			G'	320.8 +20.8R		315.5 +18.2R		311.8 +16.1R		309.1 +14.5R		307 +13.1R		305.4 +12R		304 +11R		302.9 +10.2R		302 +9.5R		
		6"	q _a	q _f	2125	3421	2000	3221	1912	3079	1847	2973	1796	2892	1756	2827	1723	2774	1696	2730	1472	2356
			G'	287.9 +29.2R		280.1 +26R		274.6 +23.4R		270.6 +21.2R		267.4 +19.3R		264.9 +17.8R		262.9 +16.4R		261.2 +15.3R		259.7 +14.3R		
		8"	q _a	q _f	1893	3048	1804	2904	1651	2659	1618	2605	1520	2448	1508	2428	1438	2316	1436	2311	1383	2226
			G'	265.8 +35.6R		261.4 +30.7R		249.3 +29R		248.3 +25.5R		240.1 +24.2R		240.3 +21.8R		234.3 +20.7R		235 +18.9R		230.2 +18.1R		
		12"	q _a	q _f	1629	2623	1470	2367	1358	2187	1276	2054	1213	1953	1163	1873	1123	1808	1089	1754	1061	1709
			G'	238.2 +44.2R		225.8 +40.3R		216.8 +36.9R		210.1 +33.9R		204.8 +31.3R		200.6 +29R		197.1 +27R		194.2 +25.3R		191.8 +23.8R		
		18"	q _a	q _f	1486	2623	1349	2171	1146	1845	1090	1756	1047	1686	926	1491	905	1456	887	1428	811	1305
			G'	221.6 +49.8R		211.2 +44.6R		189.7 +44.1R		185.9 +39.7R		183 +36R		169.8 +35.2R		169 +32.3R		168.3 +29.8R		158.9 +29.1R		
		24"	q _a	q _f	1334	2148	1222	1968	1032	1662	987	1588	858	1381	842	1355	753	1213	750	1207	684	1102
			G'	202.6 +56.4R		195 +49.6R		174 +48.5R		172.2 +43.1R		157.6 +41.9R		158 +37.8R		146.9 +36.7R		148.3 +33.5R		139.5 +32.5R		
	18 ga	4"	q _a	q _f	1928	3104	1844	2969	1784	2873	1740	2801	1705	2745	1678	2701	1514	2422	1251	2002	1051	1682
			G'	265.9 +15.9R		261.8 +13.9R		259 +12.4R		256.9 +11.1R		255.3 +10.1R		254 +9.2R		252.9 +8.5R		252.1 +7.9R		251.3 +7.3R		
		6"	q _a	q _f	1635	2633	1528	2460	1452	2338	1396	2247	1353	2178	1318	2122	1290	2077	1251	2002	1051	1682
			G'	240.4 +22.6R		234.4 +20.2R		230.1 +18.2R		226.8 +16.5R		224.4 +15.1R		222.4 +13.9R		220.8 +12.9R		219.4 +12R		218.3 +11.2R		
		8"	q _a	q _f	1460	2351	1380	2221	1256	2023	1224	1971	1146	1845	1132	1823	1077	1735	1072	1726	1030	1659
			G'	223.2 +27.8R		219.6 +24R		210 +22.8R		209.2 +20.1R		202.7 +19.2R		202.9 +17.2R		198.1 +16.5R		198.7 +15R		194.8 +14.4R		
		12"	q _a	q _f	1265	2037	1133	1824	1040	1675	972	1565	920	1481	878	1413	840	1352	811	1306	789	1270
			G'	201.3 +34.9R		191.3 +32R		184.1 +29.4R		178.7 +27.1R		174.4 +25.1R		170.9 +23.4R		168.1 +21.8R		165.8 +20.5R		163.8 +19.2R		
		18"	q _a	q _f	1160	2037	1044	1681	886	1426	831	1337	790	1271	697	1123	678	1091	664	1068	608	979
			G'	188 +39.5R		179.6 +35.6R		162.2 +35.6R		159 +32.1R		156.7 +29.2R		145.8 +28.7R		145.1 +26.4R		144.5 +24.3R		136.7 +23.9R		
		24"	q _a	q _f	1050	1691	953	1534	795	1281	753	1213	654	1053	637	1026	570	917	565	910	518	834
			G'	172.7 +45.1R		166.4 +39.8R		149.3 +39.4R		147.8 +35.1R		135.7 +34.3R		136 +31R		126.8 +30.2R		128 +27.6R		120.6 +26.9R		
	20 ga	4"	q _a	q _f	1377	2216	1305	2102	1255	2020	1217	1960	1188	1913	1165	1876	982	1570	811	1298	682	1091
			G'	208.3 +11.2R		205.5 +9.8R		203.4 +8.8R		201.9 +7.9R		200.8 +7.2R		199.9 +6.6R		199.1 +6.1R		198.5 +5.6R		198 +5.2R		
		6"	q _a	q _f	1169	1882	1082	1742	1020	1643	975	1570	940	1513	912	1469	890	1432	811	1298	682	1091
			G'	190.1 +16.2R		185.8 +14.5R		182.6 +13.1R		180.3 +12R		178.5 +11R		177 +10.1R		175.8 +9.4R		174.9 +8.7R		174 +8.2R		
		8"	q _a	q _f	1048	1688	980	1577	886	1427	857	1380	799	1286	785	1265	745	1199	738	1189	682	1091
			G'	177.6 +20R		175 +17.4R		168 +16.7R		167.4 +14.7R		162.6 +14.1R		162.7 +12.7R		159.1 +12.2R		159.5 +11.1R		156.7 +10.7R		
		12"	q _a	q _f	917	1476	813	1309	741	1193	685	1103	639	1029	604	972	578	931	558	898	540	870
			G'	161.5 +25.5R		154.1 +23.6R		148.7 +21.8R		144.6 +20.2R		141.3 +18.8R		138.7 +17.6R		136.6 +16.5R		134.8 +15.5R		133.2 +14.6R		
		18"	q _a	q _f	847	1476	754	1214	629	1013	585	941	551	888	486	783	473	761	462	743	423	681
			G'	151.7 +29.1R		145.3 +26.5R		132.1 +26.8R		129.7 +24.2R		127.8 +22.1R		119.4 +22R		118.9 +20.2R		118.5 +18.7R		112.4 +18.5R		
		24"	q _a	q _f	774	1246	692	1114	571	919	534	861	463	746	447	720	402	647	398	640	364	587
			G'	140.1 +33.5R		135.4 +29.8R		122.2 +29.9R		121 +26.7R		111.6 +26.4R		111.9 +23.8R		104.7 +23.4R		105.6 +21.4R		99.8 +21R		
	22 ga	4"	q _a	q _f	1109	1785	1045	1683	1001	1611	967	1557	941	1516	921	1481	750	1199	620	991	521	833
			G'	177.9 +8.9R		175.6 +7.8R		174 +7R		172.8 +6.3R		171.8 +5.7R		171.1 +5.3R		170.5 +4.9R		170 +4.5R		169.6 +4.2R		
		6"	q _a	q _f	943	1518	867	1397	814	1311	775	1248	745	1199	721	1161	701	1129	620	991	521	833
			G'	163.3 +13R		159.7 +11.7R		157.2 +10.6R		155.3 +9.7R		153.8 +8.9R		152.6 +8.2R		151.7 +7.6R		150.9 +7.1R		150.2 +6.7R		
		8"	q _a	q _f	849	1366	788	1268	710	1143	683	1100	635	1022	622	1002	589	948	582	937	521	833
			G'	153.1 +16.2R		151 +14.1R		145.3 +13.6R		144.8 +12R		140.8 +11.5R		140.9 +10.4R		137.9 +10R		138.3 +9.1R		136 +8.8R		
		12"	q _a	q _f	747	1202	659	1060	596	959	544	876	506	814	478	770	457	736	440	708	425	685
			G'	140 +20.8R		133.9 +19.3R		129.4 +18R		125.9 +16.7R		123.2 +15.6R		121.1 +14.6R		119.3 +13.7R		117.8 +12.9R		116.5 +12.1R		
		18"	q _a	q _f	693	1202	613	988	506	815	468	753	439	706	389	626	377	607	367	591	336	541
			G'	131.8 +23.8R		126.6 +21.8R		115.5 +22.2R		113.5 +20.2R		112 +18.4R		104.9 +18.4R		104.4 +16.9R		104.1 +15.7R		98.9 +15.5R		
		24"	q _a	q _f	637	1025	560	902	462	743	429	691	372	599	359	578	323	520	318	512	292	470
			G'	122.3 +27.6R		118.3 +24.7R		107.2 +24.9R		106.2 +22.3R		98.3 +22.2R		98.5 +20R		92.4 +19.8R		93.1 +18.1R		88.2 +17.8R		
BS-36 36/9 Support Attachment: Hilti X-HSN 24 PAF Side Seam Attachment: #10 SD HWH Screw																						

BS-36 36/9

Support Attachment: Hilti X-HSN 24 PAF

Side Seam Attachment: #10 SD HWH Screw

2.9 BN-36

Hilti X-ENP-19 Fasteners to Supports with No. 10 Screws Side Seam Attachment

Diaphragm Shear in pounds per linear foot (plf)



HILTI



Support Fastener Pattern	Gage	Seam Attach. Spacing	Allowable Shear (q _a) (plf), Factored Shear (q _f) (plf), and Flexibility Factor (G') (kip/in)																			
			Span →		4' - 0"		5' - 0"		6' - 0"		7' - 0"		8' - 0"		9' - 0"		10' - 0"		11' - 0"		12' - 0"	
36/4	16 ga	4"	q _a	q _f	1369	2204	1369	2204	1369	2204	1369	2204	1369	2204	1369	2204	1369	2204	1369	2204	1369	2204
			G'	313.9	+17.3R	309.7	+14.8R	306.8	+13R	304.7	+11.5R	303.1	+10.3R	301.8	+9.4R	300.8	+8.6R	299.9	+7.9R	299.2	+7.4R	
		6"	q _a	q _f	1348	2171	1317	2121	1295	2085	1279	2058	1266	2038	1255	2021	1247	2008	1240	1997	1234	1987
			G'	277.7	+24.9R	271.4	+21.6R	267.1	+19.1R	263.9	+17.1R	261.4	+15.5R	259.5	+14.1R	257.9	+13R	256.6	+12R	255.5	+11.1R	
		8"	q _a	q _f	1212	1952	1203	1937	1140	1835	1144	1841	1100	1771	1108	1783	1075	1730	1083	1744	1057	1702
			G'	253.1	+30.7R	250.9	+25.8R	239.7	+24R	240.1	+20.8R	232.4	+19.6R	233.6	+17.4R	227.9	+16.5R	227.4	+14.9R	224.8	+14.3R	
		12"	q _a	q _f	1028	1655	971	1563	930	1498	900	1449	877	1412	859	1382	844	1358	831	1338	821	1321
			G'	221.8	+38.9R	211.5	+34.5R	204.3	+31R	198.9	+28R	194.7	+25.6R	191.4	+23.5R	188.7	+21.7R	186.4	+20.2R	184.5	+18.9R	
		18"	q _a	q _f	913	1655	874	1406	755	1215	747	1203	741	1193	670	1079	673	1084	676	1088	626	1008
			G'	202.7	+44.2R	195.2	+38.5R	174.3	+37.5R	172.5	+33.1R	171.2	+29.7R	158.4	+28.8R	158.7	+26.2R	159	+24R	149.9	+23.3R	
		24"	q _a	q _f	782	1259	766	1233	656	1056	662	1066	589	948	601	968	547	880	561	904	518	834
			G'	180.7	+50.8R	176.9	+43.2R	156.8	+41.6R	157.5	+36.2R	143.6	+34.9R	145.7	+31R	135.1	+29.9R	137.7	+27.1R	129.3	+26.2R	
	18 ga	4"	q _a	q _f	1103	1776	1103	1776	1103	1776	1103	1776	1103	1776	1103	1776	1103	1776	1103	1776	1051	1682
			G'	260.5	+13.3R	257.3	+11.4R	255.1	+10R	253.5	+8.9R	252.2	+8R	251.2	+7.3R	250.4	+6.6R	249.8	+6.1R	249.2	+5.7R	
		6"	q _a	q _f	1041	1676	1012	1630	992	1597	977	1572	965	1553	955	1538	947	1525	941	1515	936	1506
			G'	232.4	+19.4R	227.5	+16.9R	224.1	+15R	221.6	+13.4R	219.7	+12.2R	218.1	+11.1R	216.9	+10.2R	215.8	+9.5R	215	+8.8R	
		8"	q _a	q _f	932	1500	920	1481	867	1396	867	1397	831	1338	836	1346	809	1302	815	1312	793	1277
			G'	213.1	+24.1R	211.4	+20.3R	202.4	+19R	202.7	+16.5R	196.6	+15.6R	197.5	+13.9R	193	+13.2R	194.1	+11.9R	190.5	+11.4R	
		12"	q _a	q _f	788	1269	739	1190	704	1134	679	1093	659	1061	643	1036	630	1015	620	998	611	984
			G'	188.1	+30.9R	179.8	+27.6R	173.9	+24.9R	169.6	+22.6R	166.2	+20.7R	163.4	+19.1R	161.2	+17.6R	159.4	+16.4R	157.8	+15.4R	
		18"	q _a	q _f	701	1269	666	1072	573	923	564	908	557	897	503	809	503	810	504	811	466	750
			G'	172.7	+35.4R	166.6	+31R	149.5	+30.5R	148	+27R	146.9	+24.2R	136.3	+23.7R	136.6	+21.5R	136.8	+19.7R	129.2	+19.3R	
		24"	q _a	q _f	604	973	586	943	500	805	501	807	445	716	452	728	406	654	418	672	383	616
			G'	154.8	+41R	151.6	+35R	135.1	+34.1R	135.6	+29.7R	124	+28.8R	125.8	+25.6R	117	+24.9R	119.1	+22.5R	112.1	+21.8R	
	20 ga	4"	q _a	q _f	841	1354	841	1354	836	1346	828	1333	821	1322	816	1313	811	1306	808	1298	682	1091
			G'	204.5	+9.4R	202.2	+8.1R	200.7	+7.1R	199.5	+6.3R	198.6	+5.7R	197.9	+5.2R	197.3	+4.7R	196.8	+4.4R	196.4	+4.1R	
		6"	q _a	q _f	748	1204	722	1162	703	1133	690	1111	679	1093	671	1080	664	1069	658	1059	653	1052
			G'	184.4	+13.9R	180.8	+12.2R	178.3	+10.9R	176.4	+9.8R	175	+8.9R	173.9	+8.1R	173	+7.5R	172.2	+6.9R	171.6	+6.4R	
		8"	q _a	q _f	666	1072	653	1051	610	982	608	979	580	934	582	937	561	903	564	908	548	882
			G'	170.2	+17.6R	169	+14.8R	162.3	+14R	162.5	+12.2R	158	+11.5R	158.7	+10.3R	155.3	+9.8R	156.1	+8.9R	153.4	+8.5R	
		12"	q _a	q _f	563	907	523	842	495	797	474	763	458	737	445	717	435	700	426	686	419	675
			G'	151.7	+22.9R	145.5	+20.6R	141	+18.7R	137.7	+17R	135.1	+15.6R	133	+14.4R	131.3	+13.4R	129.9	+12.5R	128.7	+11.7R	
		18"	q _a	q _f	503	907	472	761	405	652	395	636	388	625	349	562	348	560	347	558	320	516
			G'	140.1	+26.5R	135.5	+23.3R	122.3	+23.2R	121.2	+20.6R	120.3	+18.5R	112.1	+18.3R	112.3	+16.6R	112.5	+15.2R	106.5	+15R	
		24"	q _a	q _f	438	704	418	673	356	573	353	569	307	494	310	499	279	449	285	460	262	421
			G'	126.4	+31R	124	+26.6R	111.2	+26.2R	111.5	+22.9R	102.5	+22.4R	103.8	+19.9R	96.9	+19.4R	98.6	+17.6R	93	+17.2R	
	22 ga	4"	q _a	q _f	702	1130	687	1106	676	1088	667	1075	661	1064	656	1056	652	1049	620	991	521	833
			G'	174.9	+7.5R	173	+6.5R	171.7	+5.7R	170.8	+5.1R	170.1	+4.6R	169.5	+4.2R	169	+3.8R	168.7	+3.5R	168.4	+3.3R	
		6"	q _a	q _f	604	972	580	934	563	907	551	886	541	871	533	858	527	848	522	840	517	833
			G'	158.6	+11.2R	155.7	+9.9R	153.7	+8.8R	152.2	+7.9R	151	+7.2R	150.1	+6.6R	149.3	+6.1R	148.7	+5.6R	148.2	+5.3R	
		8"	q _a	q _f	536	863	523	842	487	784	484	779	460	740	460	741	443	713	445	716	431	694
			G'	147.1	+14.3R	146	+12.1R	140.6	+11.4R	140.8	+10R	137.1	+9.5R	137.6	+8.4R	134.8	+8.1R	135.5	+7.3R	133.3	+7R	
		12"	q _a	q _f	454	731	419	675	395	636	377	607	363	584	352	566	343	552	335	540	329	530
			G'	131.9	+18.8R	126.7	+17R	123	+15.4R	120.2	+14.1R	118	+13R	116.3	+12R	114.9	+11.2R	113.7	+10.4R	112.7	+9.8R	
		18"	q _a	q _f	407	731	380	611	325	523	315	508	308	496	274	442	274	441	273	440	250	403
			G'	122.3	+21.9R	118.4	+19.3R	107.3	+19.4R	106.4	+17.3R	105.6	+15.6R	98.7	+15.4R	98.8	+14R	99	+12.8R	93.9	+12.7R	
		24"	q _a	q _f	356	574	337	543	284	458	279	450	242	390	245	394	220	354	224	361	206	331
			G'	110.8	+25.8R	108.7	+22.2R	97.9	+22R	98.2	+19.3R	90.5	+18.9R	91.6	+16.9R	85.7	+16.5R	87.2	+14.9R	82.4	+14.6R	
BS-36 36/4 Support Attachment: Hilti X-ENP-19 PAF Side Seam Attachment: #10 SD HWH Screw																						

BS-36 36/4

Support Attachment: Hilti X-ENP-19 PAF

Side Seam Attachment: #10 SD HWH Screw

Hilti X-ENP-19 Fasteners to Supports with
No. 10 Screws Side Seam Attachment
Diaphragm Shear in pounds per linear foot (plf)



HILTI



Support Fastener Pattern	Gage	Seam Attach. Spacing	Allowable Shear (q _a) (plf), Factored Shear (q _f) (plf), and Flexibility Factor (G') (kip/in)																			
			Span →		4' - 0"		5' - 0"		6' - 0"		7' - 0"		8' - 0"		9' - 0"		10' - 0"		11' - 0"		12' - 0"	
36/7/4	16 ga	4"	q _a	q _f	2130	3429	2080	3349	2045	3292	2019	3251	1999	3219	1984	3194	1971	3174	1752	2804	1472	2356
			G'	315.1	+30.8R	310.6	+27R	307.5	+23.9R	305.2	+21.5R	303.5	+19.5R	302.2	+17.8R	301.1	+16.4R	300.2	+15.2R	299.4	+14.1R	
		6"	q _a	q _f	1756	2827	1685	2713	1636	2635	1600	2577	1573	2533	1551	2498	1534	2469	1519	2446	1472	2356
			G'	279.7	+43.4R	272.9	+38.6R	268.3	+34.7R	264.8	+31.4R	262.2	+28.7R	260.1	+26.4R	258.4	+24.4R	257.1	+22.7R	255.9	+21.2R	
		8"	q _a	q _f	1517	2442	1488	2395	1378	2218	1376	2216	1304	2100	1312	2112	1259	2027	1269	2044	1229	1978
			G'	255.8	+52.8R	252.9	+45.5R	241.3	+43R	241.3	+37.9R	233.5	+36R	234.5	+32.3R	228.7	+30.8R	230	+28.1R	225.4	+26.9R	
		12"	q _a	q _f	1240	1996	1146	1844	1081	1740	1034	1665	998	1607	970	1562	947	1525	929	1495	913	1470
			G'	225.6	+65.6R	214.5	+59.9R	206.6	+54.7R	200.8	+50.3R	196.3	+46.4R	192.7	+43.1R	189.8	+40.1R	187.4	+37.6R	185.4	+35.3R	
		18"	q _a	q _f	1087	1996	1020	1642	863	1390	845	1361	832	1339	743	1196	742	1194	741	1193	678	1091
			G'	207.4	+73.9R	198.7	+66.2R	177.4	+65.4R	174.9	+58.9R	173.1	+53.4R	160.1	+52.3R	160.2	+47.9R	160.2	+44.2R	151	+43.3R	
		24"	q _a	q _f	925	1490	888	1430	747	1203	745	1200	649	1045	658	1060	590	950	603	971	552	888
			G'	186.3	+83.8R	180.9	+73.6R	160.4	+72R	160.2	+64R	146	+62.2R	147.6	+56.1R	136.9	+54.5R	139.2	+49.7R	130.6	+48.3R	
	18 ga	4"	q _a	q _f	1626	2617	1580	2544	1548	2493	1525	2456	1507	2427	1493	2404	1482	2386	1251	2002	1051	1682
			G'	261.5	+23.6R	258	+20.7R	255.6	+18.4R	253.9	+16.5R	252.5	+15R	251.5	+13.7R	250.7	+12.6R	250	+11.7R	249.4	+10.9R	
		6"	q _a	q _f	1331	2144	1271	2046	1228	1978	1197	1928	1174	1889	1155	1859	1140	1835	1127	1815	1051	1682
			G'	234.1	+33.6R	228.8	+30R	225.1	+27R	222.3	+24.6R	220.3	+22.5R	218.6	+20.7R	217.3	+19.2R	216.2	+17.8R	215.3	+16.7R	
		8"	q _a	q _f	1150	1851	1120	1804	1033	1662	1028	1654	971	1563	974	1568	933	1502	939	1511	907	1460
			G'	215.3	+41.2R	213	+35.6R	203.7	+33.9R	203.7	+29.9R	197.5	+28.5R	198.2	+25.6R	193.6	+24.5R	194.6	+22.3R	191	+21.4R	
		12"	q _a	q _f	944	1520	866	1395	813	1309	774	1246	745	1199	721	1161	703	1131	687	1107	674	1086
			G'	191.3	+51.8R	182.3	+47.5R	175.9	+43.7R	171.2	+40.3R	167.5	+37.3R	164.6	+34.7R	162.2	+32.4R	160.2	+30.4R	158.6	+28.6R	
		18"	q _a	q _f	832	1520	774	1247	654	1054	636	1024	622	1001	550	886	547	881	546	878	500	805
			G'	176.6	+58.6R	169.6	+52.8R	152.2	+52.8R	150.1	+47.6R	148.6	+43.3R	137.9	+42.7R	137.9	+39.1R	137.9	+36.2R	130.2	+35.5R	
		24"	q _a	q _f	715	1152	679	1093	565	910	559	900	486	783	490	789	439	707	447	720	410	660
			G'	159.6	+67R	155.1	+59.1R	138.2	+58.4R	138	+52R	126.2	+50.9R	127.5	+46R	118.5	+44.9R	120.4	+41R	113.3	+40R	
	20 ga	4"	q _a	q _f	1149	1850	1109	1786	1082	1742	1062	1709	1046	1684	1034	1665	982	1570	811	1298	682	1091
			G'	205.2	+16.6R	202.8	+14.6R	201	+13R	199.8	+11.7R	198.8	+10.7R	198.1	+9.8R	197.5	+9R	197	+8.4R	196.6	+7.8R	
		6"	q _a	q _f	936	1507	886	1427	851	1371	826	1330	806	1298	791	1274	779	1254	769	1237	682	1091
			G'	185.6	+24R	181.7	+21.6R	179	+19.5R	177	+17.8R	175.5	+16.3R	174.3	+15R	173.3	+13.9R	172.5	+13.1R	171.8	+12.2R	
		8"	q _a	q _f	810	1304	782	1259	716	1153	708	1141	667	1073	666	1072	636	1024	639	1028	616	991
			G'	171.9	+29.8R	170.2	+25.8R	163.4	+24.7R	163.3	+21.9R	158.7	+20.9R	159.3	+18.8R	155.8	+18.1R	156.6	+16.5R	153.8	+15.9R	
		12"	q _a	q _f	670	1079	609	981	568	914	537	865	514	828	494	795	480	772	468	754	458	738
			G'	154.2	+37.9R	147.4	+35.1R	142.6	+32.4R	139	+30.1R	136.1	+27.9R	133.9	+26.1R	132.1	+24.4R	130.6	+23R	129.3	+21.6R	
		18"	q _a	q _f	596	1079	548	882	457	736	439	708	426	686	377	607	374	602	372	599	341	549
			G'	143.2	+43.3R	137.8	+39.3R	124.5	+39.7R	122.9	+36R	121.7	+32.8R	113.4	+32.6R	113.4	+30R	113.4	+27.7R	107.4	+27.4R	
		24"	q _a	q _f	518	835	482	776	398	642	389	627	338	545	338	544	304	489	308	496	282	455
			G'	130.3	+49.9R	126.8	+44.3R	113.7	+44.4R	113.5	+39.6R	104.3	+39.1R	105.3	+35.3R	98.2	+34.8R	99.7	+31.7R	94	+31.2R	
	22 ga	4"	q _a	q _f	918	1479	883	1421	858	1381	840	1352	826	1330	815	1312	750	1199	620	991	521	833
			G'	175.4	+13.2R	173.4	+11.6R	172.1	+10.4R	171	+9.4R	170.3	+8.5R	169.7	+7.8R	169.2	+7.2R	168.8	+6.7R	168.5	+6.3R	
		6"	q _a	q _f	747	1203	703	1132	673	1084	651	1048	634	1021	621	999	610	982	601	967	521	833
			G'	159.6	+19.3R	156.5	+17.4R	154.3	+15.8R	152.6	+14.4R	151.4	+13.2R	150.4	+12.2R	149.6	+11.3R	149	+10.6R	148.4	+9.9R	
		8"	q _a	q _f	648	1043	621	1000	567	913	559	899	524	844	523	841	498	802	499	804	481	774
			G'	148.5	+24.1R	147.1	+20.9R	141.5	+20.1R	141.5	+17.8R	137.6	+17.1R	138.1	+15.4R	135.2	+14.8R	135.9	+13.5R	133.6	+13.1R	
		12"	q _a	q _f	540	869	487	785	452	727	424	683	402	648	387	623	375	603	365	588	357	575
			G'	134	+30.9R	128.4	+28.7R	124.3	+26.7R	121.3	+24.8R	118.9	+23.1R	117.1	+21.6R	115.5	+20.3R	114.3	+19.1R	113.2	+18R	
		18"	q _a	q _f	482	869	440	708	364	586	347	559	335	540	298	479	295	474	292	470	268	431
			G'	124.9	+35.4R	120.4	+32.3R	109.2	+33R	107.9	+29.9R	106.8	+27.4R	99.8	+27.3R	99.8	+25.1R	99.8	+23.3R	94.7	+23.1R	
		24"	q _a	q _f	420	677	386	622	319	514	309	498	268	432	268	431	241	388	243	392	223	359
			G'	114.1	+41.1R	111.2	+36.6R	100.1	+37R	99.9	+33.1R	92.1	+32.9R	92.9	+29.7R	86.9	+29.4R	88.2	+26.8R	83.3	+26.5R	
BS-36 36/7/4 Support Attachment: Hilti X-ENP-19 PAF Side Seam Attachment: #10 SD HWH Screw																						

BS-36 36/7/4

Support Attachment: Hilti X-ENP-19 PAF

Side Seam Attachment: #10 SD HWH Screw

2.9 BN-36

Hilti X-ENP-19 Fasteners to Supports with No. 10 Screws Side Seam Attachment

Diaphragm Shear in pounds per linear foot (plf)



Support Fastener Pattern	Gage	Seam Attach. Spacing	Allowable Shear (q _a) (plf), Factored Shear (q _f) (plf), and Flexibility Factor (G') (kip/in)																					
			Span →	4' - 0"		5' - 0"		6' - 0"		7' - 0"		8' - 0"		9' - 0"		10' - 0"		11' - 0"		12' - 0"				
			q _a	q _f																				
36/7	16 ga	4"	q _a	q _f	2171	3495	2115	3405	2075	3341	2046	3294	2023	3257	2005	3229	1991	3205	1752	2804	1472	2356		
			G'		323.7 +22R	318 +19.4R	314 +17.3R	311 +15.6R	308.7 +14.2R	306.9 +13R	305.4 +12R	304.2 +11.1R	303.1 +10.4R											
		6"	q _a	q _f	1813	2920	1734	2792	1679	2703	1638	2637	1606	2586	1581	2546	1561	2513	1544	2486	1472	2356		
			G'		292.1 +30.8R	283.8 +27.6R	277.8 +25R	273.4 +22.7R	270 +20.8R	267.2 +19.2R	265 +17.8R	263.1 +16.6R	261.5 +15.5R											
		8"	q _a	q _f	1584	2551	1543	2484	1427	2297	1418	2284	1343	2162	1345	2166	1291	2078	1298	2089	1255	2021		
			G'		271.1 +37.2R	265.7 +32.4R	253.3 +30.8R	251.7 +27.3R	243.3 +26R	243.2 +23.4R	237 +22.4R	237.5 +20.5R	232.6 +19.7R											
		12"	q _a	q _f	1318	2121	1211	1949	1137	1830	1083	1743	1041	1676	1009	1624	982	1582	961	1547	943	1518		
			G'		244.9 +45.9R	231.7 +42.3R	222.1 +39R	214.8 +36R	209.1 +33.4R	204.5 +31.1R	200.7 +29.1R	197.5 +27.3R	194.9 +25.7R											
		18"	q _a	q _f	1170	2121	1088	1752	923	1486	897	1444	877	1412	786	1265	781	1258	777	1251	712	1146		
			G'		229.2 +51.4R	217.8 +46.6R	196.1 +46.4R	191.5 +42R	188 +38.3R	174.6 +37.6R	173.3 +34.6R	172.3 +32R	162.7 +31.4R											
		24"	q _a	q _f	1013	1631	959	1545	811	1305	800	1288	700	1127	704	1133	631	1016	640	1031	585	942		
			G'		211.3 +58R	202.3 +51.6R	181.1 +50.9R	178.3 +45.6R	163.4 +44.5R	163.2 +40.3R	151.9 +39.2R	152.8 +35.9R	143.8 +35R											
	18 ga	4"	q _a	q _f	1663	2677	1612	2595	1576	2537	1549	2494	1529	2461	1513	2435	1499	2414	1251	2002	1051	1682		
			G'		268.1 +16.8R	263.7 +14.9R	260.6 +13.3R	258.3 +12R	256.6 +10.9R	255.2 +10R	254 +9.3R	253.1 +8.6R	252.3 +8R											
		6"	q _a	q _f	1382	2224	1313	2114	1265	2036	1229	1979	1202	1935	1181	1901	1163	1873	1149	1849	1051	1682		
			G'		243.7 +23.7R	237.2 +21.4R	232.6 +19.4R	229.1 +17.7R	226.4 +16.3R	224.2 +15R	222.4 +14R	221 +13R	219.7 +12.2R											
		8"	q _a	q _f	1207	1944	1167	1880	1074	1729	1063	1712	1003	1615	1002	1614	959	1544	963	1550	929	1496		
			G'		227.3 +28.9R	223.1 +25.3R	213.2 +24.2R	212 +21.5R	205.3 +20.5R	205.2 +18.5R	200.2 +17.8R	200.6 +16.3R	196.7 +15.6R											
		12"	q _a	q _f	1009	1624	920	1482	859	1383	814	1311	780	1256	753	1213	732	1178	714	1149	699	1125		
			G'		206.6 +36.1R	196 +33.5R	188.3 +31R	182.5 +28.8R	177.8 +26.8R	174.1 +25R	171 +23.4R	168.5 +22R	166.3 +20.8R											
		18"	q _a	q _f	901	1624	830	1337	703	1132	679	1093	661	1064	587	944	580	934	575	926	527	849		
			G'		194.1 +40.6R	184.9 +37.1R	167.3 +37.3R	163.6 +33.8R	160.7 +31R	149.7 +30.6R	148.7 +28.2R	147.8 +26.1R	139.9 +25.7R											
		24"	q _a	q _f	787	1267	737	1187	620	998	606	975	527	849	526	848	472	759	477	768	437	704		
			G'		179.8 +46.2R	172.4 +41.3R	155.1 +41.1R	152.8 +36.9R	140.6 +36.3R	140.3 +32.9R	131 +32.2R	131.7 +29.5R	124.2 +28.9R											
	20 ga	4"	q _a	q _f	1181	1902	1137	1830	1106	1780	1083	1743	1065	1714	1051	1692	982	1570	811	1298	682	1091		
			G'		209.9 +11.8R	206.8 +10.5R	204.6 +9.4R	203 +8.5R	201.7 +7.8R	200.7 +7.1R	199.9 +6.6R	199.2 +6.1R	198.6 +5.7R											
		6"	q _a	q _f	978	1574	921	1483	881	1419	852	1372	830	1336	812	1308	798	1285	786	1266	682	1091		
			G'		192.5 +16.9R	187.8 +15.4R	184.5 +14R	181.9 +12.8R	179.9 +11.8R	178.4 +10.9R	177.1 +10.1R	176 +9.5R	175.1 +8.9R											
		8"	q _a	q _f	856	1379	820	1320	749	1206	737	1187	692	1115	689	1109	657	1058	658	1059	633	1020		
			G'		180.6 +20.8R	177.6 +18.3R	170.3 +17.6R	169.4 +15.7R	164.5 +15.1R	164.4 +13.6R	160.7 +13.1R	161 +12R	158.1 +11.6R											
		12"	q _a	q _f	721	1161	652	1049	604	972	569	915	542	872	521	839	504	811	490	789	478	770		
			G'		165.5 +26.3R	157.6 +24.6R	151.9 +22.9R	147.4 +21.4R	144 +20R	141.1 +18.7R	138.8 +17.6R	136.8 +16.6R	135.2 +15.7R											
		18"	q _a	q _f	649	1161	592	953	499	803	475	765	457	736	404	651	399	642	395	636	362	583		
			G'		156.2 +29.8R	149.3 +27.4R	136 +27.9R	133.2 +25.5R	131 +23.4R	122.5 +23.3R	121.7 +21.5R	121 +20R	114.9 +19.8R											
		24"	q _a	q _f	574	923	530	853	440	708	425	684	369	595	365	588	329	529	331	533	303	488		
			G'		145.5 +34.1R	139.9 +30.8R	126.7 +31R	124.9 +28R	115.4 +27.8R	115.2 +25.2R	107.9 +24.9R	108.5 +22.8R	102.6 +22.4R											
22 ga	4"	q _a	q _f	948	1526	907	1461	879	1416	859	1382	843	1357	830	1336	750	1199	620	991	521	833			
		G'		179.2 +9.4R	176.7 +8.4R	174.9 +7.5R	173.6 +6.8R	172.6 +6.2R	171.8 +5.7R	171.1 +5.3R	170.6 +4.9R	170.1 +4.6R												
	6"	q _a	q _f	784	1262	734	1182	699	1126	674	1085	654	1053	639	1029	626	1009	616	991	521	833			
		G'		165.2 +13.6R	161.4 +12.4R	158.7 +11.3R	156.6 +10.3R	155 +9.5R	153.7 +8.8R	152.7 +8.2R	151.8 +7.7R	151.1 +7.2R												
	8"	q _a	q _f	688	1108	654	1053	595	959	583	939	546	880	542	873	516	831	516	830	496	798			
		G'		155.6 +16.8R	153.1 +14.8R	147.2 +14.3R	146.4 +12.8R	142.4 +12.3R	142.3 +11.1R	139.3 +10.7R	139.5 +9.8R	137.1 +9.5R												
	12"	q _a	q _f	583	939	524	843	483	777	453	729	428	690	410	660	396	637	384	618	374	603			
		G'		143.2 +21.3R	136.8 +20.1R	132 +18.8R	128.3 +17.6R	125.4 +16.5R	123.1 +15.5R	121.1 +14.6R	119.5 +13.8R	118.1 +13R												
	18"	q _a	q _f	527	939	477	768	399	642	377	608	362	582	321	516	315	508	311	501	285	459			
		G'		135.6 +24.3R	129.9 +22.5R	118.9 +23.1R	116.4 +21.1R	114.6 +19.4R	107.5 +19.5R	106.8 +18R	106.2 +16.7R	101 +16.6R												
	24"	q _a	q _f	469	756	428	689	354	570	339	546	295	474	291	469	262	422	262	423	241	387			
		G'		126.8 +28R	122.1 +25.4R	111 +25.8R	109.5 +23.3R	101.5 +23.4R	101.3 +21.2R	95.2 +21R	95.6 +19.2R	90.6 +19R												
BS-36 36/7 Support Attachment: Hilti X-ENP-19 PAF Side Seam Attachment: #10 SD HWH Screw																								

BS-36 36/7 Support Attachment: Hilti X-ENP-19 PAF Side Seam Attachment: #10 SD HWH Screw

Hilti X-ENP-19 Fasteners to Supports with
No. 10 Screws Side Seam Attachment
Diaphragm Shear in pounds per linear foot (plf)



HILTI



Support Fastener Pattern	Gage	Seam Attach. Spacing	Allowable Shear (q_a) (plf), Factored Shear (q_f) (plf), and Flexibility Factor (G') (kip/in)																		
			Span →	4' - 0"		5' - 0"		6' - 0"		7' - 0"		8' - 0"		9' - 0"		10' - 0"		11' - 0"		12' - 0"	
			q_a	q_f	q_a	q_f	q_a	q_f	q_a	q_f	q_a	q_f	q_a	q_f	q_a	q_f	q_a	q_f	q_a	q_f	
36/9	16 ga	4"	q_a	2617	4213	2510	4041	2433	3917	2376	3826	2332	3754	2297	3698	2120	3393	1752	2804	1472	2356
			G'	336.4 +26.4R		328.9 +24.1R		323.6 +22R		319.6 +20.2R		316.4 +18.6R		313.9 +17.3R		311.8 +16.1R		310.1 +15.1R		308.6 +14.2R	
		6"	q_a	2220	3575	2081	3351	1983	3192	1909	3074	1853	2983	1808	2911	1772	2852	1741	2803	1472	2356
			G'	310.1 +35.5R		299.6 +33.1R		291.9 +30.7R		286.1 +28.6R		281.5 +26.6R		277.7 +24.9R		274.6 +23.4R		272.1 +22R		269.9 +20.8R	
		8"	q_a	1981	3189	1878	3023	1714	2759	1673	2694	1569	2526	1553	2500	1479	2381	1474	2373	1417	2282
			G'	293.1 +41.9R		284.5 +38.1R		270.9 +37.1R		267.1 +33.8R		257.8 +32.7R		256.2 +30R		249.3 +29R		248.6 +26.8R		243.2 +25.9R	
		12"	q_a	1711	2755	1537	2475	1415	2278	1325	2133	1256	2023	1202	1935	1158	1864	1119	1802	1086	1749
			G'	272.5 +50.2R		256.6 +48.2R		244.6 +45.8R		235.4 +43.4R		227.9 +41.1R		221.9 +38.9R		216.8 +36.9R		212.6 +35R		208.9 +33.3R	
		18"	q_a	1566	2755	1414	2277	1200	1932	1137	1831	1084	1745	958	1543	933	1503	913	1470	834	1343
			G'	260.4 +55.4R		245.4 +52.5R		223.2 +53.4R		215.7 +49.8R		209.8 +46.5R		195.9 +46.3R		192.7 +43.3R		190 +40.6R		180 +40.1R	
		24"	q_a	1413	2274	1287	2071	1082	1743	1029	1657	895	1440	874	1407	782	1259	775	1249	708	1140
			G'	246.8 +61.3R		233.2 +57.4R		211 +58R		204.7 +53.6R		188.9 +53.2R		186 +49.2R		174 +48.5R		172.8 +45.1R		163.2 +44.4R	
	18 ga	4"	q_a	2010	3236	1915	3084	1848	2975	1798	2894	1759	2831	1728	2782	1514	2422	1251	2002	1051	1682
			G'	277.8 +20R		272.1 +18.3R		268 +16.8R		264.9 +15.4R		262.5 +14.3R		260.6 +13.3R		259 +12.4R		257.6 +11.6R		256.5 +10.9R	
		6"	q_a	1705	2745	1586	2554	1503	2419	1441	2319	1393	2242	1355	2181	1324	2131	1251	2002	1051	1682
			G'	257.7 +27.1R		249.6 +25.4R		243.6 +23.7R		239 +22.1R		235.4 +20.7R		232.5 +19.4R		230.1 +18.2R		228 +17.2R		226.3 +16.2R	
		8"	q_a	1525	2456	1434	2309	1302	2096	1265	2036	1182	1902	1165	1875	1107	1782	1099	1770	1051	1682
			G'	244.5 +32.2R		237.8 +29.5R		227.1 +28.9R		224.2 +26.4R		216.8 +25.6R		215.5 +23.5R		210 +22.8R		209.5 +21.1R		205.2 +20.5R	
		12"	q_a	1327	2136	1183	1905	1083	1743	1009	1624	952	1533	902	1452	862	1387	831	1337	806	1298
			G'	228.4 +38.9R		215.9 +37.7R		206.4 +36R		199 +34.3R		193.1 +32.6R		188.2 +30.9R		184.1 +29.4R		180.7 +28R		177.7 +26.7R	
		18"	q_a	1221	2136	1094	1761	923	1487	863	1389	817	1316	722	1162	699	1126	683	1100	626	1008
			G'	218.9 +43.1R		207.1 +41.2R		189.3 +42.3R		183.3 +39.6R		178.5 +37.2R		167.2 +37.2R		164.6 +34.9R		162.4 +32.8R		154.2 +32.6R	
		24"	q_a	1110	1787	1001	1612	833	1342	786	1265	682	1098	662	1065	591	952	585	942	536	863
			G'	208.2 +48R		197.3 +45.2R		179.5 +46.1R		174.4 +42.8R		161.6 +42.8R		159.1 +39.7R		149.3 +39.4R		148.3 +36.7R		140.4 +36.2R	
	20 ga	4"	q_a	1437	2313	1357	2184	1300	2093	1258	2025	1225	1973	1199	1931	982	1570	811	1298	682	1091
			G'	216.8 +13.9R		212.8 +12.8R		209.9 +11.8R		207.7 +10.9R		205.9 +10.1R		204.6 +9.4R		203.4 +8.8R		202.5 +8.2R		201.7 +7.7R	
		6"	q_a	1221	1966	1125	1812	1058	1703	1008	1622	969	1560	939	1511	914	1472	811	1298	682	1091
			G'	202.5 +19.1R		196.7 +18R		192.4 +16.9R		189.1 +15.8R		186.5 +14.8R		184.4 +13.9R		182.6 +13.1R		181.2 +12.4R		179.9 +11.8R	
		8"	q_a	1098	1768	1021	1644	921	1483	888	1429	826	1329	810	1304	767	1234	759	1221	682	1091
			G'	193.1 +22.9R		188.3 +21R		180.5 +20.8R		178.4 +19R		173 +18.6R		172 +17.1R		168 +16.7R		167.6 +15.5R		164.4 +15R	
		12"	q_a	964	1553	852	1372	774	1246	710	1144	661	1064	622	1002	595	958	573	922	555	893
			G'	181.5 +27.9R		172.3 +27.2R		165.4 +26.2R		159.8 +25.1R		155.4 +24R		151.8 +22.9R		148.7 +21.8R		146.1 +20.9R		143.9 +19.9R	
		18"	q_a	894	1553	793	1276	659	1061	610	982	573	922	505	813	489	788	477	768	437	704
			G'	174.6 +31R		165.9 +29.9R		152.7 +31.1R		148.1 +29.3R		144.5 +27.6R		135.9 +27.9R		133.9 +26.2R		132.2 +24.7R		126 +24.7R	
		24"	q_a	821	1321	728	1171	600	966	559	901	485	781	466	750	419	675	413	665	379	609
			G'	166.7 +34.7R		158.6 +33R		145.3 +34.1R		141.4 +31.8R		131.6 +32.1R		129.8 +29.9R		122.2 +29.9R		121.4 +27.9R		115.3 +27.7R	
	22 ga	4"	q_a	1158	1865	1088	1751	1037	1670	1000	1610	971	1564	926	1481	750	1199	620	991	521	833
			G'	184.6 +11R		181.4 +10.2R		179.1 +9.4R		177.4 +8.7R		176 +8R		174.9 +7.5R		174 +7R		173.2 +6.6R		172.6 +6.2R	
		6"	q_a	987	1590	904	1456	846	1361	802	1292	769	1238	743	1196	721	1162	620	991	521	833
			G'	173.3 +15.2R		168.6 +14.4R		165.1 +13.5R		162.5 +12.7R		160.3 +12R		158.6 +11.3R		157.2 +10.6R		156 +10R		155 +9.5R	
		8"	q_a	891	1435	823	1325	739	1190	709	1141	658	1059	643	1034	605	975	599	964	521	833
			G'	165.7 +18.3R		161.8 +16.9R		155.5 +16.8R		153.7 +15.4R		149.4 +15.1R		148.5 +13.9R		145.3 +13.6R		144.9 +12.6R		142.3 +12.3R	
		12"	q_a	788	1268	692	1114	621	999	565	910	524	844	494	796	472	759	453	729	438	705
			G'	156.3 +22.4R		148.8 +22R		143.1 +21.3R		138.6 +20.5R		134.9 +19.6R		131.9 +18.8R		129.4 +18R		127.2 +17.2R		125.4 +16.5R	
		18"	q_a	733	1268	645	1038	532	856	489	787	457	736	405	652	391	630	380	612	348	561
			G'	150.7 +25R		143.6 +24.3R		132.7 +25.5R		128.9 +24.1R		125.9 +22.7R		118.7 +23.1R		117.1 +21.7R		115.7 +20.5R		110.4 +20.6R	
		24"	q_a	677	1090	591	952	487	784	451	726	390	628	375	604	338	544	331	534	304	489
			G'	144.3 +28.1R		137.6 +26.9R		126.6 +28R		123.3 +26.2R		115.2 +26.6R		113.6 +24.8R		107.2 +24.9R		106.6 +23.3R		101.4 +23.2R	
BS-36 36/9 Support Attachment: Hilti X-ENP-19 PAF Side Seam Attachment: #10 SD HWH Screw																					

BS-36 36/9

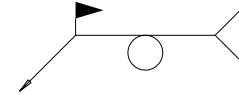
Support Attachment: Hilti X-ENP-19 PAF

Side Seam Attachment: #10 SD HWH Screw

2.10 B-36

Arc Spot/Seam Welds to Supports with Top Seam Welded Side Seam Attachment

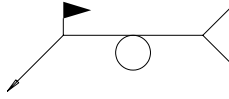
Diaphragm Shear in pounds per linear foot (plf)



Support Fastener Pattern	Gage	Seam Attach. Spacing	Allowable Shear (q _a) (plf), Factored Shear (q _f) (plf), and Flexibility Factor (G') (kip/in)																			
			Span →		4' - 0"		5' - 0"		6' - 0"		7' - 0"		8' - 0"		9' - 0"		10' - 0"		11' - 0"		12' - 0"	
			q _a	q _f	q _a	q _f	q _a	q _f	q _a	q _f	q _a	q _f	q _a	q _f	q _a	q _f	q _a	q _f	q _a	q _f	q _a	q _f
36/4	16 ga	4"	q _a	q _f	2421	3994	2421	3994	2421	3994	2421	3994	2421	3994	2120	3393	1752	2804	1472	2356		
			G'	391.4	+3.6R	390.6	+2.9R	390.1	+2.5R	389.7	+2.2R	389.4	+1.9R	389.2	+1.7R	389	+1.5R	388.9	+1.4R	388.8	+1.3R	
		6"	q _a	q _f	2421	3994	2421	3994	2421	3994	2421	3994	2421	3994	2421	3994	2120	3393	1752	2804	1472	2356
			G'	359.9	+6.3R	358.5	+5.3R	357.6	+4.5R	356.9	+3.9R	356.4	+3.5R	356	+3.1R	355.6	+2.8R	355.4	+2.6R	355.2	+2.4R	
		8"	q _a	q _f	2421	3994	2421	3994	2421	3994	2421	3994	2421	3994	2421	3994	2120	3393	1752	2804	1472	2356
			G'	334.4	+9.2R	338.4	+7R	330.9	+6.5R	334.4	+5.4R	329.1	+5.1R	332.2	+4.4R	328.1	+4.2R	330.7	+3.7R	327.3	+3.5R	
		12"	q _a	q _f	2318	3825	2258	3725	2214	3654	2182	3601	2157	3560	2137	3527	2120	3393	1752	2804	1472	2356
			G'	295.4	+14.3R	292.1	+12.1R	289.8	+10.4R	288.2	+9.2R	286.9	+8.2R	286	+7.4R	285.2	+6.7R	284.5	+6.2R	284	+5.7R	
		18"	q _a	q _f	2077	3825	2055	3391	1829	3019	1849	3051	1864	3075	1718	2835	1744	2878	1752	2804	1472	2356
			G'	267	+18.8R	269.2	+15R	247.3	+15.3R	252.2	+12.7R	255.8	+10.9R	241.6	+11R	245.7	+9.6R	249.1	+8.5R	238.6	+8.5R	
		24"	q _a	q _f	1758	2901	1801	2972	1578	2604	1640	2705	1480	2442	1542	2544	1419	2341	1476	2436	1377	2271
			G'	228.6	+25.6R	240.2	+19.2R	218.2	+19.2R	228.7	+15.4R	212.7	+15.3R	221.9	+12.8R	209.4	+12.7R	217.4	+10.9R	207.1	+10.8R	
	18 ga	4"	q _a	q _f	1900	3136	1900	3136	1900	3136	1900	3136	1900	3136	1869	2990	1514	2422	1251	2002	1051	1682
			G'	319.2	+2.6R	318.7	+2.2R	318.3	+1.8R	318	+1.6R	317.8	+1.4R	317.6	+1.3R	317.5	+1.1R	317.4	+1R	317.3	+1R	
		6"	q _a	q _f	1900	3136	1900	3136	1900	3136	1900	3136	1900	3136	1869	2990	1514	2422	1251	2002	1051	1682
			G'	295.6	+4.8R	294.6	+4R	293.9	+3.4R	293.4	+2.9R	293	+2.6R	292.7	+2.3R	292.4	+2.1R	292.2	+1.9R	292.1	+1.8R	
		8"	q _a	q _f	1900	3136	1900	3136	1900	3136	1900	3136	1900	3136	1869	2990	1514	2422	1251	2002	1051	1682
			G'	276.3	+7R	279.3	+5.4R	273.6	+5R	276.3	+4.1R	272.3	+3.9R	274.6	+3.3R	271.4	+3.2R	273.4	+2.8R	270.9	+2.7R	
		12"	q _a	q _f	1783	2942	1733	2859	1697	2799	1670	2755	1649	2721	1632	2693	1514	2422	1251	2002	1051	1682
			G'	246.2	+11.1R	243.7	+9.4R	241.9	+8.1R	240.6	+7.1R	239.7	+6.4R	238.9	+5.7R	238.3	+5.2R	237.8	+4.8R	237.3	+4.4R	
		18"	q _a	q _f	1594	2942	1574	2596	1396	2304	1409	2325	1419	2342	1305	2154	1325	2186	1251	2002	1051	1682
			G'	224.1	+14.7R	225.8	+11.8R	208.5	+12.1R	212.4	+10.1R	215.1	+8.6R	203.9	+8.7R	207.2	+7.6R	209.8	+6.7R	201.5	+6.8R	
		24"	q _a	q _f	1348	2225	1377	2273	1203	1986	1248	2059	1124	1855	1170	1931	1075	1774	1118	1845	1041	1682
			G'	193.6	+20.4R	202.8	+15.2R	185.2	+15.3R	193.6	+12.3R	180.8	+12.3R	188.2	+10.2R	178	+10.2R	184.5	+8.8R	176.2	+8.7R	
	20 ga	4"	q _a	q _f	1121	1850	1121	1850	1121	1850	1121	1850	1121	1850	1121	1850	982	1570	811	1298	682	1091
			G'	245.4	+1.8R	245	+1.5R	244.7	+1.3R	244.6	+1.1R	244.4	+1R	244.3	+0.9R	244.2	+0.8R	244.1	+0.7R	244.1	+0.7R	
		6"	q _a	q _f	1121	1850	1121	1850	1121	1850	1121	1850	1121	1850	1121	1850	982	1570	811	1298	682	1091
			G'	229.2	+3.3R	228.5	+2.7R	228	+2.3R	227.6	+2R	227.3	+1.8R	227.1	+1.6R	226.9	+1.5R	226.8	+1.4R	226.7	+1.2R	
		8"	q _a	q _f	1121	1850	1121	1850	1121	1850	1121	1850	1121	1850	1121	1850	982	1570	811	1298	682	1091
			G'	215.6	+4.9R	217.8	+3.7R	213.8	+3.5R	215.7	+2.9R	212.8	+2.7R	214.5	+2.3R	212.3	+2.2R	213.7	+2R	211.9	+1.9R	
		12"	q _a	q _f	1108	1829	1083	1787	1065	1758	1052	1736	1042	1719	1033	1705	982	1570	811	1298	682	1091
			G'	194.3	+7.9R	192.5	+6.7R	191.2	+5.8R	190.3	+5.1R	189.6	+4.6R	189	+4.1R	188.6	+3.8R	188.2	+3.5R	187.9	+3.2R	
		18"	q _a	q _f	997	1829	990	1634	887	1463	898	1481	906	1495	838	1383	852	1406	811	1298	682	1091
			G'	178.3	+10.7R	179.5	+8.5R	166.8	+8.9R	169.7	+7.4R	171.7	+6.3R	163.4	+6.4R	165.9	+5.6R	167.8	+5R	161.6	+5R	
		24"	q _a	q _f	846	1395	871	1436	766	1264	798	1317	723	1193	754	1244	696	1148	725	1196	677	1091
			G'	155.8	+15.1R	162.6	+11.2R	149.5	+11.5R	155.8	+9.1R	146.1	+9.2R	151.7	+7.6R	144.1	+7.7R	149	+6.6R	142.7	+6.6R	
	22 ga	4"	q _a	q _f	805	1329	805	1329	805	1329	805	1329	805	1329	805	1329	750	1199	620	991	521	833
			G'	207.1	+1.4R	206.8	+1.2R	206.6	+1R	206.5	+0.9R	206.4	+0.8R	206.3	+0.7R	206.2	+0.6R	206.2	+0.6R	206.1	+0.5R	
		6"	q _a	q _f	805	1329	805	1329	805	1329	805	1329	805	1329	805	1329	750	1199	620	991	521	833
			G'	194.4	+2.6R	193.9	+2.2R	193.5	+1.8R	193.2	+1.6R	193	+1.4R	192.8	+1.3R	192.7	+1.2R	192.6	+1.1R	192.5	+1R	
		8"	q _a	q _f	805	1329	805	1329	805	1329	805	1329	805	1329	805	1329	750	1199	620	991	521	833
			G'	183.7	+3.9R	185.4	+3R	182.2	+2.8R	183.7	+2.3R	181.5	+2.2R	182.8	+1.9R	181	+1.8R	182.1	+1.6R	180.7	+1.5R	
		12"	q _a	q _f	805	1329	804	1326	792	1307	784	1293	777	1282	772	1273	750	1199	620	991	521	833
			G'	166.6	+6.4R	165.1	+5.4R	164.1	+4.7R	163.4	+4.1R	162.8	+3.7R	162.4	+3.3R	162	+3R	161.7	+2.8R	161.5	+2.6R	
		18"	q _a	q _f	741	1329	738	1217	664	1096	674	1112	681	1123	632	1043	643	1060	620	991	521	833
			G'	153.6	+8.6R	154.7	+6.9R	144.3	+7.3R	146.6	+6R	148.3	+5.1R	141.5	+5.3R	143.5	+4.6R	145.1	+4.1R	140	+4.1R	
		24"	q _a	q _f	630	1039	651	1074	576	950	601	991	546	901	570	941	528	871	550	907	515	833
			G'	135.2	+12.4R	140.8	+9.2R	130	+9.5R	135.2	+7.5R	127.2	+7.6R	131.8	+6.3R	125.5	+6.4R	129.6	+5.4R	124.3	+5.5R	
			B-36 36/4 Support Attachment: 0.5" Effective Dia. Arc Spot Weld Side Seam Attachment: Top Seam Side-Lap Weld																			

B-36 36/4 Support Attachment: 0.5" Effective Dia. Arc Spot Weld Side Seam Attachment: Top Seam Side-Lap Weld

**Arc Spot/Seam Welds to Supports with
Top Seam Welded Side Seam Attachment**
Diaphragm Shear in pounds per linear foot (plf)

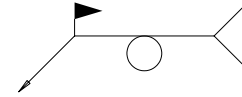


Support Fastener Pattern	Gage	Seam Attach. Spacing	Allowable Shear (q _a) (plf), Factored Shear (q _f) (plf), and Flexibility Factor (G') (kip/in)																			
			Span →		4' - 0"		5' - 0"		6' - 0"		7' - 0"		8' - 0"		9' - 0"		10' - 0"		11' - 0"		12' - 0"	
			q _a	q _f																		
36/7	16 ga	4"	q _a	q _f	4726	7798	4685	7730	4656	7682	4327	6924	3313	5301	2618	4188	2120	3393	1752	2804	1472	2356
			G'	393.3 +5R		392.1 +4.2R		391.4 +3.6R		390.8 +3.1R		390.4 +2.8R		390.1 +2.5R		389.8 +2.3R		389.6 +2.1R		389.4 +1.9R		
		6"	q _a	q _f	4163	6869	4085	6741	4030	6650	3990	6583	3313	5301	2618	4188	2120	3393	1752	2804	1472	2356
			G'	363.3 +8.8R		361.3 +7.4R		359.9 +6.4R		358.9 +5.6R		358.2 +5R		357.6 +4.5R		357.1 +4.1R		356.7 +3.8R		356.4 +3.5R		
		8"	q _a	q _f	3712	6125	3713	6127	3528	5821	3557	5868	3313	5301	2618	4188	2120	3393	1752	2804	1472	2356
			G'	339.4 +12.5R		342.2 +9.8R		334.4 +9.2R		337.3 +7.7R		331.8 +7.3R		334.5 +6.3R		330.2 +6R		332.6 +5.3R		329.2 +5.1R		
		12"	q _a	q _f	3089	5097	2941	4853	2838	4683	2762	4558	2704	4461	2618	4188	2120	3393	1752	2804	1472	2356
			G'	303.3 +19.1R		298.7 +16.4R		295.5 +14.4R		293.1 +12.8R		291.3 +11.5R		289.9 +10.5R		288.7 +9.6R		287.8 +8.8R		287 +8.2R		
		18"	q _a	q _f	2699	5097	2616	4316	2255	3721	2256	3723	2257	3724	2041	3367	2063	3393	1752	2804	1472	2356
			G'	277.6 +24.5R		277.5 +20.2R		255.7 +20.8R		259.1 +17.6R		261.6 +15.2R		247.4 +15.4R		250.9 +13.6R		253.6 +12.1R		243.1 +12.2R		
		24"	q _a	q _f	2251	3715	2254	3718	1925	3177	1975	3259	1754	2893	1813	2991	1648	2719	1707	2804	1472	2356
			G'	243.2 +32.7R		250.8 +25.4R		228.8 +25.7R		237.1 +21R		221 +21R		228.8 +17.8R		216.2 +17.7R		223.2 +15.4R		212.8 +15.3R		
	18 ga	4"	q _a	q _f	3656	6032	3620	5973	3595	5931	3089	4943	2365	3784	1869	2990	1514	2422	1251	2002	1051	1682
			G'	320.6 +3.7R		319.8 +3.1R		319.2 +2.7R		318.8 +2.3R		318.5 +2.1R		318.3 +1.9R		318.1 +1.7R		317.9 +1.5R		317.8 +1.4R		
		6"	q _a	q _f	3201	5281	3135	5173	3089	5097	3055	4943	2365	3784	1869	2990	1514	2422	1251	2002	1051	1682
			G'	298.2 +6.6R		296.7 +5.6R		295.7 +4.8R		294.9 +4.2R		294.3 +3.8R		293.9 +3.4R		293.5 +3.1R		293.2 +2.8R		293 +2.6R		
		8"	q _a	q _f	2844	4693	2841	4687	2692	4443	2712	4475	2365	3784	1869	2990	1514	2422	1251	2002	1051	1682
			G'	280.1 +9.5R		282.2 +7.4R		276.3 +7R		278.5 +5.8R		274.3 +5.5R		276.3 +4.8R		273.1 +4.6R		274.9 +4.1R		272.3 +3.9R		
		12"	q _a	q _f	2362	3897	2243	3700	2159	3562	2097	3461	2050	3383	1869	2990	1514	2422	1251	2002	1051	1682
			G'	252.4 +14.7R		248.8 +12.7R		246.3 +11.1R		244.5 +9.9R		243.1 +8.9R		242 +8.1R		241.1 +7.5R		240.3 +6.9R		239.7 +6.4R		
		18"	q _a	q _f	2064	3897	1994	3291	1716	2831	1713	2826	1710	2822	1545	2549	1514	2422	1251	2002	1051	1682
			G'	232.3 +19.1R		232.3 +15.7R		215.2 +16.3R		217.8 +13.8R		219.8 +12R		208.6 +12.2R		211.3 +10.7R		213.4 +9.6R		205.1 +9.7R		
		24"	q _a	q _f	1726	2849	1720	2838	1467	2421	1501	2476	1331	2196	1373	2266	1247	2058	1251	2002	1051	1682
			G'	205.2 +25.8R		211.3 +20R		193.7 +20.4R		200.4 +16.7R		187.5 +16.8R		193.7 +14.2R		183.5 +14.2R		189.2 +12.3R		180.8 +12.3R		
	20 ga	4"	q _a	q _f	2238	3693	2222	3667	2211	3648	2003	3205	1534	2454	1212	1939	982	1570	811	1298	682	1091
			G'	246.4 +2.5R		245.8 +2.1R		245.4 +1.8R		245.1 +1.6R		244.9 +1.4R		244.8 +1.3R		244.6 +1.1R		244.5 +1.1R		244.4 +1R		
		6"	q _a	q _f	1991	3286	1960	3233	1937	3196	1921	3169	1534	2454	1212	1939	982	1570	811	1298	682	1091
			G'	231 +4.6R		229.9 +3.8R		229.2 +3.3R		228.7 +2.9R		228.3 +2.6R		228 +2.4R		227.7 +2.1R		227.5 +2R		227.3 +1.8R		
		8"	q _a	q _f	1786	2947	1791	2955	1709	2819	1724	2844	1534	2454	1212	1939	982	1570	811	1298	682	1091
			G'	218.3 +6.6R		219.8 +5.2R		215.7 +4.9R		217.2 +4.1R		214.3 +3.9R		215.7 +3.4R		213.4 +3.2R		214.7 +2.8R		212.9 +2.7R		
		12"	q _a	q _f	1493	2463	1428	2357	1383	2282	1350	2227	1324	2185	1212	1939	982	1570	811	1298	682	1091
			G'	198.7 +10.5R		196.2 +9.1R		194.4 +8R		193 +7.1R		192 +6.4R		191.2 +5.8R		190.6 +5.4R		190 +5R		189.6 +4.6R		
		18"	q _a	q _f	1304	2463	1271	2097	1100	1814	1104	1822	1107	1827	1003	1655	982	1570	811	1298	682	1091
			G'	184.3 +13.8R		184.3 +11.3R		171.7 +11.9R		173.7 +10.1R		175.1 +8.7R		166.9 +8.9R		168.9 +7.9R		170.5 +7R		164.3 +7.1R		
		24"	q _a	q _f	1084	1789	1094	1804	937	1545	965	1593	859	1417	891	1469	810	1337	811	1298	682	1091
			G'	164.4 +18.9R		168.9 +14.6R		155.9 +15.1R		160.8 +12.3R		151.2 +12.5R		155.8 +10.5R		148.2 +10.6R		152.5 +9.2R		146.2 +9.2R		
	22 ga	4"	q _a	q _f	1611	2658	1611	2658	1611	2658	1530	2448	1171	1874	926	1481	750	1199	620	991	521	833
			G'	207.9 +2R		207.5 +1.7R		207.2 +1.4R		206.9 +1.2R		206.8 +1.1R		206.6 +1R		206.5 +0.9R		206.5 +0.8R		206.4 +0.8R		
		6"	q _a	q _f	1473	2430	1453	2397	1438	2373	1428	2356	1171	1874	926	1481	750	1199	620	991	521	833
			G'	195.8 +3.6R		195 +3R		194.4 +2.6R		194 +2.3R		193.7 +2.1R		193.5 +1.9R		193.3 +1.7R		193.1 +1.6R		193 +1.4R		
		8"	q _a	q _f	1329	2193	1335	2202	1278	2109	1291	2129	1171	1874	926	1481	750	1199	620	991	521	833
			G'	185.8 +5.2R		187 +4.1R		183.7 +3.9R		185 +3.2R		182.6 +3.1R		183.8 +2.7R		181.9 +2.6R		183 +2.3R		181.5 +2.2R		
12"		q _a	q _f	1117	1842	1073	1770	1042	1720	1020	1683	1003	1654	926	1481	750	1199	620	991	521	833	
		G'	170.2 +8.4R		168.1 +7.3R		166.7 +6.4R		165.6 +5.7R		164.8 +5.2R		164.1 +4.7R		163.6 +4.3R		163.2 +4R		162.8 +3.7R			
18"		q _a	q _f	976	1842	956	1577	830	1370	836	1380	840	1387	763	1259	750	1199	620	991	521	833	
		G'	158.5 +11.1R		158.5 +9.2R		148.3 +9.7R		149.9 +8.2R		151.1 +7.1R		144.3 +7.3R		146 +6.4R		147.3 +5.7R		142.2 +5.8R			
24"		q _a	q _f	809	1336	822	1356	706	1165	731	1206	651	1074	677	1118	617	1018	620	991	521	833	
		G'	142.3 +15.4R		146 +11.9R		135.3 +12.4R		139.4 +10.1R		131.4 +10.3R		135.3 +8.7R		129 +8.8R		132.5 +7.6R		127.3 +7.7R			
B-36 36/7 Support Attachment: 0.5" Effective Dia. Arc Spot Weld Side Seam Attachment: Top Seam Side-Lap Weld																						

2.10 B-36

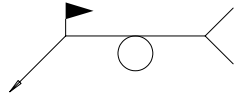
Arc Spot/Seam Welds to Supports with Button Punch Side Seam Attachments

Diaphragm Shear in pounds per linear foot (plf)



Support Fastener Pattern	Gage	Seam Attach. Spacing	Allowable Shear (q _a) (plf), Factored Shear (q _f) (plf), and Flexibility Factor (G') (kip/in)																			
			Span →	4' - 0"		5' - 0"		6' - 0"		7' - 0"		8' - 0"		9' - 0"		10' - 0"		11' - 0"		12' - 0"		
			q _a	q _f																		
36/4	16 ga	4"	q _a	q _f	920	1518	748	1234	633	1044	551	909	489	807	441	728	403	665	372	614	347	572
			G'	131.7 +46.8R		119.7 +41.1R		111.3 +36.6R		105.1 +32.9R		100.3 +29.8R		96.5 +27.3R		93.4 +25.1R		90.8 +23.3R		88.7 +21.7R		
		6"	q _a	q _f	887	1463	714	1179	600	989	518	854	456	752	408	673	370	610	339	559	313	517
			G'	118.3 +50.2R		105.4 +44.2R		96.3 +39.4R		89.5 +35.5R		84.3 +32.3R		80.2 +29.5R		76.8 +27.2R		74.1 +25.3R		71.7 +23.6R		
		8"	q _a	q _f	870	1435	701	1157	583	962	503	830	439	725	393	649	353	583	323	534	297	490
			G'	111.3 +52R		99.3 +45.5R		88.3 +40.9R		82.5 +36.7R		75.8 +33.6R		72.5 +30.6R		68 +28.4R		65.9 +26.3R		62.7 +24.6R		
		12"	q _a	q _f	853	1408	681	1124	566	934	484	799	423	697	375	618	337	555	305	504	280	462
			G'	103.9 +53.9R		89.9 +47.7R		80 +42.6R		72.6 +38.4R		67 +35R		62.5 +32.1R		58.8 +29.6R		55.8 +27.5R		53.2 +25.7R		
		18"	q _a	q _f	845	1408	674	1113	555	916	475	783	414	684	364	600	327	539	296	489	269	444
			G'	100.1 +54.9R		86.6 +48.4R		74.2 +43.7R		67.5 +39.3R		62.4 +35.7R		56.2 +33R		53.1 +30.4R		50.5 +28.2R		46.7 +26.4R		
		24"	q _a	q _f	837	1380	668	1102	550	907	470	775	406	670	360	594	320	528	290	479	263	435
			G'	96.3 +55.9R		83.3 +49.2R		71.3 +44.3R		64.9 +39.8R		57.7 +36.5R		54.1 +33.3R		49.2 +30.9R		46.9 +28.6R		43.3 +26.8R		
	18 ga	4"	q _a	q _f	740	1221	605	998	514	849	450	743	402	663	364	601	334	551	311	514	294	485
			G'	114.2 +38.8R		104.1 +34.3R		96.9 +30.7R		91.6 +27.7R		87.5 +25.2R		84.3 +23.1R		81.7 +21.3R		79.5 +19.8R		77.6 +18.5R		
		6"	q _a	q _f	706	1166	571	943	481	794	417	688	368	608	331	546	301	496	278	459	260	430
			G'	102.9 +41.8R		91.9 +37.1R		84.2 +33.2R		78.4 +30.1R		73.9 +27.4R		70.4 +25.2R		67.5 +23.3R		65.1 +21.6R		63 +20.2R		
		8"	q _a	q _f	690	1138	558	921	464	766	402	664	352	580	316	522	284	469	263	434	244	402
			G'	97 +43.4R		86.8 +38.3R		77.3 +34.7R		72.3 +31.2R		66.6 +28.7R		63.7 +26.2R		59.8 +24.4R		58 +22.6R		55.2 +21.2R		
		12"	q _a	q _f	673	1111	538	888	448	739	383	633	335	553	298	491	268	441	245	404	227	375
			G'	90.7 +45.1R		78.7 +40.2R		70.2 +36.2R		63.9 +32.8R		59 +30R		55.1 +27.6R		51.9 +25.5R		49.2 +23.7R		47 +22.2R		
		18"	q _a	q _f	665	1111	531	877	437	721	374	617	327	539	286	473	258	425	236	389	216	356
			G'	87.5 +46R		75.9 +40.9R		65.3 +37.3R		59.5 +33.7R		55 +30.7R		49.6 +28.4R		46.9 +26.3R		44.6 +24.4R		41.3 +22.9R		
		24"	q _a	q _f	656	1083	525	866	431	711	369	609	318	525	283	467	251	414	229	379	210	347
			G'	84.2 +47R		73.1 +41.6R		62.8 +37.8R		57.2 +34.1R		50.9 +31.4R		47.8 +28.7R		43.5 +26.8R		41.5 +24.8R		38.3 +23.3R		
	20 ga	4"	q _a	q _f	473	781	394	651	341	563	303	500	275	453	253	417	237	391	225	371	214	354
			G'	94.7 +30.2R		86.7 +27R		80.9 +24.3R		76.7 +22R		73.4 +20.2R		70.7 +18.5R		68.6 +17.2R		66.8 +16R		65.3 +14.9R		
		6"	q _a	q _f	441	727	361	596	308	508	270	445	241	398	219	362	204	336	191	316	181	299
			G'	85.8 +32.8R		76.9 +29.4R		70.6 +26.6R		65.9 +24.2R		62.3 +22.2R		59.4 +20.4R		57 +18.9R		55 +17.6R		53.3 +16.5R		
		8"	q _a	q _f	424	700	348	574	291	481	256	422	225	371	204	337	187	309	176	291	164	271
			G'	81 +34.2R		72.8 +30.5R		65.1 +27.8R		61 +25.2R		56.3 +23.3R		53.9 +21.3R		50.7 +19.9R		49.2 +18.5R		46.8 +17.4R		
		12"	q _a	q _f	408	672	328	541	275	453	237	390	208	343	186	307	170	281	158	261	148	244
			G'	76 +35.7R		66.3 +32.2R		59.3 +29.2R		54.1 +26.6R		50 +24.5R		46.7 +22.6R		44.1 +21R		41.9 +19.6R		40 +18.3R		
		18"	q _a	q _f	399	672	321	530	263	435	227	375	200	330	175	288	160	265	149	246	136	225
			G'	73.4 +36.5R		64 +32.8R		55.2 +30.2R		50.4 +27.4R		46.7 +25.1R		42.2 +23.4R		39.9 +21.7R		38 +20.2R		35.2 +19R		
		24"	q _a	q _f	391	645	314	519	258	426	222	367	191	316	171	282	154	254	143	236	131	216
			G'	70.8 +37.3R		61.7 +33.4R		53.2 +30.7R		48.6 +27.8R		43.3 +25.8R		40.7 +23.7R		37.1 +22.1R		35.4 +20.6R		32.8 +19.4R		
	22 ga	4"	q _a	q _f	364	600	310	511	272	448	244	403	224	369	209	346	198	328	190	313	182	300
			G'	83.9 +25.6R		76.9 +23R		72 +20.8R		68.3 +19R		65.4 +17.4R		63.1 +16.1R		61.2 +14.9R		59.6 +13.9R		58.3 +13R		
		6"	q _a	q _f	334	551	276	456	238	393	211	348	191	314	176	291	165	273	156	258	149	245
			G'	76.2 +27.9R		68.5 +25.3R		63 +22.9R		58.9 +20.9R		55.7 +19.2R		53.1 +17.8R		51.1 +16.5R		49.3 +15.4R		47.8 +14.5R		
		8"	q _a	q _f	317	523	263	434	222	366	197	325	174	287	161	266	148	245	141	233	132	218
			G'	72.1 +29.2R		64.9 +26.2R		58.2 +24.1R		54.6 +21.9R		50.5 +20.3R		48.4 +18.7R		45.5 +17.5R		44.2 +16.2R		42.1 +15.3R		
		12"	q _a	q _f	300	496	243	401	205	338	178	293	157	259	143	236	132	218	123	203	115	190
G'			67.8 +30.6R		59.2 +27.8R		53.1 +25.3R		48.5 +23.2R		44.9 +21.4R		42 +19.8R		39.7 +18.5R		37.7 +17.3R		36.1 +16.2R			
18"		q _a	q _f	292	496	236	390	194	320	168	277	149	246	132	217	122	201	114	188	104	172	
		G'	65.5 +31.3R		57.3 +28.4R		49.6 +26.2R		45.3 +24R		42 +22R		38 +20.6R		36 +19.1R		34.3 +17.8R		31.8 +16.8R			
24"		q _a	q _f	284	468	230	379	188	311	163	270	141	232	128	211	115	190	108	178	99	163	
		G'	63.2 +32.1R		55.2 +28.9R		47.7 +26.7R		43.7 +24.3R		39 +22.6R		36.7 +20.8R		33.5 +19.5R		32 +18.2R		29.6 +17.2R			
B-36 36/4 Support Attachment: 0.5" Effective Dia. Arc Spot Weld Side Seam Attachment: Button Punch																						

Arc Spot/Seam Welds to Supports with
Button Punch Side Seam Attachments
Diaphragm Shear in pounds per linear foot (plf)



Support Fastener Pattern	Gage	Seam Attach. Spacing	Allowable Shear (q_a) (plf), Factored Shear (q_f) (plf), and Flexibility Factor (G') (kip/in)															
			Span →		4' - 0"		5' - 0"		6' - 0"		7' - 0"		8' - 0"		9' - 0"		10' - 0"	
			q_a	q_f	q_a	q_f	q_a	q_f	q_a	q_f	q_a	q_f	q_a	q_f	q_a	q_f	q_a	q_f
36/7	16 ga	4"	q_a	q_f	1279	2110	1035	1707	872	1439	756	1247	669	1103	601	991	547	902
			G'		159.2	+56.7R	143.4	+51.5R	132	+47R	123.5	+43R	116.9	+39.6R	111.5	+36.7R	107.2	+34.2R
		6"	q_a	q_f	1245	2055	1001	1652	839	1384	722	1192	635	1048	568	936	513	847
			G'		147.9	+60.4R	130.9	+55R	118.7	+50.3R	109.5	+46.2R	102.3	+42.6R	96.5	+39.5R	91.8	+36.8R
		8"	q_a	q_f	1229	2027	988	1630	822	1356	708	1168	619	1021	553	912	497	820
			G'		141.9	+62.3R	125.7	+56.6R	111.6	+52.1R	103.1	+47.7R	94.6	+44.3R	89.5	+40.9R	83.6	+38.3R
		12"	q_a	q_f	1212	2000	968	1597	805	1329	689	1137	602	993	534	881	480	792
			G'		135.8	+64.4R	117.5	+58.9R	104.3	+54R	94.3	+49.8R	86.5	+46R	80.3	+42.7R	75.1	+39.9R
		18"	q_a	q_f	1204	2000	961	1586	794	1310	680	1121	594	980	523	863	470	776
			G'		132.6	+65.4R	114.7	+59.8R	99.3	+55.4R	89.8	+50.8R	82.4	+46.9R	74.5	+43.9R	69.8	+40.9R
		24"	q_a	q_f	1195	1972	955	1575	789	1301	675	1113	585	966	519	857	463	765
			G'		129.4	+66.5R	111.9	+60.6R	96.7	+56.1R	87.5	+51.4R	78.2	+47.8R	72.6	+44.3R	66.2	+41.5R
	18 ga	4"	q_a	q_f	1021	1685	830	1369	702	1159	611	1008	543	895	489	807	447	737
			G'		137.1	+46.3R	123.9	+42.4R	114.4	+38.9R	107.3	+35.8R	101.6	+33.1R	97.1	+30.8R	93.4	+28.7R
		6"	q_a	q_f	988	1630	797	1314	669	1104	578	953	509	840	456	752	413	682
			G'		127.7	+49.4R	113.5	+45.5R	103.2	+41.9R	95.4	+38.7R	89.3	+35.8R	84.4	+33.4R	80.3	+31.2R
		8"	q_a	q_f	971	1603	783	1292	652	1076	563	930	493	813	441	728	397	655
			G'		122.8	+51.1R	109.1	+46.8R	97.3	+43.5R	90	+40R	82.7	+37.3R	78.3	+34.6R	73.3	+32.5R
		12"	q_a	q_f	955	1575	763	1259	636	1049	544	898	476	785	423	697	380	627
			G'		117.7	+52.9R	102.3	+49R	91.1	+45.2R	82.5	+41.9R	75.9	+38.9R	70.5	+36.3R	66	+34R
		18"	q_a	q_f	946	1575	757	1248	624	1030	535	882	468	772	412	679	370	611
			G'		115	+53.9R	99.9	+49.7R	86.8	+46.5R	78.7	+42.9R	72.3	+39.8R	65.5	+37.4R	61.5	+34.9R
		24"	q_a	q_f	938	1548	750	1237	619	1021	530	875	459	758	408	673	363	600
			G'		112.3	+54.8R	97.5	+50.5R	84.6	+47.1R	76.7	+43.4R	68.7	+40.6R	63.9	+37.7R	58.4	+35.5R
	20 ga	4"	q_a	q_f	640	1057	527	870	452	746	398	657	358	590	326	539	304	501
			G'		112.8	+35.3R	102.5	+32.7R	94.9	+30.3R	89.2	+28.1R	84.7	+26.1R	81.1	+24.4R	78.1	+22.8R
		6"	q_a	q_f	607	1002	494	815	419	691	365	602	325	535	293	484	270	446
			G'		105.5	+38R	94.3	+35.4R	86	+32.9R	79.8	+30.6R	74.8	+28.5R	70.8	+26.7R	67.5	+25R
		8"	q_a	q_f	590	974	481	793	402	663	351	578	308	508	278	459	254	418
			G'		101.6	+39.4R	90.8	+36.5R	81.3	+34.3R	75.4	+31.7R	69.5	+29.8R	65.9	+27.8R	61.8	+26.2R
		12"	q_a	q_f	574	947	461	760	385	636	332	547	291	480	260	429	237	391
			G'		97.6	+40.9R	85.3	+38.3R	76.3	+35.8R	69.4	+33.4R	63.9	+31.2R	59.5	+29.3R	55.8	+27.5R
		18"	q_a	q_f	565	947	454	749	374	617	322	531	283	467	249	410	227	374
			G'		95.5	+41.7R	83.4	+39R	72.8	+36.8R	66.2	+34.3R	61	+32R	55.4	+30.2R	52.1	+28.4R
		24"	q_a	q_f	557	919	447	738	369	608	317	523	275	453	245	404	220	363
			G'		93.4	+42.5R	81.5	+39.6R	71.1	+37.4R	64.6	+34.7R	58	+32.8R	54.1	+30.6R	49.5	+28.9R
	22 ga	4"	q_a	q_f	486	803	405	669	351	579	312	516	283	468	262	433	246	406
			G'		99.3	+29.6R	90.5	+27.6R	84.1	+25.7R	79.1	+23.9R	75.3	+22.3R	72.1	+20.9R	69.5	+19.6R
		6"	q_a	q_f	453	748	372	614	318	524	279	461	250	413	229	378	213	351
			G'		93.1	+31.9R	83.5	+30R	76.4	+28R	71	+26.2R	66.7	+24.5R	63.2	+23R	60.3	+21.6R
		8"	q_a	q_f	436	720	359	592	301	497	265	437	233	385	214	354	196	324
			G'		89.8	+33.2R	80.5	+31R	72.3	+29.3R	67.2	+27.2R	62.1	+25.7R	58.9	+24R	55.3	+22.8R
		12"	q_a	q_f	420	693	339	559	284	469	246	406	217	358	196	323	180	296
			G'		86.4	+34.5R	75.8	+32.6R	68	+30.7R	62	+28.8R	57.2	+27R	53.3	+25.4R	50.1	+24R
		18"	q_a	q_f	411	693	332	548	273	451	236	390	208	344	185	305	170	280
			G'		84.6	+35.2R	74.2	+33.2R	65	+31.6R	59.2	+29.6R	54.6	+27.7R	49.7	+26.3R	46.8	+24.8R
		24"	q_a	q_f	403	665	325	537	268	442	232	382	200	330	181	299	163	269
			G'		82.8	+35.9R	72.5	+33.8R	63.5	+32.1R	57.8	+30R	52	+28.4R	48.5	+26.6R	44.5	+25.3R

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Support Attachment: 0.5" Effective Dia. Arc Spot Weld

Side Seam Attachment: Button Punch