

ASC Steel Deck



It is our objective to provide the highest quality products and services in the steel deck industry. This objective is partially accomplished through conducting extensive testing programs with independent testing facilities to ensure that our products comply with the stringent criteria of today's building codes. Our steel deck products have been evaluated by the International Code Council (ICC Evaluation Report #2757), listed by Underwriters Laboratories, Certified by the Steel Deck Institute and approved by Factory Mutual and City of Los Angeles. Additionally, our manufacturing plants are strategically located in the western United States so that we may provide the best possible service. Most importantly, our Sales Representatives, Customer Service and Engineering Services Department are prepared to assist you with the specific requirements of your project.

How To Use This Catalog

This Catalog contains information about Roof Deck, Acustadek™ and Deep Deck profiles. Included with the profiles are reaction tables, section properties, design load tables and diagrams of the profiles. The Technical/Specification section contains further information applicable to all profiles.

Step 1: Select the type of application (Roof Deck, Acustadek or Deep Deck).

Step 2: Identify which profile is appropriate for your specific design and select the corresponding page number.

Step 3: Contact ASC Steel Deck 1-800-726-2727.

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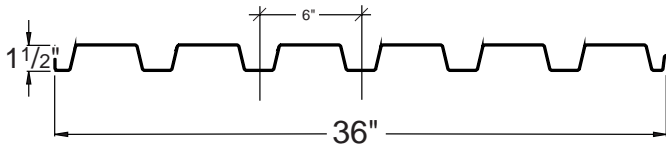
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Roof Deck



B-36 Roof Deck

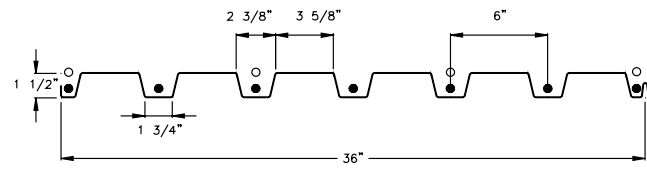
B-36 Roof Deck is a 36" net coverage structural decking product. Roof deck products act alone in transferring horizontal and vertical loads into the building frame, and do not work compositely with other building materials. B-36 Roof Deck provides the structural substrate for various roofing materials.

Features and Benefits:

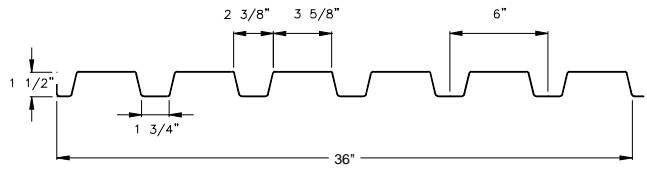
- Wide coverage means fewer pieces to handle and install, saving time and money.
- Swaged end allows for easy endlaps and quicker installation.
- Available with interlocking or nestable sidelaps.
- Product can be crimp curved.
- Interlocking sidelap allows product to be button punched or seam welded..

For more information call 1-800-726-2727

B-36 Roof Deck



○ 4 Welds ● 7 Welds



B-36 Nestable

The **B-36 profile** has been enhanced via physical testing to give you the highest diaphragm shear values of any of our prior B-series profiles.

Note: B 35 1/4" Nestable – Sacramento

B-36 Section Properties

Gauge	Weight (psf)	I (In4)	S+ (In3)	S- (In3)
22	1.68	0.178	0.180	0.195
20	2.04	0.220	0.235	0.246
18	2.70	0.302	0.321	0.336
16	3.36	0.379	0.407	0.415

1. Section properties are based on minimum 38 ksi steel (Fy).

B-36 Allowable Reactions (plf)

Gauge	Bearing Length						
	1"	1 1/2"	2"	2 1/2"	3"	3 1/2"	4"
22	416	468	520	572	625	677	729
	1007	1103	1213	1363	1513	1663	1813
20	700	776	853	929	1005	1082	1158
	1495	1617	1739	1897	2088	2280	2472
18	1443	1568	1693	1818	1943	2068	2193
	2734	2909	3084	3258	3436	3710	3985
16	2434	2608	2782	2957	3131	3305	3480
	4350	4578	4806	5034	5262	5490	5786

1. The top value reflects the allowable reaction at the panel end supports.
2. The bottom value reflects the allowable reaction at the interior supports.
3. Values are in pounds per linear foot.

B-36 Allowable Total (DL + LL) Uniform Load (psf)

Condition	Span Gauge		Span										
			5'0"	5'6"	6'0"	6'6"	7'0"	7'6"	8'0"	8'6"	9'0"	9'6"	10'0"
SINGLE SPAN	22	Stress	109	90	76	65	56	49	43	38	34	30	27
		Deflection	93	70	54	42	34	28	23	19	16	14	12
	20	Stress	143	118	99	85	73	64	56	49	44	40	36
		Deflection	115	87	67	53	42	34	28	23	20	17	14
	18	Stress	195	161	136	115	100	87	76	68	60	54	49
		Deflection	158	119	92	72	58	47	39	32	27	23	20
	16	Stress	247	205	172	146	126	110	97	86	76	69	62
		Deflection	199	149	115	90	72	59	49	40	34	29	25
DOUBLE SPAN	22	Stress	119	98	82	70	60	53	46	41	37	33	30
		Deflection	119	98	82	70	60	53	46	41	37	33	28
	20	Stress	150	124	104	89	76	66	58	52	46	41	37
		Deflection	150	124	104	89	76	66	58	52	46	41	35
	18	Stress	204	169	142	121	104	91	80	71	63	57	51
		Deflection	204	169	142	121	104	91	80	71	63	56	48
	16	Stress	252	209	175	149	129	112	99	87	78	70	63
		Deflection	252	209	175	149	129	112	99	87	78	70	60
TRIPLE SPAN	22	Stress	148	122	103	88	76	66	58	51	46	41	37
		Deflection	148	122	102	80	64	52	43	36	30	26	22
	20	Stress	187	155	130	111	95	83	73	65	58	52	47
		Deflection	187	155	126	99	79	65	53	44	37	32	27
	18	Stress	255	211	177	151	130	113	100	88	79	71	64
		Deflection	255	211	173	136	109	89	73	61	51	44	37
	16	Stress	315	261	219	187	161	140	123	109	97	87	79
		Deflection	315	261	217	171	137	111	92	76	64	55	47

1. Stress based on allowable flexural stress of 22.8 ksi.
2. Deflection based on maximum deflection of L/240.
3. Adequate bearing must be provided.
4. See page 31 for General Notes.

B-36 Roof Deck

B-36 Allowable Diaphragm Shear (q) and Flexibility Factor (F)

Gauge	Seam Attachment	No. Puddle Welds	Span							
			5'0"	6'0"	7'0"	8'0"	9'0"	10'0"		
22	Button Punch	12" O.C.	4	q	320	320	320	320	310	280
		F	14.5 + 222R	14.7 + 185R	14.8 + 159R	15.0 + 139R	15.2 + 123R	15.4 + 111R		
	24" O.C.	4	q	260	260	260	250	250	220	
		F	17.4 + 222R	17.6 + 185R	17.9 + 159R	18.1 + 139R	18.4 + 123R	18.6 + 111R		
	Top Seam Weld	12" O.C.	4	q	360	360	360	360	360	360
		F	6.9 + 222R	6.1 + 185R	5.7 + 159R	5.4 + 139R	5.1 + 123R	4.9 + 111R		
	24" O.C.	4	q	280	280	270	270	270	270	
		F	8.1 + 222R	7.2 + 185R	6.6 + 159R	6.2 + 139R	5.8 + 123R	5.6 + 111R		
	Side Seam Weld	12" O.C.	4	q	519	492	473	458	447	438
		F	7.1 + 222R	6.6 + 185R	6.2 + 159R	5.9 + 139R	5.7 + 123R	5.5 + 111R		
	24" O.C.	4	q	337	309	290	276	264	256	
		F	9.5 + 222R	8.9 + 185R	8.4 + 159R	8.0 + 139R	7.7 + 123R	7.4 + 111R		
	Button Punch	12" O.C.	7	q	570	570	560	500	450	410
		F	13.8 + 56R	14.1 + 46R	14.3 + 39R	14.6 + 34R	14.8 + 31R	15.1 + 28R		
	24" O.C.	7	q	510	500	500	450	400	360	
		F	15.2 + 56R	15.5 + 46R	15.8 + 39R	16.2 + 34R	16.5 + 31R	16.8 + 28R		
	Top Seam Weld	12" O.C.	7	q	700	700	690	690	620	560
		F	12.5 + 56R	11.1 + 46R	10.0 + 39R	9.2 + 34R	8.6 + 31R	8.2 + 28R		
24" O.C.	7	q	610	610	600	600	540	490		
	F	13.9 + 56R	12.3 + 46R	11.1 + 39R	10.2 + 34R	9.5 + 31R	9.0 + 28R			
Side Seam Weld	12" O.C.	7	q	596	555	525	504	487	473	
	F	6.9 + 56R	6.5 + 46R	6.2 + 39R	6.0 + 34R	5.7 + 31R	5.6 + 28R			
24" O.C.	7	q	414	372	343	321	304	291		
	F	8.8 + 56R	8.4 + 46R	8.1 + 39R	7.8 + 34R	7.5 + 31R	7.3 + 28R			
20	Button Punch	12" O.C.	4	q	420	420	410	410	380	350
		F	11.0 + 129R	11.2 + 107R	11.3 + 92R	11.5 + 80R	11.7 + 71R	11.8 + 64R		
	24" O.C.	4	q	340	340	340	330	310	280	
		F	13.0 + 129R	13.2 + 107R	13.4 + 92R	13.6 + 80R	13.8 + 71R	14.1 + 64R		
	Top Seam Weld	12" O.C.	4	q	450	450	450	440	440	440
		F	5.4 + 129R	5.0 + 107R	4.6 + 92R	4.4 + 80R	4.1 + 71R	4.0 + 64R		
	24" O.C.	4	q	340	340	340	340	340	340	
		F	6.4 + 129R	5.8 + 107R	5.3 + 92R	5.0 + 80R	4.7 + 71R	4.5 + 64R		
	Side Seam Weld	12" O.C.	4	q	805	756	721	694	674	658
		F	5.9 + 129R	5.5 + 107R	5.3 + 92R	5.0 + 80R	4.8 + 71R	4.6 + 64R		
	24" O.C.	4	q	543	494	458	432	412	395	
		F	7.7 + 129R	7.3 + 107R	6.9 + 92R	6.6 + 80R	6.4 + 71R	6.2 + 64R		
	Button Punch	12" O.C.	7	q	740	740	710	630	560	500
		F	10.4 + 32R	10.6 + 27R	10.8 + 23R	11.0 + 20R	11.3 + 18R	11.5 + 16R		
	24" O.C.	7	q	670	660	640	560	500	450	
		F	11.3 + 32R	11.6 + 27R	11.8 + 23R	12.1 + 20R	12.4 + 18R	12.6 + 16R		
	Top Seam Weld	12" O.C.	7	q	900	890	880	840	750	680
		F	9.6 + 32R	8.5 + 27R	7.8 + 23R	7.2 + 20R	6.7 + 18R	6.4 + 16R		
24" O.C.	7	q	790	780	770	740	660	600		
	F	10.6 + 32R	9.4 + 27R	8.5 + 23R	7.9 + 20R	7.4 + 18R	7.0 + 16R			
Side Seam Weld	12" O.C.	7	q	939	865	812	773	742	718	
	F	5.7 + 32R	5.4 + 27R	5.2 + 23R	5.0 + 20R	4.8 + 18R	4.7 + 16R			
24" O.C.	7	q	677	602	549	510	479	455		
	F	7.0 + 32R	6.8 + 27R	6.6 + 23R	6.4 + 20R	6.2 + 18R	6.0 + 16R			

1. The allowable diaphragm shears "q" are listed in pounds per linear foot (plf).
2. See page 31 for General Notes.

B-36 Roof Deck

B-36 Allowable Diaphragm Shear (q) and Flexibility (F)

Gauge	Seam Attachment	12" O.C.	No. Puddle Welds		Span					
			4	q	5'0"	6'0"	7'0"	8'0"	9'0"	10'0"
18	Button Punch	12" O.C.	4	q	806	697	619	562	517	482
		F			5.9 + 54R	6.7 + 45R	7.5 + 39R	8.2 + 34R	9.0 + 30R	9.7 + 27R
	24" O.C.	4	q	736	626	548	489	444	408	
		F			6.3 + 54R	7.2 + 45R	8.2 + 39R	9.2 + 34R	10.2 + 30R	11.2 + 27R
	Top Seam Weld	12" O.C.	4	q	1215	1112	1032	968	917	878
		F			5.0 + 54R	4.8 + 45R	4.7 + 39R	4.5 + 34R	4.4 + 30R	4.2 + 27R
	24" O.C.	4	q	940	834	752	688	638	598	
		F			6.0 + 54R	5.9 + 45R	5.7 + 39R	5.6 + 34R	5.5 + 30R	5.4 + 27R
	Side Seam Weld	12" O.C.	4	q	1580	1482	1406	1341	1291	1251
		F			4.3 + 54R	4.1 + 45R	3.9 + 39R	3.7 + 34R	3.6 + 30R	3.5 + 27R
	24" O.C.	4	q	1123	1018	940	875	826	785	
		F			5.3 + 54R	5.1 + 45R	5.0 + 39R	4.8 + 34R	4.7 + 30R	4.5 + 27R
	Button Punch	12" O.C.	7	q	1176	1008	889	800	731	677
		F			5.0 + 14R	5.7 + 11R	6.4 + 10R	7.1 + 9R	7.9 + 8R	8.6 + 7R
	24" O.C.	7	q	1102	932	811	721	651	596	
		F			5.2 + 14R	6.0 + 11R	6.9 + 10R	7.7 + 9R	8.6 + 8R	9.5 + 7R
	Top Seam Weld	12" O.C.	7	q	1538	1359	1232	1138	1064	1007
		F			4.6 + 14R	4.5 + 11R	4.4 + 10R	4.3 + 9R	4.2 + 8R	4.1 + 7R
24" O.C.	7	q	1258	1079	952	858	785	727		
	F			5.2 + 14R	5.2 + 11R	5.2 + 10R	5.1 + 9R	5.1 + 8R	5.1 + 7R	
Side Seam Weld	12" O.C.	7	q	1911	1732	1606	1511	1438	1380	
	F			4.0 + 14R	3.9 + 11R	3.8 + 10R	3.7 + 9R	3.6 + 8R	3.5 + 7R	
24" O.C.	7	q	1445	1266	1139	1044	971	913		
	F			4.8 + 14R	4.7 + 11R	4.6 + 10R	4.5 + 9R	4.5 + 8R	4.4 + 7R	
16	Button Punch	12" O.C.	4	q	1155	991	874	788	721	668
		F			4.3 + 28R	4.9 + 23R	5.5 + 20R	6.1 + 17R	6.7 + 15R	7.3 + 14R
	24" O.C.	4	q	1077	912	794	706	639	584	
		F			4.5 + 28R	5.2 + 23R	5.9 + 20R	6.6 + 17R	7.4 + 15R	8.1 + 14R
	Top Seam Weld	12" O.C.	4	q	1683	1529	1421	1344	1286	1242
		F			3.8 + 28R	3.6 + 23R	3.5 + 20R	3.4 + 17R	3.4 + 15R	3.3 + 14R
	24" O.C.	4	q	1341	1181	1068	984	920	871	
		F			4.4 + 28R	4.3 + 23R	4.3 + 20R	4.2 + 17R	4.1 + 15R	4.1 + 14R
	Side Seam Weld	12" O.C.	4	q	2138	1992	1893	1823	1773	1736
		F			3.3 + 28R	3.1 + 23R	3.0 + 20R	2.9 + 17R	2.8 + 15R	2.7 + 14R
	24" O.C.	4	q	1570	1412	1303	1224	1164	1118	
		F			3.9 + 28R	3.8 + 23R	3.7 + 20R	3.7 + 17R	3.6 + 15R	3.5 + 14R
	Button Punch	12" O.C.	7	q	1652	1408	1234	1105	1005	927
		F			3.7 + 6.9R	4.2 + 5.8R	4.7 + 5R	5.3 + 4.3R	5.8 + 3.9R	6.4 + 3.5R
	24" O.C.	7	q	1570	1323	1150	1018	916	835	
		F			3.8 + 6.9R	4.4 + 5.8R	5.0 + 5R	5.6 + 4.3R	6.3 + 3.9R	6.9 + 3.5R
	Top Seam Weld	12" O.C.	7	q	2212	1982	1821	1705	1617	1550
		F			3.4 + 6.9R	3.4 + 5.8R	3.3 + 5R	3.3 + 4.3R	3.2 + 3.9R	3.2 + 3.5R
24" O.C.	7	q	1850	1610	1442	1317	1221	1147		
	F			3.8 + 6.9R	3.8 + 5.8R	3.8 + 5R	3.8 + 4.3R	3.8 + 3.9R	3.8 + 3.5R	
Side Seam Weld	12" O.C.	7	q	2696	2476	2326	2221	2144	1895	
	F			3.1 + 6.9R	3.0 + 5.8R	2.9 + 5R	2.8 + 4.3R	2.8 + 3.9R	2.7 + 3.5R	
24" O.C.	7	q	2091	1858	1694	1575	1485	1415		
	F			3.5 + 6.9R	3.5 + 5.8R	3.5 + 5R	3.4 + 4.3R	3.4 + 3.9R	3.4 + 3.5R	

1. The allowable diaphragm shears "q" are listed in pounds per linear foot (plf).
2. See page 31 for General Notes

Roof Deck



DeltaGrip™ System

An ASC Steel Deck proprietary side seam attachment system.

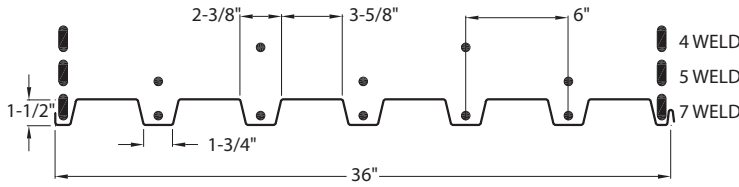
Features and Benefits:

- “As Strong As” a weld for the cost of a button punch.
- Can be installed during inclement weather.
- Connection is concealed from the underside - ideal for exposed underside applications.
- Applicable to DGB-36 and various Floor Deck profiles.
- Excellent connection for floor decks prevent side lap separation during construction.

For more information call 1-800-726-2727

ASC Steel Deck

DGB-36
for use with the DeltaGrip™ System



3/8" x 1" Effective Weld • 1/2" Diameter Effective Weld

The **DGB-36 profile** has been enhanced via full scale testing to give you the highest diaphragm shear values of any of our prior B-series profiles.

DGB-36 Section Properties

Gage	Weight (psf)	I (In4)	S+ (In3)	S- (In3)
22	1.68	0.178	0.180	0.195
20	2.04	0.220	0.235	0.246
18	2.70	0.302	0.321	0.336
16	3.36	0.379	0.407	0.415

1. Section properties are based on minimum 38 ksi steel (Fy).

DGB-36 Allowable Reactions (plf)

Gauge	Bearing Length						
	1"	1 1/2"	2"	2 1/2"	3"	3 1/2"	4"
22	416	468	520	572	625	677	729
	1007	1103	1213	1363	1513	1663	1813
20	700	776	853	929	1005	1082	1158
	1495	1617	1739	1897	2088	2280	2472
18	1443	1568	1693	1818	1943	2068	2193
	2734	2909	3084	3258	3436	3710	3985
16	2434	2608	2782	2957	3131	3305	3480
	4350	4578	4806	5034	5262	5490	5786

1. The top value reflects the allowable reaction at the panel end supports.
2. The bottom value reflects the allowable reaction at the interior supports.
3. Values are in pounds per linear foot.

DGB-36 Allowable Total (DL + LL) Uniform Load (psf)

Condition	Gage		Span								
			4'0"	5'0"	6'0"	7'0"	8'0"	9'0"	10'0"	11'0"	12'0"
SINGLE SPAN	22	Stress	171	109	76	55	42	33	27	22	19
		Deflection	171	93	54	34	22	16	11	8	6
	20	Stress	223	142	99	72	55	44	35	29	24
		Deflection	223	115	66	42	28	19	14	10	8
	18	Stress	304	195	135	99	76	60	48	40	33
		Deflection	304	158	91	57	38	27	19	14	11
16	Stress	386	247	171	126	96	76	61	51	42	
	Deflection	386	199	115	72	48	34	24	18	14	
DOUBLE SPAN	22	Stress	185	118	82	60	46	36	29	24	20
		Deflection	185	118	82	60	46	36	28	21	16
	20	Stress	233	149	103	76	58	46	37	30	25
		Deflection	233	149	103	76	58	46	34	26	20
	18	Stress	319	204	141	104	79	63	51	42	35
		Deflection	319	204	141	104	79	63	47	35	27
16	Stress	394	252	175	128	98	77	63	52	43	
	Deflection	394	252	175	128	98	77	59	44	34	
TRIPLE SPAN	22	Stress	231	148	102	75	57	45	37	30	25
		Deflection	231	148	101	64	43	30	22	16	12
	20	Stress	292	186	129	95	73	57	46	38	32
		Deflection	292	186	125	79	53	37	27	20	15
	18	Stress	399	255	177	130	99	78	63	52	44
		Deflection	399	255	172	108	72	51	37	28	21
16	Stress	492	315	219	160	123	97	78	65	54	
	Deflection	492	315	217	136	91	64	46	35	27	

1. Stress based on allowable flexural stress of 22.8 ksi.
2. Deflection based on maximum deflection of L/240.
3. Adequate bearing must be provided.
4. See page 31 of the *Steel Roof Deck Catalog* for General Notes

DeltaGrip™ System

DGB-36 • 22 Gage

Allowable Diaphragm Shears (q_a) (In Pounds per Lineal Foot), and flexibility factor (F) for DeltaGrip™ Seam Attachment.

Puddle DG Seam welds Attachment Span		4'0"	5'0"	6'0"	7'0"	8'0"	9'0"	10'0"	11'0"	12'0"	
7	4" O.C.	q_a	1277	1207	1159	1123	1095	1074	938	775	652
		F	8.3+11R	8.6+8.8R	8.8+7.3R	8.9+6.2R	9+5.4R	9.1+4.8R	9.2+4.3R	9.3+3.9R	9.3+3.6R
	6" O.C.	q_a	1118	1032	973	929	896	870	849	775	652
		F	9.3+10.6R	9.7+8.4R	10+6.9R	10.2+5.9R	10.3+5.1R	10.5+4.5R	10.6+4.1R	10.7+3.7R	10.8+3.4R
	8" O.C.	q_a	1042	945	878	830	792	763	739	718	652
		F	10.1+10.3R	10.6+8R	11+6.6R	11.3+5.5R	11.5+4.8R	11.7+4.2R	11.8+3.7R	12+3.4R	12.1+3R
5	12" O.C.	q_a	987	874	794	732	685	648	619	595	575
		F	11.4+9.5R	12.1+7.3R	12.7+5.8R	13.2+4.7R	13.5+4R	13.8+3.4R	14.1+3R	14.3+2.6R	14.5+2.3R
	18" O.C.	q_a	876	752	665	602	555	519	490	466	446
		F	12.7+8.7R	13.8+6.3R	14.6+4.7R	15.3+3.6R	15.9+2.8R	16.4+2.3R	16.8+1.8R	17.1+1.5R	17.5+1.2R
	24" O.C.	q_a	818	687	600	538	491	454	425	401	381
		F	13.6+8R	14.9+5.5R	16+3.8R	16.9+2.6R	17.7+1.8R	18.4+1.2R	19+0.7R	19.5+0.3R	19.9+0R
4	4" O.C.	q_a	1122	1074	1040	1014	994	869	704	582	489
		F	3.8+68.1R	5+54.5R	5.8+45.4R	6.4+38.9R	6.8+34R	7.2+30.2R	7.4+27.2R	7.7+24.7R	7.9+22.6R
	6" O.C.	q_a	1007	942	896	861	835	814	704	582	489
		F	4.9+67.7R	6.2+54.1R	7.1+45R	7.7+38.6R	8.2+33.7R	8.6+29.9R	8.9+26.9R	9.1+24.5R	9.3+22.4R
	8" O.C.	q_a	948	871	817	776	745	721	701	582	489
		F	5.8+67.4R	7.3+53.7R	8.2+44.7R	8.9+38.2R	9.5+33.4R	9.9+29.6R	10.2+26.6R	10.5+24.2R	10.7+22.2R
3	12" O.C.	q_a	905	811	745	696	659	627	600	578	489
		F	7.3+66.6R	9+52.9R	10.1+43.9R	11+37.4R	11.6+32.6R	12.2+28.9R	12.6+25.9R	13+23.5R	13.3+21.5R
	18" O.C.	q_a	804	704	633	575	531	498	471	448	430
		F	8.9+65.6R	10.9+51.9R	12.3+42.8R	13.4+36.3R	14.3+31.5R	15+27.7R	15.6+24.8R	16.1+22.4R	16.5+20.4R
	24" O.C.	q_a	752	649	568	510	467	433	406	384	365
		F	10+64.9R	12.3+51R	14+41.8R	15.3+35.2R	16.4+30.3R	17.3+26.6R	18.1+23.6R	18.7+21.2R	19.3+19.2R
2	4" O.C.	q_a	971	940	918	902	733	579	469	388	326
		F	1.7+96.7R	3.3+77.3R	4.4+64.4R	5.2+55.2R	5.8+48.3R	6.2+42.9R	6.6+38.6R	6.9+35.1R	7.1+32.2R
	6" O.C.	q_a	871	826	794	771	733	579	469	388	326
		F	2.9+96.3R	4.6+77R	5.8+64.1R	6.6+54.9R	7.2+48.1R	7.7+42.7R	8.1+38.4R	8.4+34.9R	8.7+32R
	8" O.C.	q_a	814	759	720	692	670	579	469	388	326
		F	3.9+96R	5.7+76.6R	7+63.8R	7.9+54.6R	8.5+47.8R	9.1+42.4R	9.5+38.2R	9.8+34.7R	10.1+31.8R
1	12" O.C.	q_a	764	695	647	611	584	562	469	388	326
		F	5.6+95.2R	7.7+75.9R	9.1+63R	10.1+53.9R	10.9+47R	11.6+41.7R	12.1+37.5R	12.5+34.1R	12.8+31.2R
	18" O.C.	q_a	667	592	536	492	459	433	413	388	326
		F	7.5+94.1R	10+74.7R	11.7+61.9R	12.9+52.7R	13.9+45.9R	14.7+40.6R	15.4+36.4R	15.9+33R	16.4+30.1R
	24" O.C.	q_a	615	533	472	428	394	369	348	331	317
		F	9+93.2R	11.7+73.7R	13.7+60.8R	15.2+51.6R	16.4+44.7R	17.4+39.4R	18.2+35.2R	18.9+31.8R	19.5+29R

- 1) Deck end laps to be 2 inches minimum over supports.
- 2) Diaphragm Shear values based on a conservative 3 or more span condition.
- 3) For q_a the safety factor for allowable stress design, Ω , has been applied to the tabulated values.
- 4) Allowable shear, q_a , is for diaphragms subjected to load combinations that include earthquake loads for non-shaded areas. Shaded areas indicate buckling mode of failure governs. Adjustment may be made for load combinations subject to wind loads per AISI Section D5.

DeltaGrip™ System

DGB-36 • 20 Gage

Allowable Diaphragm Shears (q_a) (In Pounds per Lineal Foot), and flexibility factor (F) for DeltaGrip™ Seam Attachment

Puddle welds	DG Seam Attachment	Span	4'0"	5'0"	6'0"	7'0"	8'0"	9'0"	10'0"	11'0"	12'0"
7	4" O.C.	q_a	1666	1591	1540	1501	1472	1448	1234	1020	857
		F	6.7+7R	6.8+5.6R	7+4.7R	7.1+4R	7.1+3.5R	7.2+3.1R	7.2+2.8R	7.3+2.5R	7.3+2.3R
	6" O.C.	q_a	1454	1358	1292	1243	1205	1176	1152	1020	857
		F	7.4+6.8R	7.7+5.4R	7.8+4.5R	8+3.8R	8+3.3R	8.1+2.9R	8.2+2.6R	8.2+2.4R	8.3+2.2R
	8" O.C.	q_a	1346	1235	1159	1103	1060	1027	1000	977	857
		F	8.1+6.5R	8.4+5.1R	8.6+4.2R	8.8+3.6R	8.9+3.1R	9+2.7R	9.1+2.5R	9.1+2.2R	9.2+2R
5	12" O.C.	q_a	1258	1127	1037	971	918	874	840	811	788
		F	9.1+6R	9.6+4.6R	9.9+3.7R	10.2+3.1R	10.4+2.6R	10.6+2.3R	10.7+2R	10.8+1.8R	10.9+1.6R
	18" O.C.	q_a	1100	963	861	787	731	687	653	624	601
		F	10.3+5.4R	11+3.9R	11.5+3R	12+2.3R	12.3+1.9R	12.6+1.5R	12.8+1.3R	13+1.1R	13.2+0.9R
	24" O.C.	q_a	1019	871	767	693	637	594	559	531	507
		F	11.2+4.8R	12.1+3.3R	12.8+2.3R	13.4+1.6R	13.8+1.1R	14.2+0.8R	14.6+0.5R	14.9+0.3R	15.1+0.2R
4	4" O.C.	q_a	1440	1392	1357	1331	1311	1142	925	765	643
		F	3.9+43.2R	4.6+34.5R	5.1+28.8R	5.5+24.6R	5.7+21.6R	5.9+19.2R	6.1+17.2R	6.2+15.7R	6.3+14.4R
	6" O.C.	q_a	1297	1227	1177	1140	1111	1088	925	765	643
		F	4.7+43R	5.5+34.3R	6+28.6R	6.4+24.5R	6.7+21.4R	6.9+19R	7.1+17.1R	7.2+15.6R	7.4+14.3R
	8" O.C.	q_a	1217	1131	1071	1026	992	964	925	765	643
		F	5.4+42.7R	6.2+34.1R	6.8+28.4R	7.2+24.3R	7.6+21.2R	7.8+18.9R	8+17R	8.2+15.4R	8.3+14.1R
4	12" O.C.	q_a	1150	1043	968	912	869	835	808	765	643
		F	6.6+42.2R	7.6+33.6R	8.3+27.9R	8.8+23.8R	9.2+20.8R	9.5+18.4R	9.7+16.6R	10+15R	10.1+13.7R
	18" O.C.	q_a	1010	894	813	753	702	662	630	603	581
		F	7.9+41.5R	9.2+32.8R	10.1+27.1R	10.7+23.1R	11.2+20R	11.7+17.7R	12+15.9R	12.3+14.3R	12.5+13.1R
	24" O.C.	q_a	936	816	729	660	609	568	536	510	488
		F	9+40.9R	10.4+32.1R	11.5+26.4R	12.3+22.3R	13+19.3R	13.5+16.9R	14+15.1R	14.3+13.6R	14.7+12.4R
4	4" O.C.	q_a	1241	1211	1190	1175	964	762	617	510	428
		F	2.5+61.3R	3.5+49R	4.2+40.8R	4.7+35R	5+30.6R	5.3+27.2R	5.5+24.5R	5.7+22.3R	5.9+20.4R
	6" O.C.	q_a	1123	1076	1043	1019	964	762	617	510	428
		F	3.3+61.1R	4.4+48.8R	5.1+40.7R	5.6+34.8R	6+30.5R	6.3+27.1R	6.6+24.4R	6.8+22.2R	6.9+20.3R
	8" O.C.	q_a	1050	991	949	918	894	762	617	510	428
		F	4.1+60.8R	5.2+48.6R	6+40.5R	6.5+34.7R	7+30.3R	7.3+26.9R	7.5+24.2R	7.8+22R	7.9+20.2R
4	12" O.C.	q_a	980	902	847	807	776	751	617	510	428
		F	5.5+60.3R	6.7+48.1R	7.6+40R	8.2+34.2R	8.7+29.9R	9.1+26.6R	9.4+23.9R	9.6+21.7R	9.8+19.9R
	18" O.C.	q_a	845	759	698	654	616	585	561	510	428
		F	7.1+59.6R	8.5+47.4R	9.6+39.3R	10.4+33.5R	11+29.2R	11.4+25.9R	11.8+23.2R	12.1+21.1R	12.4+19.3
	24" O.C.	q_a	772	682	615	562	523	492	467	447	428
		F	8.3+58.9R	10+46.6R	11.3+38.5R	12.2+32.8R	12.9+28.5R	13.5+25.2R	14+22.5R	14.4+20.4R	14.7+18.6R

- 1) Deck end laps to be 2 inches minimum over supports.
- 2) Diaphragm Shear values based on a conservative 3 or more span condition.
- 3) For q_a the safety factor for allowable stress design, Ω , has been applied to the tabulated values.
- 4) Allowable shear, q_a , is for diaphragms subjected to load combinations that include earthquake loads for non-shaded areas. Shaded areas indicate buckling mode of failure governs. Adjustment may be made for load combinations subject to wind loads per AISI Section D5.

DeltaGrip™ System

DGB-36 • 18 Gage

Allowable Diaphragm Shears (q_a) (In Pounds per Lineal Foot), and flexibility factor (F) for DeltaGrip™ Seam Attachment

Puddle Welds	DG Seam Attachment	Span	4'0"	5'0"	6'0"	7'0"	8'0"	9'0"	10'0"	11'0"	12'0"
7	4" O.C.	q_a	2498	2421	2367	2327	2296	2272	1888	1561	1311
		F	4.6+3.5R	4.6+2.8R	4.7+2.3R	4.7+2R	4.7+1.7R	4.8+1.6R	4.8+1.4R	4.8+1.3R	4.8+1.2R
	6" O.C.	q_a	2191	2082	2005	1949	1906	1872	1844	1561	1311
		F	4.9+3.4R	5+2.7R	5.1+2.3R	5.1+2R	5.1+1.7R	5.2+1.5R	5.2+1.4R	5.2+1.2R	5.2+1.1R
	8" O.C.	q_a	2016	1884	1793	1725	1674	1633	1600	1561	1311
		F	5.3+3.4R	5.4+2.7R	5.5+2.2R	5.5+1.9R	5.5+1.7R	5.6+1.5R	5.6+1.3R	5.6+1.2R	5.6+1.1R
	12" O.C.	q_a	1853	1690	1578	1495	1433	1383	1343	1310	1283
		F	5.9+3.2R	6.1+2.5R	6.2+2.1R	6.2+1.8R	6.3+1.5R	6.3+1.4R	6.4+1.2R	6.4+1.1R	6.4+1R
	18" O.C.	q_a	1586	1412	1292	1205	1134	1077	1032	995	964
		F	6.7+2.9R	6.9+2.2R	7.1+1.8R	7.2+1.5R	7.3+1.3R	7.4+1.1R	7.5+1R	7.5+0.9R	7.6+0.8R
	24" O.C.	q_a	1446	1266	1139	1042	969	912	866	829	798
		F	7.3+2.6R	7.7+1.9R	7.9+1.5R	8.1+1.2R	8.2+1R	8.4+0.9R	8.5+0.7R	8.5+0.6R	8.6+0.6R
5	4" O.C.	q_a	2094	2049	2017	1993	1974	1749	1416	1171	984
		F	3.2+21.2R	3.5+16.9R	3.7+14.1R	3.9+12.1R	4+10.6R	4.1+9.4R	4.2+8.5R	4.3+7.7R	4.3+7.1R
	6" O.C.	q_a	1912	1838	1786	1747	1716	1692	1416	1171	984
		F	3.6+21.1R	3.9+16.9R	4.2+14.1R	4.3+12.1R	4.5+10.5R	4.6+9.4R	4.6+8.4R	4.7+7.7R	4.8+7R
	8" O.C.	q_a	1796	1700	1632	1581	1542	1511	1416	1171	984
		F	3.9+21R	4.3+16.8R	4.5+14R	4.7+12R	4.9+10.5R	5+9.3R	5.1+8.4R	5.1+7.6R	5.2+7R
	12" O.C.	q_a	1682	1554	1463	1396	1345	1304	1270	1171	984
		F	4.6+20.9R	5+16.7R	5.3+13.9R	5.5+11.9R	5.6+10.4R	5.8+9.2R	5.9+8.3R	5.9+7.5R	6+6.9R
	18" O.C.	q_a	1453	1309	1208	1133	1076	1031	994	964	939
		F	5.4+20.6R	5.9+16.4R	6.3+13.6R	6.5+11.6R	6.7+10.2R	6.9+9R	7+8.1R	7.1+7.4R	7.2+6.7R
	24" O.C.	q_a	1328	1176	1070	992	931	879	836	802	773
		F	6.2+20.3R	6.8+16.1R	7.2+13.3R	7.5+11.4R	7.7+9.9R	7.9+8.8R	8+7.9R	8.2+7.1R	8.3+6.5R
4	4" O.C.	q_a	1785	1760	1742	1728	1475	1166	944	780	656
		F	2.5+30R	3+24R	3.3+20R	3.5+17.1R	3.7+15R	3.8+13.3R	3.9+12R	4+10.9R	4.1+10R
	6" O.C.	q_a	1651	1605	1573	1548	1475	1166	944	780	656
		F	2.9+30R	3.4+24R	3.7+20R	3.9+17.1R	4.1+15R	4.3+13.3R	4.4+12R	4.5+10.9R	4.5+10R
	8" O.C.	q_a	1555	1492	1447	1413	1387	1166	944	780	656
		F	3.3+29.9R	3.8+23.9R	4.1+19.9R	4.4+17.1R	4.5+14.9R	4.7+13.3R	4.8+11.9R	4.9+10.9R	5+10R
	12" O.C.	q_a	1448	1357	1294	1246	1210	1166	944	780	656
		F	4+29.7R	4.5+23.8R	4.9+19.8R	5.1+17R	5.3+14.8R	5.5+13.2R	5.6+11.9R	5.7+10.8R	5.8+9.9R
	18" O.C.	q_a	1232	1126	1053	998	956	923	896	780	656
		F	4.9+29.5R	5.5+23.5R	5.9+19.6R	6.2+16.8R	6.5+14.6R	6.7+13R	6.8+11.7R	6.9+10.6R	7+9.7R
	24" O.C.	q_a	1111	998	919	861	817	778	746	720	656
		F	5.7+29.2R	6.4+23.2R	6.9+19.3R	7.3+16.5R	7.5+14.4R	7.7+12.8R	7.9+11.5R	8+10.4R	8.2+9.5R

- 1) Deck end laps to be 2 inches minimum over supports.
- 2) Diaphragm Shear values based on a conservative 3 or more span condition.
- 3) For q_a the safety factor for allowable stress design, Ω , has been applied to the tabulated values.
- 4) Allowable shear, q_a , is for diaphragms subjected to load combinations that include earthquake loads for non-shaded areas. Shaded areas indicate buckling mode of failure governs. Adjustment may be made for load combinations subject to wind loads per AISI Section D5.

DeltaGrip™ System

DGB-36 • 16 Gage

Allowable Diaphragm Shears (q_a) (In Pounds per Lineal Foot), and flexibility factor (F) for DeltaGrip™ Seam Attachment

Puddle Welds	DG Seam Attachment	Span	4'0"	5'0"	6'0"	7'0"	8'0"	9'0"	10'0"	11'0"	12'0"
7	4" O.C.	q_a	3184	3097	3035	2990	2955	2927	2905	2886	2478
		F	3.8+2R	3.9+1.6R	3.9+1.3R	3.9+1.1R	4+1R	4+0.9R	4+0.8R	4+0.7R	4+0.7R
	6" O.C.	q_a	2803	2675	2585	2519	2468	2428	2395	2368	2346
		F	4.2+1.9R	4.3+1.5R	4.3+1.3R	4.3+1.1R	4.4+0.9R	4.4+0.8R	4.4+0.8R	4.4+0.7R	4.4+0.6R
	8" O.C.	q_a	2578	2421	2312	2232	2170	2122	2083	2050	2023
		F	4.5+1.8R	4.6+1.5R	4.7+1.2R	4.7+1R	4.7+0.9R	4.8+0.8R	4.8+0.7R	4.8+0.6R	4.8+0.6R
5	12" O.C.	q_a	2362	2165	2029	1929	1853	1793	1745	1705	1672
		F	5.1+1.6R	5.2+1.3R	5.3+1R	5.4+0.9R	5.4+0.8R	5.5+0.7R	5.5+0.6R	5.5+0.5R	5.6+0.5R
	18" O.C.	q_a	2010	1798	1652	1545	1464	1401	1345	1299	1261
		F	5.8+1.4R	6+1R	6.2+0.8R	6.3+0.6R	6.4+0.5R	6.5+0.4R	6.5+0.4R	6.6+0.3R	6.6+0.3R
	24" O.C.	q_a	1824	1605	1454	1340	1250	1180	1124	1078	1040
		F	6.4+1.1R	6.7+0.7R	7+0.5R	7.1+0.3R	7.3+0.2R	7.4+0.2R	7.5+0.1R	7.6+0.1R	7.6+0.1R
4	4" O.C.	q_a	2644	2595	2560	2533	2513	2497	2483	2212	1859
		F	3+12.1R	3.3+9.7R	3.4+8R	3.5+6.9R	3.6+6R	3.6+5.4R	3.7+4.8R	3.7+4.4R	3.7+4R
	6" O.C.	q_a	2428	2344	2284	2239	2204	2177	2154	2135	1859
		F	3.4+12R	3.6+9.6R	3.8+8R	3.9+6.9R	4+6R	4+5.3R	4.1+4.8R	4.1+4.4R	4.1+4R
	8" O.C.	q_a	2284	2173	2093	2034	1988	1952	1922	1897	1859
		F	3.8+11.9R	4+9.5R	4.2+7.9R	4.3+6.8R	4.4+6R	4.4+5.3R	4.5+4.8R	4.5+4.3R	4.6+4R
3	12" O.C.	q_a	2137	1984	1877	1796	1735	1686	1646	1613	1585
		F	4.4+11.8R	4.7+9.4R	4.9+7.8R	5+6.7R	5.1+5.8R	5.2+5.2R	5.2+4.7R	5.3+4.2R	5.3+3.9R
	18" O.C.	q_a	1838	1665	1543	1452	1383	1329	1284	1248	1217
		F	5.2+11.5R	5.5+9.1R	5.8+7.5R	6+6.4R	6.1+5.6R	6.2+5R	6.3+4.5R	6.4+4R	6.4+3.7R
	24" O.C.	q_a	1674	1490	1361	1266	1193	1136	1087	1045	1009
		F	5.9+11.2R	6.3+8.8R	6.6+7.3R	6.8+6.2R	7+5.4R	7.2+4.7R	7.3+4.2R	7.4+3.8R	7.5+3.5R
2	4" O.C.	q_a	2246	2218	2199	2185	2174	2165	1784	1475	1239
		F	2.7+17.1R	2.9+13.7R	3.1+11.4R	3.3+9.8R	3.4+8.6R	3.4+7.6R	3.5+6.8R	3.6+6.2R	3.6+5.7R
	6" O.C.	q_a	2093	2042	2005	1978	1957	1940	1784	1475	1239
		F	3+17.1R	3.3+13.7R	3.5+11.4R	3.7+9.7R	3.8+8.5R	3.9+7.6R	3.9+6.8R	4+6.2R	4+5.7R
	8" O.C.	q_a	1978	1905	1854	1815	1785	1761	1742	1475	1239
		F	3.4+17R	3.7+13.6R	3.9+11.3R	4.1+9.7R	4.2+8.5R	4.3+7.5R	4.3+6.8R	4.4+6.2R	4.4+5.7R
1	12" O.C.	q_a	1843	1737	1662	1606	1563	1528	1501	1475	1239
		F	4.1+16.9R	4.4+13.5R	4.7+11.2R	4.8+9.6R	4.9+8.4R	5+7.5R	5.1+6.7R	5.2+6.1R	5.2+5.6R
	18" O.C.	q_a	1564	1438	1349	1284	1234	1194	1162	1135	1112
		F	5+16.6R	5.4+13.2R	5.7+11R	5.9+9.4R	6+8.2R	6.1+7.3R	6.2+6.5R	6.3+5.9R	6.4+5.4R
	24" O.C.	q_a	1406	1270	1175	1104	1051	1008	974	944	917
		F	5.7+16.3R	6.2+12.9R	6.6+10.7R	6.8+9.1R	7+8R	7.2+7R	7.3+6.3R	7.4+5.7R	7.5+5.2R

- 1) Deck end laps to be 2 inches minimum over supports.
- 2) Diaphragm Shear values based on a conservative 3 or more span condition.
- 3) For q_a the safety factor for allowable stress design, Ω , has been applied to the tabulated values.
- 4) Allowable shear, q_a , is for diaphragms subjected to load combinations that include earthquake loads for non-shaded areas. Shaded areas indicate buckling mode of failure governs. Adjustment may be made for load combinations subject to wind loads per AISI Section D5.

Roof Deck



Q-Max® System with B-36

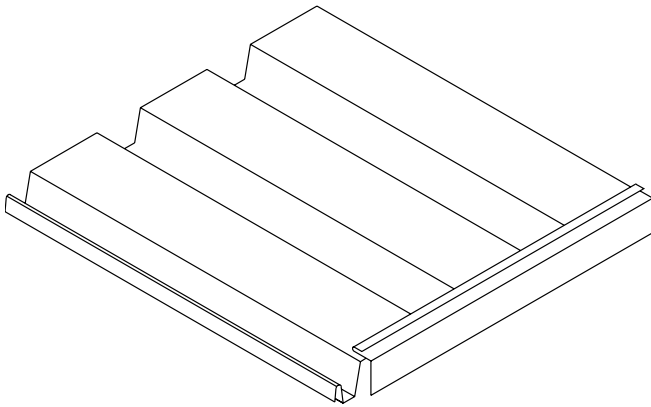
ASC combines B-36 with our 16 gauge Shear Resistance Angle to offer a very cost effective roofing system which provides an enhanced resistance to lateral loads.

Features and Benefits:

- Provides a stiffer diaphragm with increased shear values over B-36
- Interlocking seam allows for seam welding of the side seams.
- 36" wide coverage allows for reduced installation costs.

For more information call 1-800-726-2727

Q-Max[®] System with B-36 Roof Deck



ASC Steel Deck combines **B-36** with our 16 gauge Shear Resistance Angle to offer a very cost effective roofing system which provides excellent resistance to lateral loads.

Q-Max[®] Section Properties

Gauge	Weight (psf)	I (In4)	S+ (In3)	S- (In3)
22	1.68	0.178	0.180	0.195
20	2.04	0.220	0.235	0.246
18	2.70	0.302	0.321	0.336
16	3.36	0.379	0.407	0.415

1. Section properties are based on minimum 38 ksi steel (Fy).

Q-Max[®] — Allowable Reactions (plf)

Gauge	Bearing Length						
	1"	1 1/2"	2"	2 1/2"	3"	3 1/2"	4"
22	416	468	520	572	625	677	729
	1007	1103	1213	1363	1513	1663	1813
20	700	776	853	929	1005	1082	1158
	1495	1617	1739	1897	2088	2280	2472
18	1443	1568	1693	1818	1943	2068	2193
	2734	2909	3084	3258	3436	3710	3985
16	2434	2606	2782	2957	3131	3305	3480
	4350	4578	4806	5034	5262	5490	5786

1. The top value reflects the allowable reaction at the panel end supports.
2. The bottom value reflects the allowable reaction at the interior supports.
3. Values are in pounds per linear foot.

Q-Max[®] Allowable Total (DL + LL) Uniform Load (psf)

Span Condition	Gauge		Span										
			5'0"	5'6"	6'0"	6'6"	7'0"	7'6"	8'0"	8'6"	9'0"	9'6"	10'0"
SINGLE SPAN	22	Stress	109	90	76	65	56	49	43	38	34	30	27
		Deflection	93	70	54	42	34	28	23	19	16	14	12
	20	Stress	143	118	99	85	73	64	56	49	44	40	36
		Deflection	115	87	67	53	42	34	28	23	20	17	14
	18	Stress	195	161	136	115	100	87	76	68	60	54	49
		Deflection	158	119	92	72	58	47	39	32	27	23	20
	16	Stress	247	205	172	146	126	110	97	86	76	69	62
		Deflection	199	149	115	90	72	59	49	40	34	29	25
DOUBLE SPAN	22	Stress	119	98	82	70	60	53	46	41	37	33	30
		Deflection	119	98	82	70	60	53	46	41	37	33	28
	20	Stress	150	124	104	89	76	66	58	52	46	41	37
		Deflection	150	124	104	89	76	66	58	52	46	41	35
	18	Stress	204	169	142	121	104	91	80	71	63	57	51
		Deflection	204	169	142	121	104	91	80	71	63	56	48
	16	Stress	252	209	175	149	129	112	99	87	78	70	63
		Deflection	252	209	175	149	129	112	99	87	78	70	60
TRIPLE SPAN	22	Stress	148	122	103	88	76	66	58	51	46	41	37
		Deflection	148	122	102	80	64	52	43	36	30	26	22
	20	Stress	187	155	130	111	95	83	73	65	58	52	47
		Deflection	187	155	126	99	79	65	53	44	37	32	27
	18	Stress	255	211	177	151	130	113	100	88	79	71	64
		Deflection	255	211	173	136	109	89	73	61	51	44	37
	16	Stress	315	261	219	187	161	140	123	109	97	87	79
		Deflection	315	261	217	171	137	111	92	76	64	55	47

1. Stress based on allowable flexural stress of 22.8 ksi.
2. Deflection based on maximum deflection of L/240.
3. Adequate bearing must be provided.
4. See page 31 for General Notes.

Q-Max[®] System with B-36 Roof Deck

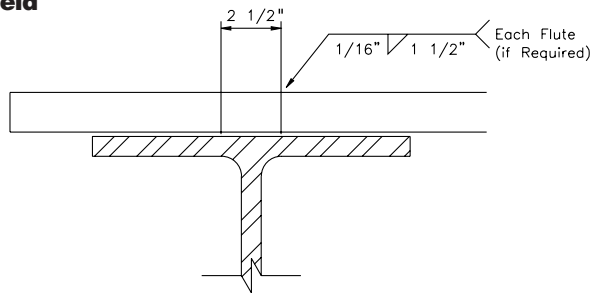
Q-Max[®] – Allowable Diaphragm Shear (q) and Flexibility Factor (F) with Lap Splice Welds

Gauge	Seam Attachment	12" O.C.	No. Puddle Welds		Span				
					6'0"	7'0"	8'0"	9'0"	10'0"
22	Top Seam Weld	12" O.C.	7	q	1200	1030	920	830	770
				F	3.8	4.0	4.2	4.3	4.4
20	Top Seam Weld	12" O.C.	7	q	1440	1280	1130	1020	940
				F	3.2	3.3	3.4	3.5	3.7
18	Top Seam Weld	12" O.C.	7	q	1860	1760	1570	1410	1290
				F	2.3	2.4	2.5	2.6	2.7
16	Top Seam Weld	12" O.C.	7	q	1960	1843	1774	1737	1723
				F	4.2 + 2.8R	4.5 + 2.4R	4.7 + 2.1R	4.9 + 1.9R	5.1 + 1.7R

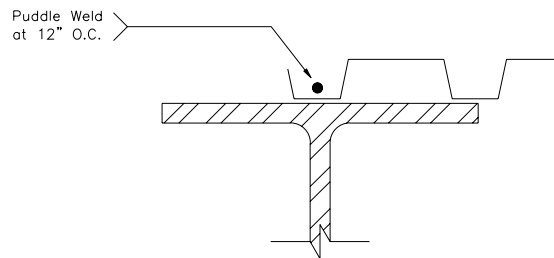
1. The allowable diaphragm shears "q" are listed in pounds per linear foot (plf).
2. See page 31 for General Notes.

Q-Max[®] Details

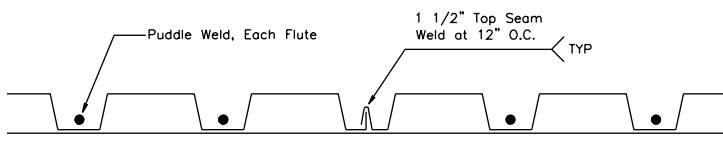
Lap Weld



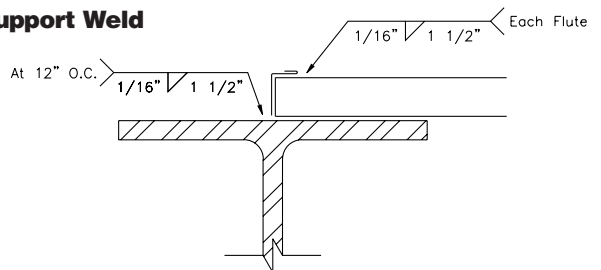
Perimeter Weld



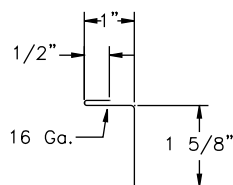
Interior Seam Welds



End Support Weld



Shear Resistance Angle



Shear Resistance Angle to be used at end of deck units and at lines of shear transfer to structural frame

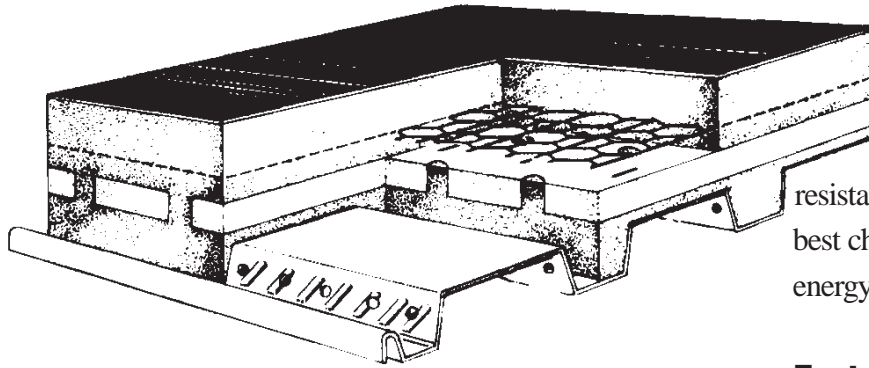
Q-Max[®] System

Q-Max[®] – Allowable Diaphragm Shear (q) and Flexibility Factor (F) without Lap Splice Welds

Gauge	Seam Attachment			Span						
				6'0"	7'0"	8'0"	9'0"	10'0"	11'0"	12'0"
22	Top Seam Weld	12" O.C.	q	996	854	755	683	629	587	554
			F	7.4 + 5.6R	7.8 + 4.8R	8.1 + 4.2R	8.3 + 3.8R	8.5 + 3.4R	8.6 + 3.1R	8.7 + 2.8R
20	Top Seam Weld	12" O.C.	q	1232	1162	1120	1032	947	881	830
			F	6.3 + 4.7R	6.7 + 4R	6.9 + 3.5R	7.2 + 3.1R	7.3 + 2.8R	7.5 + 2.5R	7.5 + 2.3R
18	Top Seam Weld	12" O.C.	q	1584	1491	1436	1407	1396	1398	1409
			F	5 + 3.5R	5.4 + 3R	5.6 + 2.6R	5.8 + 2.3R	6 + 2.1R	6.1 + 1.9R	6.2 + 1.8R
16	Top Seam Weld	12" O.C.	q	1960	1843	1774	1737	1723	1725	1740
			F	4.2 + 2.8R	4.5 + 2.4R	4.7 + 2.1R	4.9 + 1.9R	5.1 + 1.7R	5.2 + 1.5R	5.3 + 1.4R
22	Top Seam Weld	18" O.C.	q	877	752	666	564	522	490	436
			F	8 + 5.6R	8.5 + 4.8R	8.8 + 4.2R	9.5 + 3.8R	9.6 + 3.4R	9.7 + 3.1R	10.3 + 2.8R
20	Top Seam Weld	18" O.C.	q	1092	1029	993	858	790	738	655
			F	6.8 + 4.7R	7.2 + 4R	7.5 + 3.5R	8.2 + 3.1R	8.3 + 2.8R	8.5 + 2.5R	8.9 + 2.3R
18	Top Seam Weld	18" O.C.	q	1414	1328	1279	1177	1171	1176	1119
			F	5.4 + 3.5R	5.8 + 3R	6.1 + 2.6R	6.6 + 2.3R	6.8 + 2.1R	6.9 + 1.9R	7.4 + 1.8R
16	Top Seam Weld	18" O.C.	q	1759	1649	1585	1459	1450	1456	1386
			F	4.5 + 2.8R	4.8 + 2.4R	5.1 + 2.1R	5.6 + 1.9R	5.8 + 1.7R	5.9 + 1.5R	6.3 + 1.4R
22	Top Seam Weld	24" O.C.	q	818	701	577	525	451	426	377
			F	8.4 + 5.6R	8.9 + 4.8R	9.7 + 4.2R	10 + 3.8R	10.7 + 3.4R	10.8 + 3.1R	11.4 + 2.8R
20	Top Seam Weld	24" O.C.	q	1022	962	865	800	685	643	568
			F	7.1 + 4.7R	7.6 + 4R	8.3 + 3.5R	8.6 + 3.1R	9.3 + 2.8R	9.4 + 2.5R	9.9 + 2.3R
18	Top Seam Weld	24" O.C.	q	1330	1247	1121	1100	1021	1029	973
			F	5.6 + 3.5R	6.1 + 3R	6.7 + 2.6R	7 + 2.3R	7.5 + 2.1R	7.7 + 1.9R	8.2 + 1.8R
16	Top Seam Weld	24" O.C.	q	1658	1551	1396	1367	1268	1277	1209
			F	4.7 + 2.8R	5.1 + 2.4R	5.6 + 2.1R	5.9 + 1.9R	6.4 + 1.7R	6.5 + 1.5R	7 + 1.4R

1. The allowable diaphragm shears "q" are listed in pounds per linear foot (plf).
2. See page 31 for General Notes.

Roof Deck



ShearVent™ System with B-36

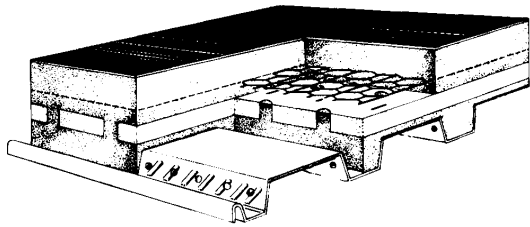
The ShearVent™ System combines positive vented (nominal 1% open area) B-36 composite, lightweight insulating concrete and the Shear Resistance Angle (16 ga.), resulting in a design offering superior shear resistance. This design takes advantage of each component's best characteristics, thereby providing an economical and energy efficient system.

Features and Benefits:

- Pierced venting allows dissipation of excess water at the time of pour and throughout the life of the assembly.
- Two-hour fire rating when designed and installed in accordance with the specified lightweight insulating concrete manufacturer's recommendations

For more information call 1-800-726-2727

Shear Vent™ System with B-36 Deck



The **Shear Vent™ system** combines positive vented (nominal 1% open area) B-36 Composite, lightweight insulating concrete and the Shear Resistance Angle (16 ga.), resulting in a design offering superior shear resistance. This design takes advantage of each component's best characteristics, thereby providing an economical and energy efficient system.

ASC's pierced venting allows dissipation of excess water at the time of pour, and trapped water vapor throughout the life of the assembly. Pierced venting, unlike alternative methods, causes no significant degradation of the strength of the steel in the direction of the stress lines. Consequently, there is no decrease in the section properties nor allowable loads relative to B-36 values.

Shear Vent™ develops a two-hour fire rating when designed and installed in accordance with the specified lightweight insulating concrete manufacturer's recommendations. Refer to the manufacturer's technical data for specific information on U-factors and specifications.

ShearVent™ Section Properties

Gauge	Weight (psf) Galv	I (In4)	S+ (In3)	S- (In3)
22	1.68	0.178	0.180	0.195
20	2.04	0.220	0.235	0.246
18	2.70	0.302	0.321	0.336
16	3.36	0.379	0.407	0.415

1. Section properties are based on minimum 38 ksi steel (Fy).

ShearVent™ — Allowable Reactions (plf)

Gauge	Bearing Length						
	1"	1 1/2"	2"	2 1/2"	3"	3 1/2"	4"
22	416	468	520	572	625	677	729
	1007	1103	1213	1363	1513	1663	1813
20	700	776	853	929	1005	1082	1158
	1495	1617	1739	1897	2088	2280	2472
18	1443	1568	1693	1818	1943	2068	2193
	2734	2909	3084	3258	3436	3710	3985
16	2434	2606	2782	2957	3131	3305	3480
	4350	4578	4806	5034	5262	5490	5786

1. The top value reflects the allowable reaction at the panel end supports.
2. The bottom value reflects the allowable reaction at the interior supports.
3. Values are in pounds per linear foot.

Shear Vent™ Allowable Total (DL + LL) Uniform Load (psf)

Condition	Gauge	Span	Span										
			5'0"	5'6"	6'0"	6'6"	7'0"	7'6"	8'0"	8'6"	9'0"	9'6"	10'0"
SINGLE SPAN	22	Stress	109	90	76	65	56	49	43	38	34	30	27
		Deflection	93	70	54	42	34	28	23	19	16	14	12
	20	Stress	143	118	99	85	73	64	56	49	44	40	36
		Deflection	115	87	67	53	42	34	28	23	20	17	14
	18	Stress	195	161	136	115	100	87	76	68	60	54	49
		Deflection	158	119	92	72	58	47	39	32	27	23	20
16	Stress	247	205	172	146	126	110	97	86	76	69	62	
	Deflection	199	149	115	90	72	59	49	40	34	29	25	
DOUBLE SPAN	22	Stress	119	98	82	70	60	53	46	41	37	33	30
		Deflection	119	98	82	70	60	53	46	41	37	33	28
	20	Stress	150	124	104	89	76	66	58	52	46	41	37
		Deflection	150	124	104	89	76	66	58	52	46	41	35
	18	Stress	204	169	142	121	104	91	80	71	63	57	51
		Deflection	204	169	142	121	104	91	80	71	63	56	48
16	Stress	252	209	175	149	129	112	99	87	78	70	63	
	Deflection	252	209	175	149	129	112	99	87	78	70	60	
TRIPLE SPAN	22	Stress	148	122	103	88	76	66	58	51	46	41	37
		Deflection	148	122	102	80	64	52	43	36	30	26	22
	20	Stress	187	155	130	111	95	83	73	65	58	52	47
		Deflection	187	155	126	99	79	65	53	44	37	32	27
	18	Stress	255	211	177	151	130	113	100	88	79	71	64
		Deflection	255	211	173	136	109	89	73	61	51	44	37
16	Stress	315	261	219	187	161	140	123	109	97	87	79	
	Deflection	315	261	217	171	137	111	92	76	64	55	47	

1. Stress based on allowable flexural stress of 22.8 ksi.
2. Deflection based on maximum deflection of L/240.
3. Adequate bearing must be provided.
4. See page 31 for General Notes.

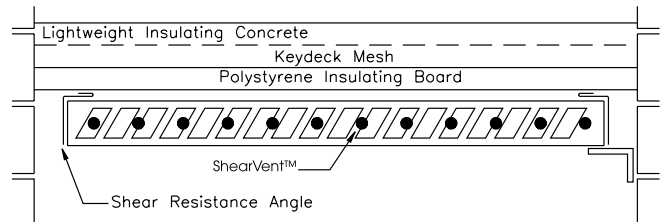
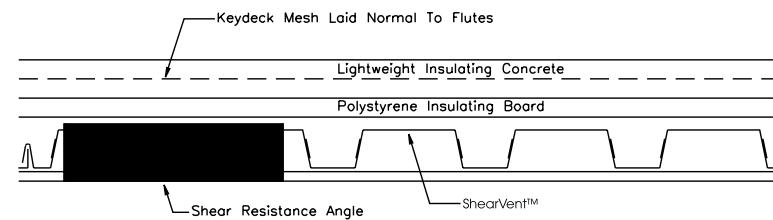
Shear Vent™ System with B-36 Deck

Shear Vent™ Allowable Diaphragm Shear (q) and Flexibility Factor (F) with Lap Splice Weld

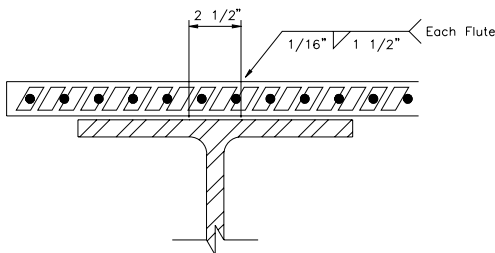
Gauge	Seam Attachment	No. Puddle Welds		Span				
				6'0"	7'0"	8'0"	9'0"	10'0"
22	Button Punch 24" O.C. Max	7	q	1050	970	910	860	810
			F	5.0	5.9	6.7	7.5	8.4
	Top Seam Weld 24" O.C. Max	7	q	1470	1360	1270	1200	1140
			F	3.6	4.2	4.8	5.4	6.0
20	Button Punch 24" O.C. Max.	7	q	1210	1120	1040	980	930
			F	4.2	4.9	5.6	6.3	7.0
	Top Seam Weld 24" O.C. Max.	7	q	1690	1560	1460	1380	1310
			F	3.0	3.5	4.0	4.5	5.0
18	Button Punch 24" O.C. Max.	7	q	1500	1380	1290	1220	1160
			F	3.1	3.7	4.2	4.7	5.2
	Top Seam Weld 24" O.C. Max	7	q	2100	1940	1810	1710	1620
			F	2.2	2.6	3.0	3.4	3.7
16	Button Punch 24" O.C. Max	7	q	1500	1380	1290	1220	1160
			F	3.1	3.7	4.2	4.7	5.2
	Top Seam Weld 24" O.C. Max	7	q	2100	1940	1810	1710	1620
			F	2.2	2.6	3.0	3.4	3.7

1. Refer to Shear Vent™ Details for weld patterns.
2. q7: q = allowable diaphragm shear (plf); 7=number of welds per support.
3. See page 31 for General Notes.

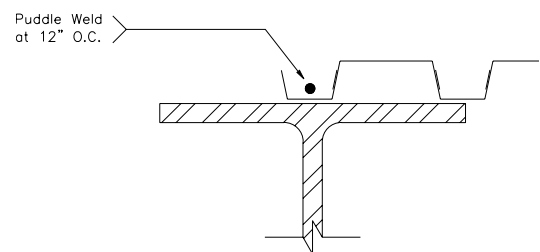
Shear Vent™ System Assembly Diagrams and Details



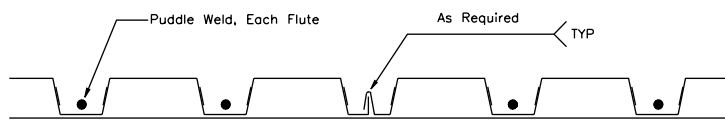
Lap Weld



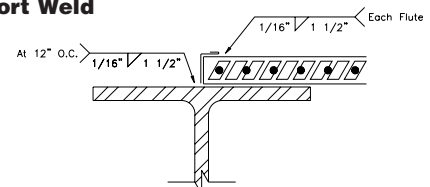
Perimeter Weld



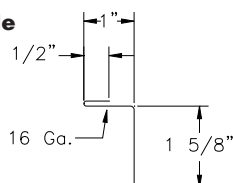
Interior and Seam Welds



End Support Weld



Shear Resistance Angle

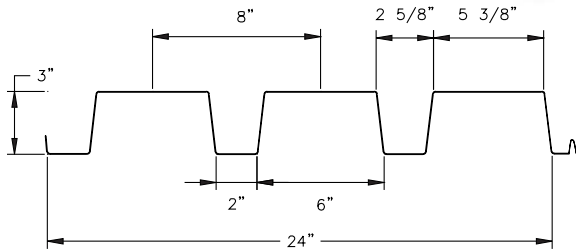


Shear Resistance Angle to be used at end of deck units and at lines of shear transfer to structural frame.

Roof Deck



N-24 Roof Deck



N-24 Roof Deck

N-24 Roof Deck is a 24" net coverage structural roof decking that transfers horizontal and vertical loads into the building frame. N-24 Roof Deck offers a variety of product options including:

- N-24 Acustadek™ featuring web perforations and field installed acoustical batts for absorbing noise.

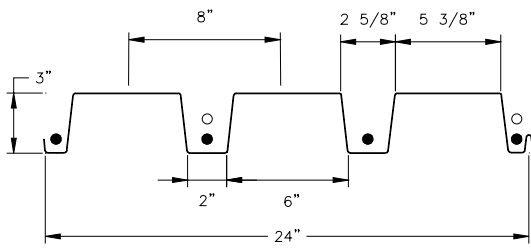
Features and Benefits:

- 3" deep flutes increase span and load capabilities.
- Swaged end allows for easy endlaps and quicker installation.
- Available with interlocking or nestable side laps
- Optional crimp curving available for unique aesthetic applications.

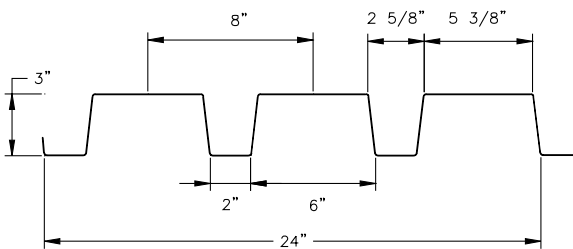
For more information call 1-800-726-2727

ASC Steel Deck

N-24 Roof Deck



○ 2 Welds ● 4 Welds



N-24 Nestable

Nestable sidelap condition available: coverage = 24"

N-24 Section Properties

Gauge	Weight (psf)	I (In4)	S+ (In3)	S- (In3)
22	2.18	0.771	0.361	0.449
20	2.58	0.945	0.467	0.554
18	3.40	1.330	0.689	0.765
16	4.22	1.716	0.882	0.949

1. Section properties are based on minimum 38 ksi steel (Fy).

N-24 Allowable Reactions (plf)

Gauge	Bearing Length						
	1"	1 1/2"	2"	2 1/2"	3"	3 1/2"	4"
22	292	328	365	402	438	475	512
	728	797	876	985	1093	1202	1310
20	501	556	610	665	720	774	829
	1095	1184	1274	1389	1530	1670	1811
18	1057	1148	1240	1331	1423	1514	1606
	2035	2165	2296	2426	2557	2762	2966
16	1805	1935	2064	2193	2323	2452	2582
	3269	3440	3611	3783	3954	4125	4348

1. The top value reflects the allowable reaction at the panel end supports.
2. The bottom value reflects the allowable reaction at the interior supports.
3. Values are in pounds per linear foot.

N-24 Allowable Total (DL + LL) Uniform Load (psf)

Span Condition	Gauge		Span										
			6'0"	7'0"	8'0"	9'0"	10'0"	11'0"	12'0"	13'0"	14'0"	15'0"	16'0"
SINGLE SPAN	22	Stress	152	112	86	68	55	45	38	32	28	24	21
		Deflection	152	112	86	68	51	38	29	23	18	15	12
	20	Stress	197	145	111	88	71	59	49	42	36	32	28
		Deflection	197	145	111	85	62	47	36	28	23	18	15
	18	Stress	291	214	164	129	105	87	73	62	53	47	41
		Deflection	291	214	164	120	87	66	50	40	32	26	21
	16	Stress	372	274	209	166	134	111	93	79	68	60	52
		Deflection	372	274	209	154	112	85	65	51	41	33	27
DOUBLE SPAN	22	Stress	190	139	107	84	68	56	47	40	35	30	27
		Deflection	190	139	107	84	68	56	47	40	35	30	27
	20	Stress	234	172	132	104	84	70	58	50	43	37	33
		Deflection	234	172	132	104	84	70	58	50	43	37	33
	18	Stress	323	237	182	144	116	96	81	69	59	52	45
		Deflection	323	237	182	144	116	96	81	69	59	52	45
	16	Stress	401	294	225	178	144	119	100	85	74	64	56
		Deflection	401	294	225	178	144	119	100	85	74	64	56
TRIPLE SPAN	22	Stress	237	174	133	105	85	71	59	50	44	38	33
		Deflection	237	174	133	105	85	71	55	43	35	28	23
	20	Stress	292	215	164	130	105	87	73	62	54	47	41
		Deflection	292	215	164	130	105	87	68	53	43	35	29
	18	Stress	404	297	227	179	145	120	101	86	74	65	57
		Deflection	404	297	227	179	145	120	95	75	60	49	40
	16	Stress	501	368	282	223	180	149	125	107	92	80	70
		Deflection	501	368	282	223	180	149	123	97	77	63	52

1. Stress based on allowable flexural stress of 22.8 ksi.
2. Deflection based on maximum deflection of L/240.

3. Adequate bearing must be provided.
4. See page 31 for General Notes.

N-24 Roof Deck

N 24 Allowable Diaphragm Shear (q) and Flexibility Factor (F)

Gauge	Seam Attachment	No. Puddle Welds	Span							
			6'0"	8'0"	10'0"	12'0"	14'0"			
22	Button Punch	12" O.C.	2	q F	190 26.7 + 1480R	170 30.1 + 1110R	160 32.6 + 839R	150 34.7 + 741R	140 36.5 + 635R	
		24" O.C.	2	q F	140 35.7 + 1480R	120 42.4 + 1110R	100 47.9 + 839R	100 52.5 + 741R	90 56.5 + 635R	
	1 1/2" Seam Weld	12" O.C.	2	q F	280 13.8 + 1480R	260 11.6 + 1110R	250 10.2 + 839R	250 9.1 + 741R	240 8.4 + 635R	
		24" O.C.	2	q F	170 21.1 + 1480R	150 18.0 + 1110R	140 15.8 + 839R	140 14.2 + 741R	130 13.0 + 635R	
	Button Punch	12" O.C.	4	q F	290 17.8 + 165R	240 21.3 + 123R	220 24.3 + 98.3R	200 27.0 + 82.3R	190 29.4 + 70.6R	
		24" O.C.	4	q F	240 21.0 + 165R	190 26.3 + 123R	160 31.2 + 98.3R	150 35.9 + 82.3R	130 40.3 + 70.6R	
	1 1/2" Seam Weld	12" O.C.	4	q F	350 11.3 + 165R	310 10.1 + 123R	290 9.1 + 98.3R	280 8.4 + 82.3R	270 7.9 + 70.6R	
		24" O.C.	4	q F	240 15.3 + 165R	200 14.0 + 123R	180 12.9 + 98.3R	170 12.1 + 82.3R	160 11.4 + 70.6R	
	20	Button Punch	12" O.C.	2	q F	260 22.2 + 857R	230 25.7 + 643R	210 28.4 + 514R	200 30.7 + 429R	190 32.7 + 367R
			24" O.C.	2	q F	200 28.3 + 857R	170 34.3 + 643R	150 39.6 + 514R	130 44.2 + 429R	120 48.3 + 367R
		1 1/2" Seam Weld	12" O.C.	2	q F	420 11.7 + 857R	390 9.9 + 643R	380 8.7 + 514R	370 7.9 + 429R	360 7.2 + 367R
			24" O.C.	2	q F	260 17.3 + 857R	240 15.0 + 643R	220 13.3 + 514R	210 12.1 + 429R	200 11.1 + 367R
Button Punch		12" O.C.	4	q F	420 14.1 + 95.3R	350 17.3 + 71.4R	300 20.2 + 57.2R	280 22.8 + 47.6R	260 25.2 + 40.8R	
		24" O.C.	4	q F	360 16.1 + 95.3R	280 20.5 + 71.4R	240 24.8 + 57.2R	210 28.9 + 47.6R	190 33.0 + 40.8R	
1 1/2" Seam Weld		12" O.C.	4	q F	550 9.3 + 95.3R	480 8.4 + 71.4R	450 7.7 + 57.2R	420 7.2 + 47.6R	410 6.7 + 40.8R	
		24" O.C.	4	q F	390 12.1 + 95.3R	330 11.3 + 71.4R	290 10.6 + 57.2R	260 10.0 + 47.6R	250 9.5 + 40.8R	

1. The allowable diaphragm shears "q" are listed in pounds per linear foot (plf).
2. See page 31 for General Notes.

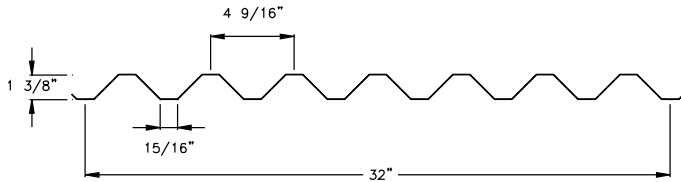
N-24 Roof Deck

N 24 Allowable Diaphragm Shear (q) and Flexibility Factor(F)

Gauge	Seam Attachment	12" O.C.	No. Puddle Welds		Span				
					6'0"	8'0"	10'0"	12'0"	14'0"
18	Button Punch	12" O.C.	2	q	440	370	330	310	290
		F		15.7 + 362R	18.8 + 271R	21.5 + 217R	23.8 + 181R	25.9 + 155R	
	1 1/2" Seam Weld	24" O.C.	2	q	370	300	250	230	210
		F		18.7 + 362R	23.4 + 271R	27.7 + 217R	31.7 + 181R	35.4 + 155R	
	1 1/2" Seam Weld	12" O.C.	2	q	830	760	720	690	670
		F		8.6 + 362R	7.5 + 271R	6.7 + 217R	6.1 + 181R	5.6 + 155R	
	24" O.C.	2	q	550	480	440	410	390	
		F		12.2 + 362R	10.8 + 271R	9.8 + 217R	9.0 + 181R	8.4 + 155R	
	Button Punch	12" O.C.	4	q	710	580	500	440	410
		F		9.5 + 40.2R	12.0 + 30.1R	14.4 + 24.1R	16.7 + 20.1R	18.9 + 17.2R	
	24" O.C.	4	q	640	500	420	360	330	
		F		10.4 + 40.2R	13.5 + 30.1R	16.7 + 24.1R	19.9 + 20.1R	23.2 + 17.2R	
1 1/2" Seam Weld	12" O.C.	4	q	1110	960	870	810	770	
	F		6.6 + 40.2R	6.1 + 30.1R	5.7 + 24.1R	5.4 + 20.1R	5.1 + 17.2R		
24" O.C.	4	q	830	680	590	530	490		
	F		8.2 + 40.2R	7.9 + 30.1R	7.5 + 24.1R	7.3 + 20.1R	7.0 + 17.2R		
16	Button Punch	12" O.C.	2	q	630	520	450	410	380
		F		11.5 + 185R	14.1 + 139R	16.4 + 111R	18.6 + 92.6R	20.5 + 79.4R	
	24" O.C.	2	q	540	430	360	320	290	
		F		13.2 + 185R	16.8 + 139R	20.2 + 111R	23.5 + 92.6R	26.7 + 79.4R	
	1 1/2" Seam Weld	12" O.C.	2	q	1230	1130	1070	1040	1020
		F		6.6 + 185R	5.8 + 139R	5.2 + 111R	4.8 + 92.6R	4.5 + 79.4R	
	24" O.C.	2	q	840	730	670	630	610	
		F		9.0 + 185R	8.1 + 139R	7.5 + 111R	7.0 + 92.6R	6.5 + 79.4R	
	Button Punch	12" O.C.	4	q	1000	800	680	600	550
		F		6.9 + 20.6R	8.8 + 15.4R	10.7 + 12.4R	12.7 + 10.3R	14.6 + 8.8R	
	24" O.C.	4	q	920	710	590	510	450	
		F		7.4 + 20.6R	9.7 + 15.4R	12.1 + 12.4R	14.6 + 10.3R	17.3 + 8.8R	
1 1/2" Seam Weld	12" O.C.	4	q	1560	1370	1270	1210	1180	
	F		4.9 + 20.6R	4.6 + 15.4R	4.4 + 12.4R	4.2 + 10.3R	4.0 + 8.8R		
24" O.C.	4	q	1200	1000	890	820	770		
	F		6.0 + 20.6R	5.8 + 15.4R	5.7 + 12.4R	5.5 + 10.3R	5.4 + 8.8R		

1. The allowable diaphragm shears "q" are listed in pounds per linear foot (plf).
2. See page 31 for General Notes.

Roof Deck



CP-32 Roof Deck

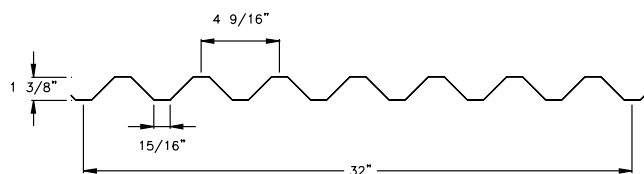
CP-32 Roof Deck is a 32" net coverage structural decking product. This product acts alone in transferring horizontal and vertical loads into the building materials. CP-32 provides the structural substrate for various roofing materials.

Features and Benefits:

- 32" net coverage means fewer pieces to handle and install, saving time and money.
- Optional integral vent tabs allow for optimum curing of lightweight insulating concrete.
- ICBO Evaluation Report No. 2757
- UL Tests for Fire Resistance.

For more information call 1-800-726-2727

CP-32 Roof Deck



CP-32, combined with lightweight insulating concrete (without a polystyrene insulation board) provides an economical insulated roof assembly which offers a 2-hour fire rating.

Please refer to the lightweight insulating concrete manufacturer's technical data for information on U-Factors and specifications.

CP-32 Section Properties

Gauge	Weight (psf)	I (In4)	S+ (In3)	S- (In3)
26	1.04	0.072	0.094	0.094
24	1.33	0.098	0.131	0.131
22	1.62	0.122	0.169	0.169
20	1.92	0.146	0.205	0.205

1. Section properties are based on minimum 80 ksi steel (Fy).

CP-32 Allowable Reactions (plf)

Gauge	Bearing Length						
	1"	1 1/2"	2"	2 1/2"	3"	3 1/2"	4"
26	220	271	328	384	440	496	552
	596	699	824	947	1072	1195	1319
24	363	414	492	569	646	723	800
	1115	1235	1412	1601	1797	1980	2169
22	598	671	756	864	973	1081	1190
	1794	1957	2128	2385	2642	2899	3156
20	978	1081	1184	1321	1476	1631	1785
	2625	2832	3039	3285	3610	3935	4261

1. The top value reflects the allowable reaction at the panel end supports.
2. The bottom value reflects the allowable reaction at the interior supports.
3. Values are in pounds per linear foot.

CP-32 Allowable Total (DL + LL) Uniform Load (psf)

Condition	Span Gauge		Span										
			3'0"	3'6"	4'0"	4'6"	5'0"	5'6"	6'0"	6'6"	7'0"	7'6"	8'0"
SINGLE SPAN	26	Stress	251	184	141	111	90	75	63	53	46	40	35
		Deflection	175	110	74	52	38	28	22	17	14	11	9
	24	Stress	349	257	197	155	126	104	87	74	64	56	49
		Deflection	238	150	100	71	51	39	30	23	19	15	13
	22	Stress	451	331	254	200	162	134	113	96	83	72	63
		Deflection	296	187	125	88	64	48	37	29	23	19	16
	20	Stress	547	402	308	243	197	163	137	116	100	87	77
		Deflection	354	223	150	105	77	58	44	35	28	23	19
DOUBLE SPAN	26	Stress	251	184	141	111	90	75	63	53	46	40	35
		Deflection	251	184	141	111	90	68	53	41	33	27	22
	24	Stress	349	257	197	155	126	104	87	74	64	56	49
		Deflection	349	257	197	155	124	93	72	56	45	37	30
	22	Stress	451	331	254	200	162	134	113	96	83	72	63
		Deflection	451	331	254	200	154	116	89	70	56	46	38
	20	Stress	547	402	308	243	197	163	137	116	100	87	77
		Deflection	547	402	308	243	184	139	107	84	67	55	45
TRIPLE SPAN	26	Stress	313	230	176	139	113	93	78	67	58	50	44
		Deflection	313	208	139	98	71	54	41	32	26	21	17
	24	Stress	437	321	246	194	157	130	109	93	80	70	61
		Deflection	437	283	189	133	97	73	56	44	35	29	24
	22	Stress	563	414	317	250	203	168	141	120	103	90	79
		Deflection	559	352	236	166	121	91	70	55	44	36	29
	20	Stress	683	502	384	304	246	203	171	146	126	109	96
		Deflection	669	421	282	198	144	109	84	66	53	43	35

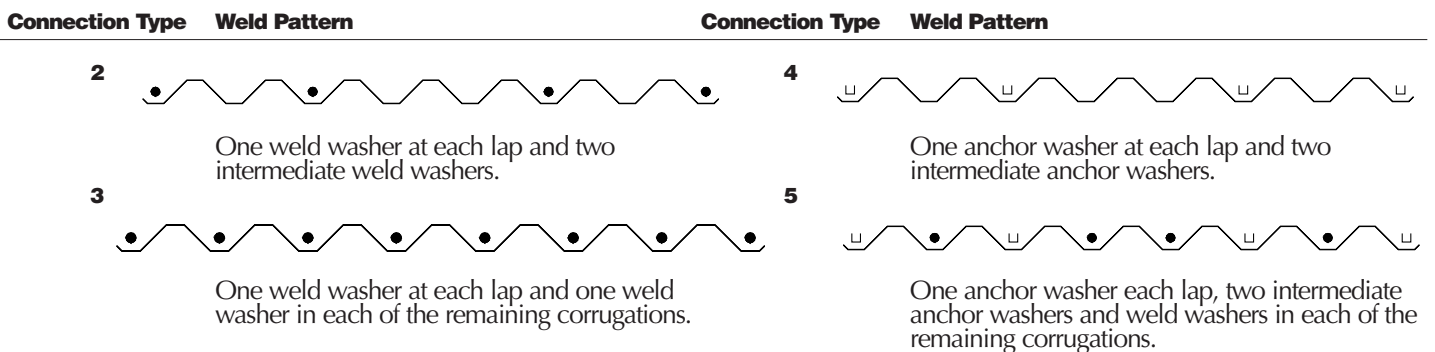
1. Stress based on allowable flexural stress of 36 ksi.
2. Deflection based on maximum deflection of L/240.
3. Adequate bearing must be provided.
4. See page 31 for General Notes.

CP-32 Roof Deck

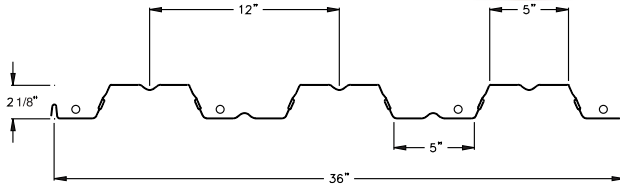
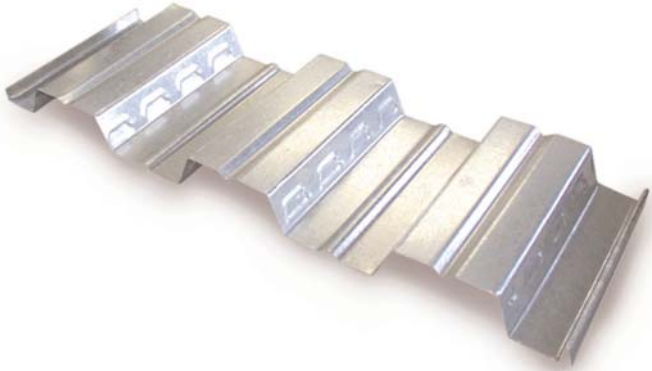
CP- 32 Allowable Diaphragm Shear

Ga	ASC		Span										
	Weld Pattern	4'0"	4'6"	5'0"	5'6"	6'0"	6'6"	7'0"	7'6"	8'0"	8'6"	9'0"	
26	2-2	392	375	362	351	342	334	328	322				
		491	474	461	450	441	433	426	421				
	3-2	446	424	406	391	379	369	460	352				
		571	548	530	515	503	497	483	474				
	5-2	544	514	490	470	454	440	428	417				
		670	640	616	596	580	573	554	544				
	5-3	838	798	767	741	720	702	686	673				
		988	948	917	891	870	860	836	823				
24	2-2	488	488	488	466	449	434	421	410	400			
		548	548	548	527	509	501	489	449	440			
	3-2	565	565	565	537	513	494	477	462	449			
		648	648	648	620	596	586	570	544	531			
	5-2	701	701	701	663	632	605	582	562	545			
		783	783	783	745	714	700	679	644	627			
	5-3	1033	1033	1033	985	945	911	882	857	835			
		1111	1111	1111	1063	1023	1006	679	935	913			
22	2-2	570	570	570	570	570	546	526	508	493	482		
		601	601	601	601	601	589	570	557	524	510		
	3-2	661	661	661	661	661	630	604	581	562	544		
		716	716	716	716	716	700	676	659	617	599		
	5-2	827	827	827	827	827	786	750	720	693	670		
		880	880	880	880	880	859	827	804	747	724		
	5-3	1134	1134	1134	1134	1134	1128	1084	1047	1014	984		
		1213	1213	1213	1213	1213	1187	1147	1119	1049	1019		
20	2-2	627	627	627	627	627	627	627	603	582	563	547	
		641	641	641	641	641	641	641	617	596	578	562	
	3-2	723	723	723	723	723	723	723	723	693	661	643	622
		763	763	763	463	763	763	763	763	733	706	683	662
	5-2	910	910	910	910	910	910	910	910	869	833	802	774
		947	947	947	947	947	947	947	947	907	871	840	812
	5-3	1270	1270	1270	1270	1270	1270	1270	1270	1221	1177	1139	1105
		1281	1281	1281	1281	1281	1281	1281	1281	1231	1188	1150	1116

- The values shown are based on a minimum depth of 2" of light-weight insulating concrete over the top flange of the rib.
- For each weld pattern the top shear values are without wire mesh; the bottom shear values are with wire mesh.
- The allowable diaphragm shears are listed in pounds per linear foot (plf).
- See page 31 for General Notes.
- The first number of the weld pattern (2-2) indicates the welding pattern at the exterior supports; the second number (2-2) indicates the weld pattern at the interior supports.
- The spacing of weld washers to support members running parallel to the flutes are as follows:
 - 24" on center for diaphragms without anchor washers, requiring shears of less than 400 lbs. per linear foot.
 - 12" o.c. for diaphragms without anchor washers, requiring shears of 400 lbs. or greater per linear foot.
 - 8" o.c. for diaphragms, without anchor washers, requiring shears of 950 lbs. or greater per linear foot.
 - Diaphragms, using anchor washers, shall be attached at the boundaries by alternating anchor washers and weld washers at every 12" o.c.



Roof Deck



○ 4 Welds
2W also available in 24" coverage

2W without Concrete Fill

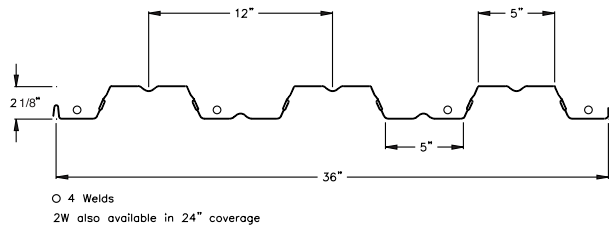
2W Composite without concrete fill is available in a 36" net coverage. 2W provides both vertical and load capacity and diaphragm shear capacities.

Features and Benefits:

- Interlocking seams allow for button punching of the side seams.
- 36" wide coverage allows for reduced installation costs
- ICBO Evaluation Report.

For more information call 1-800-726-2727

2W Composite Floor Deck without concrete fill



2W Section Properties

Gauge	Weight		I (In4)	S+ (In3)	S- (In3)
	(psf)	Galv			
22	1.63		0.380	0.298	0.339
20	1.95		0.465	0.397	0.411
18	2.57		0.601	0.535	0.538
16	3.21		0.752	0.670	0.670

2W Allowable Reactions (plf)

Gauge	Bearing Length						
	1"	1 1/2"	2"	2 1/2"	3"	3 1/2"	4"
22	164	185	206	227	248	269	291
	415	455	504	567	631	694	758
20	286	318	350	382	414	446	477
	628	680	733	804	886	968	1051
18	615	669	723	777	831	884	938
	1181	1258	1334	1411	1493	1613	1733
16	1054	1130	1207	1283	1360	1436	1512
	1902	2003	2104	2205	2306	2407	2544

1. The top value reflects the allowable reaction at the panel end supports.
2. The bottom value reflects the allowable reaction at the interior supports.
3. Values are in pounds per linear foot.

2W-36 Allowable Total (DL + LL) Uniform Load (psf) Without Concrete

Span Condition	Gauge		Span												
			6'0"	6'6"	7'0"	7'6"	8'0"	8'6"	9'0"	9'6"	10'0"	10'6"	11'0"	11'0"	12'0"
SINGLE SPAN	22	Stress	125	107	92	80	70	62	55	50	45	41	37	34	31
		Deflection	115	90	72	59	48	40	34	29	24	21	18	16	14
	20	Stress	167	142	123	107	94	83	74	66	60	54	49	45	41
		Deflection	141	111	89	72	59	49	41	35	30	26	22	20	17
	18	Stress	225	192	165	144	127	112	100	90	81	73	67	61	56
		Deflection	182	143	115	93	77	64	54	46	39	34	29	25	22
	16	Stress	282	241	207	181	159	140	125	112	101	92	84	77	70
		Deflection	228	179	143	117	96	80	67	57	49	42	37	32	28
DOUBLE SPAN	22	Stress	143	121	105	91	80	71	63	57	51	46	42	38	35
		Deflection	143	121	105	91	80	71	63	57	51	46	42	38	34
	20	Stress	173	147	127	111	97	86	77	69	62	56	51	47	43
		Deflection	173	147	127	111	97	86	77	69	62	56	51	47	42
	18	Stress	227	193	166	145	127	113	100	90	81	74	67	61	56
		Deflection	227	193	166	145	127	113	100	90	81	74	67	61	54
	16	Stress	282	241	207	181	159	140	125	112	101	92	84	77	70
		Deflection	282	241	207	181	159	140	125	112	101	92	84	77	68
TRIPLE SPAN	22	Stress	178	152	131	114	100	89	79	71	64	58	53	48	44
		Deflection	178	152	131	111	91	76	64	54	47	40	35	30	27
	20	Stress	216	184	159	138	122	108	96	86	78	70	64	59	54
		Deflection	216	184	159	136	112	93	78	67	57	49	43	37	33
	18	Stress	283	241	208	181	159	141	126	113	102	92	84	77	70
		Deflection	283	241	208	176	145	121	101	86	74	64	55	48	43
	16	Stress	353	301	259	226	198	176	157	141	127	115	105	96	88
		Deflection	353	301	259	220	181	151	127	108	93	80	69	61	53

1. Stress based on allowable flexural stress of 22.8 ksi.
2. Deflection based on maximum deflection of L/240.
3. Adequate bearing must be provided.
4. See page 31 for General Notes.

ASC Steel Deck

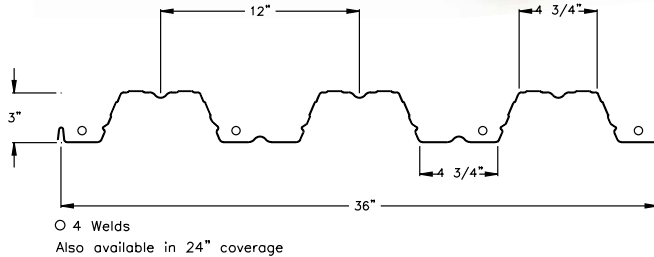
2W-36 Floor Deck without concrete fill

2W-36 Allowable Diaphragm Shears (q) and Flexibility Factor (F) Without Concrete

Gauge	Seam Attachment	No. Puddle Welds	DECK SPAN (feet)								
			6'0"	7'0"	8'0"	9'0"	10'0"	11'0"	12'0"		
22	Button Punch	4	q	220	200	190	180	170	170	160	
			F	13.5 + 290R	12.9 + 249R	12.5 + 218R	12.0 + 194R	11.7 + 174R	11.3 + 158R	11.0 + 145R	
	Button Punch	4	q	190	170	160	150	140	130	130	
			F	15.1 + 290R	14.7 + 249R	14.3 + 218R	13.9 + 194R	13.6 + 174R	13.3 + 158R	13.0 + 145R	
	Button Punch	4	q	180	160	140	130	130	120	110	
			F	16.2 + 290R	15.9 + 249R	15.5 + 218R	15.2 + 194R	14.9 + 174R	14.7 + 158R	14.4 + 145R	
	Top Seam Weld	4	q	300	290	280	270	260	250	250	
		F	8.6 + 290R	8.1 + 249R	7.7 + 218R	7.3 + 194R	7.0 + 174R	6.8 + 158R	6.5 + 145R		
Top Seam Weld	4	q	230	220	210	200	190	190	180		
		F	10.3 + 290R	9.7 + 249R	9.3 + 218R	8.8 + 194R	8.5 + 174R	8.2 + 158R	7.9 + 145R		
Top Seam Weld	4	q	200	180	170	170	160	150	150		
		F	11.6 + 290R	11.0 + 249R	10.5 + 218R	10.1 + 194R	9.7 + 174R	9.4 + 158R	9.0 + 145R		
20	Button Punch	4	q	330	300	280	260	250	230	230	
			F	10.8 + 165R	10.5 + 142R	10.3 + 124R	10.0 + 110R	9.8 + 99R	9.6 + 90R	9.4 + 83R	
	Button Punch	4	q	290	260	240	220	210	200	190	
			F	11.9 + 165R	11.7 + 142R	11.5 + 124R	11.3 + 110R	11.1 + 99R	10.9 + 90R	10.8 + 83R	
	Button Punch	4	q	280	240	220	200	190	180	170	
			F	12.5 + 165R	12.4 + 142R	12.2 + 124R	12.1 + 110R	12.0 + 99R	11.9 + 90R	11.7 + 83R	
	Top Seam Weld	4	q	480	450	430	410	400	390	380	
		F	7.1 + 165R	6.7 + 142R	6.4 + 124R	6.2 + 110R	5.9 + 99R	5.7 + 90R	5.5 + 83R		
Top Seam Weld	4	q	380	350	330	320	300	290	280		
		F	8.4 + 165R	8.0 + 142R	7.6 + 124R	7.3 + 110R	7.1 + 99R	6.9 + 90R	6.6 + 83R		
Top Seam Weld	4	q	330	300	280	270	250	240	230		
		F	9.3 + 165R	8.9 + 142R	8.6 + 124R	8.3 + 110R	8.0 + 99R	7.8 + 90R	7.6 + 83R		
18	Button Punch	4	q	590	530	480	450	420	400	380	
			F	7.4 + 68R	7.3 + 58R	7.2 + 51R	7.2 + 45R	7.1 + 41R	7.0 + 37R	6.9 + 34R	
	Button Punch	4	q	550	480	440	400	370	350	330	
			F	7.8 + 68R	7.8 + 58R	7.8 + 51R	7.8 + 45R	7.8 + 41R	7.7 + 37R	7.7 + 34R	
	Button Punch	4	q	520	460	410	380	350	320	300	
			F	8.1 + 68R	8.1 + 58R	8.2 + 51R	8.2 + 45R	8.2 + 41R	8.2 + 37R	8.2 + 34R	
	Top Seam Weld	4	q	990	920	870	830	800	770	750	
		F	5.1 + 68R	4.9 + 58R	4.7 + 51R	4.6 + 45R	4.4 + 41R	4.3 + 37R	4.2 + 34R		
Top Seam Weld	4	q	810	750	690	650	620	590	570		
		F	5.9 + 68R	5.7 + 58R	5.5 + 51R	5.3 + 45R	5.2 + 41R	5.1 + 37R	4.9 + 34R		
Top Seam Weld	4	q	720	660	600	560	530	500	480		
		F	6.4 + 68R	6.2 + 58R	6.0 + 51R	5.9 + 45R	5.8 + 41R	5.6 + 37R	5.5 + 34R		
16	Button Punch	4	q	870	770	700	640	600	560	530	
			F	5.4 + 34R	5.4 + 30R	5.4 + 26R	5.4 + 23R	5.4 + 21R	5.3 + 19R	5.3 + 17R	
	Button Punch	4	q	820	720	650	590	540	500	470	
			F	5.6 + 34R	5.7 + 30R	5.7 + 26R	5.7 + 23R	5.8 + 21R	5.8 + 19R	5.8 + 17R	
	Button Punch	4	q	790	690	620	560	510	480	440	
			F	5.8 + 34R	5.8 + 30R	5.9 + 26R	5.9 + 23R	6.0 + 21R	6.1 + 19R	6.1 + 17R	
	Top Seam Weld	4	q	1400	1310	1240	1200	1160	1130	1110	
		F	3.9 + 34R	3.8 + 30R	3.6 + 26R	3.5 + 23R	3.4 + 21R	3.4 21R	3.3 + 17R		
Top Seam Weld	4	q	1170	1080	1010	960	920	880	860		
		F	4.4 + 34R	4.3 + 30R	4.2 + 26R	4.1 + 23R	4.0 + 21R	3.9 + 19R	3.8 + 17R		
Top Seam Weld	4	q	1060	960	890	840	790	760	730		
		F	4.7 + 34R	4.6 + 30R	4.5 + 26R	4.4 + 23R	4.4 + 21R	4.3 + 19R	4.2 + 17R		

1. The allowable diaphragm shears "q" are listed in pounds per linear foot (plf).
 2. See page 31 for General Notes.

Roof Deck



3W without Concrete Fill

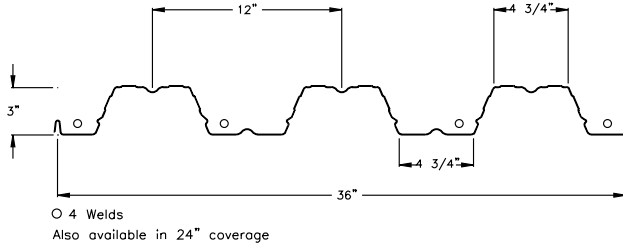
3W Composite without concrete fill is available in 36" net coverage. 3W provides both vertical load capacity and diaphragm shear capacities.

Features and Benefits:

- 3" deck allows for longer span applications.
- Interlocking seams allow for button punching of the side seams.
- 36" wide coverage allows for reduced installation costs
- ICBO Evaluation Report.

For more information call 1-800-726-2727

3W Composite Floor Deck without concrete fill



3W – Allowable Reactions (plf)

Gauge	Bearing Length						
	1"	1 1/2"	2"	2 1/2"	3"	3 1/2"	4"
22	155	175	195	215	235	255	275
	402	441	488	550	611	673	734
20	275	306	337	367	398	429	459
	615	666	717	787	867	948	1028
18	602	655	707	760	813	866	919
	1170	1246	1322	1398	1479	1598	1717
16	1042	1117	1193	1268	1344	1419	1495
	1898	1998	2099	2200	2300	2401	2538

3W – Section Properties

Gauge	Weight		I (In4)	S+ (In3)	S- (In3)
	(psf)	Galv			
22	1.68		0.769	0.433	0.471
20	2.04		0.938	0.550	0.574
18	2.70		1.260	0.780	0.777
16	3.36		1.582	0.976	0.975

1. The top value reflects the allowable reaction at the panel end supports.
2. The bottom value reflects the allowable reaction at the interior supports.
3. Values are in pounds per linear foot.

3W-36 Allowable Total (DL + LL) Uniform Load (psf) Without Concrete

Span Condition	Gauge		Span												
			6'0"	6'6"	7'0"	7'6"	8'0"	8'6"	9'0"	9'6"	10'0"	10'6"	11'0"	11'6"	12'0"
SINGLE SPAN	22	Stress	182	155	134	117	102	91	81	72	65	59	54	49	45
		Deflection	182	155	134	117	98	82	69	58	50	43	37	33	29
	20	Stress	232	197	170	148	130	115	103	92	83	75	69	63	58
		Deflection	232	197	170	145	120	100	84	71	61	53	46	40	35
	18	Stress	329	280	241	210	185	164	146	131	118	107	97	89	82
		Deflection	329	280	241	196	161	134	113	96	82	71	62	54	47
	16	Stress	412	351	302	263	231	205	183	164	148	134	122	112	103
		Deflection	412	351	302	246	202	169	142	121	103	89	78	68	60
DOUBLE SPAN	22	Stress	198	169	146	127	111	99	88	79	71	64	59	54	49
		Deflection	98	169	146	127	111	99	88	79	71	64	59	54	49
	20	Stress	242	206	178	155	136	120	107	96	87	79	72	65	60
		Deflection	242	206	178	155	136	120	107	96	87	79	72	65	60
	18	Stress	328	279	241	209	184	163	145	130	118	107	97	89	82
		Deflection	328	279	241	209	184	163	145	130	118	107	97	89	82
	16	Stress	411	350	302	263	231	205	182	164	148	134	122	112	102
		Deflection	411	350	302	263	231	205	182	164	148	134	122	112	102
TRIPLE SPAN	22	Stress	248	211	182	159	139	123	110	99	89	81	73	67	62
		Deflection	248	211	182	159	139	123	110	99	89	81	71	62	55
	20	Stress	302	258	222	193	170	150	134	120	109	98	90	82	75
		Deflection	302	258	222	193	170	150	134	120	109	98	87	76	67
	18	Stress	410	349	301	262	230	204	182	163	147	133	122	111	102
		Deflection	410	349	301	262	230	204	182	163	147	133	117	102	90
	16	Stress	514	438	378	329	289	256	228	205	185	168	153	140	128
		Deflection	514	438	378	329	289	256	228	205	185	168	147	128	113

1. Stress based on allowable flexural stress of 22.8 ksi.
2. Deflection based on maximum deflection of L/240.
3. Adequate bearing must be provided.
4. See page 31 for General Notes.

ASC Steel Deck

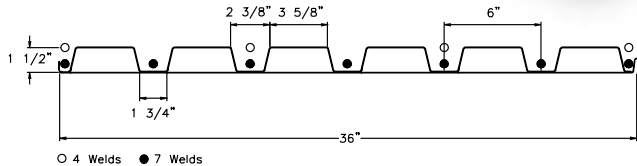
3W-36 Floor Deck without concrete fill

3W-36 Allowable Diaphragm Shears (q) and Flexibility Factor (F) Without Concrete

Gauge	Seam Attachment	12" O.C.	No. Puddle Welds		Deck Span (f e e t)						
					6'0"	7'0"	8'0"	9'0"	10'0"	11'0"	12'0"
22	Button	12" O.C.	4	q	200	180	170	160	150	150	140
	Punch			F	13.0 + 410R	12.4 + 351R	12.0 + 308R	11.5 + 273R	11.1 + 246R	10.8 + 224R	10.5 + 205R
	Button	18" O.C.	4	q	170	150	140	130	120	120	110
	Punch			F	14.6 + 410R	14.2 + 351R	13.8 + 308R	13.4 + 273R	13.0 + 246R	12.7 + 224R	12.4 + 205R
	Button	24" O.C.	4	q	150	140	130	120	110	100	100
	Punch			F	15.7 + 410R	15.3 + 351R	15.0 + 308R	14.7 + 273R	14.3 + 246R	14.1 + 224R	13.8 + 205R
20	Top Seam Weld	12" O.C.	4	q	290	280	270	260	260	250	250
				F	8.3 + 410R	7.8 + 351R	7.3 + 308R	7.0 + 273R	6.7 + 246R	6.5 + 224R	6.2 + 205R
	Top Seam Weld	18" O.C.	4	q	230	210	200	200	190	180	180
				F	9.9 + 410R	9.3 + 351R	8.8 + 308R	8.4 + 273R	8.1 + 246R	7.8 + 224R	7.5 + 205R
	Top Seam Weld	24" O.C.	4	q	190	180	170	160	150	150	150
				F	11.1 + 410R	10.5 + 351R	10.0 + 308R	9.6 + 273R	9.2 + 246R	8.9 + 224R	8.6 + 205R
18	Button	12" O.C.	4	q	290	260	240	230	220	210	200
	Punch			F	10.5 + 233R	10.2 + 200R	9.9 + 175R	9.6 + 155R	9.4 + 140R	9.2 + 127R	8.9 + 117R
	Button	18" O.C.	4	q	260	230	210	200	180	170	170
	Punch			F	11.5 + 233R	11.3 + 200R	11.1 + 175R	10.9 + 155R	10.7 + 140R	10.5 + 127R	10.3 + 117R
	Button	24" O.C.	4	q	240	210	190	180	170	160	150
	Punch			F	12.1 + 233R	12.0 + 200R	11.8 + 175R	11.7 + 155R	11.5 + 140R	11.4 + 127R	11.3 + 117R
16	Top Seam Weld	12" O.C.	4	q	470	440	420	410	400	390	380
				F	6.9 + 233R	6.5 + 200R	6.2 + 175R	5.9 + 155R	5.7 + 140R	5.5 + 127R	5.3 + 117R
	Top Seam Weld	18" O.C.	4	q	370	340	320	310	300	290	280
				F	8.1 + 233R	7.7 + 200R	7.3 + 175R	7.0 + 155R	6.8 + 140R	6.6 + 127R	6.4 + 117R
	Top Seam Weld	24" O.C.	4	q	320	290	270	260	250	240	230
				F	8.9 + 233R	8.6 + 200R	8.2 + 175R	7.9 + 155R	7.7 + 140R	7.4 + 127R	7.2 + 117R
18	Button	12" O.C.	4	q	540	480	440	410	380	360	340
	Punch			F	7.2 + 96R	7.1 + 83R	7.0 + 72R	6.9 + 64R	6.8 + 58R	6.8 + 53R	6.7 + 48R
	Button	18" O.C.	4	q	490	440	390	360	340	310	300
	Punch			F	7.7 + 96R	7.6 + 83R	7.6 + 72R	7.6 + 64R	7.5 + 58R	7.5 + 53R	7.4 + 48R
	Button	24" O.C.	4	q	470	420	370	340	310	290	270
	Punch			F	7.9 + 96R	7.9 + 83R	7.9 + 72R	7.9 + 64R	7.9 + 58R	7.9 + 53R	7.9 + 48R
16	Top Seam Weld	12" O.C.	4	q	910	860	820	790	770	750	740
				F	5.0 + 96R	4.8 + 83R	4.6 + 72R	4.4 + 64R	4.3 + 58R	4.1 + 53R	4.0 + 48R
	Top Seam Weld	18" O.C.	4	q	740	690	650	620	600	580	560
				F	5.7 + 96R	5.5 + 83R	5.3 + 72R	5.1 + 64R	5.0 + 58R	4.9 + 53R	4.8 + 48R
	Top Seam Weld	24" O.C.	4	q	660	600	560	530	510	490	470
				F	6.2 + 96R	6.0 + 83R	5.8 + 72R	5.7 + 64R	5.6 + 58R	5.4 + 53R	5.3 + 48R
16	Button	12" O.C.	4	q	820	720	650	600	560	520	500
	Punch			F	5.2 + 49R	5.2 + 42R	5.2 + 37R	5.2 + 32R	5.2 + 29R	5.2 + 27R	5.2 + 24R
	Button	18" O.C.	4	q	770	670	600	550	510	470	440
	Punch			F	5.5 + 49R	5.5 + 42R	5.5 + 37R	5.6 + 32R	5.6 + 29R	5.6 + 27R	5.6 + 24R
	Button	24" O.C.	4	q	740	650	580	520	480	440	410
	Punch			F	5.6 + 49R	5.7 + 42R	5.7 + 37R	5.8 + 32R	5.8 + 29R	5.9 + 27R	5.9 + 24R
16	Top Seam Weld	12" O.C.	4	q	1320	1230	1170	1130	1090	1060	1040
				F	3.8 + 49R	3.7 + 42R	3.5 + 37R	3.4 + 32R	3.3 + 29R	3.3 + 27R	3.2 + 24R
	Top Seam Weld	18" O.C.	4	q	1100	1010	950	900	860	830	810
				F	4.3 + 49R	4.1 + 42R	4.0 + 37R	4.0 + 32R	3.9 + 29R	3.8 + 27R	3.7 + 24R
	Top Seam Weld	24" O.C.	4	q	990	900	840	790	750	710	690
				F	4.6 + 49R	4.5 + 42R	4.4 + 37R	4.3 + 32R	4.2 + 29R	4.2 + 27R	4.1 + 24R

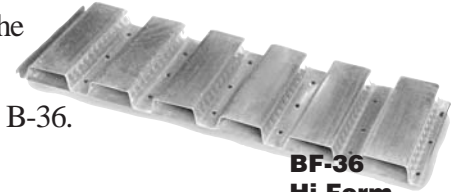
1. The allowable diaphragm shears "q" are listed in pounds per linear foot (plf).
 2. See page 31 for General Notes.

Roof Deck



BF-36 Cellular Roof Deck

BF-36 Roof Deck is a 36" net coverage structural decking product. Roof deck products act alone in transferring horizontal and vertical loads into the building frame, and do not work compositely with other building materials. BF-36 Cellular increases the load and span capabilities beyond B-36.



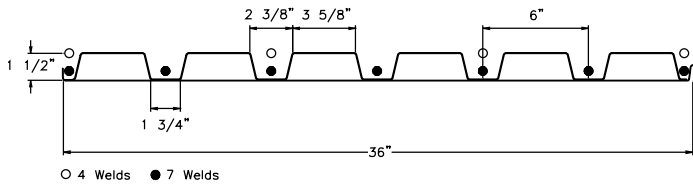
**BF-36
Hi-Form**
see floor deck

Features and Benefits:

- Its flat pan provides a flush surface for a ceiling.
- Interlocking seam allows for button punching and seam welding of the side seams.
- 36" wide coverage allows for reduced installation costs.
- Acustadek version features pan perforations and factory

For more information call 1-800-726-2727

BF-36 Roof Deck



BF-36 Section Properties

Gauge	Weight (psf)	I (In4)	S+ (In3)	S- (In3)
20/20	3.55	0.392	0.282	0.398
20/18	4.08	0.447	0.289	0.435
20/16	5.09	0.484	0.295	0.453
18/20	4.21	0.474	0.426	0.470
18/18	4.73	0.541	0.436	0.561
18/16	5.25	0.615	0.445	0.585
16/16	5.75	0.715	0.612	0.712

1. Section properties are based on minimum 38 ksi steel (Fy).

BF-36 Allowable Reactions (plf)

Gauge	Bearing Length						
	1"	1 1/2"	2"	2 1/2"	3"	3 1/2"	4"
20/20	700	776	853	929	1005	1082	1158
	1495	1617	1739	1897	2088	2280	2472
20/18	700	776	853	929	1005	1082	1158
	1495	1617	1739	1897	2088	2280	2472
20/16	700	776	853	929	1005	1082	1158
	1495	1617	1739	1897	2088	2280	2472
18/20	1443	1568	1693	1818	1943	2068	2193
	2734	2909	3084	3258	3436	3710	3985
18/18	1443	1568	1693	1818	1943	2068	2193
	2734	2909	3084	3258	3436	3710	3985
18/16	1443	1568	1693	1818	1943	2068	2193
	2734	2909	3084	3258	3436	3710	3985
16/16	2434	2608	2782	2957	3131	3305	3480
	4350	4578	4806	5034	5262	5490	5786

1. The top value reflects the allowable reaction at the panel end supports.
2. The bottom value reflects the allowable reaction at the interior supports.
3. Values are in pounds per linear foot.

BF-36— Allowable Total (DL + LL) Uniform Load (psf)

Span Condition	Gauge		Span										
			5'0"	5'6"	6'0"	6'6"	7'0"	7'6"	8'0"	8'6"	9'0"	9'6"	10'0"
SINGLE SPAN	20/20	Stress	171	142	119	101	87	76	67	59	53	47	43
		Deflection	171	142	119	94	75	61	50	42	35	30	26
	20/18	Stress	176	145	122	104	90	78	69	61	54	49	44
		Deflection	176	145	122	104	85	69	57	48	40	34	29
	18/18	Stress	265	219	184	157	135	118	104	92	82	73	66
		Deflection	265	213	164	129	103	84	69	58	49	41	35
	18/16	Stress	271	224	188	160	138	120	106	94	84	75	68
		Deflection	271	224	187	147	118	96	79	66	55	47	40
	16/16	Stress	372	308	258	220	190	165	145	129	115	103	93
		Deflection	372	282	217	171	137	111	92	76	64	55	47
DOUBLE SPAN	20/20	Stress	242	200	168	143	123	108	95	84	75	67	60
		Deflection	242	200	168	143	123	108	95	84	75	67	60
	20/18	Stress	264	219	184	156	135	118	103	92	82	73	66
		Deflection	264	219	184	156	135	118	103	92	82	73	66
	18/18	Stress	341	282	237	202	174	152	133	118	105	94	85
		Deflection	341	282	237	202	174	152	133	118	105	94	85
	18/16	Stress	356	294	247	210	181	158	139	123	110	99	89
		Deflection	356	294	247	210	181	158	139	123	110	99	89
	16/16	Stress	433	358	301	256	221	192	169	150	134	120	108
		Deflection	433	358	301	256	221	192	169	150	134	120	108
TRIPLE SPAN	20/20	Stress	268	221	186	159	137	119	105	93	83	74	67
		Deflection	268	221	186	159	137	115	95	79	67	57	48
	20/18	Stress	275	227	191	162	140	122	107	95	85	76	69
		Deflection	275	227	191	162	140	122	107	90	76	64	55
	18/18	Stress	414	342	288	245	211	184	162	143	128	115	104
		Deflection	414	342	288	244	195	159	131	109	92	78	67
	18/16	Stress	423	349	294	250	216	188	165	146	130	117	106
		Deflection	423	349	294	250	216	180	149	124	104	89	76
	16/16	Stress	541	447	376	320	276	240	211	187	167	150	135
		Deflection	541	447	376	320	258	210	173	144	121	103	88

1. Stress based on allowable flexural stress of 22.8 ksi.
2. Deflection based on maximum deflection of L/240.
3. Adequate bearing must be provided.
4. See page 31 for General Notes.

BF-36 Roof Deck

BF-36—Allowable Diaphragm Shear (q) and Flexibility Factor (F)

Gauge	Seam Attachment		No. of Puddle Welds		Span				
					6'0"	7'0"	8'0"	9'0"	10'0"
20/20	Top Seam Weld	12" O.C.	4	q	905	812	742	688	645
				F	3.3 + 4.4R	3.3 + 3.8R	3.2 + 3.3R	3.2 + 3.0R	3.2 + 2.7R
		24" O.C.	4	q	748	654	584	530	488
				F	3.7 + 4.4R	3.8 + 3.8R	3.8 + 3.3R	3.8 + 3.0R	3.8 + 2.7R
	Top Seam Weld	12" O.C.	7	q	1090	964	870	797	740
				F	3.0 + 3.9R	3.0 + 3.4R	3.0 + 3.0R	3.0 + 2.6R	3.0 + 2.4R
		24" O.C.	7	q	933	806	712	640	583
				F	3.3 + 3.9R	3.4 + 3.4R	3.4 + 3.0R	3.5 + 2.6R	3.5 + 2.4R
20/18	Top Seam Weld	12" O.C.	4	q	1582	1446	1332	1233	1154
				F	2.7 + 3.4R	2.6 + 2.9R	2.6 + 2.5R	2.6 + 2.2R	2.6 + 2.0R
		24" O.C.	4	q	1311	1169	1053	953	874
				F	3.0 + 3.4R	3.0 + 2.9R	3.1 + 2.5R	3.1 + 2.2R	3.1 + 2.0R
	Top Seam Weld	12" O.C.	7	q	1975	1742	1567	1433	1327
				F	2.5 + 3.1R	2.5 + 2.6R	2.5 + 2.3R	2.5 + 2.0R	2.5 + 1.8R
		24" O.C.	7	q	1695	1462	1287	1153	1047
				F	2.7 + 3.1R	2.8 + 2.6R	2.8 + 2.3R	2.9 + 2.0R	2.9 + 1.8R
18/18	Top Seam Weld	12" O.C.	4	q	1520	1384	1285	1210	1152
				F	2.2 + 3.2R	2.2 + 2.8R	2.2 + 2.4R	2.2 + 2.1R	2.25 + 1.9R
		24" O.C.	4	q	1275	1134	1029	949	885
				F	2.2 + 3.2R	2.5 + 2.8R	2.6 + 2.4R	2.6 + 2.1R	2.6 + 1.9R
	Top Seam Weld	12" O.C.	7	q	1887	1704	1570	1469	1390
				F	2.1 + 2.7R	2.1 + 2.3R	2.1 + 2.0R	2.1 + 1.8R	2.1 + 1.6R
		24" O.C.	7	q	1640	1450	1310	1202	1090
				F	2.3 + 2.7R	2.4 + 2.3R	2.4 + 2.0R	2.5 + 1.8R	2.5 + 1.6R
18/16	Top Seam Weld	12" O.C.	4	q	1920	1749	1625	1531	1460
				F	1.9 + 2.6R	1.9 + 2.2R	1.9 + 2.0R	1.9 + 1.7R	1.9 + 1.6R
		24" O.C.	4	q	1612	1434	1302	1201	1121
				F	2.1 + 2.6R	2.2 + 2.2R	2.2 + 2.0R	2.2 + 1.7R	2.3 + 1.6R
	Top Seam Weld	12" O.C.	7	q	2413	2181	2011	1883	1784
				F	1.8 + 2.2R	1.8 + 1.9R	1.8 + 1.7R	1.8 + 1.5R	1.9 + 1.3R
		24" O.C.	7	q	2093	1850	1670	1533	1424
				F	1.9 + 2.2R	2.0 + 1.9R	2.0 + 1.7R	2.1 + 1.5R	2.1 + 1.3R
16/16	Top Seam Weld	12" O.C.	4	q	1887	1715	1589	1494	1421
				F	1.7 + 2.5R	1.7 + 2.1R	1.7 + 1.9R	1.7 + 1.7R	1.7 + 1.5R
		24" O.C.	4	q	1601	1421	1288	1186	1105
				F	1.9 + 2.5R	1.9 + 2.1R	1.9 + 1.9R	2.0 + 1.7R	2.0 + 1.5R
	Top Seam Weld	12" O.C.	7	q	2383	2148	1976	1846	1745
				F	1.6 + 1.9R	1.6 + 1.6R	1.6 + 1.4R	1.6 + 1.3R	1.6 + 1.1R
		24" O.C.	7	q	2085	1840	1658	1519	1409
				F	1.7 + 1.9R	1.7 + 1.6R	1.8 + 1.4R	1.8 + 1.3R	1.9 + 1.1R

1. The allowable diaphragm shears "q" are listed in pounds per linear foot (plf).
2. See page 31 for general notes.

Roof Deck



DGBF-36 **DeltaGrip™ System**

An ASC Steel Deck proprietary side seam attachment system.

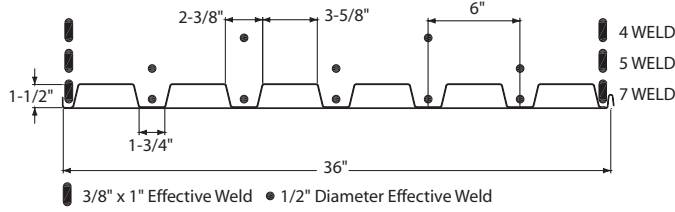
Features and Benefits:

- “As Strong As” a weld for the cost of a button punch.
- Can be installed during inclement weather.
- Connection is concealed from the underside - ideal for exposed underside applications.
- Applicable to DGB-36 and various Floor Deck profiles.
- Excellent connection for floor decks prevent side lap separation during construction.

For more information call 1-800-726-2727

DGBF-36 Roof Deck

for use with the DeltaGrip™ System



DGBF-36 Section Properties

Gage	Weight (psf)	I (In4)	S+ (In3)	S- (In3)
20/20	3.55	0.392	0.282	0.398
20/18	4.08	0.447	0.289	0.435
20/16	5.09	0.484	0.295	0.453
18/20	4.21	0.474	0.426	0.470
18/18	4.73	0.541	0.436	0.561
18/16	5.25	0.615	0.445	0.585
16/16	5.75	0.715	0.612	0.712

1. Section properties are based on minimum 38 ksi steel (Fy).

DGBF-36 Allowable Reactions (plf)

Gage	Bearing Length						
	1"	1 1/2"	2"	2 1/2"	3"	3 1/2"	4"
20/20	700	776	853	929	1005	1082	1158
	1495	1617	1739	1897	2088	2280	2472
20/18	700	776	853	929	1005	1082	1158
	1495	1617	1739	1897	2088	2280	2472
20/16	700	776	853	929	1005	1082	1158
	1495	1617	1739	1897	2088	2280	2472
18/20	1443	1568	1693	1818	1943	2068	2193
	2734	2909	3084	3258	3436	3710	3985
18/18	1443	1568	1693	1818	1943	2068	2193
	2734	2909	3084	3258	3436	3710	3985
18/16	1443	1568	1693	1818	1943	2068	2193
	2734	2909	3084	3258	3436	3710	3985
16/16	2434	2608	2782	2957	3131	3305	3480
	4350	4578	4806	5034	5262	5490	5786

1. The top value reflects the allowable reaction at the panel end supports.
2. The bottom value reflects the allowable reaction at the interior supports.
3. Values are in pounds per linear foot.

DGBF-36 Allowable Total (DL + LL) Uniform Load (psf)

Span Condition	Gage		Span									
			4'0"	5'0"	6'0"	7'0"	8'0"	9'0"	10'0"	11'0"	12'0"	
SINGLE SPAN	20/20	Stress	267	171	119	87	66	52	42	35	29	
		Deflection	267	171	119	75	50	35	25	19	14	
	20/18	Stress	274	175	122	89	68	54	43	36	30	
		Deflection	274	175	122	85	57	40	29	22	16	
	18/18	Stress	414	265	184	135	103	81	66	54	46	
		Deflection	414	265	164	103	69	48	35	26	20	
	18/16	Stress	422	270	187	138	105	83	67	55	46	
		Deflection	422	270	186	117	78	55	40	30	23	
	16/16	Stress	581	372	258	189	145	114	93	76	64	
		Deflection	581	372	217	136	91	64	46	35	27	
	DOUBLE SPAN	20/20	Stress	378	241	168	123	94	74	60	49	42
			Deflection	378	241	168	123	94	74	60	46	35
20/18		Stress	413	264	183	134	103	81	66	54	45	
		Deflection	413	264	183	134	103	81	66	52	40	
18/18		Stress	532	341	236	174	133	105	85	70	59	
		Deflection	532	341	236	174	133	105	85	64	49	
18/16		Stress	555	355	247	181	138	109	88	73	61	
		Deflection	555	355	247	181	138	109	88	72	56	
16/16		Stress	676	432	300	220	169	133	108	89	75	
		Deflection	676	432	300	220	169	133	108	84	65	
TRIPLE SPAN	20/20	Stress	418	267	186	136	104	82	66	55	46	
		Deflection	418	267	186	136	94	66	48	36	28	
	20/18	Stress	428	274	190	140	107	84	68	56	47	
		Deflection	428	274	190	140	107	75	55	41	32	
	18/18	Stress	647	414	287	211	161	127	103	85	71	
		Deflection	647	414	287	195	130	91	66	50	38	
	18/16	Stress	660	422	293	215	165	130	105	87	73	
		Deflection	660	422	293	215	148	104	76	57	44	
	16/16	Stress	845	541	375	276	211	167	135	111	93	
		Deflection	845	541	375	257	172	121	88	66	51	

1. Stress based on allowable flexural stress of 22.8 ksi.
2. Deflection based on maximum deflection of L/240.
3. Adequate bearing must be provided.
4. See page 31 of *Steel Roof Deck Catalog* for General Notes

DeltaGrip™ System

DGBF-36 • 22 Gage

Allowable Diaphragm Shears (q_a) (In Pounds per Lineal Foot), and flexibility factor (F) for DeltaGrip™ Seam Attachment

Puddle welds	DG Seam Attachment	Span	4'0"	5'0"	6'0"	7'0"	8'0"	9'0"	10'0"	11'0"	12'0"
			q_a	q_a	q_a	q_a	q_a	q_a	q_a	q_a	q_a
7	4" O.C.	q_a	1277	1207	1159	1123	1095	1074	938	775	652
		F	8.3+11R	8.6+8.8R	8.8+7.3R	8.9+6.2R	9+5.4R	9.1+4.8R	9.2+4.3R	9.3+3.9R	9.3+3.6R
	6" O.C.	q_a	1118	1032	973	929	896	870	849	775	652
		F	9.3+10.6R	9.7+8.4R	10+6.9R	10.2+5.9R	10.3+5.1R	10.5+4.5R	10.6+4.1R	10.7+3.7R	10.8+3.4R
	8" O.C.	q_a	1042	945	878	830	792	763	739	718	652
		F	10.1+10.3R	10.6+8R	11+6.6R	11.3+5.5R	11.5+4.8R	11.7+4.2R	11.8+3.7R	12+3.4R	12.1+3R
	12" O.C.	q_a	987	874	794	732	685	648	619	595	575
		F	11.4+9.5R	12.1+7.3R	12.7+5.8R	13.2+4.7R	13.5+4R	13.8+3.4R	14.1+3R	14.3+2.6R	14.5+2.3R
	18" O.C.	q_a	876	752	665	602	555	519	490	466	446
		F	12.7+8.7R	13.8+6.3R	14.6+4.7R	15.3+3.6R	15.9+2.8R	16.4+2.3R	16.8+1.8R	17.1+1.5R	17.5+1.2R
	24" O.C.	q_a	818	687	600	538	491	454	425	401	381
		F	13.6+8R	14.9+5.5R	16+3.8R	16.9+2.6R	17.7+1.8R	18.4+1.2R	19+0.7R	19.5+0.3R	19.9+0R
5	4" O.C.	q_a	1122	1074	1040	1014	994	869	704	582	489
		F	3.8+68.1R	5+54.5R	5.8+45.4R	6.4+38.9R	6.8+34R	7.2+30.2R	7.4+27.2R	7.7+24.7R	7.9+22.6R
	6" O.C.	q_a	1007	942	896	861	835	814	704	582	489
		F	4.9+67.7R	6.2+54.1R	7.1+45R	7.7+38.6R	8.2+33.7R	8.6+29.9R	8.9+26.9R	9.1+24.5R	9.3+22.4R
	8" O.C.	q_a	948	871	817	776	745	721	701	582	489
		F	5.8+67.4R	7.3+53.7R	8.2+44.7R	8.9+38.2R	9.5+33.4R	9.9+29.6R	10.2+26.6R	10.5+24.2R	10.7+22.2R
	12" O.C.	q_a	905	811	745	696	659	627	600	578	489
		F	7.3+66.6R	9+52.9R	10.1+43.9R	11+37.4R	11.6+32.6R	12.2+28.9R	12.6+25.9R	13+23.5R	13.3+21.5R
	18" O.C.	q_a	804	704	633	575	531	498	471	448	430
		F	8.9+65.6R	10.9+51.9R	12.3+42.8R	13.4+36.3R	14.3+31.5R	15+27.7R	15.6+24.8R	16.1+22.4R	16.5+20.4R
	24" O.C.	q_a	752	649	568	510	467	433	406	384	365
		F	10+64.9R	12.3+51R	14+41.8R	15.3+35.2R	16.4+30.3R	17.3+26.6R	18.1+23.6R	18.7+21.2R	19.3+19.2R
4	4" O.C.	q_a	971	940	918	902	733	579	469	388	326
		F	1.7+96.7R	3.3+77.3R	4.4+64.4R	5.2+55.2R	5.8+48.3R	6.2+42.9R	6.6+38.6R	6.9+35.1R	7.1+32.2R
	6" O.C.	q_a	871	826	794	771	733	579	469	388	326
		F	2.9+96.3R	4.6+77R	5.8+64.1R	6.6+54.9R	7.2+48.1R	7.7+42.7R	8.1+38.4R	8.4+34.9R	8.7+32R
	8" O.C.	q_a	814	759	720	692	670	579	469	388	326
		F	3.9+96R	5.7+76.6R	7+63.8R	7.9+54.6R	8.5+47.8R	9.1+42.4R	9.5+38.2R	9.8+34.7R	10.1+31.8R
	12" O.C.	q_a	764	695	647	611	584	562	469	388	326
		F	5.6+95.2R	7.7+75.9R	9.1+63R	10.1+53.9R	10.9+47R	11.6+41.7R	12.1+37.5R	12.5+34.1R	12.8+31.2R
	18" O.C.	q_a	667	592	536	492	459	433	413	388	326
		F	7.5+94.1R	10+74.7R	11.7+61.9R	12.9+52.7R	13.9+45.9R	14.7+40.6R	15.4+36.4R	15.9+33R	16.4+30.1R
	24" O.C.	q_a	615	533	472	428	394	369	348	331	317
		F	9+93.2R	11.7+73.7R	13.7+60.8R	15.2+51.6R	16.4+44.7R	17.4+39.4R	18.2+35.2R	18.9+31.8R	19.5+29R

- 1) Deck end laps to be 2 inches minimum over supports.
- 2) Diaphragm Shear values based on a conservative 3 or more span condition.
- 3) For q_a the safety factor for allowable stress design, Ω , has been applied to the tabulated values.
- 4) Allowable shear, q_a , is for diaphragms subjected to load combinations that include earthquake loads for non-shaded areas. Shaded areas indicate buckling mode of failure governs. Adjustment may be made for load combinations subject to wind loads per AISI Section D5.

DeltaGrip™ System

DGBF-36 • 18 Gage

Allowable Diaphragm Shears (q_a) (In Pounds per Lineal Foot), and flexibility factor (F) for DeltaGrip™ Seam Attachment

Puddle Welds	DG Seam Attachment	Span	4'0"	5'0"	6'0"	7'0"	8'0"	9'0"	10'0"	11'0"	12'0"
7	4" O.C.	q_a	2498	2421	2367	2327	2296	2272	1888	1561	1311
		F	4.6+3.5R	4.6+2.8R	4.7+2.3R	4.7+2R	4.7+1.7R	4.8+1.6R	4.8+1.4R	4.8+1.3R	4.8+1.2R
	6" O.C.	q_a	2191	2082	2005	1949	1906	1872	1844	1561	1311
		F	4.9+3.4R	5+2.7R	5.1+2.3R	5.1+2R	5.1+1.7R	5.2+1.5R	5.2+1.4R	5.2+1.2R	5.2+1.1R
	8" O.C.	q_a	2016	1884	1793	1725	1674	1633	1600	1561	1311
		F	5.3+3.4R	5.4+2.7R	5.5+2.2R	5.5+1.9R	5.5+1.7R	5.6+1.5R	5.6+1.3R	5.6+1.2R	5.6+1.1R
5	12" O.C.	q_a	1853	1690	1578	1495	1433	1383	1343	1310	1283
		F	5.9+3.2R	6.1+2.5R	6.2+2.1R	6.2+1.8R	6.3+1.5R	6.3+1.4R	6.4+1.2R	6.4+1.1R	6.4+1R
	18" O.C.	q_a	1586	1412	1292	1205	1134	1077	1032	995	964
		F	6.7+2.9R	6.9+2.2R	7.1+1.8R	7.2+1.5R	7.3+1.3R	7.4+1.1R	7.5+1R	7.5+0.9R	7.6+0.8R
	24" O.C.	q_a	1446	1266	1139	1042	969	912	866	829	798
		F	7.3+2.6R	7.7+1.9R	7.9+1.5R	8.1+1.2R	8.2+1R	8.4+0.9R	8.5+0.7R	8.5+0.6R	8.6+0.6R
4	4" O.C.	q_a	2094	2049	2017	1993	1974	1749	1416	1171	984
		F	3.2+21.2R	3.5+16.9R	3.7+14.1R	3.9+12.1R	4+10.6R	4.1+9.4R	4.2+8.5R	4.3+7.7R	4.3+7.1R
	6" O.C.	q_a	1912	1838	1786	1747	1716	1692	1416	1171	984
		F	3.6+21.1R	3.9+16.9R	4.2+14.1R	4.3+12.1R	4.5+10.5R	4.6+9.4R	4.6+8.4R	4.7+7.7R	4.8+7R
	8" O.C.	q_a	1796	1700	1632	1581	1542	1511	1416	1171	984
		F	3.9+21R	4.3+16.8R	4.5+14R	4.7+12R	4.9+10.5R	5+9.3R	5.1+8.4R	5.1+7.6R	5.2+7R
3	12" O.C.	q_a	1682	1554	1463	1396	1345	1304	1270	1171	984
		F	4.6+20.9R	5+16.7R	5.3+13.9R	5.5+11.9R	5.6+10.4R	5.8+9.2R	5.9+8.3R	5.9+7.5R	6+6.9R
	18" O.C.	q_a	1453	1309	1208	1133	1076	1031	994	964	939
		F	5.4+20.6R	5.9+16.4R	6.3+13.6R	6.5+11.6R	6.7+10.2R	6.9+9R	7+8.1R	7.1+7.4R	7.2+6.7R
	24" O.C.	q_a	1328	1176	1070	992	931	879	836	802	773
		F	6.2+20.3R	6.8+16.1R	7.2+13.3R	7.5+11.4R	7.7+9.9R	7.9+8.8R	8+7.9R	8.2+7.1R	8.3+6.5R
2	4" O.C.	q_a	1785	1760	1742	1728	1475	1166	944	780	656
		F	2.5+30R	3+24R	3.3+20R	3.5+17.1R	3.7+15R	3.8+13.3R	3.9+12R	4+10.9R	4.1+10R
	6" O.C.	q_a	1651	1605	1573	1548	1475	1166	944	780	656
		F	2.9+30R	3.4+24R	3.7+20R	3.9+17.1R	4.1+15R	4.3+13.3R	4.4+12R	4.5+10.9R	4.5+10R
	8" O.C.	q_a	1555	1492	1447	1413	1387	1166	944	780	656
		F	3.3+29.9R	3.8+23.9R	4.1+19.9R	4.4+17.1R	4.5+14.9R	4.7+13.3R	4.8+11.9R	4.9+10.9R	5+10R
1	12" O.C.	q_a	1448	1357	1294	1246	1210	1166	944	780	656
		F	4+29.7R	4.5+23.8R	4.9+19.8R	5.1+17R	5.3+14.8R	5.5+13.2R	5.6+11.9R	5.7+10.8R	5.8+9.9R
	18" O.C.	q_a	1232	1126	1053	998	956	923	896	780	656
		F	4.9+29.5R	5.5+23.5R	5.9+19.6R	6.2+16.8R	6.5+14.6R	6.7+13R	6.8+11.7R	6.9+10.6R	7+9.7R
	24" O.C.	q_a	1111	998	919	861	817	778	746	720	656
		F	5.7+29.2R	6.4+23.2R	6.9+19.3R	7.3+16.5R	7.5+14.4R	7.7+12.8R	7.9+11.5R	8+10.4R	8.2+9.5R

- 1) Deck end laps to be 2 inches minimum over supports.
- 2) Diaphragm Shear values based on a conservative 3 or more span condition.
- 3) For q_a the safety factor for allowable stress design, Ω , has been applied to the tabulated values.
- 4) Allowable shear, q_a , is for diaphragms subjected to load combinations that include earthquake loads for non-shaded areas. Shaded areas indicate buckling mode of failure governs. Adjustment may be made for load combinations subject to wind loads per AISI Section D5.

DeltaGrip™ System

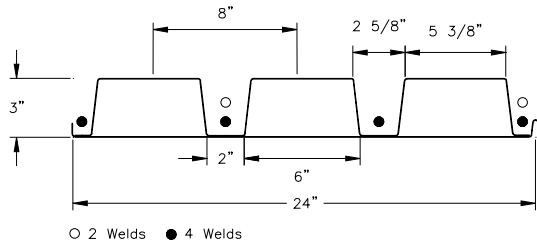
DGBF-36 • 16 Gage

Allowable Diaphragm Shears (q_a) (In Pounds per Lineal Foot), and flexibility factor (F) for DeltaGrip™ Seam Attachment

Puddle Welds	DG Seam Attachment	Span	4'0"	5'0"	6'0"	7'0"	8'0"	9'0"	10'0"	11'0"	12'0"
7	4" O.C.	q_a	3184	3097	3035	2990	2955	2927	2905	2886	2478
		F	3.8+2R	3.9+1.6R	3.9+1.3R	3.9+1.1R	4+1R	4+0.9R	4+0.8R	4+0.7R	4+0.7R
	6" O.C.	q_a	2803	2675	2585	2519	2468	2428	2395	2368	2346
		F	4.2+1.9R	4.3+1.5R	4.3+1.3R	4.3+1.1R	4.4+0.9R	4.4+0.8R	4.4+0.8R	4.4+0.7R	4.4+0.6R
	8" O.C.	q_a	2578	2421	2312	2232	2170	2122	2083	2050	2023
		F	4.5+1.8R	4.6+1.5R	4.7+1.2R	4.7+1R	4.7+0.9R	4.8+0.8R	4.8+0.7R	4.8+0.6R	4.8+0.6R
7	12" O.C.	q_a	2362	2165	2029	1929	1853	1793	1745	1705	1672
		F	5.1+1.6R	5.2+1.3R	5.3+1R	5.4+0.9R	5.4+0.8R	5.5+0.7R	5.5+0.6R	5.5+0.5R	5.6+0.5R
	18" O.C.	q_a	2010	1798	1652	1545	1464	1401	1345	1299	1261
		F	5.8+1.4R	6+1R	6.2+0.8R	6.3+0.6R	6.4+0.5R	6.5+0.4R	6.5+0.4R	6.6+0.3R	6.6+0.3R
	24" O.C.	q_a	1824	1605	1454	1340	1250	1180	1124	1078	1040
		F	6.4+1.1R	6.7+0.7R	7+0.5R	7.1+0.3R	7.3+0.2R	7.4+0.2R	7.5+0.1R	7.6+0.1R	7.6+0.1R
5	4" O.C.	q_a	2644	2595	2560	2533	2513	2497	2483	2212	1859
		F	3+12.1R	3.3+9.7R	3.4+8R	3.5+6.9R	3.6+6R	3.6+5.4R	3.7+4.8R	3.7+4.4R	3.7+4R
	6" O.C.	q_a	2428	2344	2284	2239	2204	2177	2154	2135	1859
		F	3.4+12R	3.6+9.6R	3.8+8R	3.9+6.9R	4+6R	4+5.3R	4.1+4.8R	4.1+4.4R	4.1+4R
	8" O.C.	q_a	2284	2173	2093	2034	1988	1952	1922	1897	1859
		F	3.8+11.9R	4+9.5R	4.2+7.9R	4.3+6.8R	4.4+6R	4.4+5.3R	4.5+4.8R	4.5+4.3R	4.6+4R
5	12" O.C.	q_a	2137	1984	1877	1796	1735	1686	1646	1613	1585
		F	4.4+11.8R	4.7+9.4R	4.9+7.8R	5+6.7R	5.1+5.8R	5.2+5.2R	5.2+4.7R	5.3+4.2R	5.3+3.9R
	18" O.C.	q_a	1838	1665	1543	1452	1383	1329	1284	1248	1217
		F	5.2+11.5R	5.5+9.1R	5.8+7.5R	6+6.4R	6.1+5.6R	6.2+5R	6.3+4.5R	6.4+4R	6.4+3.7R
	24" O.C.	q_a	1674	1490	1361	1266	1193	1136	1087	1045	1009
		F	5.9+11.2R	6.3+8.8R	6.6+7.3R	6.8+6.2R	7+5.4R	7.2+4.7R	7.3+4.2R	7.4+3.8R	7.5+3.5R
4	4" O.C.	q_a	2246	2218	2199	2185	2174	2165	1784	1475	1239
		F	2.7+17.1R	2.9+13.7R	3.1+11.4R	3.3+9.8R	3.4+8.6R	3.4+7.6R	3.5+6.8R	3.6+6.2R	3.6+5.7R
	6" O.C.	q_a	2093	2042	2005	1978	1957	1940	1784	1475	1239
		F	3+17.1R	3.3+13.7R	3.5+11.4R	3.7+9.7R	3.8+8.5R	3.9+7.6R	3.9+6.8R	4+6.2R	4+5.7R
	8" O.C.	q_a	1978	1905	1854	1815	1785	1761	1742	1475	1239
		F	3.4+17R	3.7+13.6R	3.9+11.3R	4.1+9.7R	4.2+8.5R	4.3+7.5R	4.3+6.8R	4.4+6.2R	4.4+5.7R
4	12" O.C.	q_a	1843	1737	1662	1606	1563	1528	1501	1475	1239
		F	4.1+16.9R	4.4+13.5R	4.7+11.2R	4.8+9.6R	4.9+8.4R	5+7.5R	5.1+6.7R	5.2+6.1R	5.2+5.6R
	18" O.C.	q_a	1564	1438	1349	1284	1234	1194	1162	1135	1112
		F	5+16.6R	5.4+13.2R	5.7+11R	5.9+9.4R	6+8.2R	6.1+7.3R	6.2+6.5R	6.3+5.9R	6.4+5.4R
	24" O.C.	q_a	1406	1270	1175	1104	1051	1008	974	944	917
		F	5.7+16.3R	6.2+12.9R	6.6+10.7R	6.8+9.1R	7+8R	7.2+7R	7.3+6.3R	7.4+5.7R	7.5+5.2R

- 1) Deck end laps to be 2 inches minimum over supports.
- 2) Diaphragm Shear values based on a conservative 3 or more span condition.
- 3) For q_a the safety factor for allowable stress design, Ω , has been applied to the tabulated values.
- 4) Allowable shear, q_a , is for diaphragms subjected to load combinations that include earthquake loads for non-shaded areas. Shaded areas indicate buckling mode of failure governs. Adjustment may be made for load combinations subject to wind loads per AISI Section D5.

Roof Deck



NF-24 Cellular Roof Deck

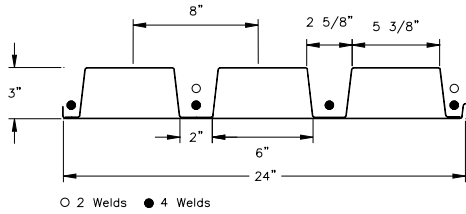
NF-24 Roof Deck is a 24" net coverage structural roof decking that transfers horizontal and vertical loads into the building frame.

Features and Benefits:

- NF-24 Cellular features a flat plan that provides a flush ceiling.
- 3" deep flutes increase span and load capabilities.
- Automated factory welding of beam and pan provides a high quality connection.
- Acustadek™ version features pan perforations and factory installed acoustical batts.

For more information call 1-800-726-2727

NF-24 Roof Deck



NF 24 Section Properties

Gauge	Weight (psf)	I (In4)	S+ (In3)	S- (In3)
20/20	3.96	1.666	0.566	0.850
20/18	4.50	1.868	0.562	0.977
20/16	4.73	1.987	0.595	1.040
18/20	4.78	1.950	0.841	0.946
18/18	5.27	2.310	0.861	1.228
18/16	5.82	2.597	0.878	1.342
16/16	6.37	3.029	1.198	1.545

1. Section properties are based on minimum 38 ksi steel (Fy).

NF-24 Allowable Reactions (plf)

Gauge	Bearing Length						
	1"	1 1/2"	2"	2 1/2"	3"	3 1/2"	4"
20/20	501	556	610	665	720	774	829
	1095	1184	1274	1389	1530	1670	1811
20/18	501	556	610	665	720	774	829
	1095	1184	1274	1389	1530	1670	1811
20/16	501	556	610	665	720	774	829
	1095	1184	1274	1389	1530	1670	1811
18/20	1057	1148	1240	1331	1423	1514	1606
	2035	2165	2296	2426	2557	2762	2966
18/18	1057	1148	1240	1331	1423	1514	1606
	2035	2165	2296	2426	2557	2762	2966
18/16	1057	1148	1240	1331	1423	1514	1606
	2035	2165	2296	2426	2557	2762	2966
16/16	1805	1935	2064	2193	2323	2452	2582
	3269	3440	3611	3783	3954	4125	4348

1. The top value reflects the allowable reaction at the panel end supports.
2. The bottom value reflects the allowable reaction at the interior supports.
3. Values are in pounds per linear foot.

NF-24 Allowable Total (DL + LL) Uniform Load (psf)

Span Condition	Gauge		Span											
			6'0"	7'0"	8'0"	9'0"	10'0"	11'0"	12'0"	13'0"	14'0"	15'0"	16'0"	
SINGLE SPAN	20/20	Stress	239	176	134	106	86	71	60	51	44	38	34	
		Deflection	239	176	134	106	86	71	60	50	40	32	27	
	20/18	Stress	237	174	133	105	85	71	59	51	44	38	33	
		Deflection	237	174	133	105	85	71	59	51	44	36	30	
	18/18	Stress	364	267	204	162	131	108	91	77	67	58	51	
		Deflection	364	267	204	162	131	108	88	69	55	45	37	
	18/16	Stress	371	272	209	165	133	110	93	79	68	59	52	
		Deflection	371	272	209	165	133	110	93	77	62	50	42	
	16/16	Stress	506	372	285	225	182	150	126	108	93	81	71	
		Deflection	506	372	285	225	182	149	115	90	72	59	48	
DOUBLE SPAN	20/20	Stress	359	264	202	160	129	107	90	76	66	57	50	
		Deflection	359	264	202	160	129	107	90	76	66	57	50	
	20/18	Stress	413	303	232	183	149	123	103	88	76	66	58	
		Deflection	413	303	232	183	149	123	103	88	76	66	58	
	18/18	Stress	518	381	292	230	187	154	130	110	95	83	73	
		Deflection	518	381	292	230	187	154	130	110	95	83	73	
	18/16	Stress	567	416	319	252	204	169	142	121	104	91	80	
		Deflection	567	416	319	252	204	169	142	121	104	91	80	
	16/16	Stress	652	479	367	290	235	194	163	139	120	104	92	
		Deflection	652	479	367	290	235	194	163	139	120	104	92	
TRIPLE SPAN	20/20	Stress	373	274	210	166	134	111	93	80	69	60	53	
		Deflection	373	274	210	166	134	111	93	80	69	60	50	
	20/18	Stress	371	272	209	165	133	110	93	79	68	59	52	
		Deflection	371	272	209	165	133	110	93	79	68	59	52	
	18/18	Stress	568	417	320	252	204	169	142	121	104	91	80	
		Deflection	568	417	320	252	204	169	142	121	104	85	70	
	18/16	Stress	579	426	326	257	209	172	145	123	106	93	81	
		Deflection	579	426	326	257	209	172	145	123	106	93	78	
	16/16	Stress	790	581	445	351	285	235	198	168	145	126	111	
		Deflection	790	581	445	351	285	235	198	168	137	111	91	

1. Stress based on allowable flexural stress of 22.8 ksi.
2. Deflection based on maximum deflection of L/240.
3. Adequate bearing must be provided.
4. See page 31 for General Notes.

NF-24 Roof Deck

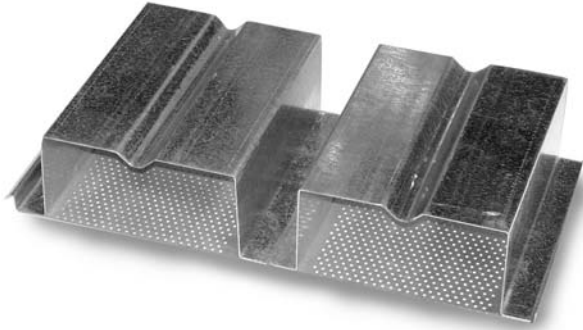
NF-24 Allowable Diaphragm Shear (q) and Flexibility Factor (F)

Gauge	Seam Attachment	12" O.C.	No. of Puddle Welds	SPAN									
				8'0"	9'0"	10'0"	11'0"	12'0"	13'0"	14'0"	15'0"	16'0"	
20/20	Top Seam Weld	12" O.C.	2	q	605	570	541	518	499	483	469	457	447
			F	5.7+3.4R	5.5+3.0R	5.4+2.7R	5.2+2.5R	5.1+2.3R	5.0+2.1R	4.9+2.0R	4.8+1.8R	4.7+1.7R	
	24" O.C.	2	q	448	412	394	361	342	326	312	300	290	
		F	7.3+3.4R	7.2+3.0R	7.1+2.7R	7.0+2.5R	6.9+2.3R	6.9+2.1R	6.7+2.0R	6.7+1.8R	6.6+1.7R		
	Top Seam Weld	12" O.C.	4	q	740	685	641	606	577	552	532	514	498
				F	4.6+3.3R	4.6+2.9R	4.5+2.6R	4.5+2.4R	4.5+2.2R	4.4+2.0R	4.4+1.9R	4.3+1.8R	4.3+1.7R
		24" O.C.	4	q	582	527	484	448	419	395	374	356	341
			F	5.5+3.3R	5.6+2.9R	5.6+2.9R	5.7+2.4R	5.7+2.2R	5.7+2.0R	5.7+1.9R	5.8+1.8R	5.8+1.7R	
20/18	Top Seam Weld	12" O.C.	2	q	1078	1013	962	920	886	857	832	811	792
			F	4.5+2.6R	4.4+2.3R	4.3+2.1R	4.2+1.9R	4.1+1.7R	4.0+1.6R	2.9+1.5R	3.8+1.4R	3.8+1.3R	
	24" O.C.	2	q	748	733	682	640	605	576	552	530	512	
		F	5.7+2.6R	5.7+2.3R	5.6+2.1R	5.3+1.9R	5.5+1.7R	5.4+1.6R	5.4+1.5R	5.3+1.4R	5.3+1.3R		
	Top Seam Weld	12" O.C.	4	q	1313	1213	1135	1071	1019	975	938	907	879
				F	3.7+2.5R	3.7+2.2R	3.7+2.1R	3.6+1.8R	3.6+1.7R	3.6+1.5R	3.6+1.4R	3.5+1.3R	3.5+1.3R
		24" O.C.	4	q	1033	933	855	791	739	695	658	627	599
			F	4.4+2.5R	4.5+2.2R	4.5+2.1R	4.6+1.8R	4.6+1.7R	4.6+1.5R	4.7+1.4R	4.7+1.3R	4.7+1.3R	
18/18	Top Seam Weld	12" O.C.	2	q	1138	1066	1008	962	923	890	863	839	818
			F	3.8+2.5R	3.7+2.3R	3.7+2.0R	3.6+1.9R	3.5+1.7R	3.5+1.6R	3.4+1.5R	3.4+1.4R	3.3+1.3R	
	24" O.C.	2	q	858	786	729	682	643	610	582	559	538	
		F	4.8+2.5R	4.8+2.3R	4.7+2.0R	4.7+1.9R	4.7+1.7R	4.7+1.6R	4.6+1.5R	4.6+1.4R	4.6+1.3R		
	Top Seam Weld	12" O.C.	4	q	1384	1281	1194	1123	1065	1017	976	941	910
				F	3.2+2.4R	3.2+2.1R	3.2+1.9R	3.2+1.7R	3.2+1.6R	3.1+1.5R	3.1+1.4R	3.1+1.3R	3.1+1.2R
		24" O.C.	4	q	1106	1001	914	843	785	737	696	661	630
			F	3.8+2.4R	3.8+2.1R	3.9+1.9R	3.9+1.7R	4.0+1.6R	4.0+1.5R	4.0+1.4R	4.0+1.3R	4.1+1.2R	
18/16	Top Seam Weld	12" O.C.	2	q	1541	1468	1412	1368	1334	1306	1285	1267	1253
			F	3.2+2.0R	3.1+1.8R	3.1+1.6R	3.0+1.5R	3.0+1.4R	2.9+1.3R	2.9+1.2R	2.9+1.1R	2.8+1.0R	
	24" O.C.	2	q	1161	1081	1019	968	927	894	866	842	822	
		F	4.0+2.0R	4.0+1.8R	4.0+1.6R	4.0+1.5R	3.9+1.4R	3.9+1.3R	3.9+1.2R	3.9+1.1R	3.9+1.0R		
	Top Seam Weld	12" O.C.	4	q	1724	1629	1557	1501	1456	1421	1393	1371	1353
				F	2.7+1.9R	2.7+1.7R	2.7+1.6R	2.7+1.4R	2.7+1.3R	2.7+1.2R	2.7+1.1R	2.7+1.0R	2.7+1.0R
		24" O.C.	4	q	1375	1270	1189	1123	1070	1026	990	959	933
			F	3.2+1.9R	3.3+1.7R	3.3+1.6R	3.4+1.4R	3.4+1.3R	3.4+1.2R	3.5+1.1R	3.5+1.0R	3.5+1.0R	
16/16	Top Seam Weld	12" O.C.	2	q	1518	1442	1384	1338	1302	1273	1250	1232	1217
			F	2.8+2.0R	2.8+1.8R	2.7+1.6R	2.7+1.5R	2.7+1.3R	2.6+1.2R	2.6+1.2R	2.6+1.0R	2.5+1.0R	
	24" O.C.	2	q	1161	1078	1013	961	919	884	855	830	809	
		F	4.0+2.0R	3.5+1.8R	3.5+1.6R	3.5+1.5R	3.5+1.3R	3.5+1.2R	3.5+1.2R	3.5+1.1R	3.4+1.0R		
	Top Seam Weld	12" O.C.	4	q	1707	1609	1534	1475	1430	1393	363	1339	1320
				F	2.7+1.9R	2.4+1.6R	2.4+1.5R	2.4+1.3R	2.4+1.2R	2.4+1.1R	2.4+1.0R	2.4+1.0R	2.4+1.0R
		24" O.C.	4	q	1378	1271	1187	1119	1064	1019	981	949	922
			F	2.8+1.8R	2.9+1.6R	2.9+1.5R	3.0+1.3R	2.0+1.2R	3.1+1.1R	3.1+1.0R	3.1+1.0R	3.1+1.0R	

1. The allowable diaphragm shears "q" are listed in pounds per linear foot (plf).

2. See page 31 for General Notes.

Roof Deck



Deep Deck Cellular Acustadek™

Acustadek™

Acustadek combines the design flexibility and strength of steel deck with high sound absorption qualities to offer an economical system for attenuating sound.

Features and Benefits:

- Cellular profiles provide a flat perforated pan that make for attractive exposed ceilings.
- Available with web perforation or full perforations.
- Easily blended with ASC's non-acoustical roof profiles.
- NRC tests were conducted in compliance with ANSI C423 and ASTM E795 test criteria.
- Sound absorption elements are inert fiberglass batts.
- Test reports furnished upon request.

For more information call 1-800-726-2727

Acustadek™

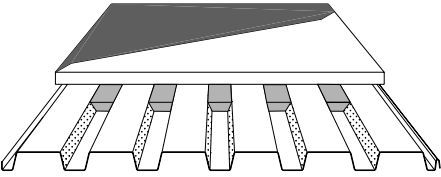
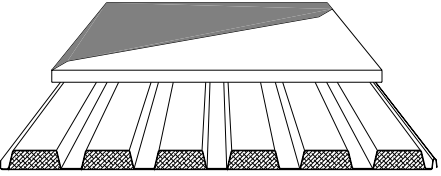
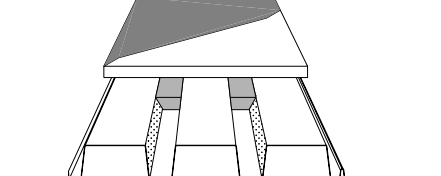
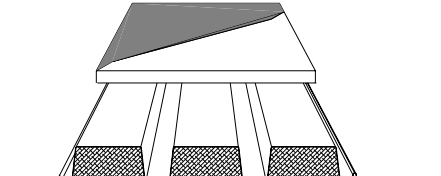
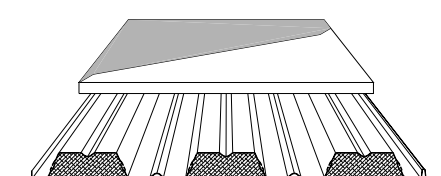
ASC Steel Deck's **Acustadek™** combines the design flexibility and strength of steel deck with high sound absorption qualities to offer an economical system for attenuating sound. Acustadek™ is an excellent product for use in theaters, churches, gymnasiums, convention centers and manufacturing environments.

ASC's Acustadek™ provides:

- An attractive exposed ceiling.
- It is easily blended with ASC's non-acoustical roof profiles.

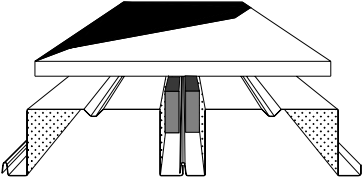
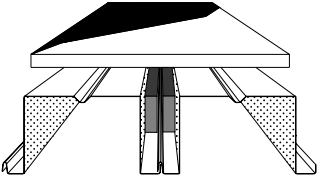
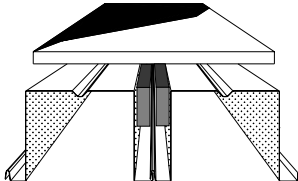
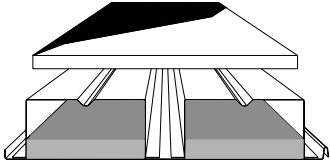
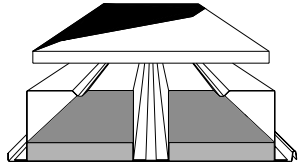
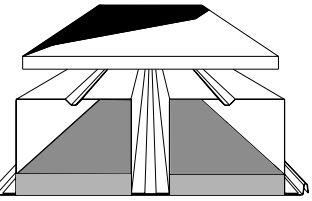
- Section modulus (S) values are unchanged and moment of inertia (I) values change by 5% less (with perforations on vertical webs) from the non-acoustical section properties.
- NRC tests were conducted in compliance with ANSI C423 and ASTM E795 test criteria.
- Sound absorption elements are inert and non-organic mineral wool.
- Test reports will be furnished upon request.

Sound Absorption Data

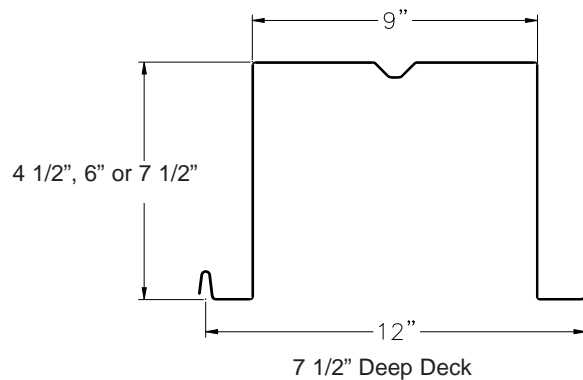
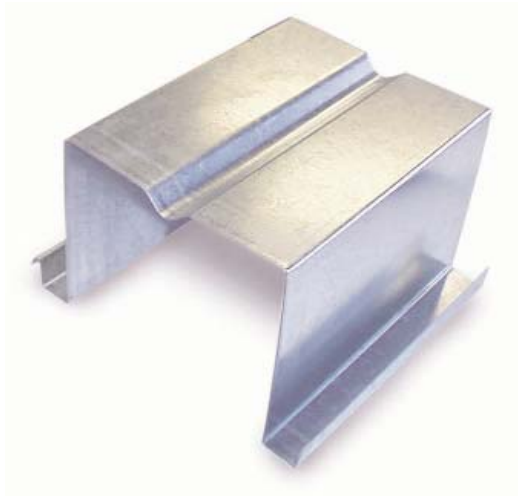
Acustadek™ Profile (Perforation Type)	Absorption Coefficient						Noise Reduction Coefficient
	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	
 <p>B-36 Acustadek™ (Web)</p>	0.23	0.67	1.21	0.82	0.46	0.24	0.80
 <p>BF-36 Acustadek™ (Pan only)</p>	0.53	0.58	0.75	0.97	0.86	0.57	0.80
 <p>N-24 Acustadek™ (Web)</p>	0.38	0.94	1.18	0.90	0.44	0.24	0.85
 <p>NF-24 Acustadek™ (Pan only)</p>	0.80	0.78	1.16	0.88	0.69	0.47	0.90
 <p>2WF & 3WF Acustadek™ (Pan only)</p>	0.33	0.48	0.75	0.87	0.59	0.49	0.65

Acustadek™ continued

Sound Absorption Data

Acustadek™ Profile (Perforation Type)	Absorption Coefficient						Noise Reduction Coefficient
	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	
 <p>4 1/2" Deep Deck Acustadek™ (Web)</p>	0.22	0.49	0.96	0.78	0.53	0.45	0.70
 <p>6" Deep Deck Acustadek™ (Web)</p>	0.27	0.59	0.79	0.69	0.61	0.55	0.65
 <p>7 1/2" Deep Deck Acustadek™ (Web)</p>	0.35	0.68	0.72	0.81	0.68	0.58	0.70
 <p>4 1/2" Deep Deck Cellular Acustadek™ (Pan only)</p>	0.40	0.75	0.83	0.68	0.70	0.54	0.75
 <p>6" Deep Deck Cellular Acustadek™ (Pan only)</p>	0.40	0.89	0.85	0.72	0.70	0.53	0.80
 <p>7 1/2" Deep Deck Cellular Acustadek™ (Pan only)</p>	0.78	0.99	0.86	0.79	0.72	0.52	0.85

Roof Deck



Deep Deck

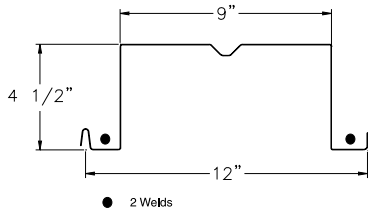
Deep Deck is a 12" wide (net coverage) deck available in three depths; 4 1/2", 6" or 7 1/2". Deep Deck can be used as roof deck as form deck. It is not available as composite deck. Deep Deck is available with a cellular option, including acoustical which provides pan perforations only.

Features and Benefits:

- ASC is the only manufacturer on the west coast for Deep Deck type products.
- ASC is the only manufacturer in the country with an ICBO. Evaluation Report covering Deep Deck with diaphragm shears.
- Deeper sections allow for longer spans up to 30'+.
- Interlocking seam allows for button punching and/or welded seams.
- Optional cellular flat pan provides clean look for exposed ceilings.

For more information call 1-800-360-2477

Deep Deck 4 1/2" and 6"



Deep Deck 4 1/2"

1. The top value reflects the allowable reaction at the panel end supports.
2. The bottom value reflects the allowable reaction at the interior supports.
3. Values are in pounds per linear foot.

Allowable Reactions

Gauge	Bearing Length (in) 3"
20	390
	853
18	815
	1477
16	1362
	2316
14	2282
	3721

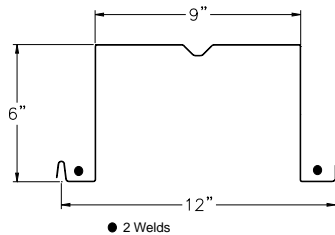
4 1/2" Deep Deck Section Properties

Gauge	Weight (psf)	I (In4)	S+ (In3)	S- (In3)
20	2.86	2.44	0.924	0.957
18	3.74	3.42	1.266	1.313
16	4.69	4.36	1.608	1.635
14	5.86	5.49	2.056	2.056

1. Section properties are based on minimum 33 ksi steel (Fy).

4 1/2" Deep Deck Allowable Total (DL + LL) Uniform Load (psf) ^{1, 2 (footnote page 26)}

Span Condition	Gauge		Span										
			10'0"	12'0"	14'0"	16'0"	18'0"	20'0"	22'0"	24'0"	26'0"	28'0"	30'0"
SINGLE SPAN	20	Stress	123	86	63	48	38	31	25	21	18	16	14
		Deflection	123	86	58	39	27	20	15	12	9	7	6
	18	Stress	169	117	86	66	52	42	35	29	25	22	19
		Deflection	169	117	82	55	38	28	21	16	13	10	8
	16	Stress	214	149	109	84	66	54	44	37	32	27	24
		Deflection	214	149	104	70	49	36	27	21	16	13	11
	14	Stress	274	190	140	107	85	69	57	48	41	35	30
		Deflection	274	190	131	88	62	45	34	26	20	16	13



Deep Deck 6"

1. The top value reflects the allowable reaction at the panel end supports.
2. The bottom value reflects the allowable reaction at the interior supports.
3. Values are in pounds per linear foot.

Allowable Reactions

Gauge	Bearing Length (in) 3"
20	351
	793
18	757
	1403
16	1289
	2226
14	2188
	3610

6" Deep Deck Section Properties

Gauge	Weight (psf)	I (In4)	S+ (In3)	S- (In3)
20	3.22	4.79	1.386	1.314
18	4.22	6.68	1.892	1.966
16	5.29	8.56	2.406	2.451
14	6.61	10.78	3.085	3.087

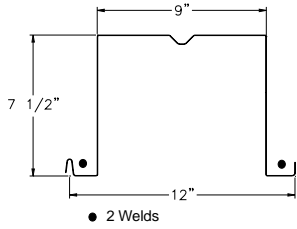
1. Section properties are based on minimum 33 ksi steel (Fy).

6" Deep Deck Allowable Total (DL + LL) Uniform Load (psf) ^{1, 2 (footnote page 26)}

Span Condition	Gauge		Span										
			10'0"	12'0"	14'0"	16'0"	18'0"	20'0"	22'0"	24'0"	26'0"	28'0"	30'0"
SINGLE SPAN	20	Stress	185	128	94	72	57	46	38	32	27	24	21
		Deflection	185	128	94	72	54	39	29	23	18	14	12
	18	Stress	252	175	129	99	78	63	52	44	37	32	28
		Deflection	252	175	129	99	75	55	41	32	25	20	16
	16	Stress	321	223	164	125	99	80	66	56	47	41	36
		Deflection	321	223	164	125	96	70	53	41	32	26	21
	14	Stress	411	286	210	161	127	103	85	71	61	52	46
		Deflection	411	286	210	161	121	88	66	51	40	32	26

ASC Steel Deck

7 1/2" Deep Deck



Deep Deck 7 1/2"

1. The top value reflects the allowable reaction at the panel end supports.
2. The bottom value reflects the allowable reaction at the interior supports.
3. Values are in pounds per linear foot.

Allowable Reactions

Gauge	Bearing Length (in) 3"
20	311
	733
18	700
	1330
16	1216
	2137
14	2095
	3499

7 1/2" Deep Deck Section Properties

Gauge	Weight (psf)	I (In4)	S+ (In3)	S- (In3)
20	3.59	8.11	1.899	1.670
18	4.70	11.28	2.593	2.528
16	5.90	14.47	3.300	3.367
14	7.38	18.26	4.238	4.245

1. Section properties are based on minimum 33 ksi steel (Fy).

7 1/2" Deep Deck Allowable Total (DL + LL) Uniform Load (psf)^{1,2}

Span Condition	Gauge		Span										
			10'0"	12'0"	14'0"	16'0"	18'0"	20'0"	22'0"	24'0"	26'0"	28'0"	30'0"
SINGLE SPAN	20	Stress	253	176	129	99	78	63	52	44	37	32	28
		Deflection	253	176	129	99	78	63	50	38	30	24	20
	18	Stress	346	240	176	135	107	86	71	60	51	44	38
		Deflection	346	240	176	135	107	86	69	53	42	34	27
	16	Stress	440	306	224	172	136	110	91	76	65	56	49
		Deflection	440	306	224	172	136	110	89	69	54	43	35
	14	Stress	565	392	288	221	174	141	117	98	84	72	63
		Deflection	565	392	288	221	174	141	112	87	68	55	44

1. Loads based on bending stress limit of Fb=20ksi or deflection limit of L/240.
2. Bearing must be checked using actual loads and bearing lengths.

1. The allowable diaphragm shears “q” are listed in pounds per linear foot (plf).
2. See page 31 for General Notes.

4 1/2", 6" and 7 1/2" Deep Deck

4 1/2", 6" and 7 1/2" Deep Deck Allowable Diaphragm Shear (q) and Flexibility Factor (F) with two puddle welds to supports and seams button punch at 12" on center

Gauge		Span												
		6'0"	7'0"	8'0"	9'0"	10'0"	11'0"	12'0"	13'0"	14'0"	15'0"	16'0"	17'0"	18'0"
20	q	300	280	260	240	230	220	210	210	200	200	190	190	190
	F	31.4+	34.9+	38.1+	41.0+	43.8+	46.4+	48.8+	51.1+	53.3+	55.4+	57.4+	59.3+	61.1+
		583R	500R	437R	389R	350R	318R	292R	269R	250R	233R	219R	206R	194R
18	q	530	480	440	410	380	360	350	340	320	310	310	300	290
	F	21.4+	24.2+	27.0+	29.6+	32.1+	34.5+	36.9+	39.2+	41.3+	43.5+	45.5+	47.5+	49.5+
		241R	206R	181R	161R	144R	131R	120R	111R	103R	96R	90R	85R	80R
16	q	780	690	630	580	540	510	490	460	450	430	420	410	400
	F	15.4+	17.7+	19.9+	22.1+	24.2+	26.3+	28.4+	30.4+	32.4+	34.4+	36.3+	38.2+	40.0+
		122R	104R	91R	81R	73R	66R	60R	56R	52R	48R	45R	43R	40R
14	q	780	690	630	580	540	510	490	460	450	430	420	410	400
	F	15.4+	17.7+	1.9+	22.1+	24.2+	26.3+	28.4+	30.4+	32.4+	34.4+	36.3+	38.2+	40.0+
		122R	104R	91R	81R	73R	66R	60R	56R	52R	48R	45R	43R	40R

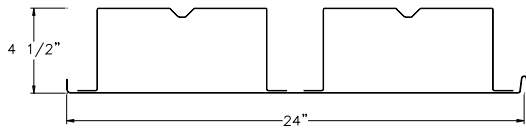
Gauge		Span											
		19'0"	20'0"	21'0"	22'0"	23'0"	24'0"	25'0"	26'0"	27'0"	28'0"	29'0"	30'0"
20	q	190	180	180	180	170	170	170	170	170	160	160	160
	F	62.9+	64.5+	66.2+	67.7+	69.2+	70.7+	72.1+	73.5+	74.8+	76.1+	77.4+	78.6
		184R	175R	167R	159R	152R	146R	140R	135R	130R	125R	121R	117R
18	q	290	280	280	280	270	270	260	260	250	250	250	240
	F	51.3+	53.2+	54.9+	56.7+	58.3+	60.0+	61.6+	63.1+	64.7+	66.2+	67.6+	69.0+
		76R	72R	68R	65R	62R	60R	57R	55R	53R	51R	49R	48R
16	q	390	380	370	370	360	360	350	350	350	340	340	330
	F	41.8+	43.6+	45.3+	47.0+	48.7+	50.3+	51.9+	53.5+	55.0+	56.5+	58.0+	59.5+
		38R	36R	34R	33R	31R	30R	29R	28R	27R	26R	25R	24R
14	q	390	380	370	370	360	360	350	350	350	340	340	330
	F	41.8+	43.6+	45.3+	47.0+	48.7+	50.3+	51.9+	53.5+	55.0+	56.5+	58.0+	59.5+
		38R	36R	34R	33R	31R	30R	29R	28R	27R	26R	25R	24R

4 1/2", 6" and 7 1/2" Deep Deck Allowable Diaphragm Shear (q) and Flexibility Factor (F) with two puddle welds to supports and seams Top Seam Welded 12" on center

Gauge		Span												
		6'0"	7'0"	8'0"	9'0"	10'0"	11'0"	12'0"	13'0"	14'0"	15'0"	16'0"	17'0"	18'0"
20	q	450	430	410	400	390	380	370	360	350	350	350	350	340
	F	17.9+	16.6+	15.5+	14.5+	13.7+	13.0+	12.4+	11.9+	11.4+	11.0+	10.7+	10.3+	10.0+
		583R	500R	437R	389R	350R	318R	292R	269R	250R	233R	219R	206R	194R
18	q	920	860	820	780	760	730	720	700	690	670	660	660	650
	F	12.9+	12.1+	11.4+	10.9+	10.4+	9.9+	9.5+	9.2+	8.9+	8.6+	8.3+	8.1+	7.9+
		241R	206R	181R	161R	144R	131R	120R	111R	103R	96R	90R	85R	80R
16	q	1320	1250	1190	1150	1120	1100	1080	1070	1060	1050	1040	1040	1040
	F	9.7+	9.2+	8.8+	8.4+	8.1+	7.8+	7.5+	7.3+	7.0+	6.8+	6.7+	6.5+	6.3+
		122R	104R	91R	81R	73R	66R	60R	56R	52R	48R	45R	43R	40R
14	q	1320	1250	1190	1150	1120	1100	1080	1070	1060	1050	1040	1040	1040
	F	9.7+	9.2+	8.8+	8.4+	8.1+	7.8+	7.5+	7.3+	7.0+	6.8+	6.7+	6.5+	6.3+
		122R	104R	91R	81R	73R	66R	60R	56R	52R	48R	45R	43R	40R

Gauge		Span											
		19'0"	20'0"	21'0"	22'0"	23'0"	24'0"	25'0"	26'0"	27'0"	28'0"	29'0"	30'0"
20	q	340	340	340	330	330	330	330	330	320	320	320	320
	F	9.7+	9.5+	9.2+	9.0	8.8+	8.6+	8.4+	8.3+	8.1+	8.0+	7.9+	7.7+
		184R	175R	167R	159R	152R	146R	140R	135R	130R	125R	121R	117R
18	q	640	630	630	620	620	620	610	610	600	600	600	600
	F	7.7+	7.5+	7.3+	7.2+	7.0+	6.9+	6.8+	6.6+	6.5+	6.4+	6.3+	6.2+
		76R	72R	66R	65R	62R	60R	57R	55R	53R	51R	49R	48R
16	q	1040	1030	1020	1010	1000	990	990	980	970	970	960	960
	F	6.2+	6.1+	5.9+	5.8+	5.7+	5.6+	5.5+	5.4+	5.3+	5.3+	5.2+	5.1+
		38R	36R	34R	33R	31R	30R	29R	28R	27R	26R	25R	24R
14	q	1040	1030	1020	1010	1000	990	990	980	970	970	960	960
	F	6.2+	6.1+	5.9+	5.8+	5.7+	5.6+	5.5+	5.4+	5.3+	5.3+	5.2+	5.1+
		38R	36R	34R	33R	31R	30R	29R	28R	27R	26R	25R	24R

Deep Deck Cellular



4 1/2" Deep Deck Cellular

1. The top value reflects the allowable reaction at the panel end supports.
2. The bottom value reflects the allowable reaction at the interior supports.
3. Values are in pounds per linear foot.
4. For diaphragm shear, use shear tables on pages 25 and 26.

4 1/2" Deep Deck Cellular Section Properties

Gauge	Weight (psf)	I (In4)	S+ (In3)	S- (In3)
20/20	4.22	4.14	1.14	1.26
20/18	4.77	4.39	1.13	1.57
20/16	5.32	4.84	1.13	1.65
18/20	5.08	4.68	1.75	1.54
18/18	5.63	5.35	1.79	1.85
18/16	6.18	5.93	1.82	2.15
16/16	7.04	6.86	2.44	2.45

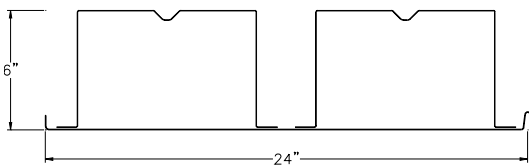
1. Section properties are based on minimum 33 ksi steel (Fy).

Allowable Reactions

Gauge	Bearing Length (in) 3"
20/20	390
	853
20/18	390
	853
20/16	390
	853
18/20	815
	1477
18/18	815
	1477
18/16	815
	1477
16/16	1362
	2316

4 1/2" Deep Deck Cellular Allowable Total (DL + LL) Uniform Load (psf)

Span Condition	Gauge		Span										
			10'0"	12'0"	14'0"	16'0"	18'0"	20'0"	22'0"	24'0"	26'0"	28'0"	30'0"
SINGLE SPAN	20/20	Stress	152	106	78	59	47	38	31	26	22	19	17
		Deflection	152	106	78	59	47	34	25	20	15	12	10
	20/18	Stress	151	105	77	59	47	38	31	26	22	19	17
		Deflection	151	105	77	59	47	37	28	22	17	14	11
	20/16	Stress	151	105	77	59	47	38	31	26	22	19	17
		Deflection	151	105	77	59	47	38	29	23	18	14	12
	18/20	Stress	233	162	119	91	72	58	48	41	35	30	26
		Deflection	233	162	108	72	51	37	28	21	17	13	11
	18/18	Stress	239	166	122	93	74	60	49	41	35	30	27
		Deflection	239	166	122	83	58	43	32	25	19	16	13
	18/16	Stress	243	169	124	95	75	61	50	42	36	31	27
		Deflection	243	169	124	95	67	49	37	28	22	18	14
	16/16	Stress	325	226	166	127	100	81	67	56	48	41	36
		Deflection	325	226	164	109	77	56	42	32	25	20	16



6" Deep Deck Cellular

1. The top value reflects the allowable reaction at the panel end supports.
2. The bottom value reflects the allowable reaction at the interior supports.
3. Values are in pounds per linear foot.
4. For diaphragm shear, use shear tables on pages 25 and 26.

6" Deep Deck Cellular Section Properties

Gauge	Weight (psf)	I (In4)	S+ (In3)	S- (In3)
20/20	4.59	7.25	1.55	1.78
20/18	5.14	8.23	1.55	2.24
20/16	5.69	8.93	1.55	2.35
18/20	5.57	8.85	2.54	2.24
18/18	6.12	9.99	2.51	2.65
18/16	6.67	11.10	2.49	3.05
16/16	7.65	12.88	3.52	3.49

1. Section properties are based on minimum 33 ksi steel (Fy).

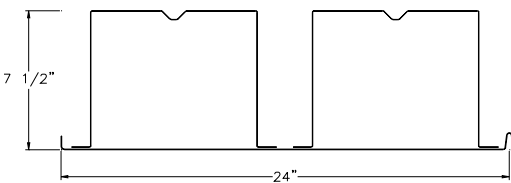
Allowable Reactions

Gauge	Bearing Length (in) 3"
20/20	351
	793
20/18	351
	793
20/16	351
	793
18/20	757
	1403
18/18	757
	1403
18/16	757
	1403
16/16	1289
	2226

Deep Deck Cellular

6" Deep Deck Cellular Allowable Total (DL + LL) Uniform Load (psf)

Span Condition	Gauge		Span										
			10'0"	12'0"	14'0"	16'0"	18'0"	20'0"	22'0"	24'0"	26'0"	28'0"	30'0"
SINGLE SPAN	20/20	Stress	207	144	105	81	64	52	43	36	31	26	23
		Deflection	207	144	105	81	64	52	43	36	29	23	19
	20/18	Stress	207	144	105	81	64	52	43	36	31	26	23
		Deflection	207	144	105	81	64	52	43	36	31	25	20
	20/16	Stress	207	144	105	81	64	52	43	36	31	26	23
		Deflection	207	144	105	81	64	52	43	36	31	26	22
	18/20	Stress	339	235	173	132	105	85	70	59	50	43	38
		Deflection	339	235	173	132	97	71	53	41	32	26	21
	18/18	Stress	335	232	171	131	103	84	69	58	50	43	37
		Deflection	335	232	171	131	103	82	61	47	37	30	24
	18/16	Stress	332	231	169	130	102	83	69	58	49	42	37
		Deflection	332	231	169	130	102	83	68	53	41	33	27
	16/16	Stress	469	325	239	183	144	117	96	81	69	59	52
		Deflection	469	325	239	183	144	105	79	61	48	38	31



7 1/2" Deep Deck Cellular

1. The top value reflects the allowable reaction at the panel end supports.
2. The bottom value reflects the allowable reaction at the interior supports.
3. Values are in pounds per linear foot.
4. For diaphragm shear, use shear tables on pages 25 and 26.

Allowable Reactions

Gauge	Bearing Length (in) 3"
20/20	311
	733
20/18	311
	733
20/16	311
	733
18/20	700
	1330
18/18	700
	1330
18/16	700
	1330
16/16	1216
	2137

7 1/2" Deep Deck Cellular Section Properties

Gauge	Weight (psf)	I (In4)	S+ (In3)	S- (In3)
20/20	4.96	12.02	1.97	2.23
20/18	5.51	13.51	1.97	2.90
20/16	6.06	14.36	1.97	3.10
18/20	6.06	14.63	3.20	2.93
18/18	6.61	16.36	3.18	3.53
18/16	7.16	18.16	3.17	4.03
16/16	8.27	21.08	4.63	4.63

1. Section properties are based on minimum 33 ksi (Fy).

7 1/2" Deep Deck Cellular Allowable Total (DL + LL) Uniform Load (psf)

Span Condition	Gauge		Span										
			10'0"	12'0"	14'0"	16'0"	18'0"	20'0"	22'0"	24'0"	26'0"	28'0"	30'0"
SINGLE SPAN	20/20	Stress	262	182	134	102	81	65	54	45	38	33	29
		Deflection	262	182	134	102	81	65	54	45	38	33	29
	20/18	Stress	262	182	134	102	81	65	54	45	38	33	29
		Deflection	262	182	134	102	81	65	54	45	38	33	29
	20/16	Stress	262	182	134	102	81	65	54	45	38	33	29
		Deflection	262	182	134	102	81	65	54	45	38	33	29
	18/20	Stress	426	296	217	166	131	106	88	74	63	54	47
		Deflection	426	296	217	166	131	106	86	66	52	42	34
	18/18	Stress	424	294	216	165	130	106	87	73	62	54	47
		Deflection	424	294	216	165	130	106	87	73	59	47	38
	18/16	Stress	422	293	215	165	130	105	87	73	62	53	46
		Deflection	422	293	215	165	130	105	87	73	62	53	44
	16/16	Stress	617	428	314	241	190	154	127	107	91	78	68
		Deflection	617	428	314	241	190	154	127	99	78	62	51

1. The allowable diaphragm shears "q" are listed in pounds per linear foot (plf).
2. See page 31 for General Notes.

Diaphragm Flexibility Limitations

Diaphragm Flexibility Limitation^{1, 2, 3, 4}

Flexibility Category	F	Max. Span in feet for masonry or concrete walls	SPAN-DEPTH LIMITATION			
			Rotation Not Considered in Diaphragm Masonry or Concrete Walls		Rotation Considered in Diaphragm Masonry or Concrete Walls	
			Masonry or Concrete Walls	Flexible Walls	Masonry or Concrete Walls	Flexible Walls
Very Flexible	More than 150	Not used	Not used	2:1	Not used	1 1/2:1
Flexible	70 - 150	200	2:1 or as required for deflection	3:1	Not used	2:1
Semiflexible	10 - 70	400	2 1/2:1 or as required for deflection	4:1	As required for deflection	2 1/2:1
Semirigid	1 - 10	No limitation	3:1 or as required for deflection	5:1	As required for deflection	3:1
Rigid	Less than 1	No limitation	As required for deflection	No limitation	As required for deflection	3 1/2:1

¹ Roof diaphragms are to be investigated regarding their flexibility and recommended span-depth limitations. Refer to above table for determination of value of F.

² Roof diaphragms supporting masonry or concrete walls are to have their deflections limited to the following amount.

$$\Delta_{wall} = \frac{H^2 f_c}{0.01 Et}$$

Where:

H = Unsupported height of wall in feet

t = Thickness of wall in inches

E = Modulus of elasticity of wall material for deflection in pounds per square inch.

f_c = Allowable compressive strength of wall material in flexure in pounds per square inch. For concrete, f_c = 0.45 f_c. For masonry, f_c = F_b = 0.33 f_m

³ The total deflection Δ of the diaphragm may be computed from the equation: Δ = Δ_f + Δω

Where:

Δ_f = Flexural deflection of the diaphragm determined in the same manner as the deflection of beams.

Δω = The web deflection may be determined by the equation: $\Delta\omega = \frac{q_{AVG} L F}{10^6}$

Where:

L = Distance in feet between vertical resisting element (such as shear wall) and the point to which the deflection is to be determined.

q_{AVG} = Average shear in diaphragm in pounds per foot over length L1.

F = Flexibility factor: The average micro-inches a diaphragm web will deflect in a span of 1 foot under a shear of 1 pound per foot.

⁴When applying these limitation to cantilevered diaphragms, the allowable span-depth ratio will be half that shown.

General Notes

The following notes apply to the load tables.

1. The length of seam welds shall be a minimum of 1 1/2" long.
2. Arc spot or arc seam (puddle) welds shall have an effective fusion area to supporting members, equivalent to at least 3/8" by 1" long or 1/2" in diameter.
3. Spacing of marginal welds to members parallel to the flutes:
 - (a) Arc spot (puddle) welds to members, such as chords, and to collector elements, such as struts or ties, shall have a spacing in feet equal to $35,000 (t)/v$ where:

t = Uncoated steel thickness of fluted deck in inches (see ICBO Report for "t")
 v = Actual diaphragm shear at marginal supports or actual shear transferred to collector (at struts or ties) in pounds per foot.
 - (b) Fillet welds to members, such as diaphragm chords, shall have spacing in feet equal to $480 I_w/v$, where:

I_w = Length of weld in inches (not less than 1 1/2")
 v = Actual diaphragm shear to be transferred to chords in pounds per foot.
 - (c) Fillet welds attaching the diaphragm to struts, ties or other collector elements shall have a spacing, in feet, equal to $300 I_w/v$ where:

v = Actual shear to be transferred to the collector element, in pounds per foot.
 - (d) In no case shall any weld spacing exceed 3'0".
4. Attachments at interior lines of shear transfer, perpendicular to deck corrugations:
 - (a) The shear transfer from a diaphragm to interior ties or strut lines, perpendicular to deck corrugations, shall not exceed the shear values indicated in the tables. Two lines of puddle welds may be used to develop to the actual shear transfer to these collector elements.
 5. Where individual panels are cut, the partial panel shall be fastened in a manner to fully transfer the shears at the point of the diaphragm to the adjacent full panels for the values specified in the tables.
 6. For all cellular profiles, the first number of the gauge designations (**20/20**) refers to the beam section (corrugated profile). The second number (**20/20**) refers to the pan section (flat plate).
 7. For all allowable diaphragm shear tables, R is the vertical load span (L_v) of the deck unit divided by the length (L_2) of the deck unit. Both units are in linear feet.
 8. Suspended ceiling, light fixtures, duct, or other utilities shall not be supported by the steel roof deck without first contacting the project engineer.
 9. Typical roof deck manufacturing tolerances:

Panel Length: $\pm 1/2"$
 Thickness: Not less than 95% of the design base metal thickness.
 Panel Cover width: $-3/8", +3/4"$
 Panel Camber/Sweep: $1/4"$ in 10' length
 Panel End Out of Square: $1/8"$ per foot of panel width
 10. Venting

Positive Venting:
 (a) B-36-nominal $1/4"$ holes, approximately 4 1/4" o.c. in every bottom flange.
 (b) N-24-Vent tab, approximately 10 5/8" o.c. in every bottom flange.

1% Venting:
 (a) B-36-nominal $1/4"$ diameter holes 1 5/8" o.c. at top flange and webs, and 4 1/4" o.c. at bottom flange.

Fire Resistance Ratings and Code Approvals

Roof Deck – Fire Resistance Rating

Restrained Assembly	UL Design No.	Concrete Type	Profile (Gauge)	Max Span	Fireproofing Required
1 HOUR	P921	Lightweight	CP-32 (26)	6'0"	No
2 HOUR ¹	P925	Insulating	CP-32 (24-20)	8'0"	No
	P928		B (22-16)	10'0"	No
	P936		2W (22-16)	10'0"	No
			N (22-26)	12'0"	No
1 HOUR	P 908	Lightweight	CP-32 (26)	6'0"	No
2 HOUR ¹	P927	Insulating	CP-32 (24-20)	8'0"	No
			B (22-16)	8'0"	No
			N (22-16)	8'0"	No
				8'0"	No
1 HOUR	P920	Lightweight	B (22-16)	8'0"	No
2 HOUR ¹		Insulating	2W (22-16)	8'0"	No
1 HOUR	P924	Lightweight	CP-32 (24-20)	8'0"	No
2 HOUR ¹	P930	Insulating	N (22-16)	8'0"	No

Please refer to the current UL fire Resistance Directory and ICBO Evaluation Report No. 3260 for additional information.

1. For 2 hour rated assembly wire mesh must be used.

Alternative Fastening Methods:

For attachment of decking, for methods other than welding, refer to the following technical information:

(a.) Screwed and Pinned Attachments

- | | |
|------------------------|------------------------------|
| ICBO Report No. | Company |
| 3056 and 4254 | ..ITW, Buildex Division |
| 3829 |Pneutek, Inc. |
| 4373 |Hilti Fastening Systems |

Code Approvals

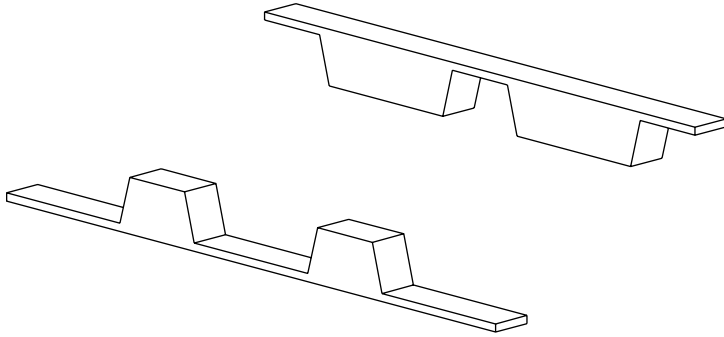
ASC's steel deck profiles have been evaluated or approved for use by:

1. ICBO Evaluation Report No. 2757
2. City of Los Angeles Research Report Nos. 23783, 23784 and 23803
3. Steel Deck Institute Certificate No. 048
4. Factory Mutual
5. Underwriter's Laboratory Fire Resistance Directory

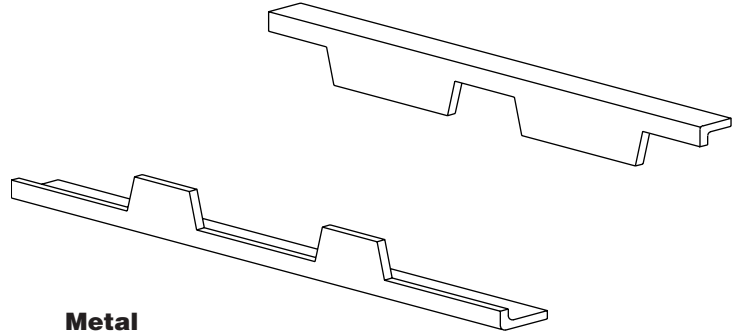
Roof Deck Accessories

Profile Closures

We offer steel and neoprene, small void and large void profile closures for our roof deck profiles.



Neoprene

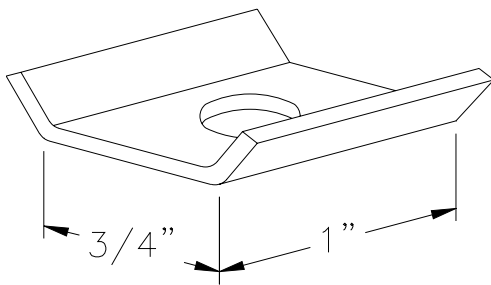


Metal

Weld Washers

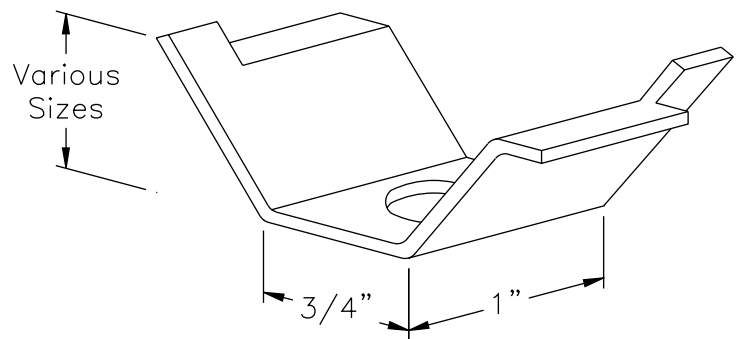
Raised Edge Weld Washers

14 gauge x 3/8" dia. hole for welded attachment of CP-32.



Anchor Washers

16 gauge x 7/16" dia. hole for welded attachment of CP-32 where higher diaphragm shear values must be achieved.



ASC Steel Deck

Roof Deck Specifications

Specification 05300 Metal Roof Deck

Part 1 - General

1.01 Work Included

A. Furnish all materials, labor and shop drawings necessary to complete metal decking installation per the Contract Documents. The layout, deck types & gages and required attachments are indicated on the contract drawings.

1.02 Related Work, Specified Elsewhere

A. The work of this Section shall be closely coordinated with that of Section 05100-Structural Steel Framing; Section 05200 - Steel Joists; and Section 07240 - Rigid Insulation OR Section 03341 - Insulating Concrete.

*Note to Specifier: Several additional sections; Section 07250 – Fireproofing; Section 07500 - Roofing; and Flashing; 07600 - Flashing and Sheet Metal and 09900 – Painting; may apply to Related Work depending upon the nature of the project.

*Note to Specifier: For exposed Metal Deck applications to be finish painted, include the following:

1. Factory applied prime paint is to be field painted upon completion of metal deck installation.
2. Minor scratches and imperfections are to be expected due to the manufacturing, shipping and installation processes.

1.03 Products Furnished But Not Installed

A. Section 07500 – Acoustical Batts

1.04 Reference Standards for Quality Assurance

A. Codes/Standards– The work and materials of this section shall comply with:

1. Section properties shall be derived in accordance with AISI “Specification for Design of Cold-Formed Steel Structural Members, Latest Edition.”
2. Metal Decking is to be attached to the structural frame in conformance with AWS D1.3 “Specification for Welding Sheet Steel in Structures.”
3. ICC-ES Legacy Evaluation Report ER-2757.

*Note to Specifier: Insert the appropriate L.A. City Research Report No. when applicable; 23783, 23784.

4. ASTM Reference numbers:
 - (a) ASTM A653, Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) By The Hot-Dip Process.
 - (b) ASTM A611, Structural Steel Sheet, Carbon, Cold-Rolled.
 - (c) ASTM A1008, Steel, Sheet, Cold-Rolled, Carbon, Structural, High Strength Low-Alloy and High-Strength Low-Alloy with Improved Formability.
5. Steel Deck Institute (SDI) – Metal roof deck profiles shall be in conformance with SDI standards.

6. Factory Mutual (FM) – Metal roof deck profiles shall be in conformance with FM where applicable (B-36 & DGB-36 only).
7. 1997 Uniform Building Code, Chapter 22, Division VII, or 2000 International Building Code, Chapter 22, Specification for the Design of Cold-Formed Steel Structural Members.

1.05 Performance Standards

A. Vertical Load Requirements: Metal Deck material supplied must meet the vertical design loads as determined by the Structural Engineer of Record.

B. Diaphragm Shear: Metal Deck material supplied must meet the diaphragm shear design loads as determined by the Structural Engineer of Record.

*Note to Specifier: When specifying type DGB-36 or DGBF-36 roof deck, include the following:

C. The pneumatic side lap connection will be inspected utilizing the ASC “Go/NoGo gauge” to ensure that effective connections are achieved during construction.

1.06 Submittals

A. Shop drawings

1. Prior to fabrication, prepare shop drawings for work under this section and submit to Architect. Shop drawings are to include deck layout, deck type and gage, framing and support of openings, dimensions and sections, details of accessories, type and location of welds and list of materials included.
2. Manufacturer’s product literature and relevant approvals are to be submitted with the shop drawings.

1.07 Product Handling

A. Metal Deck

Transport, store and erect metal deck and accessories in a manner that will prevent corrosion, deformation or other damage. Store deck clear of the ground with one end elevated to promote drainage; protect metal deck from water and the elements with a water resistant material.

*Note to Specifier: Include the following when Acustadek™ is specified;

B. Acustadek™ Sound Absorption Batts

Store batts in an enclosed area, protected from the elements.

Part 2 - Products

2.01 Materials and Finishes

A. Roof Deck Products:

1. Metal roof deck to be ASC Steel Deck [select appropriate profile(s) and gage(s)].
 - (a) B-36, (22, 20, 18, 16) gage; 1 1/2” deep x 36” wide.
 - (b) Q-Max® System with B-36, (22, 20, 18, 16) gage; 1 1/2” deep x 36” wide; with 16-gage Shear Resistance Angle.
 - (c) ShearVent™ System with B-36 (22, 20, 18, 16) gage,

Roof Deck Specifications continued

positive vented; 1 1/2" deep x 36" wide with 16-gage Shear Resistance Angle.

- (d) DGB-36, (22, 20, 18, 16) gage; 1 1/2" deep x 36" wide.
- (e) N-24 (22, 20, 18, 16) gage; 3" deep x 24" wide.
- (f) 2W-36 (22, 20, 18, 16) gage; 2 1/8" deep x 36" wide.
- (g) 3W-36 (22, 20, 18, 16) gage; 3" deep x 36" wide.
- (h) BF-36 (20/20, 20/18, 20/16, 18/20, 18/18, 18/16, 16/16) gage; 1 1/2" deep x 36" wide.
- (i) DGBF-36 (20/20, 20/18, 20/16, 18/20, 18/18, 18/16, 16/16) gage; 1 1/2" deep x 36" wide.
- (j) NF-24 (20/20, 20/18, 20/16, 18/20, 18/18, 18/16, 16/16) gage; 3" deep x 24" wide.
- (k) Deep Deck (20, 18, 16, 14) gage; 4 1/2", 6" or 7 1/2" deep x 12" wide.
- (l) Deep Deck Cellular (20/20, 20/18, 20/16, 18/20, 18/18, 18/16, 16/16) gage; 4 1/2", 6" or 7 1/2" deep x 24" wide.
- (m) CP-32 (26, 24, 22, 20) gage; 1 3/8" deep x 32" wide.

*Note to Specifier: 2W-36 and 3W-36 are available in 24" wide panels. When specified, the designations are 2W-24 and 3W-24.

*Note to Specifier: DGB-36 and DGBF-36 are to be used exclusively with the DeltaGrip™ system. When specified, the DeltaGrip™ sidelap connections must be specified as per section 3.02 C.4.

— OR —

*Note to Specifier: When specifying Acustadek™, use the following:

1. Metal roof deck to be ASC Steel Deck [select appropriate profile(s) and gage(s).]
 - (a) B-36 Acustadek™ (22, 20, 18, 16) gage; 1 1/2" deep x 36" wide.
 - (b) Q-Max® System with B-36 Acustadek™, (22, 20, 18, 16) gage; 1 1/2" deep x 36" wide; with 16-gage Shear Resistance Angle.
 - (c) DGB-36 Acustadek™ (22, 20, 18, 16) gage; 1 1/2" deep x 36" wide.
 - (d) N-24 Acustadek™ (22, 20, 18, 16) gage; 3" deep x 24" wide.
 - (e) BF-36 Acustadek™ (20/20, 20/18, 20/16, 18/20, 18/18, 18/16, 16/16) gage; 1 1/2" deep x 36" wide.
 - (f) DGBF-36 Acustadek™ (20/20, 20/18, 20/16, 18/20, 18/18, 18/16, 16/16) gage; 1 1/2" deep x 36" wide.
 - (g) NF-24 Acustadek™ (20/20, 20/18, 20/16, 18/20, 18/18, 18/16, 16/16) gage; 3" deep x 24" wide.
 - (h) Deep Deck Acustadek™ (20, 18, 16, 14) gage; 4 1/2", 6" or 7 1/2" deep x 12" wide.
 - (i) Deep Deck Cellular Acustadek™ (20/20, 20/18, 20/16, 18/20, 18/18, 18/16, 16/16) gage; 4 1/2", 6" or 7 1/2" deep x 24" wide.
 - (j) 2WF-36 Acustadek™ (20/20, 20/18, 20/16, 18/20, 18/18, 18/16, 16/16) gage; 2 1/8" deep x 36" wide.
 - (k) 3WF-36 Acustadek™ (20/20, 20/18, 20/16, 18/20, 18/18, 18/16, 16/16) gage; 3" deep x 36" wide.
2. Acustadek™ perforations are 1/8" or 5/32" (dependent on

deck type) diameter holes on staggered centers. The Noise Reduction Coefficient is to be (select from ASC Steel Deck Preformed Metal Roof Deck Catalog). The NRC values were developed in accordance with ANSI C423, as performed by Riverbank Laboratory.

*Note to Specifier: DGB-36 Acustadek™ and DGBF-36 Acustadek™ are to be used exclusively with the DeltaGrip™ system. When specified, the DeltaGrip™ sidelap connections must be specified as per section 3.02 C.4.

— OR —

*Note to Specifier: When specifying deck coated with Prime Shield™, use the following:

1. Metal roof deck to be ASC Steel Deck [select appropriate profile(s) and gage(s).]
 - (a) B-36 (22, 20, 18, 16) gage; 1 1/2" deep x 36" wide.
 - (b) Q-Max® System with B-36, (22, 20, 18, 16) gage; 1 1/2" deep x 36" wide; with 16-gage Shear Resistance Angle.
 - (c) DGB-36, (22, 20, 18, 16) gage; 1 1/2" deep x 36" wide.
 - (d) N-24 (22, 20, 18, 16) gage; 3" deep x 24" wide.

*Note to Specifier: DGB-36 is to be used exclusively with the DeltaGrip™ system. When specified, the DeltaGrip™ sidelap connections must be specified as per section 3.02 C.4.

B. Materials:

*Note to Specifier: When specifying B-36, Q-Max® System, Shearvent™ System, DGB-36, N-24, 2W-36, 3W-36, BF-36, DGBF-36, NF-24, B-36 Acustadek™, DGB-36 Acustadek™, N-24 Acustadek™, BF-36 Acustadek™, DGBF-36 Acustadek™, NF-24 Acustadek™, 2WF-36 Acustadek™ or 3WF-36 Acustadek™, use the following:

1. Galvanized Steel: ASTM A653, minimum yield (Fy) = 38 ksi

— OR —

*Note to Specifier: When specifying Deep Deck, Deep Deck Cellular, Deep Deck Acustadek™ or Deep Deck Cellular Acustadek™, use the following:

1. Galvanized Steel: ASTM A653, minimum yield (Fy) = 33 ksi

— OR —

*Note to Specifier: When specifying CP-32, use the following:

1. Galvanized Steel: ASTM A653 Structural Grade 80, minimum yield (Fy) = 80 ksi

— OR —

*Note to Specifier: When specifying deck coated with Prime Shield™, use the following:

1. Cold Rolled Steel: ASTM A611 minimum Grade C or ASTM A1008 minimum Grade 33, minimum yield (Fy) = 38 ksi

Roof Deck Specifications continued

*Note to Specifier: When specifying Acustadek™, include the following:

2. Acoustical sound absorbing batts are to be inert and non-organic mineral wool or fiberglass provided in proper size for deck product specified

C. Finishes:

1. Galvanized Steel: ASTM A653, galvanized coating
 - (a) Galvanized designation of G60 or G90.

*Note to Specifier: When CP-32 is specified, the galvanized coating is G90.

*Note to Specifier: When project requires factory prime paint over the galvanized surface include the following:

- (b) Acrylic prime paint to be factory applied and oven cured having a 0.30 mil nominal dry film thickness on exposed side of steel deck.

— OR —

- (b) Double White
 - (i) Acrylic prime paint to be factory applied and oven cured having a 0.60 mil nominal dry film thickness on exposed side of steel deck.

— OR —

- (b) Prime paint bottom side of Cellular Deck and Acoustical Cellular Deck:
 - (i) Zinc rich gray prime paint to be factory applied and oven cured having a 0.30 mil nominal dry film thickness on flat bottom surface of steel deck.
 - (ii) Touch up of the spot welds, resulting from steel deck fabrication, shall be the responsibility of the General Contractor.

*Note to Specifier: When specifying deck coated with Prime Shield™, use the following:

1. Cold Rolled Steel: ASTM A611 or ASTM A1008 with a prime-painted finish
 - (a) Prime Shield™: The deck shall be coated with the Prime Shield™ primer on both sides.
 - (i) Acrylic prime paint to be factory applied to steel which has been cleaned, chemically pretreated and oven cured having a 0.30 mil nominal dry film thickness on each side.

2.02 Fabrication

A. Metal Deck

Manufacture deck units to lengths as indicated on shop drawings. Panel end conditions are to be butted or endlapped, 2" minimum. Side laps are to be male/female interlocking type, suitable

for button punching, seam welding or ASC DeltaGrip™ system. Side laps are to be nestable or interlocking when using screw-type fasteners.

Note to Specifier: When specifying CP-32, delete the last two sentences and insert: Sidelaps are to be overlapping type.

B. Accessories

Fabricate steel deck accessories (not including cell closures) from the same gage and materials as adjacent steel deck, or as required to meet conditions.

Part 3 - Execution

3.01 Inspection

- A. Examine the areas and conditions under which the work of this Section is to be performed. Correct any conditions, which are detrimental to the timely and proper completion of the work of this Section. Do not proceed with work until unsatisfactory conditions are corrected.

*Note to Specifier: When specifying type DGB-36 or DGBF-36 roof deck, include the following:

- B. The pneumatic side lap connection will be inspected utilizing the ASC "Go/NoGo gauge" to ensure that effective connections are achieved during construction.
- C. Ensure that all deck units are labeled with the DeltaGrip™ name, DGB-36 or DGBF-36.

3.02 Installation

A. General:

Install the metal deck and accessories in compliance with the manufacturer's written recommendations and approved shop drawings.

B. Placing Metal Deck Units:

Place metal deck units on supporting members and adjust to proper position. Ensure proper bearing on supporting members and accurate alignment of butted ends/end laps and side laps prior to permanently attaching units.

C. Attachment of Metal Deck Units:

1. Welded attachment of metal deck units to the supporting members shall conform to AWS D1.3. Welders shall demonstrate an ability to produce satisfactory welds according to the procedures described in AWS D1.3 prior to commencing work.
2. Attach metal deck units to supporting members with 1/2" effective diameter or 3/8" by 1" long effective area puddle welds and/or mechanical fasteners as indicated on the structural drawings.
3. The side laps of the deck units are to be connected as indicated on the structural drawings.

*Note to Specifier: When specifying DGB-36 or DGBF-36, replace

Roof Deck Specifications continued

section C.3 with the following:

4. The sidelaps of the deck units are to be connected with the DeltaGrip™ side seam attachments as indicated on the structural drawings. A DeltaGrip™ side seam attachment is comprised of three triangular tabs produced by 3/8-inch wide, 60-degree triangular punches that tightly clinch the standing seam side lap of the deck unit and is achieved utilizing the ASC DeltaGrip™ tool.

*Note to Specifier: When specifying CP-32, replace section C.2 and C.3 with the following:

5. Attach metal deck units to supporting members with plug welds using a 14-gage weld washer having a 3/8" diameter hole or (when attachment method requires) a 16-gage anchor washer having a 7/16" diameter hole, as required for diaphragm shear capacity. Welds to supporting members and the method of side lap attachment are to be as per the structural drawing.

3.03 Protection

- A. Deck units shall be permanently secured into position before use as storage areas or working platforms.
- B. Construction loads must not exceed the carrying capacity of the deck.

END OF SECTION

Materials and Finishes

The B, Q-Max®, ShearVent™, Deep Deck, N, NF and BF profiles are manufactured from steel conforming to ASTM A653. CP-32 profile is manufactured from steel conforming to ASTM A653, Structural Grade E.

The standard galvanized coatings are G-60 (.60 oz./ft.²) or G-90 (.90 oz./ft.²) in accordance with ASTM A653. The B, Q-Max®, ShearVent™, Deep Deck, N, 2W, 3W, NF and BF are available in G-60 and G-90. The CP-32 profile is available in G-90. Please inquire for the availability of alternate coatings.

Please note: Spot weld discoloration will not be a reason for rejection of cellular deck.

The cellular decking listed in this catalog is manufactured from two sections of galvanized steel that are jointed with resistance welds. The deck coating and finish will be removed, from the area of the resistance weld, during this process. This condition should be considered when determining the fitness of this product for a specific application. This condition will also not be an acceptable cause for rejection of the material. Please contact your ASC Steel Deck representative for additional information on this subject.

ASC Steel Deck reserves the right to make revisions in the design and/or specifications of our products without prior notice. Dimensions and specifications of products are subject to normal manufacturing tolerances. Consult factory concerning availability of product.

The information in this brochure is, to the best of our knowledge, accurate. However, no information, representation nor formula contained herein is designed to replace the judgement of an experienced structural engineer or other professional designer. ASC Steel Deck assumes no liability whatsoever for the accuracy or completeness of the information contained in this brochure, nor for the suitability of the material for its intended purpose.

ASC Steel Deck

1-800-726-2727



Metric Conversion Chart

Metric Conversions

	Multiply	By	To Obtain
Spans, length and thickness	Inches	25.4	Millimetres
	Feet	304.8	Millimetres
	Inches	0.0254	Metres
	Feet	0.3048	Metres
Vertical Load and Superimposed Load	psf	0.0479	kPa
	psi	6.8948	kPa
Area	Square feet	0.0929	Square Metre
	Square	9.2903	Square Metre
Diaphragm Shear	plf	0.0146	KN/m
Section Properties	in ³ /ft	53,763	mm ³ /m
	in ⁴ /ft	1,365,588	mm ⁴ /m
	in ³ /ft	53.763	cm ³ /m
	in ⁴ /ft	136.559	cm ⁴ /m
Weight	Pounds	0.00445	kN
	psf	4.8824	kg/m ²
Volume	pcf	16.018	kg/m ³