

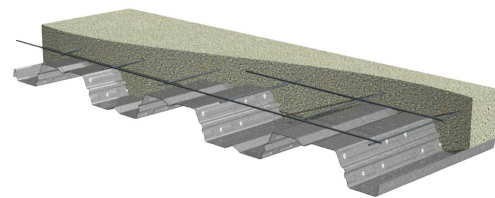
PLW2™-36/W2-36 FORMLOK® COMPOSITE DECKS

GRADE 50 STEEL

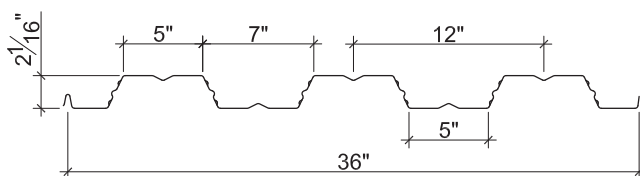
ASD

W2 FORMLOK DECKS

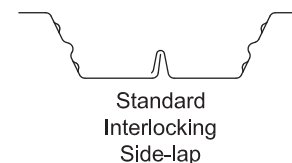
- PLW2-36 FormLok Deck used with PunchLok® II System
- W2-36 FormLok Deck used with TSWs or BPs
- W2-36-SS FormLok Deck used with Side-lap Screws



Nominal Dimensions

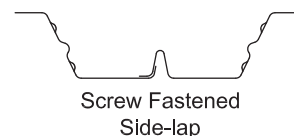


PLW2-36 or W2-36 FormLok



Standard
Interlocking
Side-lap

W2-36-SS FormLok



Screw Fastened
Side-lap

Section Properties

Deck Gage	Deck Weight w_{dd} (psf)	Base Metal Thickness t (in.)	Yield Strength F_y (ksi)	Effective Moment of Inertia at Service Load $I_d = (2I_e + I_g)/3$		Effective Section Modulus at $F_y = 50$ ksi		Vertical Web Shear V_n/Ω (lb/ft)
				I_{d+} (in ⁴ /ft)	I_{d-} (in ⁴ /ft)	S_{e+} (in ³ /ft)	S_{e-} (in ³ /ft)	
22	1.8	0.030	50	0.341	0.339	0.246	0.256	1699
20	2.1	0.036	50	0.422	0.419	0.323	0.333	2444
18	2.7	0.047	50	0.564	0.562	0.471	0.481	3224
16	3.3	0.059	50	0.708	0.708	0.623	0.638	4034

Allowable Reactions at Supports Based on Web Crippling, R_n/Ω (lb/ft)

Deck Gage	Bearing Length of Webs											
	One-Flange Loading						Two-Flange Loading					
	End Bearing				Interior Bearing		End Bearing				Interior Bearing	
	1 1/2"	2"	3"	4"	4"	6"	1 1/2"	2"	3"	4"	4"	6"
22	375	412	474	527	792	910	376	405	453	494	955	1107
20	526	577	661	732	1109	1268	560	601	670	728	1355	1565
18	862	940	1071	1182	1808	2056	990	1058	1172	1267	2247	2580
16	1310	1423	1613	1773	2737	3095	1594	1696	1867	2011	3439	3929

Standard Features

- ASTM A653 SS GR50 Min., with G60 or G90, white or gray primer bottom optional
- ASTM A1008 SS GR50 Min. with gray primer bottom
- Standard lengths – 6'-0" to 40'-0"
- IAPMO UES ER-2018 and UL Listed
- Tables conform to ANSI/SDI C-2017

Optional Features

- Inquire regarding cost and lead times for:
 - Short cuts < 6'-0"
 - Sheet Lengths > 40'-0"
 - Alternative metallic and painted finishes
- Factory Vent Tabs

PLW2™-36/W2-36 FORMLOK® DECK-SLABS

NORMAL WEIGHT CONCRETE (145 pcf)

ASD

		Maximum Unshored Spans				Composite Deck-Slab Properties			
Slab Depth		Deck Gage	Maximum Unshored Construction Clear Span			Concrete + Deck (psf)	Deflection $I_d = (I_{cr} + I_u)/2$ (in ⁴ /ft)	Moment M_{no}/Ω (kip-ft/ft)	Shear V_{no}/Ω (kip/ft)
Total	Topping		1	2	3				
4"	2"	22	7'-10"	9'-1"	9'-4"	38.1	4.17	2.45	3.07
		20	9'-4"	10'-4"	10'-8"	38.4	4.44	2.88	3.07
		18	10'-7"	12'-5"	12'-7"	39.0	4.91	3.62	3.07
		16	11'-4"	14'-1"	13'-3"	39.6	5.37	4.39	3.07
5½"	3½"	22	6'-11"	7'-11"	8'-2"	56.2	10.38	3.51	3.89
		20	8'-2"	9'-1"	9'-4"	56.5	11.02	4.14	4.57
		18	9'-4"	10'-10"	11'-3"	57.1	12.10	5.24	4.67
		16	10'-1"	12'-6"	12'-2"	57.7	13.18	6.38	4.67
6½"	4½"	22	6'-5"	7'-4"	7'-7"	68.3	16.86	4.46	4.49
		20	7'-7"	8'-5"	8'-9"	68.6	17.86	5.27	5.17
		18	8'-10"	10'-1"	10'-6"	69.2	19.55	6.71	5.87
		16	9'-6"	11'-8"	11'-7"	69.8	21.23	7.80	5.87

Note:

- Maximum unshored spans do not consider web-crippling. Required bearing should be determined based on specific span conditions.

Superimposed Allowable Load, W_n/Ω , Limited by L/360 (psf)

NWC (145 pcf), $f'_c = 3000$ psi

Total Slab Depth	Deck Gage	Span (ft.-in.)								
		6'-0"	7'-0"	8'-0"	9'-0"	10'-0"	11'-0"	12'-0"	13'-0"	14'-0"
4"	22	507	362	268	204	158	124	98	78	62
	20	601	431	321	246	192	145	112	88	70
	18	765	552	413	294	214	161	124	97	78
	16	935	676	458	321	234	176	135	106	85
5½"	22	724	517	382	290	224	175	138	110	87
	20	863	619	460	352	274	217	173	139	112
	18	1106	798	597	460	361	289	233	190	156
	16	1360	983	739	572	452	364	296	244	202
6½"	22	923	660	489	372	288	226	179	142	113
	20	1103	792	590	452	353	280	224	181	146
	18	1421	1025	769	593	467	374	303	248	204
	16	1663	1203	904	700	554	445	363	299	248

Notes:

- For high loads long term concrete creep should be considered.
- See Composite Deck-Slab Strength Web Based Solutions for alternate slabs or LRFD design.

PLW2™-36/W2-36 FORMLOK® DECK-SLABS

LIGHT WEIGHT CONCRETE (110 pcf)

ASD

		Maximum Unshored Spans				Composite Deck-Slab Properties			
Slab Depth		Deck Gage	Maximum Unshored Construction Clear Span			Concrete + Deck (psf)	Deflection $I_d = (I_{cr} + I_u)/2$ (in ⁴ /ft)	Moment M_{no}/Ω (kip-ft/ft)	Shear V_{no}/Ω (kip/ft)
Total	Topping		1	2	3				
4"	2"	22	8'-7"	9'-11"	10'-3"	29.3	3.21	2.34	2.70
		20	10'-4"	11'-3"	11'-8"	29.6	3.45	2.74	3.07
		18	11'-6"	13'-6"	13'-5"	30.2	3.85	3.43	3.07
		16	12'-1"	15'-0"	14'-2"	30.8	4.24	4.14	3.07
4½"	2½"	22	8'-3"	9'-6"	9'-9"	33.9	4.47	2.68	2.89
		20	9'-10"	10'-10"	11'-2"	34.2	4.80	3.13	3.57
		18	11'-0"	12'-11"	13'-0"	34.8	5.34	3.93	3.57
		16	11'-8"	14'-7"	13'-8"	35.4	5.87	4.74	3.57
5¼"	3¼"	22	7'-9"	8'-11"	9'-2"	40.8	6.93	3.20	3.20
		20	9'-3"	10'-2"	10'-6"	41.1	7.42	3.76	3.88
		18	10'-5"	12'-3"	12'-5"	41.7	8.24	4.72	4.39
		16	11'-2"	13'-11"	13'-2"	42.3	9.04	5.72	4.39

Note:

- Maximum unshored spans do not consider web-crippling. Required bearing should be determined based on specific span conditions.

Superimposed Allowable Load, W_n/Ω , Limited by L/360 (psf)

LWC (110 pcf), $f'_c = 3000$ psi

Total Slab Depth	Deck Gage	Span (ft.-in.)								
		6'-0"	7'-0"	8'-0"	9'-0"	10'-0"	11'-0"	12'-0"	13'-0"	14'-0"
4"	22	491	353	263	192	140	105	81	63	51
	20	579	418	294	206	150	113	87	68	54
	18	732	490	328	230	168	126	97	76	61
	16	858	540	361	254	185	139	107	84	67
4½"	22	560	402	300	230	180	143	113	88	71
	20	662	477	357	275	209	157	121	95	76
	18	837	606	455	320	233	175	135	106	85
	16	1018	738	500	351	256	192	148	116	93
5¼"	22	670	481	359	275	215	170	136	110	89
	20	793	572	428	329	259	207	167	136	112
	18	1007	729	548	424	336	270	208	163	131
	16	1228	891	672	522	395	296	228	179	144

Notes:

- For high loads long term concrete creep should be considered.
- See Composite Deck-Slab Strength Web Based Solutions for alternate slabs or LRFD design.

PLW2-36/W2-36 FormLok Deck-Slab Information

$f'_c = 3000$ psi

Recommended Reinforcing for Temperature and Shrinkage					
Total Slab Depth (in.)	Cover Depth (in.)	Theoretical Concrete Volume (yd ³ /100 ft ²)	Min. A _s for T&S (in. ²)	WWR (OR)	Bekaert Dramix® Steel Fiber Alternate to WWR (lb/yd ³)
4D 65/60BG					
Normal Weight Concrete (145 pcf)					
4	2	0.93	0.028	6x6-W1.4xW1.4	29
4½	2½	1.08	0.028	6x6-W1.4xW1.4	29
5	3	1.24	0.028	6x6-W1.4xW1.4	29
5½	3½	1.39	0.032	6x6-W2.1xW2.1	29
6½	4½	1.70	0.041	6x6-W2.1xW2.1	29
Light Weight Concrete (110 pcf)					
4	2	0.93	0.028	6x6-W1.4xW1.4	29
4½	2½	1.08	0.028	6x6-W1.4xW1.4	29
5¼	3¼	1.31	0.029	6x6-W2.1xW2.1	29
6¼	4¼	1.62	0.038	6x6-W2.1xW2.1	29

Notes:

1. FRC reinforcement is based on IAPMO UES ER-497 and ER-465.
2. Dramix® fibers may be used in UL or ULC fire rated assemblies in lieu of WWR. See UL file R19307 for additional information.

For information on Bekaert Dramix® fibers contact 770-514-2295 or infobuilding@beckaert.com

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