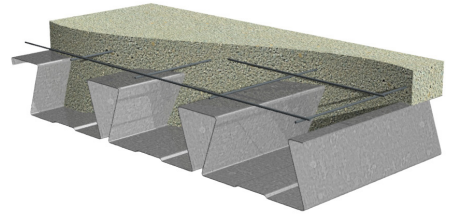


3.5D FORMLOK® DOVETAIL DECK

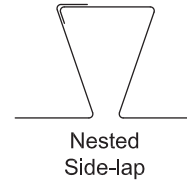
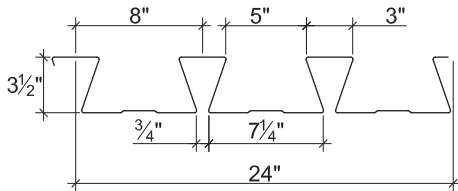
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3.5D FORMLOK DOVETAIL DECK

- Enhanced 2-Coat Polyester Paint
- White Factory Primer Paint
- Galvanized Finish
- UL Listed



Nominal Dimensions



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 $F_y = 40$ ksi		Design Moment		Vertical Web Shear ϕV_n (lb/ft)
				I_{d+} (in ⁴ /ft)	I_{d-} (in ⁴ /ft)	S_{e+} (in ³ /ft)	S_{e-} (in ³ /ft)	ϕM_{n+} (lb-ft/ft)	ϕM_{n-} (lb-ft/ft)	
20	3.3	0.0358	40	1.762	1.646	0.676	0.781	2028	2343	5221
18	4.3	0.0474	40	2.415	2.272	0.980	1.070	2940	3210	9138
16	5.4	0.0598	40	3.133	2.968	1.317	1.377	3951	4131	12635

Design Reactions at Supports Based on Web Crippling, ϕR_n (lb/ft)

Deck Gage	Bearing Length of Webs											
	One-Flange Loading						Two-Flange Loading					
	End Bearing				Interior Bearing		End Bearing				Interior Bearing	
	2"	3"	4"	5"	4"	6"	2"	3"	4"	5"	4"	6"
20	1060	1215	1346	1461	2170	2484	1092	1218	1324	1417	2564	2962
18	1787	2035	2245	2429	3602	4096	2004	2219	2399	2559	4354	4998
16	2744	3108	3416	3687	5475	6191	3270	3599	3876	4120	6717	7671

Standard Features

- ASTM A653 SS GR 40 Min. with G90
- Standard lengths – 6'-0" to 42'-0"
- Tables conform to ANSI/SDI C-2017
- IAPMO UES ER-423 and UL Listed

Optional Features

- Inquire regarding cost and lead times for:
 - 19 gage
 - Short cuts < 6'-0"
 - Alternative metallic and painted finishes

3.5D FORMLOK® DOVETAIL DECK-SLAB

NORMAL WEIGHT CONCRETE (145 pcf)

LRFD

		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 ϕM_{no} (kip-ft/ft)	Shear ϕV_{no} (kip/ft)	
		1	2	3					
5½"	2"	20	10'-10"	12'-0"	12'-5"	59.9	14.40	10.22	6.78
		18	13'-4"	14'-1"	14'-7"	60.9	15.99	13.00	6.78
		16	14'-9"	15'-11"	16'-5"	62.0	17.61	15.35	6.78
5¾"	2¼"	20	10'-8"	11'-10"	12'-2"	62.9	16.27	10.60	7.09
		18	13'-1"	13'-10"	14'-3"	63.9	18.03	13.58	7.09
		16	14'-7"	15'-8"	16'-2"	65.0	19.75	16.51	7.09
6"	2½"	20	10'-5"	11'-7"	12'-0"	65.9	18.29	10.99	7.39
		18	12'-10"	13'-7"	14'-0"	66.9	20.24	14.09	7.39
		16	14'-5"	15'-4"	15'-10"	68.0	22.14	17.25	7.39

Note:

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

Superimposed Design Load, ϕW_n , / Deflection at L/360 (psf) NWC (145 pcf), $f'_c = 3000$ psi

Total Slab Depth	Deck Gage	Span (ft-in.)							
		15'-0"	17'-0"	18'-0"	19'-0"	20'-0"	21'-0"	23'-0"	25'-0"
5½"	20	291/186	211/128	180/107	154/91	132/78	113/67	82/51	58/40
	18	389/207	286/142	248/119	215/101	187/87	162/75	123/57	93/44
	16	471/228	350/156	304/131	265/112	232/96	204/83	157/63	122/49
5¾"	20	301/210	217/144	186/121	159/103	136/88	116/76	84/58	60/45
	18	406/233	299/160	258/135	224/114	194/98	169/85	128/64	97/50
	16	509/255	379/175	329/147	287/125	252/107	221/93	171/70	133/55
6"	20	311/236	225/162	192/137	164/116	140/99	120/86	87/65	61/51
	18	420/262	309/180	267/151	231/128	201/110	175/95	132/72	100/56
	16	531/286	395/196	344/165	300/141	263/120	231/104	179/79	139/61

Notes:

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

3.5D FORMLOK® DOVETAIL DECK-SLAB

LIGHT WEIGHT CONCRETE (110 pcf)

LRFD

		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 ϕM_{no} (kip-ft/ft)	Shear ϕV_{no} (kip/ft)
Total	Topping		1	2	3				
5½"	2"	20	12'-1"	13'-4"	13'-9"	46.2	11.18	9.48	6.78
		18	14'-10"	15'-7"	16'-1"	47.2	12.69	11.69	6.78
		16	15'-9"	17'-7"	18'-2"	48.3	14.26	14.04	6.78
5¾"	2¼"	20	11'-11"	13'-1"	13'-7"	48.5	12.57	10.13	7.09
		18	14'-8"	15'-4"	15'-10"	49.5	14.13	12.42	7.09
		16	15'-7"	17'-4"	17'-10"	50.6	15.75	14.70	7.09
8"	4½"	20	10'-3"	11'-5"	11'-10"	69.1	31.09	13.86	8.37
		18	12'-8"	13'-5"	13'-10"	70.1	34.56	17.73	9.86
		16	14'-4"	15'-2"	15'-8"	71.2	37.85	21.67	9.86

Note:

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

		Superimposed Design Load, ϕW_n , / Deflection at L/360 (psf)					LWC (110 pcf), $f'_c = 3000$ psi			
Total Slab Depth	Deck Gage	Span (ft-in.)								
		15'-0"	17'-0"	18'-0"	19'-0"	20'-0"	21'-0"	23'-0"	25'-0"	
5½"	20	281/144	206/99	178/83	154/71	134/61	116/52	87/40	65/31	
	18	359/164	267/112	232/95	202/80	177/69	155/59	120/45	93/35	
	16	441/184	330/126	288/106	253/90	222/77	196/67	154/51	121/39	
5¾"	20	301/162	222/111	191/94	166/80	144/68	125/59	94/45	71/35	
	18	382/182	284/125	247/105	215/90	188/77	165/66	128/50	99/39	
	16	462/203	346/140	302/118	265/100	233/86	205/74	161/56	127/44	
8"	20	409/402	300/276	259/233	224/198	194/169	168/146	126/111	94/86	
	18	546/447	406/307	353/258	308/220	270/188	237/163	183/124	142/96	
	16	685/490	514/336	449/283	394/241	347/206	307/178	242/135	191/105	

Notes:

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

3.5D FORMLOK® DOVETAIL DECK-SLAB

LRFD

3.5D FormLok Deck-Slab Information

$f'_c = 3000$ psi

Total Slab Depth (in.)	Cover Depth (in.)	Theoretical Concrete Volume (yd ³ /100 ft ²)	Min. A _s for T&S (in. ²)	Recommended Reinforcing for Temperature and Shrinkage	
				WWR	(OR) Bekaert Dramix® Steel Fiber Alternate to WWR (lb/yd ³)
					4D 65/60BG
Normal Weight Concrete (145 pcf)					
5½	2	1.44	0.028	6x6-W1.4xW1.4	23
5¾	2¼	1.52	0.028	6x6-W1.4xW1.4	20
6	2½	1.60	0.028	6x6-W1.4xW1.4	18
6½	3	1.75	0.028	6x6-W1.4xW1.4	15
7	3½	1.91	0.032	6x6-W2.1xW2.1	15
7¼	3¾	1.98	0.034	6x6-W2.1xW2.1	15
7½	4	2.06	0.036	6x6-W2.1xW2.1	15
8	4½	2.22	0.041	6x6-W2.1xW2.1	15
Light Weight Concrete (110 pcf)					
5½	2	1.44	0.028	6x6-W1.4xW1.4	33
5¾	2¼	1.52	0.028	6x6-W1.4xW1.4	28
6	2½	1.60	0.028	6x6-W1.4xW1.4	25
6½	3	1.75	0.028	6x6-W1.4xW1.4	20
7	3½	1.91	0.032	6x6-W2.1xW2.1	20
7½	4	2.06	0.036	6x6-W2.1xW2.1	20
8	4½	2.22	0.041	6x6-W2.1xW2.1	20

Notes:

1. FRC reinforcement is based on IAPMO UES 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@bekaert.com.

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