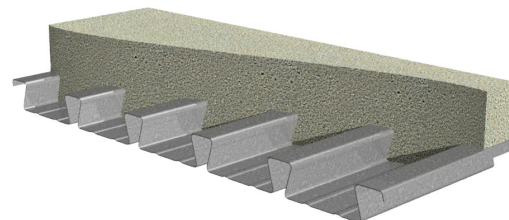


2.0DS-30 FL FORMLOK® DOVETAIL DECK GRADE 50 STEEL

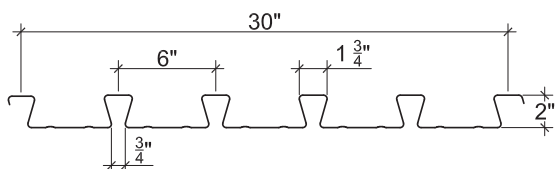
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2.0DS-30 FL DOVETAIL DECK

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



Nominal Dimensions



Nested
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		Allowable Moment		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)	$M_n +/\Omega$ (lb-ft/ft)	$M_n -/\Omega$ (lb-ft/ft)	
22	2.2	0.0299	50	0.430	0.382	0.301	0.306	752	763	3334
20	2.7	0.0359	50	0.520	0.473	0.378	0.373	943	930	3978
18	3.6	0.0478	50	0.695	0.661	0.527	0.509	1315	1269	5229
16	4.5	0.0598	50	0.872	0.856	0.667	0.648	1664	1617	6455

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
	1½"	2"	3"	4"	3" 5"	1½"	2"	3"	4"	3" 5"
22	833	916	1054	1171	1557 1794	859	926	1037	1130	1905 2217
20	1166	1278	1465	1622	2186 2503	1272	1366	1523	1655	2706 3130
18	1970	2148	2446	2698	3707 4201	2322	2480	2745	2968	4656 5331
16	2964	3218	3646	4007	5590 6279	3684	3919	4313	4646	7085 8040

Standard Features

- ASTM A653 SS GR 50 Min. with G90
- Standard lengths – 6'-0" to 40'-0"
- Tables conform to ANSI/SDI C-2017
- IAPMO UES ER-423 and UL Listed

Optional Features

- Inquire regarding cost and lead times for:
 - 21, 19, or 17 gage
 - Alternative metallic and painted finishes

2.0DS-30 FL FORMLOK® DOVETAIL DECK-SLAB

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	8'-6"	9'-5"	9'-9"	45.5	5.74	4.34	3.72
		20	9'-9"	10'-4"	10'-8"	46.0	6.14	5.11	3.72
		18	10'-8"	12'-0"	12'-5"	46.9	6.85	6.56	3.72
		16	11'-5"	13'-6"	13'-4"	47.8	7.48	7.93	3.72
5¼"	3¼"	22	7'-8"	8'-6"	8'-9"	60.6	12.20	5.64	4.89
		20	8'-9"	9'-4"	9'-8"	61.1	13.00	6.66	4.89
		18	9'-9"	10'-11"	11'-3"	62.0	14.44	8.58	4.89
		16	10'-6"	12'-3"	12'-6"	62.9	15.73	10.43	4.89
5½"	3½"	22	7'-6"	8'-4"	8'-8"	63.6	13.88	5.91	5.12
		20	8'-7"	9'-2"	9'-6"	64.1	14.79	6.97	5.12
		18	9'-8"	10'-8"	11'-1"	65.0	16.41	9.00	5.12
		16	10'-4"	12'-0"	12'-4"	65.9	17.88	10.95	5.12

Notes:

- Maximum unshored spans are based on 20 psf uniform construction live load and 150 plf concentrated construction live load.
- 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.)								
		10'-0"	11'-0"	12'-0"	13'-0"	14'-0"	15'-0"	16'-0"	18'-0"	20'-0"
4"	22	250	188	145	114	91	74	61	43	31
	20	268	201	155	122	97	79	65	46	33
	18	299	224	173	136	109	88	73	51	37
	16	327	245	189	148	119	96	79	56	40
5¼"	22	390	312	252	206	169	139	115	78	52
	20	471	378	308	253	207	168	138	97	71
	18	624	474	365	287	229	186	154	108	78
	16	687	516	397	312	250	203	167	117	85
5½"	22	408	326	264	216	177	146	120	82	54
	20	493	396	323	266	220	183	153	108	75
	18	655	530	415	326	261	212	175	122	89
	16	781	586	452	355	284	231	190	133	97

Notes:

- For high loads long term concrete creep should be considered.
- See Composite Deck-Slab Superimposed Load tool for alternate slabs or LRFD design.

2.0DS-30 FL FORMLOK® DOVETAIL DECK-SLAB 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	9'-4"	10'-4"	10'-8"	35.0	4.44	4.15	3.72
		20	10'-8"	11'-4"	11'-9"	35.5	4.77	4.87	3.72
		18	11'-7"	13'-2"	13'-4"	36.4	5.36	6.21	3.72
		16	12'-2"	14'-9"	14'-2"	37.3	5.88	7.48	3.72
4½"	2½"	22	8'-11"	9'-11"	10'-3"	39.6	6.12	4.65	4.19
		20	10'-3"	10'-11"	11'-3"	40.1	6.58	5.46	4.19
		18	11'-3"	12'-8"	13'-0"	41.0	7.37	6.97	4.19
		16	11'-10"	14'-2"	13'-9"	41.9	8.07	8.41	4.19
5¼"	3¼"	22	8'-6"	9'-5"	9'-9"	46.5	9.36	5.42	4.88
		20	9'-9"	10'-4"	10'-8"	47.0	10.04	6.38	4.89
		18	10'-8"	12'-0"	12'-5"	47.9	11.23	8.18	4.89
		16	11'-5"	13'-6"	13'-4"	48.8	12.29	9.89	4.89

Notes:

- Maximum unshored spans are based on 20 psf uniform construction live load and 150 plf concentrated construction live load.
- 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.)								
		10'-0"	11'-0"	12'-0"	13'-0"	14'-0"	15'-0"	16'-0"	18'-0"	20'-0"
4"	22	194	145	112	88	70	57	47	33	24
	20	208	156	120	94	76	61	50	35	26
	18	234	176	135	106	85	69	57	40	29
	16	257	193	148	117	93	76	62	44	32
4½"	22	267	201	154	121	97	79	65	45	33
	20	287	215	166	130	104	85	70	49	35
	18	322	242	186	146	117	95	78	55	40
	16	352	265	204	160	128	104	86	60	44
5¼"	22	387	307	236	186	149	121	99	70	51
	20	438	329	253	199	159	129	107	75	54
	18	490	368	284	223	178	145	119	84	61
	16	536	403	310	244	195	159	131	92	67

Notes:

- For high loads long term concrete creep should be considered.
- See Composite Deck-Slab Superimposed Load tool for alternate slabs or LRFD design.

2.0DS-30 FL FORMLOK® DOVETAIL DECK-SLAB

ASD

2.0DS-30 FL Deck-Slab Information

$f'_c = 3000$ psi

Total Slab Depth (in.)	Cover Depth (in.)	Theoretical Concrete Volume (yd³/100 ft²)	Min. A _s for T&S (in.²)	Recommended Reinforcing for Temperature and Shrinkage	
				WWR	Bekaert Dramix® Steel Fiber Alternate to WWR (lb/yd³)
					4D 65/60BG
Normal Weight Concrete (145 pcf)					
4	2	1.11	0.028	6x6-W1.4xW1.4	23
4½	2½	1.26	0.028	6x6-W1.4xW1.4	18
4¾	2¾	1.34	0.028	6x6-W1.4xW1.4	16
5	3	1.41	0.028	6x6-W1.4xW1.4	15
5¼	3¼	1.49	0.029	6x6-W2.1xW2.1	15
5½	3½	1.57	0.032	6x6-W2.1xW2.1	15
6	4	1.72	0.036	6x6-W2.1xW2.1	15
6¾	4¾	1.95	0.043	6x6-W2.9xW2.9	15
Light Weight Concrete (110 pcf)					
4	2	1.11	0.028	6X6-W1.4xW1.4	33
4½	2½	1.26	0.028	6x6-W1.4xW1.4	25
5	3	1.41	0.028	6x6-W1.4xW1.4	20
5¼	3¼	1.49	0.029	6x6-W2.1xW2.1	20
5½	3½	1.57	0.032	6x6-W2.1xW2.1	20
6	4	1.72	0.036	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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