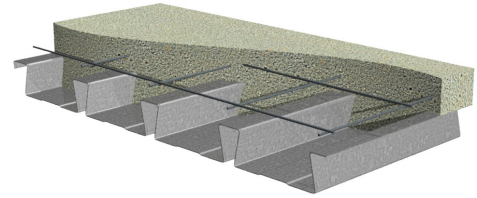


2.0D FORMLOK® DOVETAIL DECK GRADE 40 STEEL

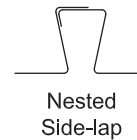
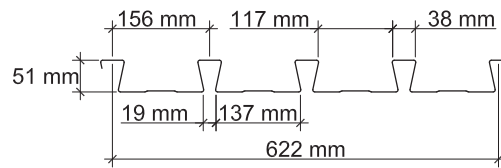
Metric
LSD

2.0D FORMLOK DOVETAIL DECK

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



Nominal Dimensions



Section Properties

Deck Gage	Deck Weight w_{dd} (kg/m ²)	Base Metal Thickness t (mm)	Yield Strength F_y (MPa)	Effective Moment of Inertia at Service Load* $I_d = (2I_e + I_y)/3$		Effective Section Modulus* at $F_y = 276$ MPa		Factored Moment*		Vertical Web Shear* ϕV_n (kN)
				I_{d+} (mm ⁴ x10 ³)	I_{d-} (mm ⁴ x10 ³)	S_{e+} (mm ³ x10 ³)	S_{e-} (mm ³ x10 ³)	ϕM_{n+} (N-m)	ϕM_{n-} (N-m)	
22	10.25	0.75	276	528.5	490.2	14.62	14.62	3631	3631	54
20	12.69	0.91	276	644.6	610.4	18.44	17.96	4576	4456	65
18	16.60	1.20	276	854.9	835.7	24.89	24.19	6177	6005	86
16	20.99	1.52	276	1081.5	1080.2	31.56	30.97	7835	7687	107

*Physical Properties per meter (m) of width

Factored Reactions at Supports Based on Web Crippling, ϕR_n (kN/m)

Deck Gage	Bearing Length of Webs (mm)											
	One-Flange Loading						Two-Flange Loading					
	End Bearing				Interior Bearing		End Bearing				Interior Bearing	
	40	50	75	100	75	125	40	50	75	100	75	125
22	13.2	14.2	16.3	18.1	24.4	28.9	13.1	13.9	15.5	16.9	29.9	35.7
20	18.8	20.1	23.1	25.6	34.8	40.9	19.7	20.8	23.2	25.2	43.0	51.2
18	31.3	33.5	38.2	42.1	57.9	67.5	35.2	37.1	41.0	44.3	72.7	85.9
16	47.8	51.0	57.8	63.5	88.3	102.3	56.5	59.3	65.3	70.3	111.8	131.2

Standard Features

- ASTM A653/A653M SS GR40 Min., with Z275/G90 galvanized or ZF75/A25 galvanealed
- Standard lengths – 1.83 m to 12.8 m
- UL Listed
- Cold-formed steel deck conforms to CAN/CSA S136-16 and meets the guidelines of CSSBI 12M-2018.

Optional Features

- Inquire regarding cost and lead times for:
 - Short cuts < 1.83 m
 - Sheet Lengths > 12.8 m
 - Alternative metallic and painted finishes

2.0D FORMLOK® DOVETAIL DECK-SLABS

NORMAL WEIGHT CONCRETE (2325 kg/m³)

Metric
LSD

Slab Depth		Maximum Unshored Spans			Composite Deck-Slab Properties				
Total (mm)	Topping (mm)	Deck Gage	Maximum Unshored Construction Clear Span (mm)			Concrete + Deck (kPa)	Deflection $I_d = (I_{cr} + I_u)/2$ (mm ⁴ × 10 ⁹ /m)	Moment ϕM_{no} (kN-m/m)	Shear ϕV_{no} (kN/m)
			1	2	3				
102	51	22	2332	2598	2667	2.2	7854.44	21.49	80
		20	2700	2870	2966	2.2	8423.89	25.53	80
		18	3096	3316	3427	2.3	9365.84	32.59	80
		16	3327	3730	3855	2.3	10263.50	39.77	80
135	84	22	2104	2350	2413	3.0	17049.71	27.93	106
		20	2428	2597	2684	3.0	18221.22	33.28	106
		18	2815	3004	3105	3.0	20172.43	42.72	106
		16	3030	3384	3497	3.1	22042.50	52.40	106
140	89	22	2075	2318	2362	3.1	18861.91	28.92	109
		20	2394	2562	2648	3.1	20148.71	34.48	110
		18	2780	2964	3064	3.1	22294.88	44.30	110
		16	2993	3339	3451	3.2	24354.80	54.37	110

Note:

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

Superimposed Factored Load, ϕW_n , / Deflection at L/360 (kPa)

NWC (2325 kg/m³), $f'_c = 20$ MPa

Total Slab Depth	Deck Gage	Span (mm)							
		3000	3600	3900	4200	4500	4800	5400	6000
102	22	16.3/12.6	10.5/7.3	8.5/5.7	6.9/4.6	5.7/3.7	4.7/3.1	3.1/2.2	2/1.5
	20	19.9/13.5	12.9/7.8	10.6/6.1	8.8/4.9	7.3/4	6/3.3	4.2/2.3	2.9/1.7
	18	26.1/15	17.2/8.7	14.3/6.8	11.9/5.5	10/4.5	8.4/3.6	6.1/2.5	4.4/1.9
	16	32.4/16.5	21.6/9.5	18/7.5	15.1/6	12.8/4.9	10.9/4	8/2.8	5.9/2.1
135	22	21.1/27.4	13.5/15.8	11/12.4	9/10	7.3/8.1	6/6.7	3.9/4.7	2.5/3.4
	20	25.8/29.3	16.8/16.9	13.7/13.3	11.3/10.6	9.4/8.7	7.8/7.1	5.4/5	3.6/3.6
	18	34.2/32.4	22.6/18.7	18.7/14.7	15.6/11.8	13.1/9.6	11/7.9	7.9/5.6	5.7/4
	16	42.7/35.4	28.5/20.5	23.7/16.1	19.9/12.9	16.9/10.5	14.3/8.6	10.5/6	7.8/4.4
140	22	21.8/30.3	14/17.5	11.3/13.8	9.2/11	7.6/9	6.2/7.4	4.1/5.2	2.5/3.8
	20	26.8/32.4	17.4/18.7	14.2/14.7	11.7/11.8	9.7/9.6	8.1/7.9	5.6/5.5	3.7/4
	18	35.4/35.8	23.4/20.7	19.3/16.3	16.1/13	13.6/10.6	11.4/8.7	8.2/6.1	5.9/4.5
	16	44.3/39.1	29.5/22.6	24.6/17.8	20.6/14.2	17.5/11.6	14.9/9.5	10.9/6.7	8.1/4.9

Notes:

- The composite deck-slab design is based on tested performance and engineering analysis in accordance Section 7.6.1 of CSSBI 12M-2018.
- For high loads long term concrete creep should be considered.
- Use Composite Deck-Slab Strength Web Based Solutions for alternate slabs.

2.0D FORMLOK® DOVETAIL DECK-SLABS

LIGHT WEIGHT CONCRETE (1840 kg/m³)

Metric
LSD

Slab Depth		Maximum Unshored Spans			Composite Deck-Slab Properties				
Total (mm)	Topping (mm)	Deck Gage	Maximum Unshored Construction Clear Span (mm)			Concrete + Deck (kPa)	Deflection $I_d = (I_{cr} + I_u)/2$ (mm ⁴ × 10 ⁹ /m)	Moment ϕM_{no} (kN-m/m)	Shear ϕV_{no} (kN/m)
			1	2	3				
102	51	22	2511	2785	2879	1.8	6751.57	20.98	88
		20	2916	3075	3178	1.8	7269.70	24.87	90
		18	3326	3549	3668	1.8	8118.96	31.65	90
		16	3570	3989	4123	1.9	8920.56	38.52	90
115	64	22	2410	2681	2769	2.0	9378.15	23.44	92
		20	2794	2961	3060	2.0	10083.20	27.83	101
		18	3195	3419	3534	2.1	11239.90	35.49	101
		16	3432	3845	3974	2.1	12330.85	43.28	101
135	84	22	2278	2541	2616	2.4	14585.52	27.35	99
		20	2636	2807	2901	2.4	15656.35	32.53	110
		18	3029	3244	3353	2.4	17421.11	41.64	119
		16	3257	3650	3773	2.5	19091.91	50.93	119

Note:

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

Superimposed Factored Load, ϕW_n , / Deflection at L/360 (kPa)

LWC (1840 kg/m³), $f'_c = 25$ MPa

Total Slab Depth	Deck Gage	Span (mm)							
		3000	3600	3900	4200	4500	4800	5400	6000
102	22	16.4/10.8	10.7/6.3	8.8/4.9	7.3/3.9	6/3.2	5/2.6	3.5/1.8	2.4/1.3
	20	19.8/11.7	13.1/6.8	10.8/5.3	9/4.2	7.6/3.4	6.4/2.8	4.5/2	3.3/1.4
	18	25.8/13	17.2/7.5	14.3/5.9	12/4.7	10.2/3.8	8.7/3.2	6.4/2.2	4.7/1.6
	16	31.9/14.3	21.4/8.3	17.9/6.5	15.1/5.2	12.8/4.2	11/3.5	8.2/2.4	6.2/1.8
115	22	18.3/15	11.9/8.7	9.8/6.8	8.1/5.5	6.7/4.5	5.6/3.6	3.9/2.5	2.7/1.9
	20	22.2/16.2	14.6/9.3	12.1/7.4	10.1/5.9	8.4/4.8	7.1/3.9	5.1/2.8	3.6/2
	18	28.9/18.1	19.3/10.4	16/8.2	13.5/6.6	11.4/5.3	9.7/4.4	7.1/3.1	5.3/2.3
	16	35.8/19.8	24/11.4	20.1/9	16.9/7.2	14.4/5.8	12.4/4.8	9.2/3.4	6.9/2.4
135	22	21.3/23.4	13.9/13.6	11.4/10.6	9.4/8.5	7.8/6.9	6.5/5.7	4.5/4	3.1/2.9
	20	25.9/25.1	17/14.6	14.1/11.4	11.7/9.1	9.8/7.4	8.3/6.1	5.9/4.3	4.2/3.1
	18	33.9/28	22.6/16.2	18.8/12.7	15.8/10.2	13.4/8.3	11.4/6.8	8.4/4.8	6.2/3.5
	16	42.1/30.6	28.3/17.7	23.7/13.9	20/11.2	17/9	14.6/7.5	10.9/5.2	8.2/3.8

Notes:

- The composite deck-slab design is based on tested performance and engineering analysis in accordance Section 7.6.1 of CSSBI 12M-2018.
- For high loads long term concrete creep should be considered.
- Use Composite Deck-Slab Strength Web Based Solutions for alternate slabs.

2.0D FORMLOK® DOVETAIL DECK-SLABS

Metric
LSD

2.0D FormLok Deck-Slab Information

Total Slab Depth (mm)	Cover Depth (mm)	Theoretical Concrete Volume (m ³ /m ²)	Min. A _s for T&S (mm ² /m)	Recommended WWR for Temperature and Shrinkage
Normal Weight Concrete (2325 kg/m³)				
102	51	0.092	60	152x152-MW9.1xMW9.1
115	64	0.105	60	152x152-MW9.1xMW9.1
120	69	0.111	60	152x152-MW9.1xMW9.1
125	74	0.118	60	152x152-MW9.1xMW9.1
135	84	0.124	72	152x152-MW13.3xMW13.3
140	89	0.130	87	152x152-MW13.3xMW13.3
155	104	0.143	132	152x152-MW25.8xMW25.8
170	119	0.162	177	102x102-MW18.7xMW18.7
Light Weight Concrete (1840 kg/m³)				
102	51	0.092	60	152x152-MW9.1xMW9.1
115	64	0.105	60	152x152-MW9.1xMW9.1
125	74	0.118	60	152x152-MW9.1xMW9.1
135	84	0.124	72	152x152-MW11.1xMW11.1
140	89	0.130	87	152x152-MW13.3xMW13.3
155	104	0.143	132	152x152-MW22.6xMW22.6

Notes:

1. Recommended temperature and shrinkage reinforcement in accordance with CSSBI S3-08, Table 2.

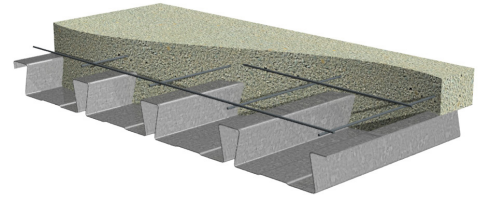
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2.0D FORMLOK® DOVETAIL DECK GRADE 40 STEEL

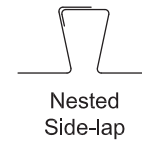
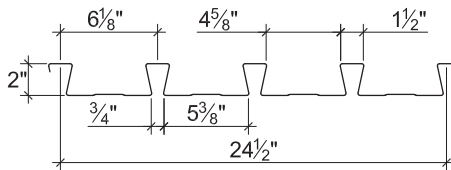
Imperial
LSD

2.0D FORMLOK DOVETAIL DECK

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



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		Factored 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)	
22	2.1	0.0295	40	0.387	0.359	0.272	0.272	816	816	3706
20	2.6	0.0358	40	0.472	0.447	0.343	0.334	1029	1002	4477
18	3.4	0.0474	40	0.626	0.612	0.463	0.450	1389	1350	5868
16	4.3	0.0598	40	0.792	0.791	0.587	0.576	1761	1728	7325

Factored 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	
	1 1/2"	2"	3"	4"	3"	5"	1 1/2"	2"	3"	4"	3"	5"
22	888	976	1123	1248	1681	1990	885	953	1068	1165	2057	2463
20	1267	1388	1591	1762	2393	2817	1333	1431	1595	1734	2963	3530
18	2116	2308	2629	2899	3985	4652	2386	2548	2821	3051	5005	5916
16	3234	3512	3979	4372	6075	7035	3835	4079	4489	4835	7699	9031

Standard Features

- ASTM A653/A653M SS GR40 Min., with Z275/G90 galvanized or ZF75/A25 galvanized
- Standard lengths – 6'-0" to 42'-0"
- UL Listed
- Cold-formed steel deck conforms to CAN/CSA S136-16 and meets the guidelines of CSSBI 12M-2018.

Optional Features

- Inquire regarding cost and lead times for:
 - Short cuts < 6'-0"
 - Sheet Lengths > 42'-0"
 - Alternative metallic and painted finishes

2.0D FORMLOK® DOVETAIL DECK-SLABS

NORMAL WEIGHT CONCRETE (145 pcf)

Slab Depth		Maximum Unshored Spans			Composite Deck-Slab Properties				
		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				
4"	2"	22	7'-8"	8'-6"	8'-9"	46.0	5.75	4.82	5.56
		20	8'-10"	9'-5"	9'-9"	46.5	6.16	5.73	5.56
		18	10'-2"	10'-11"	11'-3"	47.3	6.85	7.31	5.56
		16	10'-11"	12'-3"	12'-8"	48.2	7.50	8.93	5.56
5¼"	3¼"	22	6'-11"	7'-9"	7'-11"	61.1	12.19	6.21	7.30
		20	8'-0"	8'-7"	8'-10"	61.6	13.03	7.40	7.30
		18	9'-3"	9'-11"	10'-3"	62.4	14.42	9.50	7.30
		16	10'-0"	11'-2"	11'-6"	63.3	15.75	11.65	7.30
5½"	3½"	22	6'-10"	7'-7"	7'-9"	64.1	13.87	6.50	7.53
		20	7'-10"	8'-5"	8'-8"	64.6	14.81	7.75	7.65
		18	9'-2"	9'-9"	10'-1"	65.4	16.39	9.95	7.65
		16	9'-10"	11'-0"	11'-4"	66.3	17.90	12.22	7.65

Note:

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

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

Total Slab Depth	Deck Gage	Span (ft-in.)							
		10'-0"	12'-0"	13'-0"	14'-0"	15'-0"	16'-0"	18'-0"	20'-0"
4"	22	328/251	210/145	170/114	139/91	113/74	93/61	61/43	38/31
	20	400/269	260/155	212/122	175/98	145/79	120/65	83/46	56/33
	18	525/299	347/173	287/136	239/109	200/88	169/73	121/51	87/37
	16	653/327	435/189	362/149	304/119	257/97	218/80	160/56	118/40
5¼"	22	420/532	268/308	217/242	177/194	144/157	117/130	76/91	47/66
	20	515/569	334/329	273/259	225/207	186/168	154/138	105/97	71/71
	18	682/630	449/364	371/286	309/229	259/186	218/153	156/108	112/78
	16	853/688	568/398	472/313	396/250	335/203	285/168	208/118	153/86
5½"	22	439/606	280/350	227/275	184/220	150/179	122/148	80/103	49/75
	20	538/647	349/374	285/294	235/235	194/191	161/158	110/111	74/80
	18	714/716	471/414	389/325	324/260	272/212	229/174	163/122	117/89
	16	894/782	595/452	495/355	415/285	351/231	298/190	218/134	161/97

Notes:

- The composite deck-slab design is based on tested performance and engineering analysis in accordance Section 7.6.1 of CSSBI 12M-2018.
- For high loads long term concrete creep should be considered.
- Use Composite Deck-Slab Strength Web Based Solutions for alternate slabs.

2.0D FORMLOK® DOVETAIL DECK-SLABS

LIGHT WEIGHT CONCRETE (115 pcf)

Imperial
LSD

Slab Depth		Maximum Unshored Spans			Composite Deck-Slab Properties				
		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				
4"	2"	22	8'-3"	9'-2"	9'-5"	36.9	5.05	4.72	6.11
		20	9'-7"	10'-1"	10'-5"	37.4	5.43	5.60	6.42
		18	10'-11"	11'-8"	12'-0"	38.2	6.06	7.14	6.42
		16	11'-9"	13'-1"	13'-6"	39.1	6.66	8.69	6.42
4½"	2½"	22	7'-11"	8'-10"	9'-1"	41.7	6.97	5.27	6.41
		20	9'-2"	9'-9"	10'-1"	42.2	7.49	6.25	7.19
		18	10'-6"	11'-3"	11'-7"	43.0	8.35	7.98	7.22
		16	11'-3"	12'-7"	13'-1"	43.9	9.15	9.74	7.22
5¼"	3¼"	22	7'-6"	8'-4"	8'-7"	48.9	10.67	6.10	6.87
		20	8'-8"	9'-3"	9'-7"	49.4	11.44	7.26	7.64
		18	10'-0"	10'-8"	11'-0"	50.2	12.72	9.30	8.43
		16	10'-9"	12'-0"	12'-5"	51.1	13.93	11.38	8.43

Note:

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

Superimposed Factored Load, ϕW_n , / Deflection at L/360 (psf) LWC (115 pcf), $f'_c = 4000$ psi

Total Slab Depth	Deck Gage	Span (ft-in.)							
		10'-0"	12'-0"	13'-0"	14'-0"	15'-0"	16'-0"	18'-0"	20'-0"
4"	22	331/220	216/127	177/100	146/80	121/65	101/53	70/37	48/27
	20	401/237	264/137	218/108	181/86	152/70	128/57	91/40	65/29
	18	523/264	348/153	289/120	243/96	205/78	175/64	128/45	94/33
	16	646/290	433/168	362/132	305/106	260/86	222/71	165/49	124/36
4½"	22	369/304	240/176	197/138	162/111	135/90	112/74	77/52	53/38
	20	447/327	294/189	243/149	202/119	169/97	142/79	101/56	72/40
	18	584/364	389/211	324/166	271/132	229/108	195/89	143/62	105/45
	16	724/399	486/231	406/182	342/145	291/118	249/97	185/68	139/49
5¼"	22	427/466	277/269	227/212	187/169	155/138	129/113	89/79	60/58
	20	519/500	341/289	281/227	234/182	196/148	165/122	117/85	83/62
	18	681/555	453/321	377/253	316/202	267/164	227/135	166/95	123/69
	16	846/608	568/352	474/277	400/221	340/180	291/148	217/104	163/76

Notes:

- The composite deck-slab design is based on tested performance and engineering analysis in accordance Section 7.6.1 of CSSBI 12M-2018.
- For high loads long term concrete creep should be considered.
- Use Composite Deck-Slab Strength Web Based Solutions for alternate slabs.

2.0D FORMLOK® DOVETAIL DECK-SLABS

2.0D FormLok Deck-Slab Information

Total Slab Depth (in.)	Cover Depth (in.)	Theoretical Concrete Volume (yd ³ /100 ft ²)	Min. A _s for T&S (in. ²)	Recommended WWR for Temperature and Shrinkage
Normal Weight Concrete (145 pcf)				
4	2	1.12	0.028	6x6-W1.4xW1.4
4½	2½	1.28	0.028	6x6-W1.4xW1.4
4¾	2¾	1.35	0.028	6x6-W1.4xW1.4
5	3	1.43	0.028	6x6-W1.4xW1.4
5¼	3¼	1.51	0.034	6x6-W2.1xW2.1
5½	3½	1.58	0.041	6x6-W2.1xW2.1
6	4	1.74	0.062	6x6-W4.0xW4.0
6¾	4¾	1.97	0.084	4x4-W2.9xW2.9
Light Weight Concrete (110 pcf)				
4	2	1.12	0.028	6x6-W1.4xW1.4
4½	2½	1.28	0.028	6x6-W1.4xW1.4
5	3	1.43	0.028	6x6-W1.4xW1.4
5¼	3¼	1.51	0.034	6x6-W1.7xW1.7
5½	3½	1.58	0.041	6x6-W2.1xW2.1
6	4	1.74	0.062	6x6-W3.5xW3.5

Notes:

1. Recommended temperature and shrinkage reinforcement in accordance with CSSBI S3-08, Table 2.

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