

2.0DF-30 FL FORMLOK® DOVETAIL DECK

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	20	3168	3322	3433	1.8	7252.46	31.04	84
		18	3459	3943	4035	1.8	8129.45	39.68	84
		16	3676	4446	4282	1.9	8907.98	47.88	84
115	64	20	3040	3188	3295	2.0	10060.34	34.82	95
		18	3323	3787	3913	2.1	11252.88	44.61	95
		16	3559	4272	4157	2.1	12309.11	53.92	95
135	84	20	2877	3010	3111	2.4	15632.60	40.87	111
		18	3148	3578	3698	2.4	17452.86	52.54	111
		16	3376	4039	3996	2.5	19069.25	63.70	111

Notes:

1. Maximum unshored spans are based on 1.0 kPa uniform construction live load and 2.2 kN/m concentrated construction live load.
2. 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	20	25.3/11.6	16.9/6.7	14.1/5.3	11.8/4.2	10.0/3.4	8.5/2.8	6.3/2.0	4.6/1.4
	18	33.0/13.0	22.2/7.5	18.6/5.9	15.7/4.7	13.4/3.8	11.5/3.2	8.6/2.2	6.5/1.6
	16	40.2/14.3	27.2/8.3	22.8/6.5	19.3/5.2	16.6/4.2	14.3/3.4	10.8/2.4	8.3/1.8
115	20	28.4/16.1	19.0/9.3	15.8/7.3	13.3/5.9	11.2/4.8	9.5/3.9	7.0/2.7	5.2/2.0
	18	37.1/18.1	24.9/10.4	20.9/8.2	17.6/6.6	15.0/5.3	12.9/4.4	9.6/3.1	7.3/2.3
	16	45.3/19.8	30.6/11.4	25.7/9.0	21.8/7.2	18.7/5.8	16.1/4.8	12.2/3.4	9.3/2.4
135	20	33.3/25.1	22.2/14.5	18.5/11.4	15.6/9.1	13.2/7.4	11.2/6.1	8.2/4.3	6.1/3.1
	18	43.7/28.0	29.4/16.2	24.6/12.7	20.8/10.2	17.7/8.3	15.2/6.8	11.3/4.8	8.6/3.5
	16	53.5/30.6	36.2/17.7	30.4/13.9	25.8/11.2	22.1/9.0	19.0/7.5	14.4/5.2	11.1/3.8

Notes:

1. The composite deck-slab design is based on tested performance and engineering analysis in accordance Section 7.6.1 of CSSBI 12M-2024.
2. For high loads long term concrete creep should be considered.
3. See Composite Deck-Slab Superimposed Load tool for alternate slabs.

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2.0DF-30 FL 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)				f'_c = 20 MPa
102	51	0.091	60	152x152-MW9.1xMW9.1
115	64	0.104	60	152x152-MW9.1xMW9.1
120	69	0.109	60	152x152-MW9.1xMW9.1
125	74	0.114	60	152x152-MW9.1xMW9.1
135	84	0.124	72	152x152-MW13.3xMW13.3
140	89	0.129	82	152x152-MW13.3xMW13.3
155	104	0.144	132	152x152-MW22.6xMW22.6
170	119	0.159	177	102x102-MW18.7xMW18.7
Light Weight Concrete (1840 kg/m³)				f'_c = 25 MPa
102	51	0.091	60	152x152-MW9.1xMW9.1
115	64	0.104	60	152x152-MW9.1xMW9.1
125	74	0.114	60	152x152-MW9.1xMW9.1
135	84	0.124	72	152x152-MW13.3xMW13.3
140	89	0.129	87	152x152-MW13.3xMW13.3
155	104	0.144	132	152x152-MW22.6xMW22.6

Notes:

1. Recommended temperature and shrinkage reinforcement in accordance with CSSBI S3-2019, Table 2.

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