3.5DS-24 FL FORMLOK® DOVETAIL DECK
LIGHT WEIGHT CONCRETE (1840 kg/m³)

Metric LSD

Maximum Unshored Spans

Slab Depth			Maximum Unshored Construction Clear Span (mm)		
Total (mm)	Topping (mm)	Deck Gage	1	2	3
140	51	20	4278	4519	4669
		18	4605	5459	5305
		16	4867	5982	5627
145	56	20	4236	4456	4604
		18	4561	5385	5254
		16	4822	5926	5574
205	116	20	3719	3857	3985
		18	4157	4678	4788
		16	4401	5410	5088

Composite Deck-Slab Properties

Concrete + Deck (kPa)	Deflection $I_d = (I_{cr}+I_u)/2$ (mm^4x10^3/m)	Moment $øM_{no}$ (kN-m/m)	Shear $øV_{no}$ (kN/m)
2.3	16559.76	49.83	97
2.3	18652.98	61.39	97
2.4	20724.51	72.65	97
2.4	18197.47	51.31	100
2.4	20390.48	64.95	100
2.5	22508.64	75.96	100
3.4	47363.18	72.09	123
3.5	52542.65	92.70	141
3.5	57239.96	112.53	141

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, $øW_n$, / Deflection at L/360 (kPa)

LWC (1840 kg/m³), f'_c = 25 MPa

Total Slab Depth	Deck Gage	Span (mm)							
		4500	5100	5400	5700	6000	6300	6900	7500
140	20	16.9/7.9	12.5/5.4	10.8/4.5	9.4/3.9	8.2/3.3	7.2/2.9	5.5/2.2	4.2/1.7
	18	21.4/8.9	15.9/6.1	13.9/5.1	12.2/4.4	10.7/3.7	9.4/3.2	7.4/2.4	5.8/1.9
	16	25.7/9.9	19.3/6.8	16.9/5.7	14.9/4.8	13.2/4.1	11.7/3.6	9.2/2.7	7.3/2.1
145	20	17.3/8.6	12.8/5.9	11.1/5.0	9.7/4.3	8.4/3.6	7.4/3.1	5.6/2.4	4.3/1.9
	18	22.6/9.7	16.9/6.7	14.8/5.6	13.0/4.7	11.4/4.1	10.1/3.5	7.9/2.7	6.2/2.1
	16	26.9/10.7	20.3/7.3	17.8/6.2	15.6/5.3	13.8/4.5	12.2/3.9	9.7/3.0	7.7/2.3
205	20	24.2/22.6	17.9/15.5	15.5/13	13.5/11.1	11.7/9.5	10.2/8.2	7.8/6.2	5.9/4.8
	18	32.2/25.0	24.1/17.1	21.1/14.5	18.4/12.3	16.2/10.5	14.3/9.1	11.2/6.9	8.8/5.4
	16	40.0/27.2	30.2/18.7	26.4/15.8	23.3/13.4	20.5/11.5	18.2/9.9	14.5/7.5	11.5/5.8

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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3.5S-24 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/m^3)				**f'_c = 20 MPa**
140	**51**	0.116	60	152x152-MW9.1xMW9.1
145	**56**	0.121	60	152x152-MW9.1xMW9.1
155	**66**	0.131	60	152x152-MW9.1xMW9.1
165	**76**	0.141	60	152x152-MW9.1xMW9.1
180	**91**	0.156	93	152x152-MW16xMW16
185	**96**	0.161	108	152x152-MW18.7xMW18.7
190	**101**	0.166	123	152x152-MW18.7xMW18.7
205	**116**	0.181	168	152x152-MW25.8xMW25.8
Light Weight Concrete (1840 kg/m^3)				**f'_c = 25 MPa**
140	**51**	0.116	60	152x152-MW9.1xMW9.1
145	**56**	0.121	60	152x152-MW9.1xMW9.1
155	**66**	0.131	60	152x152-MW9.1xMW9.1
165	**76**	0.141	60	152x152-MW9.1xMW9.1
180	**91**	0.156	93	152x152-MW16xMW16
190	**101**	0.166	123	152x152-MW18.7xMW18.7
205	**116**	0.181	168	152x152-MW25.8xMW25.8

Notes:

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