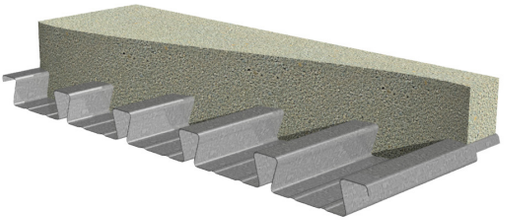
2.0DS-30 FL FORMLOK® DOVETAIL DECK
GRADE 50 STEEL

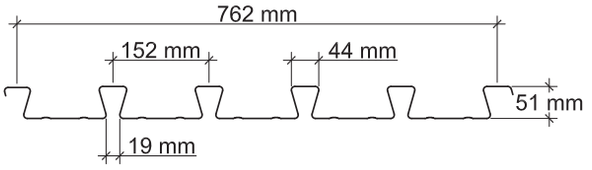
Metric LSD

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} (kg/m²)	Base Metal Thickness t (mm)	Yield Strength F_y (MPa)	Effective Moment of Inertia at Service Load* $I_d = (2I_e+I_g)/3$ I_d+ (mm⁴x10³)	I_d- (mm⁴x10³)	Effective Section Modulus* at F_y = 345 MPa S_e+ (mm³x10³)	S_e- (mm³x10³)	Factored Moment* øM$_n$+ (N-m)	øM$_n$- (N-m)	Vertical Web Shear* øV$_n$ (kN)
22	10.74	0.759	345	587.2	521.7	16.18	16.45	5025	5098	62
20	13.18	0.912	345	710.1	645.9	20.32	20.05	6301	6218	74
18	17.58	1.214	345	949.1	902.7	28.33	27.37	8794	8485	98
16	21.97	1.519	345	1190.8	1168.9	35.86	34.84	11125	10811	121

*Physical Properties per meter (m) of width

Factored Reactions at Supports Based on Web Crippling, øR$_n$ (kN/m)

Deck Gage	Bearing Length of Webs (mm) One-Flange Loading End Bearing 40	50	75	100	Interior Bearing 75	125	Two-Flange Loading End Bearing 40	50	75	100	Interior Bearing 75	125
22	16.8	18.1	20.8	23.1	29.7	34.4	16.0	16.9	19.0	20.7	36.3	42.5
20	23.5	25.2	28.9	32.0	41.7	48.0	23.7	25.0	27.9	30.3	51.6	60.0
18	39.7	42.4	48.3	53.2	70.7	80.5	43.2	45.4	50.3	54.3	88.8	102.1
16	59.6	63.6	72.0	79.1	106.6	120.3	68.4	71.8	79.0	85.1	135.1	154.0

Standard Features

- ASTM A653/A653M SS GR50 Min., with Z275/G90 galvanized or ZF75/A25 galvannealed
- Standard lengths – 1.8 m to 12.2 m
- UL Listed
- Cold-formed steel deck conforms to AISI S100-16 and meets the guidelines of CSSBI 12M-2024.

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
NORMAL WEIGHT CONCRETE (2325 kg/m³)

Metric LSD

Maximum Unshored Spans

Slab Depth			Maximum Unshored Construction Clear Span (mm)		
Total (mm)	Topping (mm)	Deck Gage	1	2	3
102	51	22	2642	2913	3011
		20	2938	3210	3317
		18	3215	3732	3826
		16	3446	4191	4063
135	84	22	2366	2616	2692
		20	2665	2884	2981
		18	2921	3358	3470
		16	3136	3776	3785
140	89	22	2332	2579	2642
		20	2631	2843	2938
		18	2885	3310	3421
		16	3097	3723	3751

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)
2.2	7849.59	27.11	75
2.2	8393.53	31.89	75
2.3	9365.82	40.90	75
2.3	10234.96	49.48	75
2.9	17061.89	35.51	99
3.0	18184.75	41.90	99
3.0	20201.42	54.04	99
3.1	22012.10	65.68	99
3.1	18879.57	36.82	103
3.1	20113.77	43.46	103
3.1	22333.20	56.09	103
3.2	24328.76	68.23	103

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)

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	21.4/12.6	14.0/7.3	11.5/5.7	9.5/4.6	7.9/3.7	6.7/3.1	4.7/2.2	3.3/1.5
	20	25.6/13.5	16.9/7.8	14.0/6.1	11.7/4.9	9.8/4.0	8.3/3.3	5.9/2.3	4.3/1.7
	18	33.5/15.0	22.4/8.7	18.7/6.8	15.7/5.5	13.3/4.5	11.3/3.6	8.4/2.5	6.2/1.9
	16	41.1/16.4	27.6/9.5	23.1/7.5	19.5/6.0	16.7/4.8	14.3/4.0	10.7/2.8	8.1/2.0
135	22	27.9/27.4	18.2/15.8	15.0/12.4	12.4/10.0	10.3/8.1	8.6/6.7	6.0/4.7	4.2/3.4
	20	33.5/29.2	22.1/16.9	18.3/13.3	15.3/10.6	12.8/8.6	10.8/7.1	7.8/5.0	5.6/3.6
	18	44.2/32.5	29.6/18.8	24.7/14.7	20.7/11.8	17.6/9.6	15.0/7.9	11.1/5.6	8.2/4.0
	16	54.5/35.3	36.7/20.4	30.7/16.1	26.0/12.9	22.1/10.4	19.0/8.6	14.2/6.0	10.8/4.4
140	22	28.9/30.3	18.9/17.5	15.5/13.8	12.8/11.0	10.7/9.0	9.0/7.4	6.3/5.2	4.4/3.8
	20	34.8/32.3	22.9/18.7	19.0/14.7	15.8/11.8	13.3/9.6	11.2/7.9	8.0/5.5	5.8/4.0
	18	45.9/39.1	30.7/20.7	25.6/16.3	21.5/13.1	18.2/10.6	15.6/8.8	11.4/6.1	8.5/4.5
	16	56.6/39.1	38.1/22.6	31.9/17.8	27.0/14.2	23.0/11.5	19.7/9.5	14.7/6.7	11.2/4.9

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.