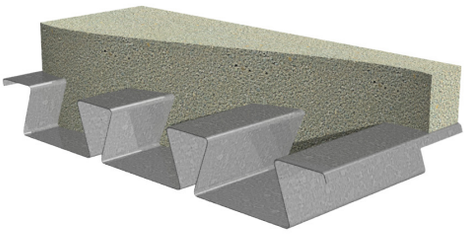
3.5DF-24 FL FORMLOK® DOVETAIL DECK
GRADE 50 STEEL

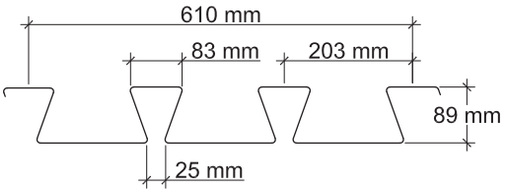
Metric LSD

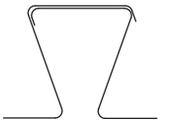
3.5DF-24 FL DOVETAIL DECK

- **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+ (mm^4x10^3)	I_d- (mm^4x10^3)	Effective Section Modulus* at F_y = 345 MPa S_e+ (mm^3x10^3)	S_e- (mm^3x10^3)	Factored Moment* øM$_n$+ (N-m)	øM$_n$- (N-m)	Vertical Web Shear* øV$_n$ (kN)
18	21.97	1.214	345	3670.7	3408.5	56.72	50.27	17602	15600	127
16	27.34	1.519	345	4684.0	4446.4	76.18	69.30	23640	21508	183

*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 50	75	100	125	Interior Bearing 100	150	Two-Flange Loading End Bearing 50	75	100	125	Interior Bearing 100	150
18	28.9	32.9	36.3	39.3	55.9	63.5	29.2	32.3	34.9	37.2	67.5	77.5
16	43.8	49.6	54.5	58.8	84.2	95.1	47.0	51.7	55.7	59.2	103.1	117.7

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:
  - -17 gage
  - -Alternative metallic and painted finishes

3.5DF-24 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
140	51	18	4368	4639	4794
		16	4621	5423	5344
145	56	18	4325	4571	4723
		16	4577	5345	5293
150	61	18	4285	4505	4656
		16	4535	5270	5245

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)
2.9	21403.18	65.59	86
2.9	23503.04	76.84	86
3.0	23512.02	67.64	90
3.0	25704.95	81.39	90
3.1	25764.81	69.67	93
3.2	28128.83	84.56	93

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)							
		4500	5100	5400	5700	6000	6300	6900	7500
140	18	22.3/10.2	16.6/7.0	14.4/5.9	12.5/5.0	11.0/4.3	9.6/3.7	7.4/2.8	5.7/2.2
	16	26.7/11.2	20.0/7.7	17.4/6.5	15.2/5.5	13.4/4.7	11.8/4.1	9.2/3.1	7.2/2.4
145	18	23.0/11.2	17.0/7.7	14.8/6.5	12.9/5.5	11.3/4.7	9.9/4.1	7.6/3.1	5.9/2.4
	16	28.3/12.2	21.2/8.4	18.5/7.0	16.2/6.0	14.3/5.1	12.6/4.5	9.9/3.4	7.8/2.6
150	18	23.6/12.3	17.5/8.4	15.2/7.1	13.3/6.0	11.6/5.2	10.2/4.5	7.8/3.4	6.0/2.6
	16	29.4/13.4	22.0/9.2	19.2/7.7	16.9/6.6	14.8/5.6	13.1/4.8	10.2/3.7	8.0/2.9

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.