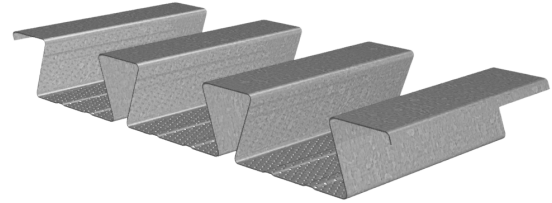


# 3.5DS-24 AC ACOUSTICAL DOVETAIL ROOF DECK GRADE 50 STEEL

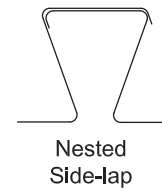
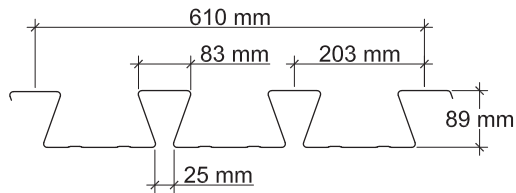
Metric  
LSD

## 3.5DS-24 AC DOVETAIL ROOF DECK

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



## Nominal Dimensions



## Section Properties

Deck Gage	Deck Weight $w_{dd}$ (kg/m <sup>2</sup> )	Base Metal Thickness $t$ (mm)	Yield Strength $F_y$ (MPa)	Effective Moment of Inertia at Service Load* $I_d = (2I_e + I_g)/3$		Effective Section Modulus* at $F_y = 345$ MPa		Factored Moment*		Vertical Web Shear* $\phi V_n$ (kN)
				$I_{d+}$ (mm <sup>4</sup> x10 <sup>3</sup> )	$I_{d-}$ (mm <sup>4</sup> x10 <sup>3</sup> )	$S_{e+}$ (mm <sup>3</sup> x10 <sup>3</sup> )	$S_{e-}$ (mm <sup>3</sup> x10 <sup>3</sup> )	$\phi M_{n+}$ (N-m)	$\phi M_{n-}$ (N-m)	
20	15.62	0.912	345	2303.7	2247.8	36.24	35.75	11246	11093	70
18	20.51	1.214	345	3158.6	3169.5	52.80	53.71	16378	16662	127
16	25.88	1.519	345	4017.6	4151.4	71.08	74.19	22059	23020	183

\*Physical Properties per meter (m) of width

## Factored Reactions at Supports Based on Web Crippling, $\phi R_n$ (kN/m)

Deck Gage	Bearing Length of Webs (mm)											
	One-Flange Loading					Two-Flange Loading						
	End Bearing				Interior Bearing		End Bearing				Interior Bearing	
	50	75	100	125	100	150	50	75	100	125	100	150
20	17.0	19.4	21.5	23.4	33.1	37.8	15.6	17.4	18.9	20.2	39.0	45.0
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
- Standard lengths – 1.8 m to 12.2 m
- FM Listed
- Cold-formed steel deck conforms to CAN/CSA S136-16 and meets the guidelines of CSSBI 10M-2018.

## Optional Features

- Inquire regarding cost and lead times for:
  - 19 or 17 gage
  - Alternative metallic and painted finishes

# 3.5DS-24 AC ACOUSTICAL DOVETAIL ROOF DECK GRADE 50 STEEL

Metric  
LSD

## Inward Uniform Factored Loads, LSD (kPa)

Deck Gage	Spans	Criteria	Span (mm)										
			3300	3600	3900	4200	4500	4800	5100	5400	5700	6000	6300
20	Single	$\phi W_n$	8.3	7.0	5.9	5.1	4.5	3.9	3.5	3.1	2.8	2.5	2.3
		L/240	4.2	3.2	2.5	2.0	1.6	1.4	1.1	1.0	0.8	0.7	0.6
	Double	$\phi W_n$	7.9	6.7	5.7	5.0	4.3	3.8	3.4	3.0	2.7	2.5	2.2
		L/240	9.8	7.6	6.0	4.8	3.9	3.2	2.7	2.2	1.9	1.6	1.4
	Triple	$\phi W_n$	9.8	8.3	7.1	6.1							
		L/240	7.7	5.9	4.7	3.7							
18	Single	$\phi W_n$	12.1	10.1	8.6	7.4	6.5	5.7	5.1	4.5	4.0	3.6	3.3
		L/240	5.7	4.4	3.5	2.8	2.3	1.9	1.6	1.3	1.1	1.0	0.8
	Double	$\phi W_n$	12.0	10.1	8.7	7.5	6.5	5.7	5.1	4.5	4.1	3.7	3.3
		L/240	13.9	10.7	8.4	6.7	5.5	4.5	3.8	3.2	2.7	2.3	2.0
	Triple	$\phi W_n$	14.9	12.6	10.8	9.3							
		L/240	10.9	8.4	6.6	5.3							
16	Single	$\phi W_n$	16.2	13.7	11.6	10.0	8.7	7.7	6.8	6.1	5.4	4.9	4.5
		L/240	7.3	5.6	4.4	3.5	2.9	2.4	2.0	1.7	1.4	1.2	1.0
	Double	$\phi W_n$	16.7	14.0	12.0	10.4	9.0	7.9	7.0	6.3	5.6	5.1	4.6
		L/240	18.2	14.0	11.0	8.8	7.2	5.9	4.9	4.1	3.5	3.0	2.6
	Triple	$\phi W_n$	20.7	17.4	14.9	12.9							
		L/240	14.2	11.0	8.6	6.9							

### Note:

1. Table does not account for web crippling. Required bearing should be determined based on specific span conditions.