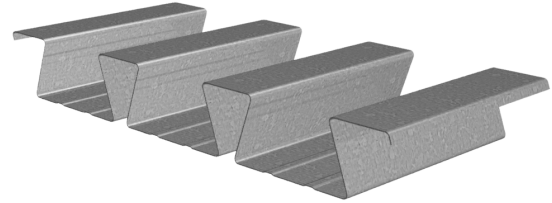


# 3.5DS-24 DOVETAIL ROOF DECK GRADE 50 STEEL

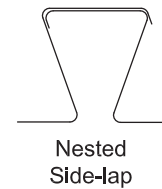
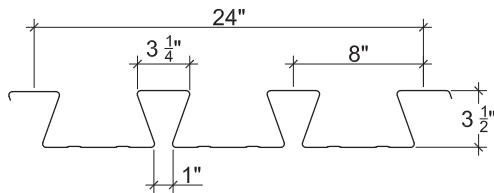
LRFD

## 3.5DS-24 DOVETAIL ROOF DECK

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



## Nominal Dimensions



## Section Properties

Deck Gage	Deck Weight $w_{dd}$ (psf)	Base Metal Thickness $t$ (in.)	Yield Strength $F_y$ (ksi)	Effective Moment of Inertia at Service Load $I_d = (2I_e + I_g)/3$		Effective Section Modulus at $F_y = 50$ ksi		Design Moment		Vertical Web Shear
				$I_{d+}$ (in <sup>4</sup> /ft)	$I_{d-}$ (in <sup>4</sup> /ft)	$S_{e+}$ (in <sup>3</sup> /ft)	$S_{e-}$ (in <sup>3</sup> /ft)	$\phi M_{n+}$ (lb-ft/ft)	$\phi M_{n-}$ (lb-ft/ft)	$\phi V_n$ (lb/ft)
20	3.4	0.0359	50	1.951	1.805	0.714	0.757	2677	2840	5706
18	4.5	0.0478	50	2.681	2.505	1.052	1.108	3947	4156	10356
16	5.6	0.0598	50	3.421	3.243	1.414	1.505	5301	5645	14868

## Design Reactions at Supports Based on Web Crippling, $\phi R_n$ (lb/ft)

Deck Gage	Bearing Length of Webs											
	One-Flange Loading						Two-Flange Loading					
	End Bearing				Interior Bearing		End Bearing				Interior Bearing	
	2"	3"	4"	5"	4"	6"	2"	3"	4"	5"	4"	6"
20	1315	1507	1669	1812	2580	2953	1301	1450	1576	1687	3044	3515
18	2241	2553	2815	3046	4363	4960	2435	2695	2915	3108	5269	6048
16	3392	3843	4223	4557	6567	7425	3924	4319	4652	4945	8048	9192

## Standard Features

- ASTM A653 SS GR 50 Min. with G90
- Standard lengths – 6'-0" to 40'-0"
- Tables conform to ANSI/SDI RD-2017
- IAPMO UES ER-423, FM and UL Listed

## Optional Features

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

# 3.5DS-24 DOVETAIL ROOF DECK GRADE 50 STEEL

LRFD

## Inward Uniform Design Loads, LRFD (psf)

Deck Gage	Spans	Criteria	Span (ft-in.)										
			11'-0"	12'-0"	13'-0"	14'-0"	15'-0"	16'-0"	17'-0"	18'-0"	19'-0"	20'-0"	21'-0"
20	Single	$\phi W_n$	177	149	127	109	95	84	74	66	59	54	49
		L/240	96	74	58	47	38	31	26	22	19	16	14
	Double	$\phi W_n$	183	154	132	114	100	88	78	69	62	56	
		L/240	214	165	130	104	84	70	58	49	42	36	
	Triple	$\phi W_n$	226	191	164								
		L/240	168	129	102								
18	Single	$\phi W_n$	261	219	187	161	140	123	109	97	87	79	72
		L/240	132	102	80	64	52	43	36	30	26	22	19
	Double	$\phi W_n$	270	228	194	168	146	129	114	102	92	83	
		L/240	297	229	180	144	117	97	81	68	58	49	
	Triple	$\phi W_n$	336	283	242								
		L/240	233	179	141								
16	Single	$\phi W_n$	350	294	251	216	188	166	147	131	117	106	96
		L/240	168	130	102	82	66	55	46	38	33	28	24
	Double	$\phi W_n$	368	310	264	228	199	175	155	139	124	112	
		L/240	385	296	233	187	152	125	104	88	75	64	
	Triple	$\phi W_n$	457	385	329								
		L/240	302	232	183								

### Notes:

1. Table does not account for web crippling. Required bearing should be determined based on specific span conditions.
2. The symbol "---" indicates that the uniform allowable load based on deflection exceeds the allowable load based on stress.

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