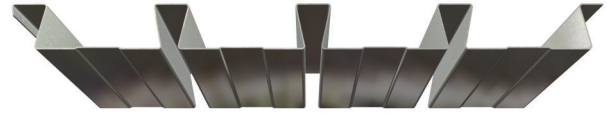


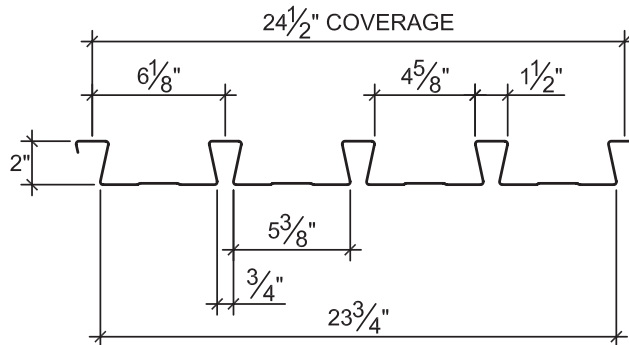
# 2.0D DOVETAIL ROOF DECK

## 2.0D DOVETAIL ROOF DECK

- 2" Deep Deck
- FM Approved
- UL Fire Rated
- IAPMO UES ER-423



### 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 $F_y = 40$ ksi		Vertical Web Shear $V_n/\Omega$ (lb/ft)
				$I_{d+}$ (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)	
22	2.13	0.0295	40	0.387	0.359	0.272	0.272	2896
20	2.59	0.0358	40	0.472	0.447	0.343	0.334	3496
18	3.43	0.0474	40	0.626	0.612	0.463	0.450	4584
16	4.34	0.0598	40	0.792	0.791	0.587	0.576	5722

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

Deck Gage	Bearing Length of Webs											
	End Bearing						Interior Bearing					
	1 1/2"	2"	3"	4"	5"	≥ 5 1/4"	1 1/2"	2"	3"	4"	5"	≥ 5 1/4"
22	653	718	827	918	999	1006	1045	1133	1282	1407	1517	1527
20	932	1021	1171	1297	1408	1415	1499	1621	1825	1996	2148	2158
18	1557	1698	1934	2134	2309	2314	2527	2718	3039	3309	3547	3554
16	2380	2585	2928	3217	3469	3469	3891	4168	4632	5024	5364	5364

### Standard Features

- ASTM A653 or A1063 SS GR 40 minimum steel with  $F_y = 40$  ksi.
- G90 stocked standard
- Standard lengths – 6'-0" to 42'-0"
- Tables conform to ANSI/SDI RD-2017.

### Optional Features

- Inquire regarding cost and lead times for:
  - 19 gage
  - Short cuts < 6'-0"
  - Alternative metallic and painted finishes

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## Allowable Uniform Load, $W_n/\Omega$ (psf)

Deck Gage	Spans	Criteria	Span (ft-in.)										
			4'-0"	5'-0"	6'-0"	7'-0"	8'-0"	9'-0"	10'-0"	11'-0"	12'-0"	13'-0"	14'-0"
22	Single	$F_y / \Omega$	271	173	120	88	67	53	43	35	30	25	22
		L/240	---	---	118	74	50	35	25	19	15	12	9
		L/180	---	---	---	---	66	46	34	25	20	15	12
	Double	$F_y / \Omega$	264	170	119	87	67	53	43	35	30	25	22
		L/240	---	---	---	---	---	---	---	---	---	---	21
		L/180	---	---	---	---	---	---	---	---	---	---	---
	Triple	$F_y / \Omega$	326	211	148	109	84	66	53	44	37	32	27
		L/240	---	---	---	---	---	61	44	33	26	20	16
		L/180	---	---	---	---	---	---	---	---	34	27	22
20	Single	$F_y / \Omega$	342	219	152	111	85	67	54	45	38	32	27
		L/240	---	---	143	90	61	43	31	23	18	14	11
		L/180	---	---	---	---	81	57	41	31	24	19	15
	Double	$F_y / \Omega$	324	209	146	107	82	65	53	43	36	31	27
		L/240	---	---	---	---	---	---	---	---	---	---	26
		L/180	---	---	---	---	---	---	---	---	---	---	---
	Triple	$F_y / \Omega$	400	259	181	134	103	81	66	54	46	39	33
		L/240	---	---	---	---	---	76	55	42	32	25	20
		L/180	---	---	---	---	---	---	---	---	43	34	27
18	Single	$F_y / \Omega$	462	295	205	150	115	91	73	61	51	43	37
		L/240	---	---	190	120	80	56	41	31	24	19	15
		L/180	---	---	---	---	107	75	55	41	32	25	20
	Double	$F_y / \Omega$	436	282	196	145	111	88	71	59	49	42	36
		L/240	---	---	---	---	---	---	---	---	---	---	35
		L/180	---	---	---	---	---	---	---	---	---	---	---
	Triple	$F_y / \Omega$	538	349	244	180	138	109	89	73	62	52	45
		L/240	---	---	---	---	---	104	76	57	44	34	28
		L/180	---	---	---	---	---	---	---	---	58	46	37
16	Single	$F_y / \Omega$	585	374	260	191	146	115	93	77	65	55	47
		L/240	---	---	241	152	102	71	52	39	30	24	19
		L/180	---	---	---	---	135	95	69	52	40	32	25
	Double	$F_y / \Omega$	557	360	251	185	142	112	91	75	63	54	46
		L/240	---	---	---	---	---	---	---	---	---	---	46
		L/180	---	---	---	---	---	---	---	---	---	---	---
	Triple	$F_y / \Omega$	687	447	313	231	177	140	114	94	79	67	58
		L/240	---	---	---	---	---	134	98	74	57	45	36
		L/180	---	---	---	---	---	---	---	---	76	59	48

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

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