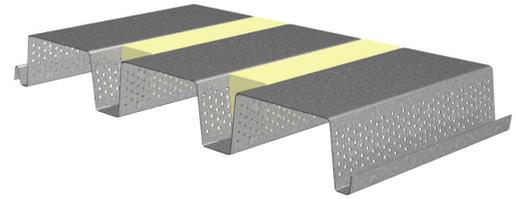


3NA-24/3NIA-24 ACOUSTICAL ROOF DECKS GRADE 40 STEEL

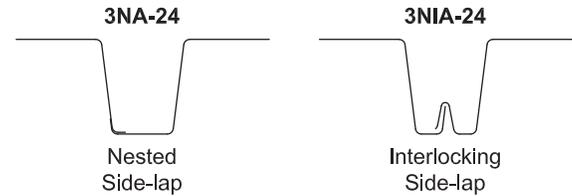
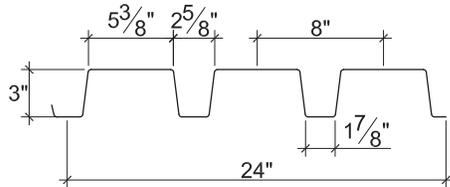
ASD

24" WIDE 3N ACOUSTICAL ROOF DECKS

- 3NA-24 Deck used with Side-lap Screws
- 3NIA-24 Deck used with TSWs or BPs



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 $I_d = (2I_e + I_p)/3$		Effective Section Modulus at $F_y = 40$ ksi		Allowable Moment		Vertical Web Shear V_n/Ω (lb/ft)
				I_{d+} (in ⁴ /ft)	I_{d-} (in ⁴ /ft)	S_{e+} (in ³ /ft)	S_{e-} (in ³ /ft)	M_{n+}/Ω (lb-ft/ft)	M_{n-}/Ω (lb-ft/ft)	
22	1.9	0.0295	40	0.679	0.826	0.349	0.398	696	795	1816
20	2.4	0.0358	40	0.856	1.017	0.458	0.503	914	1004	2673
19	2.8	0.0418	40	1.033	1.189	0.555	0.605	1108	1208	3641
18	3.1	0.0474	40	1.204	1.350	0.640	0.695	1277	1387	4266
16	3.9	0.0598	40	1.598	1.705	0.832	0.887	1660	1771	5346

Allowable Reactions at Supports Based on Web Crippling, R_n/Ω (lb/ft)

Deck Gage	Bearing Length of Webs											
	One-Flange Loading						Two-Flange Loading					
	End Bearing				Interior Bearing		End Bearing				Interior Bearing	
	1 1/2"	2"	3"	4"	4"	8"	1 1/2"	2"	3"	4"	4"	8"
22	440	483	556	618	1007	1171	400	431	483	526	1144	1343
20	638	699	801	887	1442	1786	628	674	752	817	1675	2103
19	857	937	1070	1183	1920	2417	893	956	1061	1150	2263	2893
18	1088	1187	1352	1491	2421	3032	1181	1262	1397	1511	2883	3670
16	1688	1834	2077	2283	3710	4603	1963	2088	2298	2475	4494	5671

Standard Features

- ASTM A653 SS GR40 Min., with G60 or G90, white or gray primer optional
- ASTM A1008 SS GR40 Min. with gray primer
- Standard lengths – 6'-0" to 42'-0"
- IAPMO UES ER-0652 and FM Listed
- Tables conform to ANSI/SDI RD-2017

Optional Features

- Inquire regarding cost and lead times for:
 - Short cuts < 6'-0"
 - Sheet Lengths > 42'-0"
 - Alternative metallic and painted finishes

3NA-24/3NIA-24 ACOUSTICAL ROOF DECKS GRADE 40 STEEL

ASD

Inward Uniform Allowable Loads, ASD (psf)

Deck Gage	Spans	Criteria	Span (ft-in.)										
			4'-0"	6'-0"	8'-0"	9'-0"	10'-0"	11'-0"	12'-0"	14'-0"	16'-0"	18'-0"	20'-0"
22	Single	W_n / Ω	348	155	87	69	56	46	39	28	22	17	14
		L/240	---	---	87	61	45	33	26	16	11	8	6
	Double	W_n / Ω	349	166	96	76	62	52	43	32	25	19	16
		L/240	---	---	---	---	---	---	---	---	---	---	---
	Triple	W_n / Ω	415	202	118	94	77	64	54	40			
		L/240	---	---	---	---	---	---	---	37			
20	Single	W_n / Ω	457	203	114	90	73	60	51	37	29	23	18
		L/240	---	---	110	77	56	42	32	20	14	10	7
	Double	W_n / Ω	454	213	122	97	79	65	55	41	31	25	20
		L/240	---	---	---	---	---	---	---	---	---	---	---
	Triple	W_n / Ω	547	261	151	120	98	81	69	51			
		L/240	---	---	---	---	---	---	---	46			
19	Single	W_n / Ω	554	246	138	109	89	73	62	45	35	27	22
		L/240	---	---	132	93	68	51	39	25	17	12	8
	Double	W_n / Ω	558	259	148	117	95	79	66	49	38	30	24
		L/240	---	---	---	---	---	---	---	---	---	---	23
	Triple	W_n / Ω	676	318	183	146	118	98	83	61			
		L/240	---	---	---	---	---	---	---	54			
18	Single	W_n / Ω	639	284	160	126	102	84	71	52	40	32	26
		L/240	---	---	154	108	79	59	46	29	19	14	10
	Double	W_n / Ω	643	298	170	135	110	91	76	56	43	34	28
		L/240	---	---	---	---	---	---	---	---	---	---	27
	Triple	W_n / Ω	779	366	211	167	136	113	95	70			
		L/240	---	---	---	---	---	---	---	61			
16	Single	W_n / Ω	830	369	208	164	133	110	92	68	52	41	33
		L/240	---	---	205	144	105	79	61	38	26	18	13
	Double	W_n / Ω	818	379	217	172	140	116	97	72	55	44	35
		L/240	---	---	---	---	---	---	---	---	---	---	34
	Triple	W_n / Ω	991	467	269	213	174	144	121	89			
		L/240	---	---	---	---	---	---	---	77			

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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