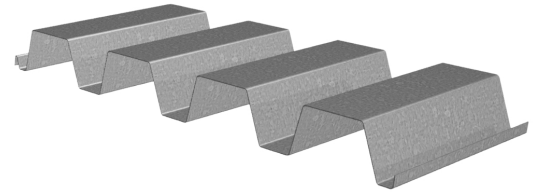


3NL-32/3NI-32/3PLN-32 ROOF DECKS GRADE 50 STEEL

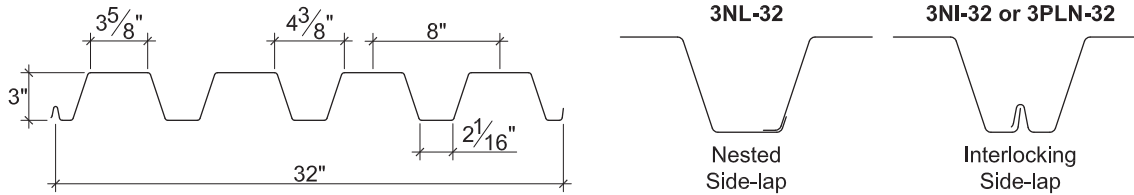
ASD

32" WIDE 3N ROOF DECKS

- 3NL-32 Deck used with Side-lap Screws
- 3NI-32 Deck used with TSWs or BPs
- 3PLN-32 Deck used with PunchLok® II System



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		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	1.8	0.0295	50	0.643	0.715	0.345	0.372	861	928	2176
20	2.2	0.0358	50	0.806	0.886	0.448	0.476	1118	1187	3761
19	2.6	0.0418	50	0.965	1.052	0.554	0.579	1382	1445	5127
18	2.9	0.0474	50	1.123	1.200	0.660	0.675	1647	1684	6598
16	3.7	0.0598	50	1.479	1.524	0.869	0.885	2168	2208	9064

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	536	589	678	753	1185	1377	508	547	613	669	1380	1620
20	774	848	972	1077	1697	2101	788	846	944	1026	2014	2529
19	1036	1132	1294	1430	2258	2842	1112	1190	1322	1433	2715	3471
18	1313	1432	1631	1799	2847	3565	1464	1563	1731	1872	3454	4397
16	2031	2206	2499	2746	4365	5416	2414	2568	2826	3043	5374	6781

Standard Features

- ASTM A653 SS GR50 Min., with G60 or G90, white or gray primer optional
- ASTM A1008 SS GR50 Min. with gray primer
- Standard lengths – 6'-0" to 42'-0"
- IAPMO UES ER-0652, UL, 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
- Web Perforated Acoustical Versions

3NL-32/3NI-32/3PLN-32 ROOF DECKS

GRADE 50 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	431	191	108	85	69	57	48	35	27	21	17
		L/240	---	---	82	58	42	32	24	15	10	7	5
	Double	W_n / Ω	409	194	112	89	73	60	51	37	29	23	18
		L/240	---	---	---	---	---	---	---	---	28	19	14
	Triple	W_n / Ω	489	237	138	110	90	75	63	47			
		L/240	---	---	---	---	88	66	51	32			
20	Single	W_n / Ω	559	248	140	110	89	74	62	46	35	28	22
		L/240	---	245	103	72	53	40	31	19	13	9	7
	Double	W_n / Ω	552	255	146	116	94	78	65	48	37	29	24
		L/240	---	---	---	---	---	---	---	---	34	24	17
	Triple	W_n / Ω	671	315	181	143	117	97	81	60			
		L/240	---	---	---	---	110	82	63	40			
19	Single	W_n / Ω	691	307	173	136	111	91	77	56	43	34	28
		L/240	---	293	124	87	63	48	37	23	15	11	8
	Double	W_n / Ω	681	313	178	141	114	95	80	59	45	36	29
		L/240	---	---	---	---	---	---	---	---	41	28	21
	Triple	W_n / Ω	832	386	221	175	142	118	99	73			
		L/240	---	---	---	---	130	98	75	47			
18	Single	W_n / Ω	823	366	206	163	132	109	91	67	51	41	33
		L/240	---	341	144	101	74	55	43	27	18	13	9
	Double	W_n / Ω	802	366	208	165	134	111	93	68	52	41	34
		L/240	---	---	---	---	---	---	---	---	46	32	24
	Triple	W_n / Ω	983	453	258	205	167	138	116	85			
		L/240	---	---	---	204	149	112	86	54			
16	Single	W_n / Ω	1084	482	271	214	173	143	120	89	68	54	43
		L/240	---	449	189	133	97	73	56	35	24	17	12
	Double	W_n / Ω	1056	481	273	216	175	145	122	90	69	54	44
		L/240	---	---	---	---	---	---	---	88	59	41	30
	Triple	W_n / Ω	1296	596	339	269	219	181	152	112			
		L/240	---	---	---	259	189	142	109	69			

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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