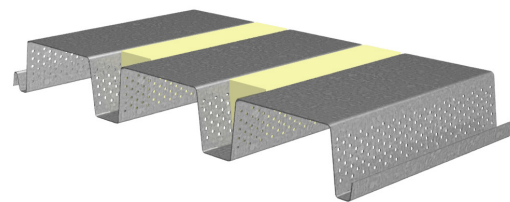


# PLN™-24/N-24 ACOUSTICAL ROOF DECKS GRADE 50 STEEL

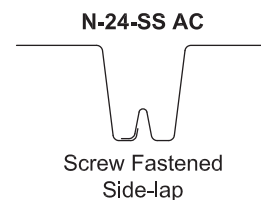
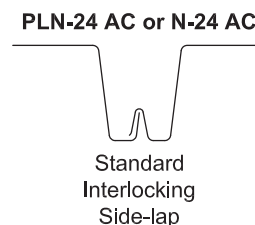
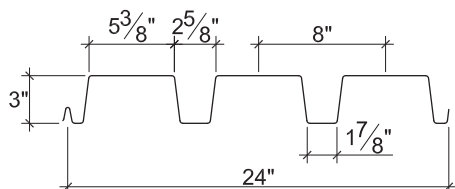
ASD

## N-24 ACOUSTICAL ROOF DECKS

- PLN-24 AC Deck used with PunchLok® II System
- N-24 AC Deck used with TSWs or BPs
- N-24-SS AC Deck used with Side-lap Screws



## 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		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	2.2	0.0299	50	0.692	0.813	0.317	0.403	2162
20	2.6	0.0359	50	0.859	0.979	0.411	0.498	3293
18	3.5	0.0478	50	1.202	1.300	0.609	0.692	5783
16	4.2	0.0598	50	1.560	1.620	0.784	0.860	7204

## Allowable Reactions at Supports Based on Web Crippling, $R_n/\Omega$ (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	576	633	729	809	1294	1511	539	580	650	709	1492	1759
20	816	894	1025	1135	1815	2250	819	879	980	1066	2133	2681
18	1401	1528	1740	1919	3074	3846	1546	1652	1828	1977	3699	4704
16	2133	2317	2624	2884	4633	5740	2508	2668	2937	3163	5660	7129

## 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 40'-0"
- IAPMO UES ER-2018 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 > 40'-0"
  - Alternative metallic and painted finishes
- Fully Perforated Acoustical Versions

# PLN™-24/N-24 ACOUSTICAL 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	$W_n / \Omega$	396	176	99	78	63	52	44	32	25	20	16
		L/240	---	---	89	62	45	34	26	17	11	8	6
	Double	$W_n / \Omega$	435	208	121	96	78	65	55	40	31	25	20
		L/240	---	---	---	---	---	---	---	---	---	22	16
	Triple	$W_n / \Omega$	515	253	148	119	97	81	68	50			
		L/240	---	---	---	---	---	76	58	37			
20	Single	$W_n / \Omega$	513	228	128	101	82	68	57	42	32	25	21
		L/240	---	---	110	77	56	42	33	21	14	10	7
	Double	$W_n / \Omega$	562	263	151	120	98	81	68	50	39	31	25
		L/240	---	---	---	---	---	---	---	---	38	27	19
	Triple	$W_n / \Omega$	676	323	187	149	121	101	85	63			
		L/240	---	---	---	---	121	91	70	44			
18	Single	$W_n / \Omega$	760	338	190	150	122	100	84	62	47	38	30
		L/240	---	---	154	108	79	59	46	29	19	14	10
	Double	$W_n / \Omega$	809	372	212	168	137	113	95	70	54	42	34
		L/240	---	---	---	---	---	---	---	---	50	35	26
	Triple	$W_n / \Omega$	985	460	263	209	170	141	119	87			
		L/240	---	---	---	---	161	121	93	59			
16	Single	$W_n / \Omega$	978	435	245	193	157	129	109	80	61	48	39
		L/240	---	---	200	140	102	77	59	37	25	18	13
	Double	$W_n / \Omega$	1005	463	264	209	170	141	118	87	67	53	43
		L/240	---	---	---	---	---	---	---	---	62	44	32
	Triple	$W_n / \Omega$	1224	571	327	260	211	175	147	109			
		L/240	---	---	---	---	201	151	116	73			

#### 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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