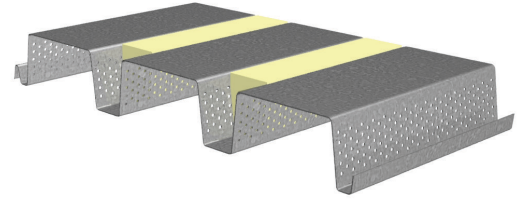


PLN™-24/N-24 ACOUSTICAL ROOF DECKS GRADE 50 STEEL

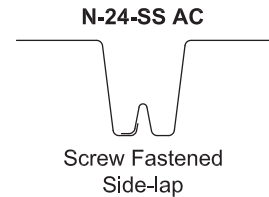
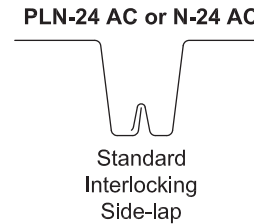
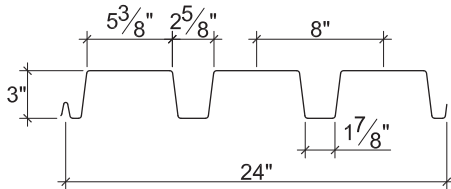
LRFD

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 ϕV_n (lb/ft)
				I_{d+} (in ⁴ /ft)	I_{d-} (in ⁴ /ft)	S_{e+} (in ³ /ft)	S_{e-} (in ³ /ft)	
22	2.2	0.0299	50	0.692	0.813	0.317	0.403	3286
20	2.6	0.0359	50	0.859	0.979	0.411	0.498	5006
18	3.5	0.0478	50	1.202	1.300	0.609	0.692	8789
16	4.2	0.0598	50	1.560	1.620	0.784	0.860	10950

Design Reactions at Supports Based on Web Crippling, ϕR_n (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	881	969	1115	1238	1925	2248	824	888	994	1084	2219	2617
20	1249	1368	1568	1737	2700	3347	1253	1346	1500	1630	3173	3988
18	2144	2337	2662	2936	4573	5721	2366	2527	2797	3024	5503	6997
16	3264	3544	4015	4412	6892	8538	3838	4082	4493	4839	8420	10605

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

LRFD

Inward Uniform Design Loads, LRFD (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	ϕW_n	594	264	149	117	95	79	66	49	37	29	24
		L/240	709	210	89	62	45	34	26	17	11	8	6
	Double	ϕW_n	655	314	182	145	118	98	82	61	47	37	30
		L/240	2006	594	251	176	128	96	74	47	31	22	16
	Triple	ϕW_n	777	381	223	178	146	121	102	76			
		L/240	1338	397	167	117	86	64	50	31			
20	Single	ϕW_n	771	343	193	152	123	102	86	63	48	38	31
		L/240	880	261	110	77	56	42	33	21	14	10	7
	Double	ϕW_n	846	396	227	181	147	122	103	76	58	46	37
		L/240	2416	716	302	212	155	116	89	56	38	27	19
	Triple	ϕW_n	1019	486	281	224	182	151	127	94			
		L/240	1661	492	208	146	106	80	62	39			
18	Single	ϕW_n	1142	508	286	226	183	151	127	93	71	56	46
		L/240	1231	365	154	108	79	59	46	29	19	14	10
	Double	ϕW_n	1217	560	319	253	205	170	143	105	81	64	52
		L/240	3208	950	401	282	205	154	119	75	50	35	26
	Triple	ϕW_n	1483	691	396	314	255	212	178	131			
		L/240	2325	689	291	204	149	112	86	54			
16	Single	ϕW_n	1470	653	368	290	235	194	163	120	92	73	59
		L/240	1598	473	200	140	102	77	59	37	25	18	13
	Double	ϕW_n	1513	696	396	314	255	211	178	131	100	79	64
		L/240	3997	1184	500	351	256	192	148	93	62	44	32
	Triple	ϕW_n	1844	859	492	391	318	263	222	163			
		L/240	3017	894	377	265	193	145	112	70			

Note:

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

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