

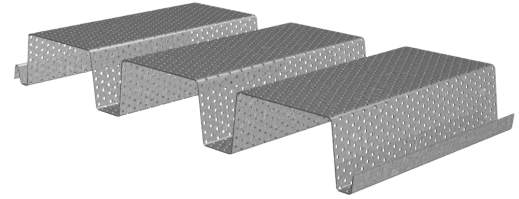
PLN™-24/N-24 FULLY PERFORED ROOF DECKS

GRADE 50 STEEL

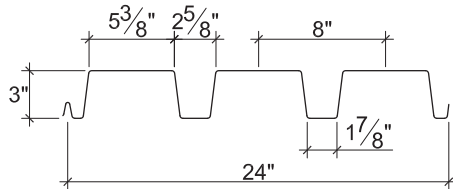
ASD

21% OPEN FULLY PERFORATED ROOF DECKS

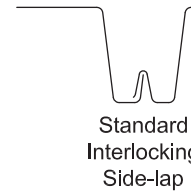
- PLN-24 FP21 Deck used with PunchLok® II System
- N-24 FP21 Deck used with TSWs or BPs
- N-24-SS FP21 Deck used with Side-lap Screws



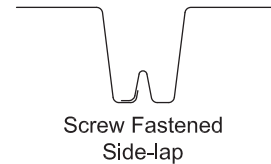
Nominal Dimensions



PLN-24 FP21 or N-24 FP21



N-24-SS FP21



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/Ω (lb/ft)
				I_{d+} (in ⁴ /ft)	I_{d-} (in ⁴ /ft)	S_{e+} (in ³ /ft)	S_{e-} (in ³ /ft)	
22	1.7	0.0299	50	0.501	0.535	0.152	0.190	1456
20	2.1	0.0359	50	0.616	0.640	0.196	0.235	2218
18	2.8	0.0478	50	0.840	0.849	0.289	0.326	3897
16	3.3	0.0598	50	1.058	1.058	0.371	0.405	4858

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	532	585	673	747	1282	1497	455	490	549	599	1407	1659
20	761	834	956	1059	1800	2231	710	762	850	924	2024	2545
18	1323	1442	1642	1811	3051	3818	1382	1476	1634	1767	3542	4503
16	2029	2204	2497	2744	4603	5703	2283	2428	2673	2878	5450	6864

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 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
- Acoustical Insulation
- Web Perforated Acoustical Versions

PLN™-24/N-24 FULLY PERFERED ROOF DECKS GRADE 50 STEEL

ASD

Inward Uniform Allowable Loads, ASD (psf)

FP21

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	190	84	47	37	30	25	21	15	12	9	8
		L/240	---	---	---	---	---	25	19	12	8	6	4
	Double	W_n / Ω	220	102	58	46	37	31	26	19	15	12	9
		L/240	---	---	---	---	---	---	---	---	---	---	---
	Triple	W_n / Ω	266	125	72	57	47	39	33	24			
		L/240	---	---	---	---	---	---	---	23			
20	Single	W_n / Ω	245	109	61	48	39	32	27	20	15	12	10
		L/240	---	---	---	---	---	30	23	15	10	7	5
	Double	W_n / Ω	278	127	72	57	46	38	32	24	18	14	12
		L/240	---	---	---	---	---	---	---	---	---	---	---
	Triple	W_n / Ω	341	157	90	71	58	48	40	30			
		L/240	---	---	---	---	---	---	---	28			
18	Single	W_n / Ω	360	160	90	71	58	48	40	29	23	18	14
		L/240	---	---	---	---	55	41	32	20	13	9	7
	Double	W_n / Ω	393	178	101	80	65	54	45	33	25	20	16
		L/240	---	---	---	---	---	---	---	---	---	---	---
	Triple	W_n / Ω	485	221	126	99	81	67	56	41			
		L/240	---	---	---	---	---	---	---	38			
16	Single	W_n / Ω	463	206	116	91	74	61	51	38	29	23	19
		L/240	---	---	---	---	69	52	40	25	17	12	9
	Double	W_n / Ω	489	221	125	99	80	67	56	41	32	25	20
		L/240	---	---	---	---	---	---	---	---	---	---	---
	Triple	W_n / Ω	603	275	156	124	100	83	70	51			
		L/240	---	---	---	---	---	---	---	48			

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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