

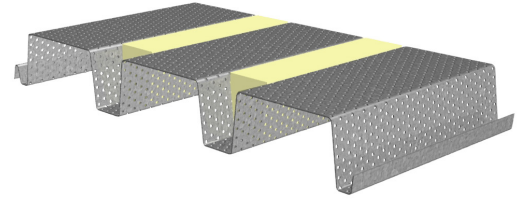
# PLN™-24/N-24 FULLY PERFORATED ROOF DECKS

## GRADE 50 STEEL

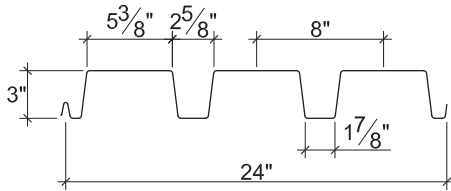
LRFD

### 11% OPEN FULLY PERFORATED ROOF DECKS

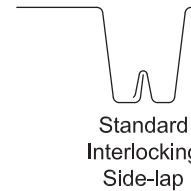
- PLN-24 FP11 Deck used with PunchLok® II System
- N-24 FP11 Deck used with TSWs or BPs
- N-24-SS FP11 Deck used with Side-lap Screws



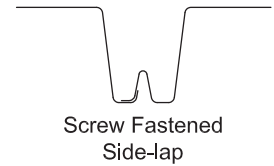
### Nominal Dimensions



PLN-24 FP11 or N-24 FP11



N-24-SS FP11



### 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 $\phi V_n$ (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	2.0	0.0299	50	0.596	0.651	0.192	0.240	2980
20	2.3	0.0359	50	0.734	0.780	0.247	0.296	4541
18	3.1	0.0478	50	1.010	1.034	0.364	0.410	7979
16	3.7	0.0598	50	1.283	1.289	0.467	0.510	9947

### Design Reactions at Supports Based on Web Crippling, $\phi R_n$ (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	866	952	1095	1216	1921	2243	795	856	959	1046	2191	2583
20	1230	1347	1544	1710	2695	3340	1216	1305	1455	1581	3136	3942
18	2117	2308	2628	2899	4565	5712	2117	2308	2628	2899	4565	6929
16	3228	3506	3971	4364	6882	8526	3760	4000	4402	4741	8349	10516

### 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
- Web Perforated Acoustical Versions

# PLN™-24/N-24 FULLY PERFERED ROOF DECKS

## GRADE 50 STEEL

LRFD

### Inward Uniform Design Loads, LRFD (psf)

FP11

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	$\phi W_n$	360	160	90	71	58	48	40	29	23	18	14
		L/240	610	181	76	54	39	29	23	14	10	7	5
	Double	$\phi W_n$	421	194	111	88	71	59	50	37	28	22	18
		L/240	1606	476	201	141	103	77	59	37	25	18	13
	Triple	$\phi W_n$	512	239	137	109	89	73	62	46			
		L/240	1259	373	157	111	81	61	47	29			
20	Single	$\phi W_n$	463	206	116	91	74	61	51	38	29	23	19
		L/240	752	223	94	66	48	36	28	18	12	8	6
	Double	$\phi W_n$	531	242	137	109	88	73	61	45	35	27	22
		L/240	1925	570	241	169	123	93	71	45	30	21	15
	Triple	$\phi W_n$	651	299	171	135	110	91	76	56			
		L/240	1508	447	189	132	97	73	56	35			
18	Single	$\phi W_n$	683	303	171	135	109	90	76	56	43	34	27
		L/240	1035	307	129	91	66	50	38	24	16	11	8
	Double	$\phi W_n$	747	337	191	151	122	101	85	63	48	38	31
		L/240	2551	756	319	224	163	123	94	60	40	28	20
	Triple	$\phi W_n$	923	419	238	188	153	126	106	78			
		L/240	2000	592	250	176	128	96	74	47			
16	Single	$\phi W_n$	876	389	219	173	140	116	97	71	55	43	35
		L/240	1314	389	164	115	84	63	49	31	21	14	11
	Double	$\phi W_n$	930	420	237	188	152	126	106	78	60	47	38
		L/240	3180	942	398	279	204	153	118	74	50	35	25
	Triple	$\phi W_n$	1148	522	296	234	190	157	132	97			
		L/240	2493	739	312	219	160	120	92	58			

**Note:**

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

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