

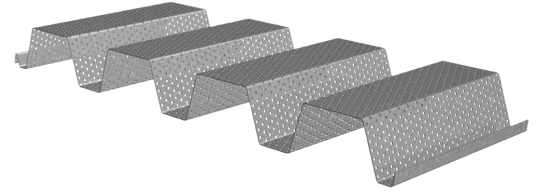
# PLN3™-32/HSN3™-32 FULLY PERFORATED ROOF DECKS

## GRADE 50 STEEL

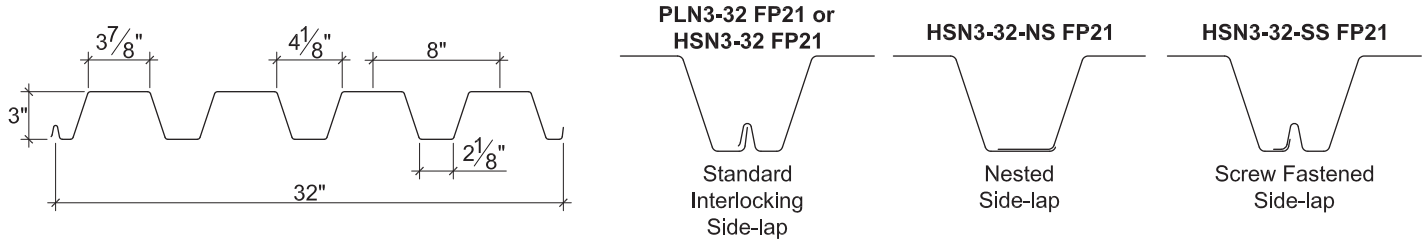
LRFD

### 21% OPEN FULLY PERFORATED N3 ROOF DECK

- PLN3-32 FP21 Deck used with PunchLok® II System
- HSN3-32 FP21 Deck used with TSWs or BPs
- HSN3-32-NS FP21 Deck used with Side-lap Screws
- HSN3-32-SS FP21 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 $\phi V_n$ (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	1.6	0.0299	50	0.483	0.496	0.156	0.180	1961
20	1.9	0.0359	50	0.588	0.595	0.200	0.225	3219
18	2.4	0.0478	50	0.789	0.789	0.297	0.320	5703
16	3.1	0.0598	50	0.984	0.984	0.391	0.413	7611

### 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	764	839	966	1073	1817	2122	639	688	771	840	1973	2326
20	1094	1199	1374	1522	2551	3162	1003	1077	1200	1305	2842	3572
18	1907	2079	2368	2611	4326	5416	1966	2100	2324	2513	4980	6337
16	2928	3180	3602	3959	6522	8093	3258	3466	3814	4108	7666	9673

### 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

# PLN3™-32/HSN3™-32 FULLY PERFERED ROOF DECKS

## GRADE 50 STEEL

LRFD

### Inward Uniform Design Loads, LRFD (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	$\phi W_n$	293	130	73	58	47	39	33	24	18	14	12
		L/240	495	147	62	43	32	24	18	12	8	5	4
	Double	$\phi W_n$	310	144	82	65	53	44	37	27	21	17	13
		L/240	1224	363	153	107	78	59	45	29	19	13	10
	Triple	$\phi W_n$	375	177	102	81	66	55	46	34			
		L/240	934	277	117	82	60	45	35	22			
20	Single	$\phi W_n$	375	167	94	74	60	50	42	31	23	19	15
		L/240	602	178	75	53	39	29	22	14	9	7	5
	Double	$\phi W_n$	401	183	104	83	67	55	47	34	26	21	17
		L/240	1468	435	184	129	94	71	54	34	23	16	12
	Triple	$\phi W_n$	491	227	129	103	83	69	58	43			
		L/240	1137	337	142	100	73	55	42	27			
18	Single	$\phi W_n$	557	248	139	110	89	74	62	45	35	28	22
		L/240	808	239	101	71	52	39	30	19	13	9	6
	Double	$\phi W_n$	580	263	149	118	95	79	66	49	37	30	24
		L/240	1947	577	243	171	125	94	72	45	30	21	16
	Triple	$\phi W_n$	715	326	185	147	119	99	83	61			
		L/240	1526	452	191	134	98	73	57	36			
16	Single	$\phi W_n$	733	326	183	145	117	97	81	60	46	36	29
		L/240	1008	299	126	88	65	48	37	24	16	11	8
	Double	$\phi W_n$	751	339	192	152	123	102	86	63	48	38	31
		L/240	2428	719	303	213	155	117	90	57	38	27	19
	Triple	$\phi W_n$	926	422	239	189	154	127	107	79			
		L/240	1903	564	238	167	122	92	70	44			

**Note:**

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

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