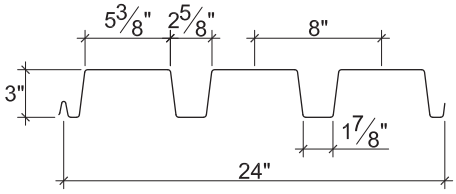
PLN™-24/N-24 FULLY PERFED ROOF DECKS
GRADE 50 STEEL

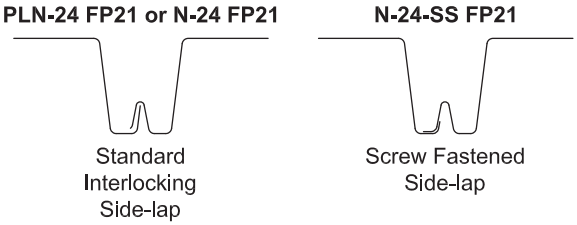
LRFD

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





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 $I_d = (2I_e+I_g)/3$ I_d+ (in⁴/ft)	I_d- (in⁴/ft)	Effective Section Modulus at F_y = 50 ksi S_e+ (in³/ft)	S_e- (in³/ft)	Vertical Web Shear $øV_n$ (lb/ft)
22	1.7	0.0299	50	0.501	0.535	0.152	0.190	2213
20	2.1	0.0359	50	0.616	0.640	0.196	0.235	3372
18	2.8	0.0478	50	0.840	0.849	0.289	0.326	5923
16	3.3	0.0598	50	1.058	1.058	0.371	0.405	7384

Design Reactions at Supports Based on Web Crippling, $øR_n$ (lb/ft)

Deck Gage	Bearing Length of Webs: One-Flange Loading, End Bearing 1½"	2"	3"	4"	Interior Bearing 4"	8"	Two-Flange Loading, End Bearing 1½"	2"	3"	4"	Interior Bearing 4"	8"
22	814	895	1030	1143	1907	2226	696	750	840	916	2093	2468
20	1164	1276	1462	1620	2677	3318	1087	1167	1301	1414	3011	3785
18	2024	2207	2513	2771	4539	5679	2115	2259	2500	2703	5268	6698
16	3105	3372	3820	4198	6847	8482	3493	3715	4089	4404	8107	10210

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

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	$øW_n$	285	127	71	56	46	38	32	23	18	14	11
		L/240	513	152	64	45	33	25	19	12	8	6	4
	Double	$øW_n$	331	153	87	69	56	47	39	29	22	18	14
		L/240	1320	391	165	116	84	63	49	31	21	14	11
	Triple	$øW_n$	401	188	108	86	70	58	49	36			
		L/240	969	287	121	85	62	47	36	23			
20	Single	$øW_n$	368	163	92	73	59	49	41	30	23	18	15
		L/240	631	187	79	55	40	30	23	15	10	7	5
	Double	$øW_n$	419	191	109	86	70	58	49	36	27	22	18
		L/240	1579	468	197	139	101	76	58	37	25	17	13
	Triple	$øW_n$	513	237	135	107	87	72	61	45			
		L/240	1191	353	149	105	76	57	44	28			
18	Single	$øW_n$	542	241	135	107	87	72	60	44	34	27	22
		L/240	860	255	108	76	55	41	32	20	13	9	7
	Double	$øW_n$	592	268	152	120	97	80	68	50	38	30	24
		L/240	2095	621	262	184	134	101	78	49	33	23	17
	Triple	$øW_n$	730	332	189	149	121	100	84	62			
		L/240	1624	481	203	143	104	78	60	38			
16	Single	$øW_n$	696	309	174	137	111	92	77	57	43	34	28
		L/240	1084	321	135	95	69	52	40	25	17	12	9
	Double	$øW_n$	736	333	188	149	121	100	84	62	47	37	30
		L/240	2611	773	326	229	167	126	97	61	41	29	21
	Triple	$øW_n$	907	413	235	186	151	125	105	77			
		L/240	2046	606	256	180	131	98	76	48			

Note:

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