

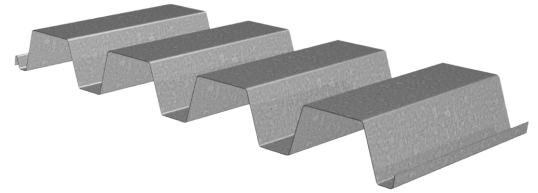
PLN3™-32/HSN3™-32 ROOF DECKS

GRADE 50 STEEL

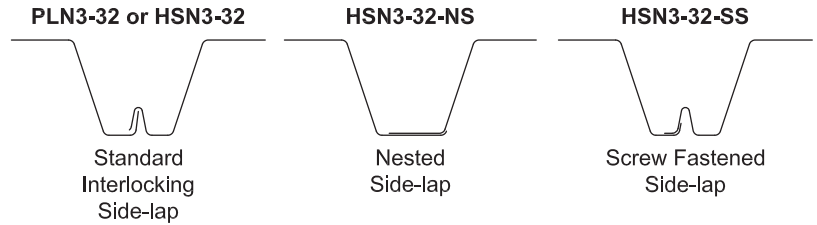
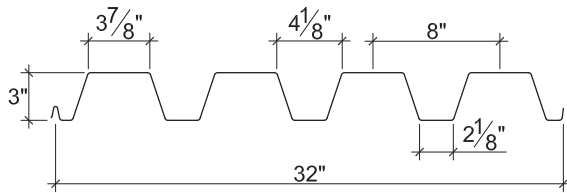
LRFD

N3 ROOF DECKS

- PLN3-32 Deck used with PunchLok® II System
- HSN3-32 Deck used with TSWs or BPs
- HSN3-32-NS Deck used with Side-lap Screws
- HSN3-32-SS 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	2.0	0.0299	50	0.721	0.785	0.353	0.405	3566
20	2.4	0.0359	50	0.890	0.953	0.452	0.509	5821
18	3.1	0.0478	50	1.229	1.273	0.671	0.722	10371
16	3.9	0.0598	50	1.570	1.587	0.883	0.932	13843

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	860	945	1087	1208	1843	2152	821	885	991	1080	2154	2539
20	1215	1331	1525	1690	2584	3203	1241	1332	1485	1614	3072	3861
18	2079	2266	2581	2846	4374	5476	2325	2484	2749	2973	5315	6763
16	3155	3427	3882	4266	6586	8173	3752	3992	4393	4731	8115	10239

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, UL, 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
- Web and Fully Perforated Acoustical Versions

PLN3™-32/HSN3™-32 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	662	294	165	131	106	88	74	54	41	33	26
		L/240	739	219	92	65	47	36	27	17	12	8	6
	Double	ϕW_n	670	318	184	146	119	99	83	61	47	37	30
		L/240	1937	574	242	170	124	93	72	45	30	21	15
	Triple	ϕW_n	800	388	226	180	147	122	103	76			
		L/240	1518	450	190	133	97	73	56	35			
20	Single	ϕW_n	847	377	212	167	136	112	94	69	53	42	34
		L/240	912	270	114	80	58	44	34	21	14	10	7
	Double	ϕW_n	883	409	234	185	151	125	105	77	59	47	38
		L/240	2351	697	294	206	150	113	87	55	37	26	19
	Triple	ϕW_n	1071	504	290	230	187	155	131	96			
		L/240	1843	546	230	162	118	89	68	43			
18	Single	ϕW_n	1258	559	315	249	201	166	140	103	79	62	50
		L/240	1259	373	157	111	81	61	47	29	20	14	10
	Double	ϕW_n	1287	588	334	265	215	178	150	110	84	67	54
		L/240	3141	931	393	276	201	151	116	73	49	34	25
	Triple	ϕW_n	1576	728	415	329	267	222	186	137			
		L/240	2462	729	308	216	158	118	91	57			
16	Single	ϕW_n	1656	736	414	327	265	219	184	135	103	82	66
		L/240	1608	476	201	141	103	77	60	38	25	18	13
	Double	ϕW_n	1666	760	431	342	277	230	193	142	109	86	70
		L/240	3916	1160	489	344	251	188	145	91	61	43	31
	Triple	ϕW_n	2043	941	537	425	346	286	241	177			
		L/240	3069	909	384	269	196	148	114	72			

Note:

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

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