

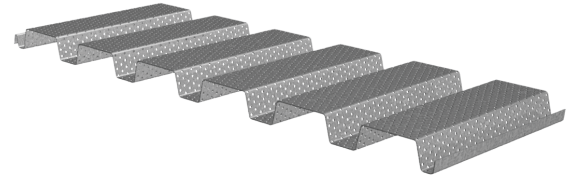
# PLB™-36/HSB®-36 FULLY PERFORED ROOF DECKS

## GRADE 50 STEEL

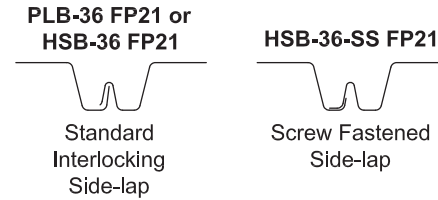
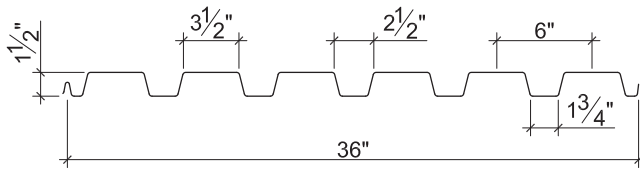
LRFD

### 21% OPEN FULLY PERFORATED B ROOF DECKS

- PLB-36 FP21 Deck used with PunchLok® II System
- HSB-36 FP21 Deck used with TSWs or BPs
- HSB-36-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	1.5	0.0299	50	0.118	0.120	0.078	0.083	2246
20	1.8	0.0359	50	0.143	0.143	0.102	0.105	2691
18	2.3	0.0478	50	0.190	0.190	0.139	0.147	3563
16	2.8	0.0598	50	0.236	0.236	0.177	0.182	4432

### 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"	3"	4"	1 1/2"	2"	3"	4"	3"	4"
22	1215	1335	1537	1662	2297	2461	1203	1296	1452	1548	2730	2940
20	1710	1873	2147	2316	3229	3451	1801	1934	2156	2292	3894	4182
18	2908	3171	3611	3876	5485	5833	3333	3560	3940	4168	6737	7202
16	4397	4775	5409	5783	8283	8772	5336	5676	6247	6583	10291	10957

### 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
- HSB-30-NS FP21 Deck used with Side-lap screws

# PLB™-36/HSB®-36 FULLY PERFERED ROOF DECKS GRADE 50 STEEL

LRFD

## Inward Uniform Design Loads, LRFD (psf)

FP21

Deck Gage	Spans	Criteria	Span (ft-in.)										
			2'-0"	3'-0"	4'-0"	5'-0"	6'-0"	7'-0"	8'-0"	9'-0"	10'-0"	11'-0"	12'-0"
22	Single	$\phi W_n$	585	260	146	94	65	48	37	29	23	19	16
		L/240	967	287	121	62	36	23	15	11	8	6	4
	Double	$\phi W_n$	588	270	153	99	69	51	39	31	25	21	17
		L/240	2369	702	296	152	88	55	37	26	19	14	11
	Triple	$\phi W_n$	719	333	191	123	86	63	48	38	31	26	22
		L/240	1826	541	228	117	68	43	29	20	15	11	8
20	Single	$\phi W_n$	765	340	191	122	85	62	48	38	31	25	21
		L/240	1172	347	146	75	43	27	18	13	9	7	5
	Double	$\phi W_n$	740	340	194	125	87	64	49	39	31	26	22
		L/240	2823	836	353	181	105	66	44	31	23	17	13
	Triple	$\phi W_n$	902	420	241	155	108	80	61	48	39	32	27
		L/240	2212	656	277	142	82	52	35	24	18	13	10
18	Single	$\phi W_n$	1042	463	261	167	116	85	65	51	42	34	29
		L/240	1557	461	195	100	58	36	24	17	12	9	7
	Double	$\phi W_n$	1029	475	271	174	122	90	69	54	44	36	31
		L/240	3750	1111	469	240	139	87	59	41	30	23	17
	Triple	$\phi W_n$	1251	586	336	217	151	112	86	68	55	45	38
		L/240	2940	871	367	188	109	69	46	32	24	18	14
16	Single	$\phi W_n$	1328	590	332	213	148	108	83	66	53	44	37
		L/240	1934	573	242	124	72	45	30	21	15	12	9
	Double	$\phi W_n$	1273	587	335	216	150	111	85	67	54	45	38
		L/240	4658	1380	582	298	173	109	73	51	37	28	22
	Triple	$\phi W_n$	1548	724	415	268	187	138	106	84	68	56	47
		L/240	3651	1082	456	234	135	85	57	40	29	22	17

**Note:**

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

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