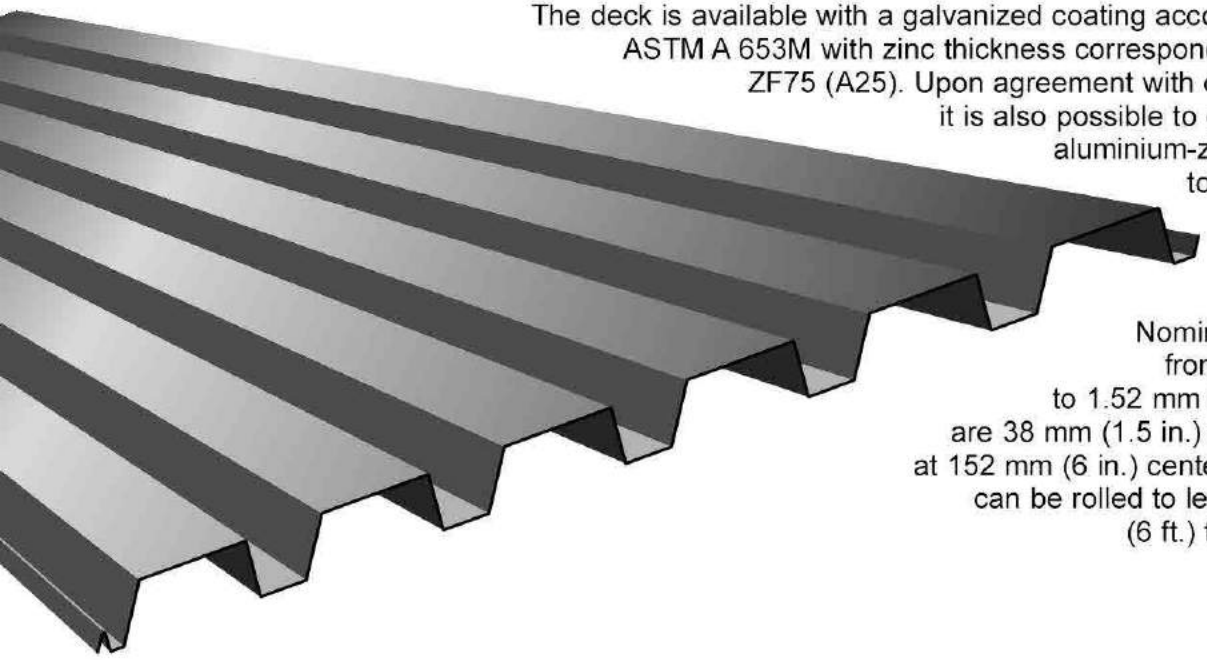
P-3615 & P-3606

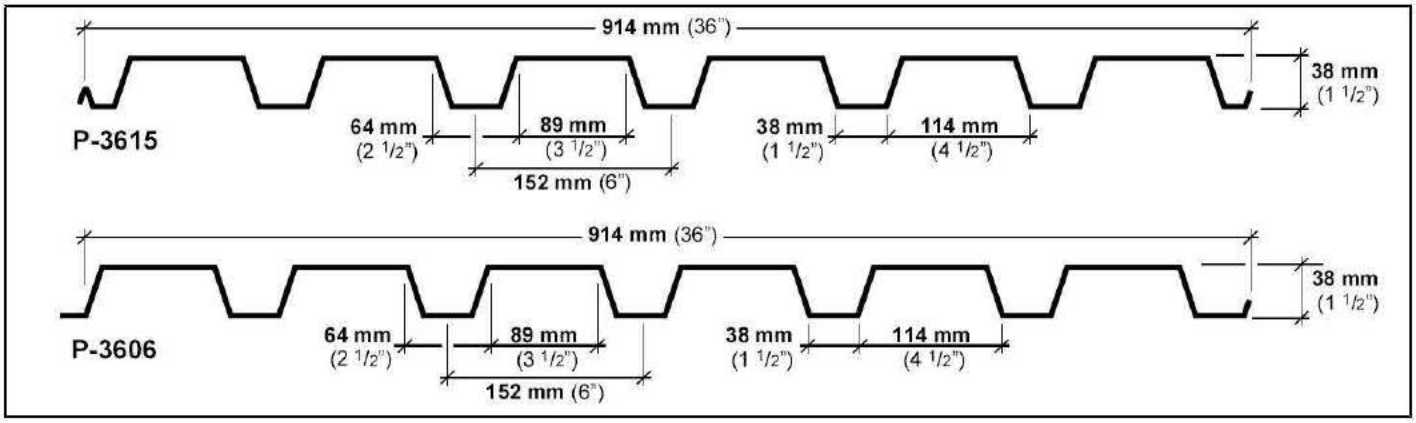
Canam's steel deck profiles P-3615 and P-3606 are roll formed to cover 914 mm (36 in.).



The deck is available with a galvanized coating according to the standard ASTM A 653M with zinc thickness corresponding to Z275 (G90) or ZF75 (A25). Upon agreement with our sales department, it is also possible to obtain steel deck with aluminium-zinc coating according to designation AZM150 (AZ50) of the standard ASTM A 792M.

Nominal thicknesses range from 0.76 mm (0.030 in.) to 1.52 mm (0.060 in.). The flutes are 38 mm (1.5 in.) deep and are spaced at 152 mm (6 in.) center to center. The deck can be rolled to lengths from 1 800 mm (6 ft.) to 12 200 mm (40 ft.).

Dimensions



Physical Properties

Type	Nominal Thickness	Design Thickness	Overall Depth	Weight	Section Modulus		Moment of Inertia for Deflection
					M^+	M^-	
	mm (in.)	mm (in.)	mm (in.)	kg/m² (lb/ft²)	mm³ (in³)	mm³ (in³)	mm⁴ (in⁴)
22	0.76 (0.030)	0.762 (0.0300)	37.4 (1.47)	8.50 (1.74)	9 529 (0.1772)	10 081 (0.1875)	202 228 (0.1481)
20	0.91 (0.036)	0.909 (0.0358)	37.5 (1.48)	10.07 (2.06)	11 558 (0.2150)	12 005 (0.2233)	254 750 (0.1865)
18	1.21 (0.048)	1.217 (0.0479)	37.8 (1.49)	13.26 (2.72)	15 813 (0.2941)	15 994 (0.2975)	363 493 (0.2662)
16	1.52 (0.060)	1.511 (0.0595)	38.1 (1.50)	16.34 (3.35)	19 786 (0.3680)	19 786 (0.3680)	452 472 (0.3313)

- Effective properties are based on a unit width of 1 000 mm (S.I. units) or 12 in. (imperial units).
- Material according to ASTM A 653M SS Grade 230, yield strength of 230 MPa (33 ksi).
- Tables are calculated according to CAN/CSA-S136-01 standard.

Factored and Service Loads Table (kPa)

Metric

Type	Nominal Thickness (mm)		SPAN (mm)											
			1 200	1 350	1 500	1 650	1 800	1 950	2 100	2 250	2 400	2 550	2 700	2 850	3 000
			SINGLE SPAN												
22	0.76	F	10.69	8.49	6.90	5.72	4.82								
		D	7.60	5.34	3.89	2.92	2.25								
20	0.91	F	12.95	10.29	8.37	6.93	5.84	4.98							
		D	9.58	6.73	4.90	3.68	2.84	2.23							
18	1.21	F	17.70	14.06	11.44	9.48	7.98	6.82	5.89	5.13					
		D	13.66	9.60	7.00	5.26	4.05	3.18	2.55	2.07					
16	1.52	F	22.14	17.59	14.31	11.86	9.99	8.53	7.36	6.42	5.65				
		D	17.01	11.95	8.71	6.54	5.04	3.96	3.17	2.58	2.13				
			DOUBLE SPAN												
22	0.76	F	11.11	8.85	7.22	5.99	5.05	4.32	3.73						
		D	18.31	12.86	9.38	7.04	5.43	4.27	3.42						
20	0.91	F	13.23	10.54	8.59	7.14	6.02	5.14	4.44	3.88					
		D	23.07	16.20	11.81	8.87	6.84	5.38	4.30	3.50					
18	1.21	F	17.63	14.05	11.45	9.51	8.02	6.85	5.92	5.17	4.55	4.03	3.60		
		D	32.92	23.12	16.85	12.66	9.75	7.67	6.14	4.99	4.11	3.43	2.89		
16	1.52	F	21.82	17.39	14.17	11.77	9.92	8.48	7.33	6.39	5.63	4.99	4.46	4.00	3.62
		D	40.97	28.78	20.98	15.76	12.14	9.55	7.65	6.22	5.12	4.27	3.60	3.06	2.62
			TRIPLE SPAN												
22	0.76	F	(13.60)	10.88	8.90	7.40	6.25	5.35	4.63	4.04					
		D	14.35	10.08	7.35	5.52	4.25	3.34	2.68	2.18					
20	0.91	F	16.19	12.96	10.59	8.82	7.45	6.37	5.51	4.82	4.24	3.77			
		D	18.08	12.70	9.26	6.96	5.36	4.21	3.37	2.74	2.26	1.88			
18	1.21	F	21.59	17.27	14.12	11.75	9.93	8.49	7.35	6.42	5.65	5.02	4.48	4.03	
		D	25.80	18.12	13.21	9.92	7.64	6.01	4.81	3.91	3.22	2.69	2.26	1.93	
16	1.52	F	26.72	21.38	17.47	14.54	12.28	10.51	9.09	7.94	6.99	6.21	5.55	4.98	4.50
		D	32.11	22.56	16.44	12.35	9.52	7.48	5.99	4.87	4.01	3.35	2.82	2.40	2.06

Factored and Service Loads Table (psf)

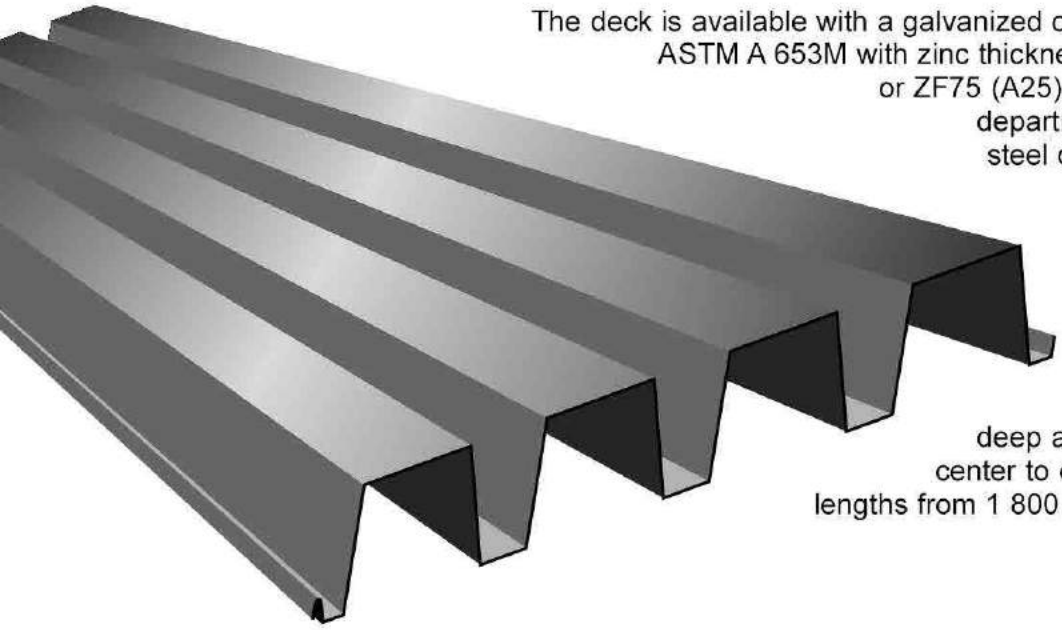
Imperial

Type	Nominal Thickness (in.)		SPAN (ft.-in.)											
			4'-0"	4'-6"	5'-0"	5'-6"	6'-0"	6'-6"	7'-0"	7'-6"	8'-0"	8'-6"	9'-0"	9'-6"	10'-0"
			SINGLE SPAN												
22	0.030	F	216	172	140	116	97								
		D	151	106	78	58	45								
20	0.036	F	262	208	169	140	118	101							
		D	191	134	98	73	57	44							
18	0.048	F	358	285	232	192	162	138	119	104					
		D	272	191	139	105	81	63	51	41					
16	0.060	F	448	356	290	240	202	173	149	130	114				
		D	339	238	173	130	100	79	63	51	42				
			DOUBLE SPAN												
22	0.030	F	225	179	146	121	102	87	76						
		D	365	256	187	140	108	85	68						
20	0.036	F	268	214	174	144	122	104	90	78					
		D	459	323	235	177	136	107	86	70					
18	0.048	F	357	285	232	193	162	139	120	105	92	82	73		
		D	655	460	336	252	194	153	122	99	82	68	58		
16	0.060	F	442	352	287	238	201	172	148	129	114	101	90	81	73
		D	816	573	418	314	242	190	152	124	102	85	72	61	52
			TRIPLE SPAN												
22	0.030	F	276	220	180	150	127	108	94	82					
		D	286	201	146	110	85	67	53	43					
20	0.036	F	328	263	215	179	151	129	112	98	86				
		D	360	253	184	139	107	84	67	55	45				
18	0.048	F	438	350	286	238	201	172	149	130	114	102	91		
		D	514	361	263	198	152	120	96	78	64	54	45		
16	0.060	F	542	433	354	294	249	213	184	161	142	126	112	101	91
		D	640	449	327	246	189	149	119	97	80	67	56	48	41

- Loads in rows marked "F" are the maximum factored loads controlled by the bending capacity, and those in rows marked "D" are the uniform service loads that produce a deflection of L/240.
- Loads in rows marked "F" should be compared to factored loads according to CAN/CSA-S16-01 Limit States Design of Steel Structure.
- The live loads producing deflection equal to the span/180 or span/360 can be calculated by multiplying the loads in the "D" rows by 1.33 or 0.66 respectively.
- Web crippling controls loads in brackets calculated with the end bearing length equal to 40 mm (1.6 in.) and the interior bearing length equal to 102 mm (4 in.). Refer to page 24 for web crippling tables and examples.
- The span is the shortest of the following dimensions: dimension c/c of the supports, or the clear dimension between the supports plus the depth of the deck at each end.
- Refer to page 34 for maximum spans approved by Factory Mutual (FM).

P-2436 & P-2404

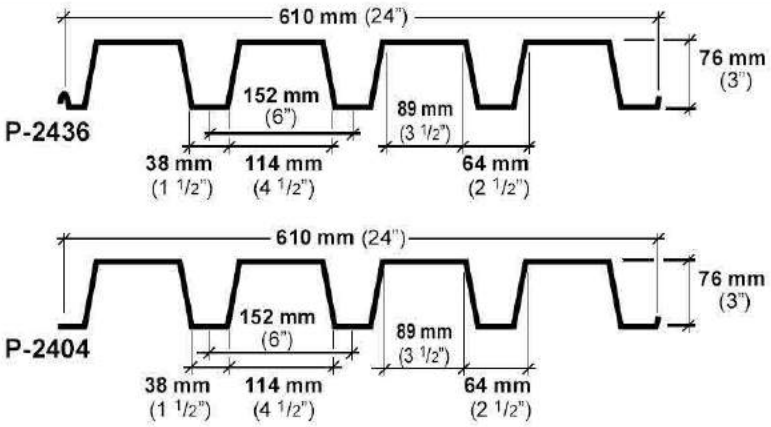
Canam's steel deck profiles P-2436 and P-2404 are roll formed to cover 610 mm (24 in.).



The deck is available with a galvanized coating according to the standard ASTM A 653M with zinc thickness corresponding to Z275 (G90) or ZF75 (A25). Upon agreement with our sales department, it is also possible to obtain steel deck with aluminium-zinc coating according to designation AZM150 (AZ50) of the standard ASTM A 792M.

Nominal thicknesses range from 0.76 mm (0.030 in.) to 1.52 mm (0.060 in.). The flutes are 76 mm (3 in.) deep and are spaced at 152 mm (6 in.) center to center. The deck can be rolled to lengths from 1 800 mm (6 ft.) to 12 200 mm (40 ft.).

Dimensions



Physical Properties

Type	Nominal Thickness	Design Thickness	Overall Depth	Weight	Section Modulus		Moment of Inertia for Deflexion
					M^+	M^-	
	mm (in.)	mm (in.)	mm (in.)	kg/m² (lb/ft²)	mm³ (in³)	mm³ (in³)	mm⁴ (in⁴)
22	**0.76** (0.030)	**0.762** (0.0300)	**76.2** (3.00)	**11.85** (2.43)	**24 134** (0.4489)	**25 690** (0.4778)	**1 006 306** (0.7369)
20	**0.91** (0.036)	**0.909** (0.0358)	**76.4** (3.01)	**14.04** (2.88)	**29 407** (0.5470)	**31 169** (0.5797)	**1 262 487** (0.9245)
18	**1.21** (0.048)	**1.217** (0.0479)	**76.7** (3.02)	**18.33** (3.75)	**40 633** (0.7558)	**41 655** (0.7748)	**1 819 220** (1.3322)
16	**1.52** (0.060)	**1.511** (0.0595)	**77.0** (3.03)	**22.71** (4.65)	**51 473** (0.9574)	**51 681** (0.9613)	**2 294 846** (1.6805)

- Effective properties are based on a unit width of 1 000 mm (S.I. units) or 12 in. (imperial units).
- Material according to ASTM A 653M SS Grade 230, yield strength of 230 MPa (33 ksi).
- Tables are calculated according to CAN/CSA-S136-01 standard.

Factored and Service Loads Table (kPa)

Metric

Type	Nominal Thickness (mm)		SPAN (mm)											
			2 100	2 250	2 400	2 550	2 700	2 850	3 000	3 150	3 300	3 450	3 600	3 750	3 900
			SINGLE SPAN												
22	0.76	F	8.94	7.80	6.87	6.09	5.44	4.88	4.41	4.00					
		D	7.06	5.74	4.73	3.94	3.32	2.82	2.42	2.09					
20	0.91	F	10.93	9.54	8.39	7.44	6.64	5.96	5.38	4.89	4.45	4.08			
		D	8.86	7.20	5.93	4.95	4.17	3.54	3.04	2.62	2.28	2.00			
18	1.21	F	15.13	13.19	11.61	10.29	9.18	8.25	7.45	6.76	6.16	5.64	5.18	4.77	4.41
		D	12.76	10.37	8.55	7.13	6.00	5.11	4.38	3.78	3.29	2.88	2.53	2.24	1.99
16	1.52	F	19.16	16.71	14.70	13.03	11.63	10.44	9.43	8.56	7.80	7.14	6.56	6.04	5.59
		D	16.10	13.09	10.78	8.99	7.57	6.44	5.52	4.77	4.15	3.63	3.20	2.83	2.51
			DOUBLE SPAN												
22	0.76	F	9.42	8.23	7.25	6.44	5.75	5.17	4.67	4.24	3.87	3.54			
		D	17.00	13.82	11.39	9.50	8.00	6.80	5.83	5.04	4.38	3.83			
20	0.91	F	11.51	10.04	8.84	7.85	7.01	6.30	5.69	5.16	4.71	4.31	3.96	3.65	
		D	21.33	17.34	14.29	11.91	10.04	8.53	7.32	6.32	5.50	4.81	4.23	3.75	
18	1.21	F	15.43	13.46	11.85	10.51	9.38	8.43	7.61	6.91	6.30	5.77	5.30	4.88	4.52
		D	30.74	24.99	20.59	17.17	14.46	12.30	10.54	9.11	7.92	6.93	6.10	5.40	4.80
16	1.52	F	19.14	16.70	14.70	13.04	11.64	10.46	9.44	8.57	7.81	7.15	6.57	6.06	5.60
		D	38.78	31.53	25.98	21.66	18.24	15.51	13.30	11.49	9.99	8.74	7.70	6.81	6.05
			TRIPLE SPAN												
22	0.76	F	(11.11)	(10.18)	8.98	7.98	7.14	6.42	5.81	5.27	4.81	4.41	4.05	3.74	
		D	13.33	10.84	8.93	7.44	6.27	5.33	4.57	3.95	3.43	3.01	2.65	2.34	
20	0.91	F	14.26	12.46	10.98	9.75	8.71	7.83	7.08	6.43	5.86	5.37	4.93	4.55	4.21
		D	16.72	13.59	11.20	9.34	7.87	6.69	5.73	4.95	4.31	3.77	3.32	2.94	2.61
18	1.21	F	19.15	16.72	14.73	13.07	11.68	10.49	9.48	8.61	7.85	7.19	6.61	6.09	5.63
		D	24.09	19.59	16.14	13.46	11.34	9.64	8.26	7.14	6.21	5.43	4.78	4.23	3.76
16	1.52	F	23.76	20.75	18.28	16.22	14.49	13.02	11.76	10.68	9.74	8.92	8.20	7.56	6.99
		D	30.39	24.71	20.36	16.97	14.30	12.16	10.42	9.00	7.83	6.85	6.03	5.34	4.74

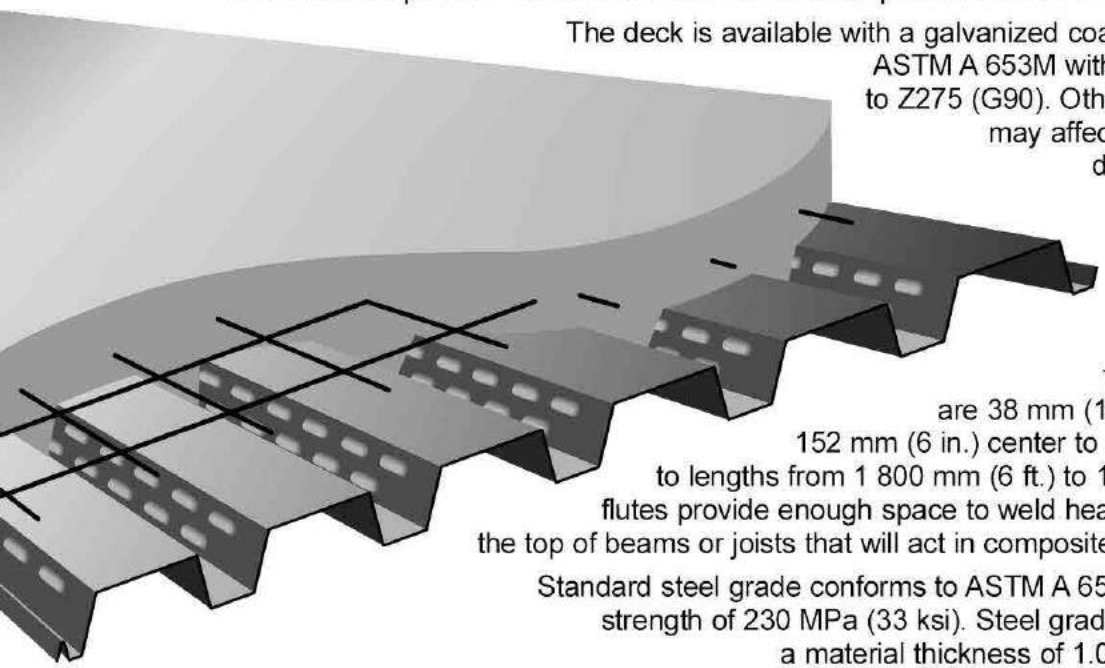
Factored and Service Loads Table (psf)

Imperial

Type	Nominal Thickness (in.)		SPAN (ft.-in.)											
			7'-0"	7'-6"	8'-0"	8'-6"	9'-0"	9'-6"	10'-0"	10'-6"	11'-0"	11'-6"	12'-0"	12'-6"	13'-0"
			SINGLE SPAN												
22	0.030	F	181	158	139	123	110	99	89	81					
		D	141	114	94	79	66	56	48	42					
20	0.036	F	221	193	170	151	134	121	109	99	90	82			
		D	176	143	118	98	83	71	60	52	45	40			
18	0.048	F	306	267	235	208	186	167	151	137	125	114	105	97	89
		D	254	207	170	142	120	102	87	75	65	57	50	45	40
16	0.060	F	388	338	297	264	235	211	191	173	158	144	133	122	113
		D	321	261	215	179	151	128	110	95	83	72	64	56	50
			DOUBLE SPAN												
22	0.030	F	191	167	147	130	116	105	95	86	78				
		D	339	275	227	189	159	135	116	100	87				
20	0.036	F	233	203	179	159	142	127	115	104	95	87	80	74	
		D	425	345	285	237	200	170	146	126	109	96	84	75	
18	0.048	F	312	272	240	213	190	171	154	140	127	117	107	99	91
		D	612	498	410	342	288	245	210	181	158	138	122	108	96
16	0.060	F	387	338	298	264	236	212	191	173	158	145	133	123	113
		D	772	628	517	431	363	309	265	229	199	174	153	136	121
			TRIPLE SPAN												
22	0.030	F	(236)	206	182	162	145	130	118	107	97	89	82	76	
		D	265	216	178	148	125	106	91	79	68	60	53	47	
20	0.036	F	289	252	222	197	176	159	143	130	119	109	100	92	85
		D	333	271	223	186	157	133	114	99	86	75	66	58	52
18	0.048	F	388	339	298	265	236	212	192	174	159	145	134	123	114
		D	480	390	321	268	226	192	165	142	124	108	95	84	75
16	0.060	F	481	420	370	328	293	264	238	216	197	180	166	153	141
		D	605	492	405	338	285	242	208	179	156	136	120	106	94

- Loads in rows marked "F" are the maximum factored loads controlled by the bending capacity, and those in rows marked "D" are the uniform service loads that produce a deflection of L/240.
- Loads in rows marked "F" should be compared to factored loads according to CAN/CSA-S16-01 Limit States Design of Steel Structure.
- The live loads producing deflection equal to the span/180 or span/360 can be calculated by multiplying the loads in the "D" rows by 1.33 or 0.66 respectively.
- Web crippling controls loads in brackets calculated with the end bearing length equal to 76 mm (3 in.) and the interior bearing length equal to 152 mm (6 in.). Refer to page 24 for web crippling tables and examples.
- The span is the shortest of the following dimensions: dimension c/c of the supports, or the clear dimension between the supports plus the depth of the deck at each end.

P-3615 & P-3606 COMPOSITE



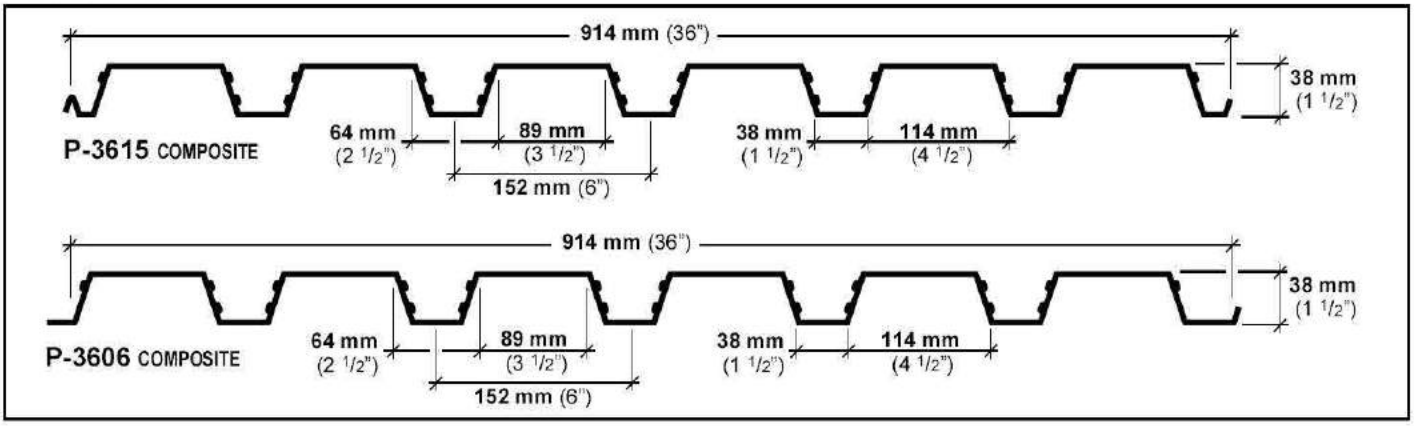
Canam's composite P-3615 and P-3606 steel deck profiles are roll formed to cover 914 mm (36 in.).

The deck is available with a galvanized coating according to the standard ASTM A 653M with zinc thickness corresponding to Z275 (G90). Other types of steel sheet finishes may affect the bond properties between deck and concrete. Contact our sales department for more information.

Nominal thicknesses are 0.76 mm (0.030 in.), 0.91 mm (0.036 in.) and 1.21 mm (0.048 in.). The flutes are 38 mm (1.5 in.) deep and are spaced at 152 mm (6 in.) center to center. The deck can be rolled to lengths from 1 800 mm (6 ft.) to 12 200 mm (40 ft.). The narrow flutes provide enough space to weld headed studs through the deck to the top of beams or joists that will act in composite action with the concrete slab.

Standard steel grade conforms to ASTM A 653M SS Grade 230 with a yield strength of 230 MPa (33 ksi). Steel grades up to 350 MPa (50 ksi) and a material thickness of 1.07 mm (0.042 in.) are available given sufficient delivery time.

Dimensions



Physical Properties

Type	Nominal Thickness	Design Thickness	Overall Depth	Weight	Section Modulus		Moment of Inertia	Steel Area	Center of Gravity
					M^+	M^-			
	mm (in.)	mm (in.)	mm (in.)	kg/m² (lb/ft²)	mm³ (in³)	mm³ (in³)	mm⁴ (in⁴)	mm² (in²)	mm (in.)
22	0.76 (0.030)	0.762 (0.0300)	37.4 (1.47)	8.50 (1.74)	9 529 (0.1772)	10 081 (0.1875)	202 228 (0.1481)	1 016 (0.480)	22.50 (0.89)
20	0.91 (0.036)	0.909 (0.0358)	37.5 (1.48)	10.07 (2.06)	11 558 (0.2150)	12 005 (0.2233)	254 750 (0.1865)	1 212 (0.573)	22.58 (0.89)
18	1.21 (0.048)	1.217 (0.0479)	37.8 (1.49)	13.26 (2.72)	15 813 (0.2941)	15 994 (0.2975)	363 493 (0.2662)	1 622 (0.766)	22.73 (0.89)

- Effective properties are based on a unit width of 1 000 mm (S.I. units) or 12 in. (imperial units).
- Material according to ASTM A 653M SS Grade 230, yield strength of 230 MPa (33 ksi).
- Tables are calculated according to CAN/CSA-S136-01 standard.

Factored Resistance Table of Composite Slab (kPa)

Metric

Slab Thick. (mm)	Deck Thick. (mm)	Maximum Unshored Span Single (mm)	Double (mm)	Triple (mm)	Self Weight (kPa)	Comp. Mom. of Inertia (10^6 mm^4)	SPAN (mm) 1 200	1 350	1 500	1 650	1 800	1 950	2 100	2 250	2 400	2 550	2 700	2 850	3 000
90																			
	0.76	1 690	1 995	1 980	1.62	3.917	20.00	20.00	20.00	20.00	18.90	15.99	13.69	11.84	10.33	9.08	8.04	7.16	6.42
	0.91	1 940	2 285	2 265	1.63	4.185	20.00	20.00	20.00	20.00	20.00	18.35	16.01	14.11	12.55	11.24	10.14	9.21	8.40
	1.21	2 405	2 735	2 790	1.66	4.690	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	19.07	17.59	16.31	15.20	13.85
100																			
	0.76	1 630	1 920	1 905	1.85	5.360	20.00	20.00	20.00	20.00	20.00	18.36	15.72	13.59	11.86	10.43	9.23	8.22	7.37
	0.91	1 865	2 195	2 170	1.86	5.721	20.00	20.00	20.00	20.00	20.00	20.00	18.38	16.20	14.41	12.91	11.65	10.57	9.65
	1.21	2 305	2 630	2 670	1.89	6.403	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	18.74	17.46	16.33
115																			
	0.76	1 550	1 820	1 805	2.20	8.134	20.00	20.00	20.00	20.00	20.00	20.00	18.76	16.22	14.15	12.45	11.02	9.82	8.79
	0.91	1 770	2 075	2 055	2.22	8.666	20.00	20.00	20.00	20.00	20.00	20.00	20.00	19.34	17.20	15.41	13.90	12.62	11.52
	1.21	2 180	2 490	2 515	2.24	9.678	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	19.51
125																			
	0.76	1 505	1 765	1 745	2.44	10.432	20.00	20.00	20.00	20.00	20.00	20.00	20.00	17.98	15.68	13.79	12.21	10.88	9.74
	0.91	1 715	2 010	1 985	2.45	11.101	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	19.06	17.08	15.41	13.98	12.76
	1.21	2 110	2 410	2 430	2.48	12.378	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00
140																			
	0.76	1 440	1 690	1 670	2.79	14.627	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	17.98	15.81	14.00	12.47	11.17
	0.91	1 640	1 920	1 895	2.81	15.535	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	19.58	17.66	16.03	14.63
	1.21	2 010	2 300	2 315	2.83	17.278	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00
150																			
	0.76	1 405	1 645	1 625	3.03	17.965	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	19.51	17.16	15.19	13.53	12.12
	0.91	1 595	1 870	1 845	3.04	19.056	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	19.17	17.40	15.88
	1.21	1 955	2 235	2 245	3.07	21.155	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00

- **The table is based on concrete density of 2 400 kg/m^3 and minimum compressive resistance (f'_c) equal to 20 MPa at 28 days.**
- During construction, the steel deck must support itself, the concrete and a construction uniform load of 1 kPa or a transverse load of 2 kN/m, as specified by the Canadian Sheet Steel Building Institute.
- The maximum unshored spans shown in the table are established for bending under the slab self-weight and the construction loads, for web crippling and for the deflection under wet concrete to be less than the span over 180 (L/180). The web crippling resistance is calculated assuming the end bearing length equal to 40 mm and the interior bearing length equal to 102 mm.

  If the bearing length is shorter, the design engineer must verify the web crippling factored resistance with the reaction produced by wet concrete and construction factored loads (refer to page 24 for web crippling tables and examples).
- Contact Canam sales personnel when the total uniform load exceeds 20 kPa, as this is an indication that significant concentrated loads will be used. The composite slab and its reinforcing should be verified for the effect of concentrated loads (see notes on page 5).
- Shaded values indicate that the deck should be shored at mid-span during the pour and the curing of concrete for those spans and concrete thickness conditions. Shaded values correspond to the maximum unshored span values shown at the left of the table.
- The design engineer is responsible for specifying size and location of the wire mesh in the concrete slab in order to respect current concrete practices.

Example

Triple span of 1 800 mm, total slab thickness of 100 mm with 62 mm of concrete cover on top of 38 mm deck profile.

Once the concrete is cured, the composite slab will have to support these loads:

Dead load = 1.50 kPa
Service live load = 4.80 kPa

According to the table of maximum unshored span above, we need to use a deck with a nominal thickness of 0.76 mm for a triple span condition.

Deck and concrete weights are 1.85 kPa (shown in the table).

Total factored load

$w_f = 1.25 \times (1.85 + 1.50) + 1.5 \times 4.80 = 11.39$ kPa

Factored resistance

$w_r = 20.00$ kPa for a span of 1 800 mm, with a 100 mm slab and a 0.76 mm thick deck.

$w_r > w_f$ OK

Service load w = 4.80 kPa

Composite moment of inertia is 5.360 x 10^6 mm^4 (from the table).

$$\text{Deflection} = \frac{5\, w\, L^4}{384\, E_s\, I_{comp}} = \frac{5 \times 4.80 \times 1\,800^4}{384 \times 203\,000 \times 5\,360\,000}$$

$$= 0.6 \text{ mm} < \frac{1\,800}{360} = 5.0 \text{ mm} \quad \text{OK}$$

FACTORED RESISTANCE TABLE OF COMPOSITE SLAB (psf)

IMPERIAL

Slab Thick. (in.)	Deck Thick. (in.)	Maximum Unshored Span Single (ft.-in.)	Double (ft.-in.)	Triple (ft.-in.)	Self Weight (psf)	Comp. Mom. of Inertia (in^4)	SPAN (ft.-in.) 4'-0"	4'-6"	5'-0"	5'-6"	6'-0"	6'-6"	7'-0"	7'-6"	8'-0"	8'-6"	9'-0"	9'-6"	10'-0"
3.50																			
	0.030	5' - 6"	6' - 7"	6' - 6"	33.2	2.789	420	420	420	420	376	318	272	235	205	180	160	142	127
	0.036	6' - 4"	7' - 6"	7' - 5"	33.5	2.979	420	420	420	420	420	366	319	282	250	224	203	184	168
	0.048	7' - 11"	9' - 0"	9' - 2"	34.1	3.338	420	420	420	420	420	420	420	418	384	354	328	306	278
4.00																			
	0.030	5' - 3"	6' - 3"	6' - 2"	39.5	4.150	420	420	420	420	420	379	324	280	244	215	190	169	152
	0.036	6' - 1"	7' - 1"	7' - 1"	39.8	4.428	420	420	420	420	420	420	381	336	298	267	241	219	200
	0.048	7' - 6"	8' - 6"	8' - 8"	40.3	4.953	420	420	420	420	420	420	420	420	420	420	391	365	341
4.50																			
	0.030	5' - 1"	5' - 11"	5' - 11"	45.8	5.899	420	420	420	420	420	420	376	325	284	249	221	197	176
	0.036	5' - 9"	6' - 10"	6' - 9"	46.0	6.284	420	420	420	420	420	420	420	389	346	310	280	254	232
	0.048	7' - 2"	8' - 2"	8' - 3"	46.6	7.016	420	420	420	420	420	420	420	420	420	420	420	420	396
5.00																			
	0.030	4' - 10"	5' - 9"	5' - 8"	52.0	8.079	420	420	420	420	420	420	420	370	323	284	251	224	200
	0.036	5' - 7"	6' - 6"	6' - 5"	52.3	8.593	420	420	420	420	420	420	420	420	394	353	319	289	264
	0.048	6' - 10"	7' - 10"	7' - 10"	52.8	9.575	420	420	420	420	420	420	420	420	420	420	420	420	420
5.50																			
	0.030	4' - 8"	5' - 6"	5' - 5"	58.3	10.737	420	420	420	420	420	420	420	415	362	318	282	251	225
	0.036	5' - 4"	6' - 3"	6' - 2"	58.5	11.401	420	420	420	420	420	420	420	420	420	396	358	325	296
	0.048	6' - 7"	7' - 6"	7' - 7"	59.1	12.675	420	420	420	420	420	420	420	420	420	420	420	420	420
6.00																			
	0.030	4' - 7"	5' - 4"	5' - 3"	64.5	13.916	420	420	420	420	420	420	420	420	401	353	312	278	249
	0.036	5' - 2"	6' - 1"	6' - 0"	64.8	14.752	420	420	420	420	420	420	420	420	420	420	396	360	328
	0.048	6' - 4"	7' - 3"	7' - 3"	65.3	16.363	420	420	420	420	420	420	420	420	420	420	420	420	420

- **The table is based on concrete density of 150 lb/ft^3 and minimum compressive resistance (f'_c) equal to 3 000 psi at 28 days.**
- During construction, the steel deck must support itself, the concrete and a construction uniform load of 21 psf or a transverse load of 137 plf as specified by the Canadian Sheet Steel Building Institute.
- The maximum unshored spans shown in the table are established for bending under the slab self-weight and the construction loads, for web crippling and for the deflection under wet concrete to be less than the span over 180 (L/180). The web crippling resistance is calculated assuming the end bearing length equal to 1.5 in. and the interior bearing length equal to 4 in.

  If the bearing length is shorter, the design engineer must verify the web crippling factored resistance with the reaction produced by wet concrete and construction factored loads (refer to page 24 for web crippling tables and examples).
- Contact Canam sales personnel when the total uniform load exceeds 420 psf, as this is an indication that significant concentrated loads will be used. The composite slab and its reinforcing should be verified for the effect of concentrated loads (see notes on page 5).
- Shaded values indicate that the deck should be shored at mid-span during the pour and the curing of concrete for those spans and concrete thickness conditions. Shaded values correspond to the maximum unshored span values shown at the left of the table.
- The design engineer is responsible for specifying size and location of the wire mesh in the concrete slab in order to respect current concrete practices.

EXAMPLE

Triple span of 6'-0", total slab thickness of 4" with 2 1/2" of concrete cover on top of 1 1/2" deck profile.

Once the concrete is cured, the composite slab will have to support these loads:

Dead load = 30 psf
Service live load = 100 psf

According to the table of maximum unshored span above, we need to use a deck with a nominal thickness of 0.030" for a triple span condition.

Deck and concrete weights are 39.5 psf (shown in the table).

Total factored load

$w_f = 1.25 \times (39.5 + 30) + 1.5 \times 100 = 237$ psf

Factored resistance

$w_r = 420$ psf for a span of 6'-0", with a 4" slab and a 0.030" thick deck.

$w_r > w_f$ OK

Service load w = 100 psf

Composite moment of inertia is 4.150 in^4 (from the table).

$$\text{Deflection} = \frac{5\,w\,L^4}{384\,E_s\,I_{comp}} = \frac{5 \times 100 \times 6^4 \times 1\,728}{384 \times 29\,500 \times 4.150 \times 1\,000}$$

$$= 0.02" < \frac{72"}{360} = 0.20" \quad \textbf{OK}$$

Factored Resistance Table of Composite Slab (kPa)

Lightweight Concrete - Metric

Slab Thick. (mm)	Deck Thick. (mm)	Maximum Unshored Span Single (mm)	Double (mm)	Triple (mm)	Self Weight (kPa)	Comp. Mom. of Inertia (10^6 mm^4)	SPAN (mm) 1 200	1 350	1 500	1 650	1 800	1 950	2 100	2 250	2 400	2 550	2 700	2 850	3 000
100																			
	0.76	1 740	2 060	2 045	1.44	4.398	20.00	20.00	20.00	20.00	20.00	18.36	15.72	13.59	11.86	10.43	9.23	8.22	7.37
	0.91	2 005	2 365	2 345	1.45	4.717	20.00	20.00	20.00	20.00	20.00	20.00	18.38	16.20	14.41	12.91	11.65	10.57	9.65
	1.21	2 490	2 825	2 895	1.48	5.312	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	18.74	17.46	16.33
115																			
	0.76	1 665	1 965	1 950	1.71	6.652	20.00	20.00	20.00	20.00	20.00	20.00	18.76	16.22	14.15	12.45	11.02	9.82	8.79
	0.91	1 910	2 245	2 225	1.72	7.127	20.00	20.00	20.00	20.00	20.00	20.00	20.00	19.34	17.20	15.41	13.90	12.62	11.52
	1.21	2 365	2 690	2 740	1.75	8.016	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	19.51
125																			
	0.76	1 620	1 910	1 890	1.89	8.513	20.00	20.00	20.00	20.00	20.00	20.00	20.00	17.98	15.68	13.79	12.21	10.88	9.74
	0.91	1 855	2 180	2 155	1.90	9.112	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	19.06	17.08	15.41	13.98	12.76
	1.21	2 290	2 610	2 650	1.93	10.238	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00
140																			
	0.76	1 560	1 835	1 815	2.16	11.895	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	17.98	15.81	14.00	12.47	11.17
	0.91	1 780	2 090	2 065	2.17	12.713	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	19.58	17.66	16.03	14.63
	1.21	2 195	2 505	2 530	2.20	14.260	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00
150																			
	0.76	1 520	1 790	1 770	2.34	14.575	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	19.51	17.16	15.19	13.53	12.12
	0.91	1 735	2 035	2 015	2.36	15.561	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	19.17	17.40	15.88
	1.21	2 135	2 440	2 460	2.38	17.432	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00
165																			
	0.76	1 470	1 725	1 710	2.61	19.287	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	19.17	16.97	15.12	13.54
	0.91	1 675	1 965	1 940	2.63	20.558	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	19.45	17.75
	1.21	2 060	2 355	2 370	2.65	22.983	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00

- **The table is based on concrete density of 1 840 kg/m^3 and minimum compressive resistance (f'_c) equal to 25 MPa at 28 days.**
- Refer to page 11 for other notes.

Factored Resistance Table of Composite Slab (psf)

Lightweight Concrete - Imperial

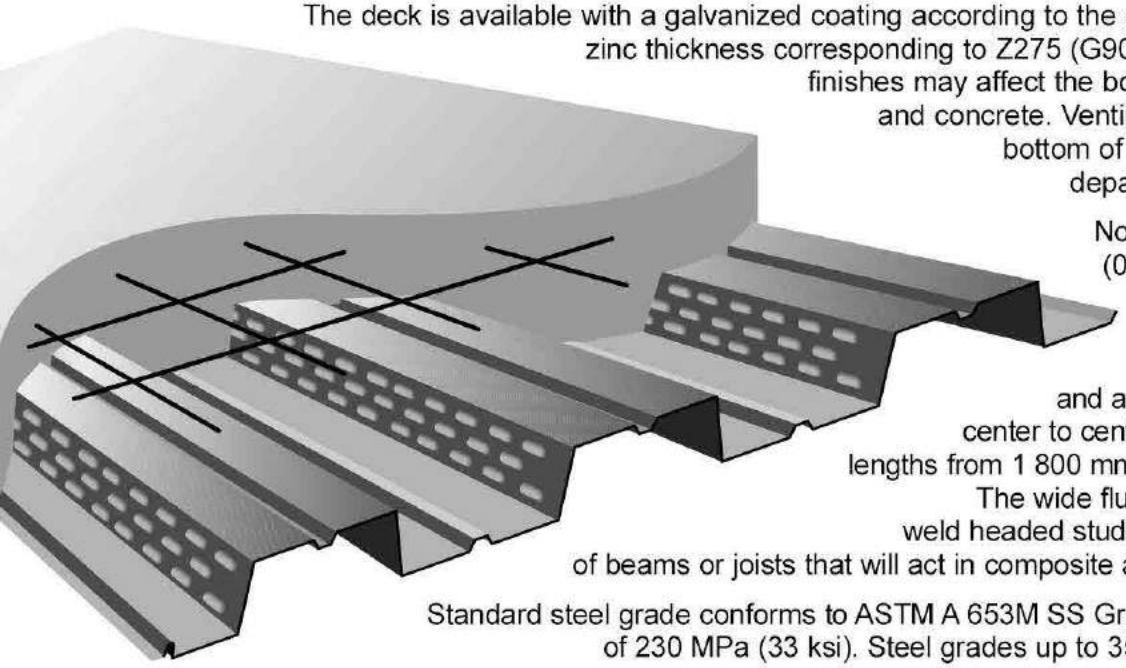
Slab Thick. (in.)	Deck Thick. (in.)	Maximum Unshored Span Single (ft.-in.)	Double (ft.-in.)	Triple (ft.-in.)	Self Weight (psf)	Comp. Mom. of Inertia (in^4)	SPAN (ft.-in.) 4'-0"	4'-6"	5'-0"	5'-6"	6'-0"	6'-6"	7'-0"	7'-6"	8'-0"	8'-6"	9'-0"	9'-6"	10'-0"
4.00																			
	0.030	5' - 8"	6' - 8"	6' - 8"	30.7	3.451	420	420	420	420	420	379	324	280	244	215	190	169	152
	0.036	6' - 6"	7' - 8"	7' - 7"	31.0	3.699	420	420	420	420	420	420	381	336	298	267	241	219	200
	0.048	8' - 1"	9' - 2"	9' - 5"	31.6	4.163	420	420	420	420	420	420	420	420	420	420	391	365	341
4.50																			
	0.030	5' - 5"	6' - 5"	6' - 4"	35.5	4.892	420	420	420	420	420	420	376	325	284	249	221	197	176
	0.036	6' - 3"	7' - 4"	7' - 3"	35.8	5.239	420	420	420	420	420	420	420	389	346	310	280	254	232
	0.048	7' - 9"	8' -10"	9' - 0"	36.3	5.889	420	420	420	420	420	420	420	420	420	420	420	420	396
5.00																			
	0.030	5' - 3"	6' - 2"	6' - 2"	40.3	6.683	420	420	420	420	420	420	420	370	323	284	251	224	200
	0.036	6' - 0"	7' - 1"	7' - 0"	40.6	7.147	420	420	420	420	420	420	420	420	394	353	319	289	264
	0.048	7' - 5"	8' - 6"	8' - 7"	41.1	8.024	420	420	420	420	420	420	420	420	420	420	420	420	420
5.50																			
	0.030	5' - 1"	6' - 0"	5' -11"	45.1	8.857	420	420	420	420	420	420	420	415	362	318	282	251	225
	0.036	5' -10"	6' -10"	6' - 9"	45.4	9.460	420	420	420	420	420	420	420	420	420	396	358	325	296
	0.048	7' - 2"	8' - 2"	8' - 3"	45.9	10.603	420	420	420	420	420	420	420	420	420	420	420	420	420
6.00																			
	0.030	4' -11"	5' -10"	5' - 9"	49.9	11.447	420	420	420	420	420	420	420	420	401	353	312	278	249
	0.036	5' - 8"	6' - 7"	6' - 6"	50.1	12.209	420	420	420	420	420	420	420	420	420	420	396	360	328
	0.048	6' -11"	7' -11"	8' - 0"	50.7	13.661	420	420	420	420	420	420	420	420	420	420	420	420	420
6.50																			
	0.030	4' - 9"	5' - 8"	5' - 7"	54.7	14.487	420	420	420	420	420	420	420	420	420	387	343	305	274
	0.036	5' - 6"	6' - 5"	6' - 4"	54.9	15.430	420	420	420	420	420	420	420	420	420	420	420	395	361
	0.048	6' - 9"	7' - 8"	7' - 9"	55.5	17.233	420	420	420	420	420	420	420	420	420	420	420	420	420

- **The table is based on concrete density of 115 lb/ft^3 and minimum compressive resistance (f'_c) equal to 4 000 psi at 28 days.**
- Refer to page 12 for other notes.

P-3623 COMPOSITE

Canam's composite P-3623 is a steel deck roll formed to cover 914 mm (36 in.).

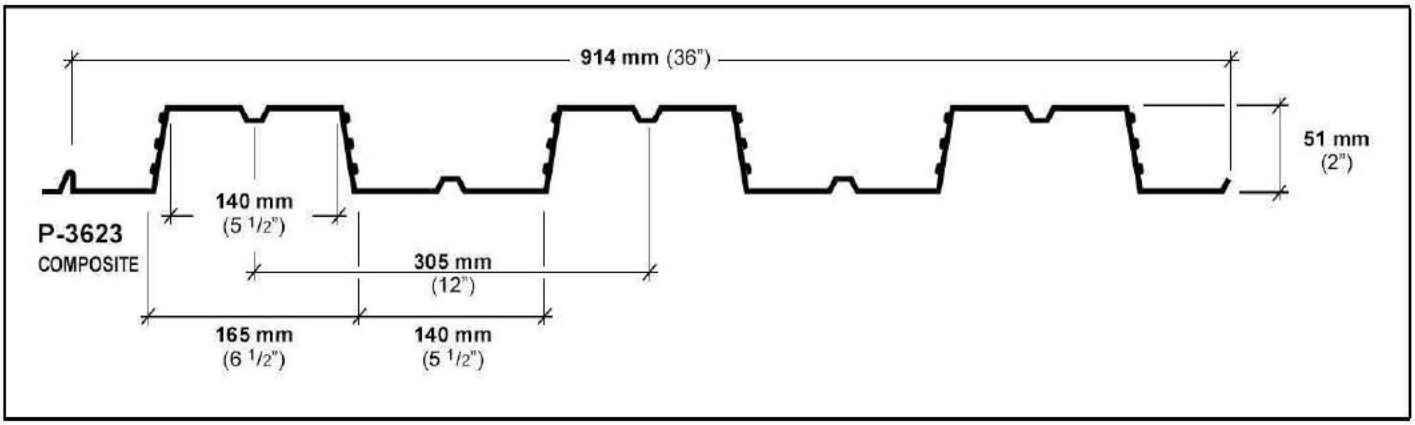
The deck is available with a galvanized coating according to the standard ASTM A 653M with zinc thickness corresponding to Z275 (G90). Other types of steel sheet finishes may affect the bond properties between deck and concrete. Venting slots can be added to the bottom of the flutes. Contact our sales department for more information.



Nominal thickness are 0.76 mm (0.030 in.), 0.91 mm (0.036 in.) and 1.21 mm (0.048 in.). The flutes are 51 mm (2 in.) deep and are spaced at 305 mm (12 in.) center to center. The deck can be rolled to lengths from 1 800 mm (6 ft.) to 12 200 mm (40 ft.). The wide flutes provide enough space to weld headed studs through the deck to the top of beams or joists that will act in composite action with the concrete slab.

Standard steel grade conforms to ASTM A 653M SS Grade 230 with a yield strength of 230 MPa (33 ksi). Steel grades up to 350 MPa (50 ksi) and material thickness of 1.07 mm (0.042 in.) are available given sufficient delivery time.

Dimensions



Physical Properties

Type	Nominal Thickness	Design Thickness	Overall Depth	Weight	Section Modulus		Moment of Inertia	Steel Area	Center of Gravity
					M+	M−			
	mm (in.)	mm (in.)	mm (in.)	kg/m² (lb/ft²)	mm³ (in³)	mm³ (in³)	mm⁴ (in⁴)	mm² (in²)	mm (in.)
22	**0.76** (0.030)	**0.762** (0.0300)	**50.8** (2.00)	**8.50** (1.74)	**15 350** (0.2855)	**15 350** (0.2855)	**430 932** (0.3156)	**1 016** (0.480)	**25.40** (1.00)
20	**0.91** (0.036)	**0.909** (0.0358)	**51.0** (2.01)	**10.07** (2.06)	**19 473** (0.3622)	**19 473** (0.3622)	**532 353** (0.3898)	**1 212** (0.573)	**25.47** (1.00)
18	**1.21** (0.048)	**1.217** (0.0479)	**51.3** (2.02)	**13.26** (2.72)	**27 996** (0.5207)	**27 996** (0.5207)	**717 655** (0.5255)	**1 622** (0.766)	**25.63** (1.01)

- Effective properties are based on a unit width of 1 000 mm (S.I. units) or 12 in. (imperial units).
- Material according to ASTM A 653M SS Grade 230, yield strength of 230 MPa (33 ksi).
- Tables are calculated according to CAN/CSA-S136-01 standard.

Factored Resistance Table of Composite Slab (kPa)

Metric

Slab Thick. (mm)	Deck Thick. (mm)	Maximum Unshored Span Single (mm)	Double (mm)	Triple (mm)	Self Weight (kPa)	Comp. Mom. of Inertia (10^6 mm^4)	SPAN (mm) 1 500	1 650	1 800	1 950	2 100	2 250	2 400	2 550	2 700	2 850	3 000	3 150	3 300
100																			
	0.76	2 280	2 430	2 530	1.84	5.718	20.00	18.78	16.05	13.91	12.20	10.80	9.65	8.68	7.87	7.17	6.57	6.05	5.59
	0.91	2 670	2 920	3 015	1.85	6.080	20.00	20.00	20.00	17.40	15.25	13.50	12.05	10.84	9.82	8.94	8.19	7.54	6.97
	1.21	3 115	3 485	3 575	1.88	6.772	20.00	20.00	20.00	20.00	18.28	16.17	14.44	12.98	11.75	10.71	9.80	9.02	8.34
125																			
	0.76	2 035	2 035	2 120	2.43	10.841	20.00	20.00	20.00	18.58	16.29	14.42	12.88	11.59	10.51	9.58	8.77	8.08	7.47
	0.91	2 425	2 675	2 765	2.44	11.498	20.00	20.00	20.00	20.00	20.00	18.02	16.09	14.48	13.11	11.94	10.94	10.07	9.31
	1.21	2 845	3 195	3 265	2.47	12.758	20.00	20.00	20.00	20.00	20.00	20.00	19.29	17.35	15.71	14.31	13.10	12.05	11.14
140																			
	0.76	1 855	1 855	1 930	2.78	15.050	20.00	20.00	20.00	20.00	18.74	16.59	14.82	13.34	12.09	11.02	10.10	9.29	8.59
	0.91	2 310	2 550	2 640	2.80	15.938	20.00	20.00	20.00	20.00	20.00	20.00	18.52	16.66	15.09	13.74	12.59	11.59	10.71
	1.21	2 720	3 050	3 125	2.82	17.647	20.00	20.00	20.00	20.00	20.00	20.00	20.00	19.96	18.08	16.46	15.08	13.87	12.82
150																			
	0.76	1 750	1 750	1 825	3.02	18.390	20.00	20.00	20.00	20.00	20.00	18.04	16.12	14.51	13.14	11.98	10.98	10.11	9.34
	0.91	2 245	2 420	2 525	3.03	19.456	20.00	20.00	20.00	20.00	20.00	20.00	20.00	18.11	16.40	14.94	13.69	12.60	11.64
	1.21	2 650	2 965	3 040	3.06	21.511	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	19.66	17.90	16.39	15.08	13.94
165																			
	0.76	1 615	1 615	1 685	3.37	24.277	20.00	20.00	20.00	20.00	20.00	20.00	18.06	16.25	14.72	13.42	12.30	11.32	10.47
	0.91	2 155	2 235	2 330	3.38	25.643	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	18.38	16.74	15.34	14.11	13.05
	1.21	2 555	2 850	2 930	3.41	28.288	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	18.37	16.90	15.62
190																			
	0.76	1 430	1 430	1 395	3.96	36.664	20.00	20.00	20.00	20.00	20.00	20.00	20.00	19.16	17.36	15.82	14.50	13.35	12.34
	0.91	1 980	1 980	2 065	3.97	38.628	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	19.74	18.08	16.64	15.38
	1.21	2 425	2 680	2 770	4.00	42.447	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	19.94	18.42

- **The table is based on concrete density of 2 400 kg/m^3 and minimum compressive resistance (f'_c) equal to 20 MPa at 28 days.**
- During construction, the steel deck must support itself, the concrete and a construction uniform load of 1 kPa or a transverse load of 2 kN/m as specified by the Canadian Sheet Steel Building Institute.
- The maximum unshored spans shown in the table are established for bending under the slab self-weight and the construction loads, for web crippling and for the deflection under wet concrete to be less than the span over 180 (L/180). The web crippling resistance is calculated assuming the end bearing length equal to 51 mm and the interior bearing length equal to 127 mm.

  If the bearing length is shorter, the design engineer must verify the web crippling factored resistance with the reaction produced by wet concrete and construction factored loads (refer to page 24 for web crippling tables and examples).
- Contact Canam sales personnel when the total uniform load exceeds 20 kPa, as this is an indication that significant concentrated loads will be used. The composite slab and its reinforcing should be verified for the effect of concentrated loads (see notes on page 5).
- Shaded values indicate that the deck should be shored at mid-span during the pour and the curing of concrete for those spans and concrete thickness conditions. Shaded values correspond to the maximum unshored span values shown at the left of the table.
- The design engineer is responsible for specifying size and location of the wire mesh in the concrete slab in order to respect current concrete practices.

Example

Triple span of 2 400 mm, total slab thickness of 125 mm with 74 mm of concrete cover on top of 51 mm deck profile.

Once the concrete is cured, the composite slab will have to support these loads:

Dead load = 1.50 kPa
Service live load = 4.80 kPa

According to the table of maximum unshored span above, we need to use a deck with a nominal thickness of 0.91 mm for a triple span condition.

Deck and concrete weight is 2.44 kPa (shown in the table).

Total factored load

$w_f = 1.25 \times (2.44 + 1.50) + 1.5 \times 4.80 = 12.13$ kPa

Factored resistance

$w_r = 16.09$ kPa for a span of 2 400 mm, with a 125 mm slab and a 0.91 mm thick deck.

$w_r > w_f$ **OK**

Service load w = 4.80 kPa

Composite moment of inertia is 11.498 x 10^6 mm^4 (from the table).

$$\text{Deflection} = \frac{5\ w\ L^4}{384\ E_s\ I_{comp}} = \frac{5 \times 4.80 \times 2\,400^4}{384 \times 203\,000 \times 11\,498\,000}$$

$$= 0.9 \text{ mm} < \frac{2\,400}{360} = 6.7 \text{ mm} \quad \textbf{OK}$$

Factored Resistance Table of Composite Slab (psf)

Imperial

Slab Thick. (in.)	Deck Thick. (in.)	Maximum Unshored Span			Self Weight (psf)	Comp. Mom. of Inertia (in^4)	SPAN (ft.-in.)												
		Single (ft.-in.)	Double (ft.-in.)	Triple (ft.-in.)			5'-0"	5'-6"	6'-0"	6'-6"	7'-0"	7'-6"	8'-0"	8'-6"	9'-0"	9'-6"	10'-0"	10'-6"	11'-0"
4.00																			
	0.030	7' - 5"	7' -10"	8' - 2"	39.3	4.419	420	389	333	289	253	224	200	180	163	149	136	126	116
	0.036	8' - 8"	9' - 6"	9' -10"	39.5	4.697	420	420	416	361	316	280	250	225	204	186	170	157	145
	0.048	10' - 1"	11' - 4"	11' - 7"	40.1	5.227	420	420	420	420	379	335	299	269	244	222	204	187	173
5.00																			
	0.030	6' - 7"	6' - 7"	6' -10"	51.8	8.385	420	420	420	385	337	299	267	240	218	199	182	168	155
	0.036	7' -10"	8' - 8"	9' - 0"	52.0	8.889	420	420	420	420	420	373	333	300	272	248	227	209	193
	0.048	9' - 3"	10' - 4"	10' - 7"	52.6	9.857	420	420	420	420	420	420	400	359	326	297	272	250	231
5.50																			
	0.030	6' - 1"	6' - 1"	6' - 4"	58.0	11.052	420	420	420	420	380	336	300	270	245	223	205	189	174
	0.036	7' - 7"	8' - 4"	8' - 7"	58.3	11.701	420	420	420	420	420	420	375	338	306	279	255	235	217
	0.048	8' -11"	10' - 0"	10' - 3"	58.9	12.951	420	420	420	420	420	420	420	405	366	334	306	281	260
6.00																			
	0.030	5' - 8"	5' - 8"	5' -10"	64.3	14.233	420	420	420	420	420	374	334	300	272	248	227	209	194
	0.036	7' - 3"	7' -10"	8' - 2"	64.5	15.050	420	420	420	420	420	420	417	375	340	310	284	261	241
	0.048	8' - 7"	9' - 7"	9' -11"	65.1	16.626	420	420	420	420	420	420	420	420	407	371	340	313	289
6.50																			
	0.030	5' - 3"	5' - 3"	5' - 6"	70.5	17.974	420	420	420	420	420	411	367	330	299	273	250	230	213
	0.036	7' - 0"	7' - 3"	7' - 7"	70.8	18.980	420	420	420	420	420	420	420	413	374	341	312	287	265
	0.048	8' - 4"	9' - 4"	9' - 7"	71.4	20.927	420	420	420	420	420	420	420	420	420	408	374	344	318
7.50																			
	0.030	4' - 8"	4' - 8"	4' -10"	83.0	27.312	420	420	420	420	420	420	420	391	354	323	296	272	252
	0.036	6' - 5"	6' - 5"	6' - 9"	83.3	28.765	420	420	420	420	420	420	420	420	420	403	369	339	314
	0.048	7' -11"	8' - 9"	9' - 1"	83.9	31.591	420	420	420	420	420	420	420	420	420	420	420	407	376

- **The table is based on concrete density of 150 lb/ft^3 and minimum compressive resistance (f'_c) equal to 3 000 psi at 28 days.**
- During construction, the steel deck must support itself, the concrete and a construction uniform load of 21 psf or a transverse load of 137 plf as specified by the Canadian Sheet Steel Building Institute.
- The maximum unshored spans shown in the table are established for bending under the slab self-weight and the construction loads, for web crippling and for the deflection under wet concrete to be less than the span over 180 (L/180). The web crippling resistance is calculated assuming the end bearing length equal to 2 in. and the interior bearing length equal to 5 in.

  If the bearing length is shorter, the design engineer must verify the web crippling factored resistance with the reaction produced by wet concrete and construction factored loads (refer to page 24 for web crippling tables and examples).
- Contact Canam sales personnel when the total uniform load exceeds 420 psf, as this is an indication that significant concentrated loads will be used. The composite slab and its reinforcing should be verified for the effect of concentrated loads (see notes on page 5).
- Shaded values indicate that the deck should be shored at mid-span during the pour and the curing of concrete for those spans and concrete thickness conditions. Shaded values correspond to the maximum unshored span values shown at the left of the table.
- The design engineer is responsible for specifying size and location of the wire mesh in the concrete slab in order to respect current concrete practices.

Example

Triple span of 8'-0", total slab thickness of 5" with 3" of concrete cover on top of 2" deck profile.

Once the concrete is cured, the composite slab will have to support these loads:

Dead load = 30 psf
Service live load = 100 psf

According to the table of maximum unshored span above, we need to use a deck with a nominal thickness of 0.036" for a triple span condition.

Deck and concrete weight is 52.0 psf (shown in the table).

Total factored load

$w_f = 1.25 \times (52.0 + 30) + 1.5 \times 100 = 253$ psf

Factored resistance

$w_r = 333$ psf for a span of 8'-0", with a 5" slab and a 0.036" thick deck.

$w_r > w_f$ OK

Service load w = 100 psf

Composite moment of inertia is 8.889 in^4 (from the table).

$$\text{Deflection} = \frac{5\, w\, L^4}{384\, E_s\, I_{comp}} = \frac{5 \times 100 \times 8.0^4 \times 1\,728}{384 \times 29\,500 \times 8.889 \times 1\,000}$$

$$= 0.04" < \frac{96"}{360} = 0.27" \quad \textbf{OK}$$

Factored Resistance Table of Composite Slab (kPa)

Lightweight Concrete - Metric

Slab Thick. (mm)	Deck Thick. (mm)	Maximum Unshored Span Single (mm)	Double (mm)	Triple (mm)	Self Weight (kPa)	Comp. Mom. of Inertia (10^6 mm^4)	SPAN (mm) 1 500	1 650	1 800	1 950	2 100	2 250	2 400	2 550	2 700	2 850	3 000	3 150	3 300
115																			
	0.76	2 335	2 545	2 655	1.70	6.925	20.00	20.00	19.28	16.71	14.65	12.97	11.59	10.43	9.45	8.61	7.89	7.27	6.72
	0.91	2 740	2 990	3 090	1.71	7.396	20.00	20.00	20.00	20.00	18.32	16.21	14.47	13.02	11.79	10.74	9.84	9.06	8.37
	1.21	3 195	3 565	3 670	1.74	8.287	20.00	20.00	20.00	20.00	20.00	19.43	17.35	15.60	14.13	12.87	11.78	10.84	10.02
125																			
	0.76	2 265	2 400	2 500	1.88	8.788	20.00	20.00	20.00	18.58	16.29	14.42	12.88	11.59	10.51	9.58	8.77	8.08	7.47
	0.91	2 650	2 900	2 995	1.90	9.379	20.00	20.00	20.00	20.00	20.00	18.02	16.09	14.48	13.11	11.94	10.94	10.07	9.31
	1.21	3 095	3 460	3 550	1.92	10.497	20.00	20.00	20.00	20.00	20.00	20.00	19.29	17.35	15.71	14.31	13.10	12.05	11.14
140																			
	0.76	2 165	2 205	2 295	2.15	12.167	20.00	20.00	20.00	20.00	18.74	16.59	14.82	13.34	12.09	11.02	10.10	9.29	8.59
	0.91	2 530	2 780	2 875	2.17	12.968	20.00	20.00	20.00	20.00	20.00	20.00	18.52	16.66	15.09	13.74	12.59	11.59	10.71
	1.21	2 960	3 320	3 395	2.19	14.491	20.00	20.00	20.00	20.00	20.00	20.00	20.00	19.96	18.08	16.46	15.08	13.87	12.82
150																			
	0.76	2 090	2 090	2 180	2.33	14.840	20.00	20.00	20.00	20.00	20.00	18.04	16.12	14.51	13.14	11.98	10.98	10.11	9.34
	0.91	2 460	2 710	2 800	2.35	15.804	20.00	20.00	20.00	20.00	20.00	20.00	20.00	18.11	16.40	14.94	13.69	12.60	11.64
	1.21	2 885	3 235	3 310	2.37	17.640	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	19.66	17.90	16.39	15.08	13.94
165																			
	0.76	1 940	1 940	2 025	2.60	19.534	20.00	20.00	20.00	20.00	20.00	20.00	18.06	16.25	14.72	13.42	12.30	11.32	10.47
	0.91	2 365	2 610	2 700	2.62	20.776	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	18.38	16.74	15.34	14.11	13.05
	1.21	2 780	3 120	3 190	2.65	23.149	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	18.37	16.90	15.62
190																			
	0.76	1 735	1 735	1 810	3.05	29.363	20.00	20.00	20.00	20.00	20.00	20.00	20.00	19.16	17.36	15.82	14.50	13.35	12.34
	0.91	2 235	2 400	2 500	3.07	31.158	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	19.74	18.08	16.64	15.38
	1.21	2 640	2 950	3 030	3.10	34.610	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	19.94	18.42

- **The table is based on concrete density of 1 840 kg/m^3 and minimum compressive resistance (f'_c) equal to 25 MPa at 28 days.**
- Refer to page 15 for other notes.

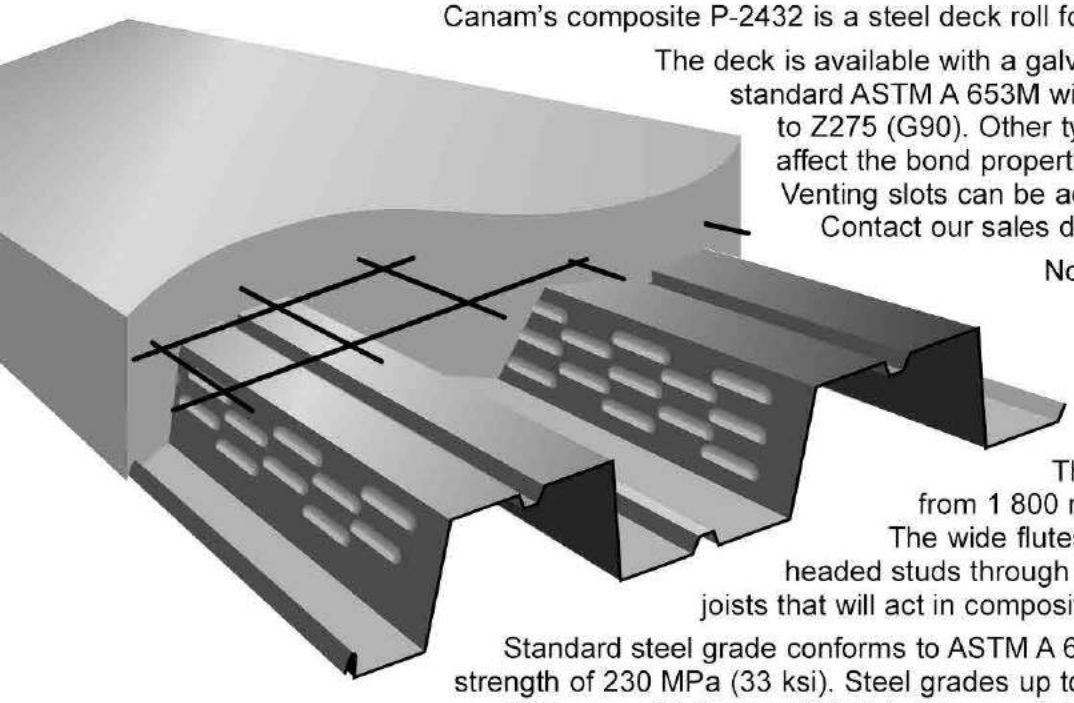
Factored Resistance Table of Composite Slab (psf)

Lightweight Concrete - Imperial

Slab Thick. (in.)	Deck Thick. (in.)	Maximum Unshored Span Single (ft.-in.)	Double (ft.-in.)	Triple (ft.-in.)	Self Weight (psf)	Comp. Mom. of Inertia (in^4)	SPAN (ft.-in.) 5'-0"	5'-6"	6'-0"	6'-6"	7'-0"	7'-6"	8'-0"	8'-6"	9'-0"	9'-6"	10'-0"	10'-6"	11'-0"
4.50																			
	0.030	7' - 8"	8' - 4"	8' - 8"	35.3	5.100	420	420	388	337	295	261	234	210	191	174	159	147	136
	0.036	9' - 0"	9' - 9"	10' - 1"	35.6	5.444	420	420	420	420	369	327	292	262	238	217	198	183	169
	0.048	10' - 6"	11' - 8"	12' - 0"	36.2	6.095	420	420	420	420	420	392	350	314	285	259	238	219	202
5.00																			
	0.030	7' - 4"	7' - 9"	8' - 1"	40.1	6.894	420	420	420	385	337	299	267	240	218	199	182	168	155
	0.036	8' - 7"	9' - 5"	9' - 9"	40.4	7.351	420	420	420	420	420	373	333	300	272	248	227	209	193
	0.048	10' - 1"	11' - 3"	11' - 6"	41.0	8.219	420	420	420	420	420	420	400	359	326	297	272	250	231
5.50																			
	0.030	7' - 1"	7' - 2"	7' - 6"	44.9	9.066	420	420	420	420	380	336	300	270	245	223	205	189	174
	0.036	8' - 3"	9' - 1"	9' - 5"	45.2	9.657	420	420	420	420	420	420	375	338	306	279	255	235	217
	0.048	9' - 8"	10' -10"	11' - 1"	45.8	10.781	420	420	420	420	420	420	420	405	366	334	306	281	260
6.00																			
	0.030	6' - 9"	6' - 9"	7' - 0"	49.7	11.650	420	420	420	420	420	374	334	300	272	248	227	209	194
	0.036	8' - 0"	8' -10"	9' - 1"	50.0	12.396	420	420	420	420	420	420	417	375	340	310	284	261	241
	0.048	9' - 4"	10' - 6"	10' - 9"	50.6	13.819	420	420	420	420	420	420	420	420	407	371	340	313	289
6.50																			
	0.030	6' - 4"	6' - 4"	6' - 7"	54.5	14.679	420	420	420	420	420	411	367	330	299	273	250	230	213
	0.036	7' - 9"	8' - 6"	8' -10"	54.8	15.601	420	420	420	420	420	420	420	413	374	341	312	287	265
	0.048	9' - 1"	10' - 2"	10' - 5"	55.4	17.365	420	420	420	420	420	420	420	420	420	408	374	344	318
7.50																			
	0.030	5' - 8"	5' - 8"	5' -11"	64.1	22.206	420	420	420	420	420	420	420	391	354	323	296	272	252
	0.036	7' - 3"	7' -10"	8' - 2"	64.3	23.545	420	420	420	420	420	420	420	420	420	403	369	339	314
	0.048	8' - 7"	9' - 8"	9' -11"	64.9	26.122	420	420	420	420	420	420	420	420	420	420	420	407	376

- **The table is based on concrete density of 115 lb/ft^3 and minimum compressive resistance (f'_c) equal to 4 000 psi at 28 days.**
- Refer to page 16 for other notes.

P-2432 COMPOSITE



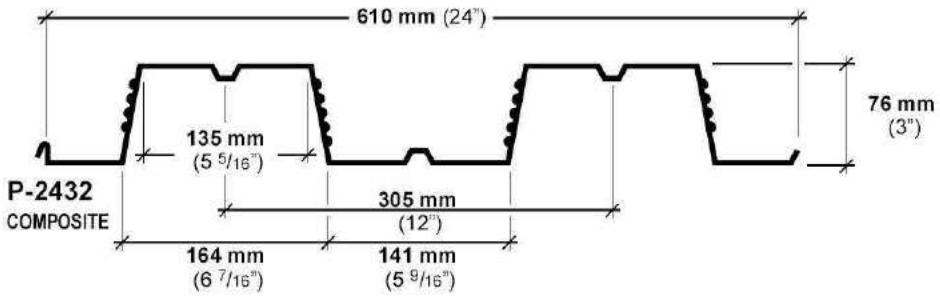
Canam's composite P-2432 is a steel deck roll formed to cover 610 mm (24 in.).

The deck is available with a galvanized coating according to the standard ASTM A 653M with zinc thickness corresponding to Z275 (G90). Other types of steel sheet finishes may affect the bond properties between deck and concrete. Venting slots can be added to the bottom of the flutes. Contact our sales department for more information.

Nominal thicknesses are 0.76 mm (0.030 in.), 0.91 mm (0.036 in.) and 1.21 mm (0.048 in.). The flutes are 76 mm (3 in.) deep and are spaced at 305 mm (12 in.) center to center. The deck can be rolled to lengths from 1 800 mm (6 ft.) to 12 200 mm (40 ft.). The wide flutes provide enough space to weld headed studs through the deck to the top of beams or joists that will act in composite action with the concrete slab.

Standard steel grade conforms to ASTM A 653M SS Grade 230 with a yield strength of 230 MPa (33 ksi). Steel grades up to 350 MPa (50 ksi) and material thickness of 1.07 mm (0.042 in.) are available given sufficient delivery time.

Dimensions



Physical Properties

Type	Nominal Thickness	Design Thickness	Overall Depth	Weight	Section Modulus		Moment of Inertia	Steel Area	Center of Gravity
					M^+	M^-			
	mm (in.)	mm (in.)	mm (in.)	kg/m² (lb/ft²)	mm³ (in³)	mm³ (in³)	mm⁴ (in⁴)	mm² (in²)	mm (in.)
22	0.76 (0.030)	0.762 (0.0300)	76.2 (3.00)	9.46 (1.94)	24 496 (0.4556)	24 528 (0.4562)	1 065 293 (0.7801)	1 131 (0.534)	37.51 (1.48)
20	0.91 (0.036)	0.909 (0.0358)	76.4 (3.01)	11.21 (2.30)	31 156 (0.5795)	31 273 (0.5817)	1 320 131 (0.9667)	1 350 (0.638)	37.59 (1.48)
18	1.21 (0.048)	1.217 (0.0479)	76.7 (3.02)	14.71 (3.01)	45 921 (0.8541)	46 310 (0.8614)	1 813 851 (1.3283)	1 800 (0.850)	37.74 (1.49)

- Effective properties are based on a unit width of 1 000 mm (S.I. units) or 12 in. (imperial units).
- Material according to ASTM A 653M SS Grade 230, yield strength of 230 MPa (33 ksi).
- Tables are calculated according to CAN/CSA-S136-01 standard.

Factored Resistance Table of Composite Slab (kPa)

Metric

Slab Thick. (mm)	Deck Thick. (mm)	Maximum Unshored Span Single (mm)	Double (mm)	Triple (mm)	Self Weight (kPa)	Comp. Mom. of Inertia (10^6 mm^4)	SPAN (mm) 2 100	2 250	2400	2 550	2 700	2 850	3 000	3 150	3 300	3 450	3 600	3 750	3 900
125																			
	0.76	2 455	2 455	2 555	2.14	10.569	17.78	15.48	13.61	12.06	10.75	9.65	8.71	7.90	7.20	6.59	6.05	5.57	5.15
	0.91	3 375	3 375	3 515	2.15	11.200	20.00	17.76	15.75	14.07	12.66	11.46	10.43	9.55	8.77	8.09	7.49	6.96	6.49
	1.21	4 040	4 275	4 420	2.18	12.413	20.00	20.00	20.00	19.68	17.97	16.50	15.22	14.11	13.13	12.27	11.50	10.81	10.20
140																			
	0.76	2 220	2 220	2 310	2.49	14.566	20.00	18.14	15.94	14.12	12.60	11.31	10.20	9.25	8.43	7.72	7.09	6.53	6.04
	0.91	3 050	3 050	3 180	2.51	15.410	20.00	20.00	18.45	16.49	14.83	13.43	12.23	11.18	10.28	9.48	8.78	8.16	7.61
	1.21	3 845	4 070	4 205	2.54	17.026	20.00	20.00	20.00	20.00	20.00	19.33	17.84	16.54	15.39	14.38	13.48	12.67	11.95
150																			
	0.76	2 085	2 085	2 170	2.73	17.731	20.00	19.91	17.50	15.50	13.83	12.41	11.20	10.16	9.26	8.47	7.78	7.17	6.63
	0.91	2 870	2 870	2 990	2.74	18.742	20.00	20.00	20.00	18.10	16.28	14.74	13.42	12.28	11.28	10.41	9.64	8.96	8.35
	1.21	3 730	3 945	4 080	2.77	20.676	20.00	20.00	20.00	20.00	20.00	20.00	19.58	18.15	16.90	15.79	14.80	13.91	13.12
165																			
	0.76	1 915	1 915	1 995	3.08	23.305	20.00	20.00	19.83	17.57	15.67	14.06	12.69	11.51	10.49	9.60	8.81	8.12	7.51
	0.91	2 635	2 635	2 745	3.10	24.605	20.00	20.00	20.00	20.00	18.46	16.71	15.21	13.91	12.79	11.80	10.92	10.15	9.46
	1.21	3 585	3 785	3 910	3.13	27.092	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	19.16	17.90	16.77	15.77	14.87
190																			
	0.76	1 680	1 680	1 750	3.67	35.048	20.00	20.00	20.00	20.00	18.74	16.82	15.18	13.77	12.55	11.48	10.54	9.72	8.98
	0.91	2 315	2 315	2 410	3.68	36.933	20.00	20.00	20.00	20.00	20.00	19.99	18.19	16.64	15.29	14.11	13.07	12.14	11.32
	1.21	3 385	3 550	3 670	3.71	40.548	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	18.87	17.79
200																			
	0.76	1 605	1 605	1 670	3.90	40.689	20.00	20.00	20.00	20.00	19.97	17.92	16.18	14.67	13.37	12.23	11.23	10.35	9.57
	0.91	2 210	2 210	2 300	3.92	42.845	20.00	20.00	20.00	20.00	20.00	20.00	19.39	17.74	16.30	15.04	13.92	12.94	12.06
	1.21	3 315	3 465	3 585	3.95	46.985	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	18.96

- **The table is based on concrete density of 2 400 kg/m^3 and minimum compressive resistance (f'_c) equal to 20 MPa at 28 days.**
- During construction, the steel deck must support itself, the concrete and a construction uniform load of 1 kPa or a transverse load of 2 kN/m as specified by the Canadian Sheet Steel Building Institute.
- The maximum unshored spans shown in the table are established for bending under the slab self-weight and the construction loads, for web crippling and for the deflection under wet concrete to be less than the span over 180 (L/180). The web crippling resistance is calculated assuming the end bearing length equal to 76 mm and the interior bearing length equal to 152 mm.

  If the bearing length is shorter, the design engineer must verify the web crippling factored resistance with the reaction produced by wet concrete and construction factored loads (refer to page 24 for web crippling tables and examples).
- Contact Canam sales personnel when the total uniform load exceeds 20 kPa, as this is an indication that significant concentrated loads will be used.The composite slab and its reinforcing should be verified for the effect of concentrated loads (see notes on page 5).
- Shaded values indicate that the deck should be shored at mid-span during the pour and the curing of concrete for those spans and concrete thickness conditions. Shaded values correspond to the maximum unshored span values shown at the left of the table.
- The design engineer is responsible for specifying size and location of the wire mesh in the concrete slab in order to respect current concrete practices.

Example

Triple span of 2 850 mm, total slab thickness of 140 mm with 65 mm of concrete cover on top of 76 mm deck profile.

Once the concrete is cured, the composite slab will have to support these loads:

Dead load = 1.50 kPa
Service live load = 4.80 kPa

According to the table of maximum unshored span above, we need to use a deck with a nominal thickness of 0.91 mm for a triple span condition.

Deck and concrete weight is 2.51 kPa (shown in the table).

Total factored load

$w_f = 1.25 \times (2.51 + 1.50) + 1.5 \times 4.80 = 12.21$ kPa

Factored resistance

$w_r = 13.43$ kPa for a span of 2 850 mm, with a 140 mm slab and a 0.91 mm thick deck.

$w_r > w_f$ OK

Service load w = 4.80 kPa

Composite moment of inertia is 15.410 x10^6 mm^4 (from the table).

$$\text{Deflection} = \frac{5\, w\, L^4}{384\, E_s\, I_{comp}} = \frac{5 \times 4.80 \times 2\,850^4}{384 \times 203\,000 \times 15\,410\,000}$$

$$= 1.3 \text{ mm} < \frac{2\,850}{360} = 7.9 \text{ mm} \quad \text{OK}$$

Factored Resistance Table of Composite Slab (psf)

Imperial

Slab Thick. (in.)	Deck Thick. (in.)	Maximum Unshored Span			Self Weight (psf)	Comp. Mom. of Inertia (in^4)	SPAN (ft.-in.)												
		Single (ft.-in.)	Double (ft.-in.)	Triple (ft.-in.)			7'-0"	7'-6"	8'-0"	8'-6"	9'-0"	9'-6"	10'-0"	10'-6"	11'-0"	11'-6"	12'-0"	12'-6"	13'-0"
5.00																			
	0.030	7' -11"	7' -11"	8' - 3"	45.7	8.167	368	320	282	249	223	200	180	163	149	136	125	115	107
	0.036	10' -10"	10' -10"	11' - 4"	46.0	8.650	419	368	327	292	263	238	217	198	182	168	156	145	135
	0.048	13' - 1"	13' -11"	14' - 4"	46.7	9.578	420	420	420	410	374	344	317	294	274	256	240	226	213
5.50																			
	0.030	7' - 3"	7' - 3"	7' - 7"	51.9	10.699	420	366	322	285	254	228	206	187	170	156	143	132	122
	0.036	10' - 0"	10' - 0"	10' - 5"	52.3	11.316	420	420	373	333	300	272	247	226	208	192	178	165	154
	0.048	12' - 7"	13' - 4"	13' - 9"	52.9	12.497	420	420	420	420	420	393	362	336	313	292	274	258	243
6.00																			
	0.030	6' - 8"	6' - 8"	7' - 0"	58.2	13.713	420	411	362	320	286	256	231	210	191	175	161	148	137
	0.036	9' - 3"	9' - 3"	9' - 8"	58.5	14.488	420	420	419	375	337	305	278	254	234	216	200	186	173
	0.048	12' - 1"	12' -10"	13' - 3"	59.2	15.970	420	420	420	420	420	420	408	378	352	329	308	290	273
6.50																			
	0.030	6' - 3"	6' - 3"	6' - 6"	64.4	17.255	420	420	402	356	317	285	257	233	212	194	178	164	152
	0.036	8' - 7"	8' - 7"	8' -11"	64.8	18.212	420	420	420	416	375	339	309	283	260	240	222	206	192
	0.048	11' - 9"	12' - 4"	12' - 9"	65.4	20.044	420	420	420	420	420	420	420	420	391	365	342	322	304
7.50																			
	0.030	5' - 6"	5' - 6"	5' - 8"	76.9	26.107	420	420	420	420	380	341	308	280	255	233	214	197	182
	0.036	7' - 6"	7' - 6"	7' -10"	77.3	27.502	420	420	420	420	420	407	370	339	311	287	266	247	231
	0.048	11' - 1"	11' - 7"	12' - 0"	77.9	30.178	420	420	420	420	420	420	420	420	420	420	411	386	364
8.00																			
	0.030	5' - 2"	5' - 2"	5' - 4"	83.2	31.505	420	420	420	420	412	370	334	303	276	252	232	214	197
	0.036	7' - 1"	7' - 1"	7' - 5"	83.5	33.157	420	420	420	420	420	420	401	367	337	311	288	268	250
	0.048	10' - 9"	11' - 3"	11' - 8"	84.2	36.330	420	420	420	420	420	420	420	420	420	420	420	418	394

- **The table is based on concrete density of 150 lb/ft^3 and minimum compressive resistance (f'_c) equal to 3 000 psi at 28 days.**
- During construction, the steel deck must support itself, the concrete and a construction uniform load of 21 psf or a transverse load of 137 plf as specified by the Canadian Sheet Steel Building Institute.
- The maximum unshored spans shown in the table are established for bending under the slab self-weight and the construction loads, for web crippling and for the deflection under wet concrete to be less than the span over 180 (L/180). The web crippling resistance is calculated assuming the end bearing length equal to 3 in. and the interior bearing length equal to 6 in.

  If the bearing length is shorter, the design engineer must verify the web crippling factored resistance with the reaction produced by wet concrete and construction factored loads (refer to page 24 for web crippling tables and examples).
- Contact Canam sales personnel when the total uniform load exceeds 420 psf, as this is an indication that significant concentrated loads will be used. The composite slab and its reinforcing should be verified for the effect of concentrated loads (see notes on page 5).
- Shaded values indicate that the deck should be shored at mid-span during the pour and the curing of concrete for those spans and concrete thickness conditions. Shaded values correspond to the maximum unshored span values shown at the left of the table.
- The design engineer is responsible for specifying size and location of the wire mesh in the concrete slab in order to respect current concrete practices.

Example

Triple span of 9'-6", total slab thickness of 5 1/2" with 2 1/2" of concrete cover on top of 3" deck profile.

Once the concrete is cured, the composite slab will have to support these loads:

Dead load = 30 psf
Service live load = 100 psf

According to the table of maximum unshored span above, we need to use a deck with a nominal thickness of 0.036" for a triple span condition.

Deck and concrete weight is 52.3 psf (shown in the table).

Total factored load

$w_f = 1.25 \times (52.3 + 30) + 1.5 \times 100 = 253$ psf

Factored resistance

$w_r = 272$ psf for a span of 9'-6", with a 5 1/2" slab and a 0.036" thick deck.

$w_r > w_f$ **OK**

Service load w = 100 psf

Composite moment of inertia is 11.316 in^4 (from the table).

$$\text{Deflection} = \frac{5\,w\,L^4}{384\,E_s\,I_{comp}} = \frac{5 \times 100 \times 9.5^4 \times 1\,728}{384 \times 29\,500 \times 11.316 \times 1\,000}$$

$$= 0.05" < \frac{114"}{360} = 0.32" \quad \text{OK}$$

Factored Resistance Table of Composite Slab (kPa)

Lightweight Concrete - Metric

Slab Thick. (mm)	Deck Thick. (mm)	Maximum Unshored Span			Self Weight (kPa)	Comp. Mom. of Inertia (10^6 mm^4)	SPAN (mm)												
		Single (mm)	Double (mm)	Triple (mm)			2 100	2 250	2 400	2 550	2 700	2 850	3 000	3 150	3 300	3 450	3 600	3 750	3 900
125																			
	0.76	2 865	2 865	2 980	1.66	8.555	17.78	15.48	13.61	12.06	10.75	9.65	8.71	7.90	7.20	6.59	6.05	5.57	5.15
	0.91	3 755	3 810	3 940	1.68	9.131	20.00	17.76	15.75	14.07	12.66	11.46	10.43	9.55	8.77	8.09	7.49	6.96	6.49
	1.21	4 385	4 615	4 770	1.71	10.229	20.00	20.00	20.00	19.68	17.97	16.50	15.22	14.11	13.13	12.27	11.50	10.81	10.20
140																			
	0.76	2 615	2 615	2 725	1.93	11.751	20.00	18.14	15.94	14.12	12.60	11.31	10.20	9.25	8.43	7.72	7.09	6.53	6.04
	0.91	3 555	3 595	3 745	1.95	12.518	20.00	20.00	18.45	16.49	14.83	13.43	12.23	11.18	10.28	9.48	8.78	8.16	7.61
	1.21	4 175	4 410	4 560	1.98	13.972	20.00	20.00	20.00	20.00	20.00	19.33	17.84	16.54	15.39	14.38	13.48	12.67	11.95
150																			
	0.76	2 470	2 470	2 575	2.11	14.281	20.00	19.91	17.50	15.50	13.83	12.41	11.20	10.16	9.26	8.47	7.78	7.17	6.63
	0.91	3 400	3 400	3 540	2.13	15.198	20.00	20.00	20.00	18.10	16.28	14.74	13.42	12.28	11.28	10.41	9.64	8.96	8.35
	1.21	4 055	4 290	4 435	2.16	16.937	20.00	20.00	20.00	20.00	20.00	20.00	19.58	18.15	16.90	15.79	14.80	13.91	13.12
165																			
	0.76	2 285	2 285	2 380	2.38	18.729	20.00	20.00	19.83	17.57	15.67	14.06	12.69	11.51	10.49	9.60	8.81	8.12	7.51
	0.91	3 145	3 145	3 275	2.40	19.910	20.00	20.00	20.00	20.00	18.46	16.71	15.21	13.91	12.79	11.80	10.92	10.15	9.46
	1.21	3 900	4 130	4 265	2.43	22.145	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	19.16	17.90	16.77	15.77	14.87
190																			
	0.76	2 030	2 030	2 115	2.83	28.069	20.00	20.00	20.00	20.00	18.74	16.82	15.18	13.77	12.55	11.48	10.54	9.72	8.98
	0.91	2 795	2 795	2 910	2.85	29.787	20.00	20.00	20.00	20.00	20.00	19.99	18.19	16.64	15.29	14.11	13.07	12.14	11.32
	1.21	3 685	3 895	4 025	2.88	33.047	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	18.87	17.79
200																			
	0.76	1 940	1 940	2 025	3.01	32.542	20.00	20.00	20.00	20.00	19.97	17.92	16.18	14.67	13.37	12.23	11.23	10.35	9.57
	0.91	2 675	2 675	2 785	3.03	34.511	20.00	20.00	20.00	20.00	20.00	20.00	19.39	17.74	16.30	15.04	13.92	12.94	12.06
	1.21	3 610	3 810	3 940	3.06	38.251	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	18.96

- **The table is based on concrete density of 1 840 kg/m^3 and minimum compressive resistance (f'_c) equal to 25 MPa at 28 days.**
- Refer to page 19 for other notes.

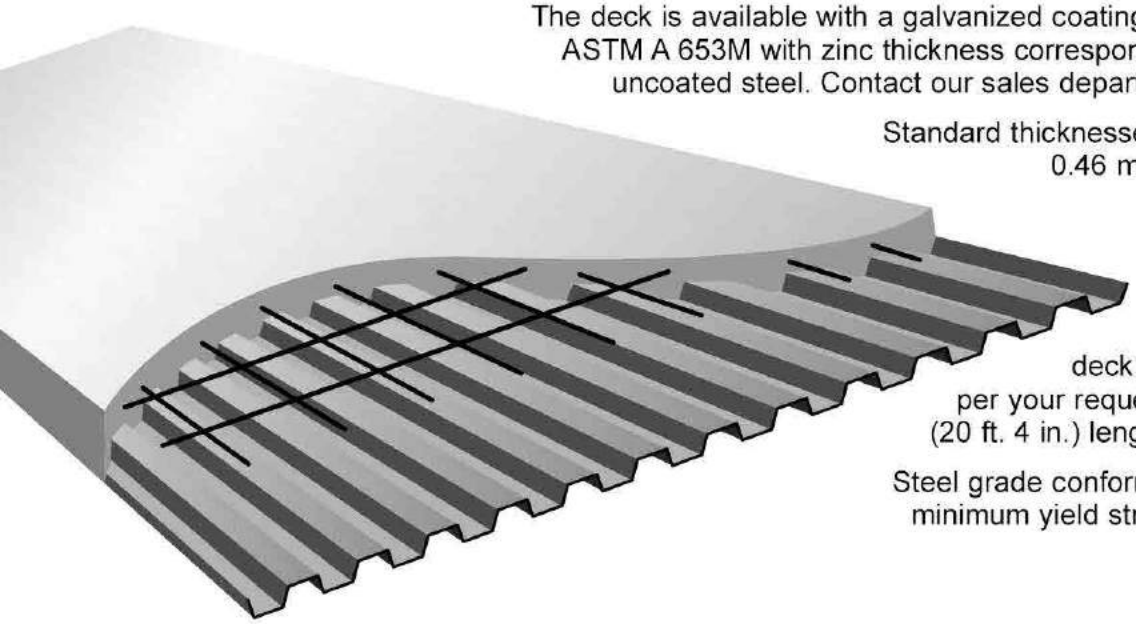
Factored Resistance Table of Composite Slab (psf)

Lightweight Concrete - Imperial

Slab Thick. (in.)	Deck Thick. (in.)	Maximum Unshored Span			Self Weight (psf)	Comp. Mom. of Inertia (in^4)	SPAN (ft.-in.)												
		Single (ft.-in.)	Double (ft.-in.)	Triple (ft.-in.)			7'-0"	7'-6"	8'-0"	8'-6"	9'-0"	9'-6"	10'-0"	10'-6"	11'-0"	11'-6"	12'-0"	12'-6"	13'-0"
5.00																			
	0.030	9' - 3"	9' - 3"	9' - 7"	35.5	6.704	368	320	282	249	223	200	180	163	149	136	125	115	107
	0.036	12' - 2"	12' - 5"	12' -10"	35.8	7.147	419	368	327	292	263	238	217	198	182	168	156	145	135
	0.048	14' - 3"	15' - 0"	15' - 6"	36.5	7.993	420	420	420	410	374	344	317	294	274	256	240	226	213
5.50																			
	0.030	8' - 7"	8' - 7"	8' -11"	40.3	8.760	420	366	322	285	254	228	206	187	170	156	143	132	122
	0.036	11' - 8"	11' - 9"	12' - 3"	40.6	9.324	420	420	373	333	300	272	247	226	208	192	178	165	154
	0.048	13' - 8"	14' - 5"	14' -11"	41.3	10.397	420	420	420	420	420	393	362	336	313	292	274	258	243
6.00																			
	0.030	8' - 0"	8' - 0"	8' - 4"	45.1	11.206	420	411	362	320	286	256	231	210	191	175	161	148	137
	0.036	11' - 0"	11' - 0"	11' - 5"	45.4	11.914	420	420	419	375	337	305	278	254	234	216	200	186	173
	0.048	13' - 2"	13' -11"	14' - 5"	46.1	13.258	420	420	420	420	420	420	408	378	352	329	308	290	273
6.50																			
	0.030	7' - 5"	7' - 5"	7' - 9"	49.9	14.076	420	420	402	356	317	285	257	233	212	194	178	164	152
	0.036	10' - 3"	10' - 3"	10' - 8"	50.2	14.952	420	420	420	416	375	339	309	283	260	240	222	206	192
	0.048	12' - 9"	13' - 6"	14' - 0"	50.8	16.613	420	420	420	420	420	420	420	420	391	365	342	322	304
7.50																			
	0.030	6' - 7"	6' - 7"	6' -11"	59.4	21.227	420	420	420	420	380	341	308	280	255	233	214	197	182
	0.036	9' - 1"	9' - 1"	9' - 6"	59.8	22.509	420	420	420	420	420	407	370	339	311	287	266	247	231
	0.048	12' -0"	12' - 9"	13' - 2"	60.4	24.943	420	420	420	420	420	420	420	420	420	420	411	386	364
8.00																			
	0.030	6' - 3"	6' - 3"	6' - 6"	64.2	25.575	420	420	420	420	412	370	334	303	276	252	232	214	197
	0.036	8' - 7"	8' - 7"	9' - 0"	64.6	27.095	420	420	420	420	420	420	401	367	337	311	288	268	250
	0.048	11' - 9"	12' - 5"	12' -10"	65.2	29.988	420	420	420	420	420	420	420	420	420	420	420	418	394

- **The table is based on concrete density of 115 lb/ft^3 and minimum compressive resistance (f'_c) equal to 4 000 psi at 28 days.**
- Refer to page 20 for other notes.

P-3012 FORM DECK



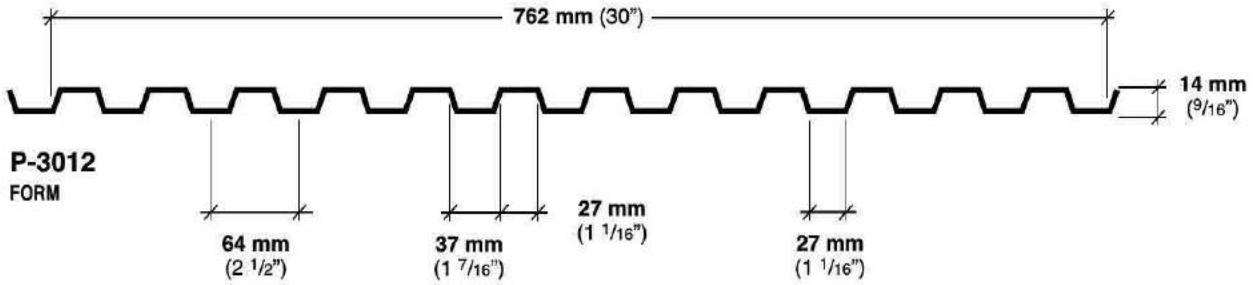
Canam's P-3012 is a steel deck roll formed to cover 762 mm (30 in.).

The deck is available with a galvanized coating according to the standard ASTM A 653M with zinc thickness corresponding to Z275 (G90) or with uncoated steel. Contact our sales department for more information.

Standard thicknesses are 0.38 mm (0.015 in.), 0.46 mm (0.018 in.) and 0.61 mm (0.024 in.). The flutes are 14 mm (9/16 in.) deep and are spaced at 64 mm (2.5 in.) center to center. The deck can be rolled to lengths as per your request or stocked in 6 200 mm (20 ft. 4 in.) length to cover multiple spans.

Steel grade conforms to ASTM A 653M with a minimum yield strength of 410 MPa (60 ksi).

Dimensions



Physical Properties

Type	Nominal Thickness	Design Thickness	Overall Depth	Weight	Section Modulus	Moment of Inertia
	mm (in.)	mm (in.)	mm (in.)	kg/m² (lb/ft²)	mm³ (in³)	mm⁴ (in⁴)
28	0.38 (0.015)	0.378 (0.0149)	14.2 (0.56)	4.37 (0.90)	1 834 (0.0341)	15 270 (0.0112)
26	0.46 (0.018)	0.455 (0.0179)	14.3 (0.56)	5.15 (1.06)	2 386 (0.0444)	19 318 (0.0141)
24	0.61 (0.024)	0.607 (0.0239)	14.4 (0.57)	6.71 (1.37)	3 566 (0.0663)	27 483 (0.0201)

- Effective properties are based on a unit width of 1 000 mm (S.I. units) or 12 in. (imperial units).
- Material according to ASTM A 653M, minimum yield strength of 410 MPa (60 ksi).
- Tables are calculated according to CAN/CSA-S136-01 standard.

Maximum Concrete Slab Thickness Table (mm)

Metric

Type	Nominal Thickness (mm)	SPAN (mm)						
		700	750	800	850	900	950	1 000
28	0.38	100	100	100	80	60	---	---
26	0.45	100	100	100	100	100	85	75
24	0.61	100	100	100	100	100	100	100

Factored Resistance Table of Concrete Slab with Wire Mesh (kPa)

Metric

Slab Thick. (mm)	Self Weight (kPa)	Welded Wire Fabric Designation	Wire Diam. (mm)	Wire Area (mm^2/m)	SPAN (mm)						
					700	750	800	850	900	950	1 000
65	1.47	152 x 152 MW 13.3 x MW 13.3	4.10	88.7*	11.85	10.32	9.07	8.03	7.17	6.49	5.80
		152 x 152 MW 18.7 x MW 18.7	4.88	124.5	20.00	18.61	16.36	14.49	12.93	11.60	10.47
		152 x 152 MW 25.8 x MW 25.8	5.74	171.5	20.00	18.75	17.58	16.55	15.63	14.81	13.71
75	1.71	152 x 152 MW 13.3 x MW 13.3	4.10	88.7*	14.22	12.38	10.88	9.64	8.60	7.72	6.97
		152 x 152 MW 18.7 x MW 18.7	4.88	124.5*	19.35	16.86	14.82	13.13	11.71	10.51	9.48
		152 x 152 MW 25.8 x MW 25.8	5.74	171.5	20.00	20.00	20.00	19.09	18.03	17.08	16.23
90	2.06	152 x 152 MW 18.7 x MW 18.7	4.88	124.5*	20.00	20.00	18.64	16.51	14.73	13.22	11.93
		152 x 152 MW 25.8 x MW 25.8	5.74	171.5	20.00	20.00	20.00	20.00	20.00	20.00	19.48
100	2.30	152 x 152 MW 18.7 x MW 18.7	4.88	124.5*	20.00	20.00	20.00	18.77	16.74	15.02	13.56
		152 x 152 MW 25.8 x MW 25.8	5.74	171.5*	20.00	20.00	20.00	20.00	20.00	20.00	18.14

Maximum Concrete Slab Thickness Table (in.)

Imperial

Type	Nominal Thickness (mm)	SPAN (ft.-in.)						
		2'-0"	2'-3"	2'-6"	2'-9"	3'-0"	3'-3"	3'-6"
28	0.015	4.00	4.00	4.00	3.50	---	---	---
26	0.018	4.00	4.00	4.00	4.00	3.75	3.00	2.50
24	0.024	4.00	4.00	4.00	4.00	4.00	4.00	3.50

Factored Resistance Table of Concrete Slab with Wire Mesh (psf)

Imperial

Slab Thick. (in.)	Self Weight (psf)	Welded Wire Fabric Designation	Wire Diam. (in.)	Wire Area ($in^2/ft.$)	SPAN (ft.-in.)						
					2'-0"	2'-3"	2'-6"	2'-9"	3'-0"	3'-3"	3'-6"
2.50	30	6 x 6 W2.1 x W2.1	0.162	0.042*	316	250	202	167	141	120	103
		6 x 6 W2.9 x W2.9	0.192	0.059	420	420	365	302	254	216	186
		6 x 6 W4.0 x W4.0	0.226	0.081	420	420	383	348	319	283	244
3.00	36	6 x 6 W2.1 x W2.1	0.162	0.042*	399	315	255	211	177	151	130
		6 x 6 W2.9 x W2.9	0.192	0.059*	420	420	348	288	242	206	178
		6 x 6 W4.0 x W4.0	0.226	0.081	420	420	420	418	383	354	314
3.50	42	6 x 6 W2.9 x W2.9	0.192	0.059*	420	420	420	349	293	250	215
		6 x 6 W4.0 x W4.0	0.226	0.081	420	420	420	420	420	412	383
4.00	49	6 x 6 W2.9 x W2.9	0.192	0.059*	420	420	420	410	345	294	253
		6 x 6 W4.0 x W4.0	0.226	0.081*	420	420	420	420	420	394	340

- Wire fabric steel: F_y = 450 MPa (65 ksi).
- The tables are based on concrete density of 2 400 kg/m^3 (150 lb/ft^3) and minimum compressive resistance f'_c = 20 MPa (3.00 ksi) at 28 days.
- Maximum spans of P-3012 form deck are calculated for different slab thicknesses taking into account:
  - The weight of wet concrete;
  - A construction load of 1 kPa (21 psf) uniformly distributed or a transverse load of 2 kN/m (137 plf) as specified by the Canadian Sheet Steel Building Institute;
  - A triple span condition;
  - A maximum deflection of the span over 240 (L/240) under the wet concrete;
  - The height of the steel form deck included in the slab thickness.
- The resistance of the slab is computed considering that welded wire mesh is held at mid-height of the concrete thickness above the deck.
- The reinforced slab must resist to a negative moment computed as $0.116\ w_f\ L^2$ over the support and to a positive moment computed as $0.100\ w_f\ L^2$ at mid-span. Maximum shear is computed as $0.620\ w_f\ L$.
- Steel form deck does not supply resistance under service load.
- Welded wire mesh area marked with an asterisk (*) means it does not satisfy the clause 7.8.1 of the CAN/CSA-A23.3-94 standard regarding minimum reinforcement.
- A total uniform load that exceeds 20 kPa (420 psf) is an indication that significant concentrated loads will be applied on that floor. In that case, the composite slab and its reinforcing should be verified for the effect of concentrated loads (see notes on page 5).

Example

Metric

Slab thickness = **65 mm**
Dead load = **1.50 kPa**
Service live load = **2.40 kPa**

Deck and concrete weight is 1.47 kPa (from the table).

Total factored load = 1.25 x (1.47 + 1.50) + 1.5 x 2.40 = 7.31 kPa

We can select a P-3012 form deck 0.38 mm thick with multiple spans of 850 mm on center for 65 mm slab with a welded wire fabric 152 x 152 x MW13.3 x MW13.3 maintained at mid-depth of the concrete thickness above the deck. Once cured, the concrete slab can safely support 8.03 kPa which is greater than the total factored load.

DESIGN AIDS - WEB CRIPPLING*

Web Crippling Factored Resistance Table (kN/m of width)

Metric

Profile	Type	Nominal Thickness (mm)	Reaction Type	BEARING LENGTH (mm)							
				40	50	65	75	90	100	115	125
P-3615 P-3606	22	0.76	End	11.00	11.84	12.95	13.62	14.54	15.12	15.93	16.44
			Interior	14.36	15.29	16.53	17.28	18.32	18.96	19.87	20.44
	20	0.91	End	15.23	16.35	17.83	18.73	19.97	20.74	21.83	22.52
			Interior	20.37	21.65	23.34	24.36	25.77	26.65	27.88	28.66
	18	1.21	End	25.97	27.77	30.17	31.61	33.61	34.85	36.60	37.71
			Interior	36.01	38.10	40.89	42.57	44.89	46.34	48.37	49.65
	16	1.52	End	38.62	41.18	44.59	46.64	49.48	51.24	53.73	55.30
			Interior	54.82	57.84	61.85	64.27	67.61	69.68	72.61	74.46
P-2436 P-2404	22	0.76	End	10.65	11.46	12.53	13.18	14.08	14.63	15.42	15.91
			Interior	16.83	17.92	19.38	20.26	21.47	22.22	23.29	23.96
	20	0.91	End	14.85	15.94	17.39	18.27	19.48	20.23	21.29	21.96
			Interior	23.54	25.01	26.96	28.14	29.77	30.78	32.21	33.11
	18	1.21	End	25.59	27.37	29.73	31.15	33.12	34.35	36.07	37.16
			Interior	40.80	43.18	46.34	48.24	50.87	52.51	54.81	56.27
	16	1.52	End	38.30	40.85	44.22	46.26	49.08	50.82	53.29	54.85
			Interior	61.41	64.79	69.28	71.99	75.73	78.05	81.33	83.40
P-3623	22	0.76	End	5.48	5.90	6.45	6.79	7.25	7.53	7.94	8.19
			Interior	7.99	8.51	9.20	9.62	10.20	10.56	11.06	11.38
	20	0.91	End	7.60	8.16	8.91	9.35	9.97	10.36	10.90	11.24
			Interior	11.22	11.92	12.85	13.41	14.19	14.67	15.35	15.78
	18	1.21	End	13.00	13.91	15.11	15.83	16.83	17.46	18.33	18.89
			Interior	19.54	20.68	22.19	23.10	24.37	25.15	26.25	26.95
	16	1.52	End	19.38	20.66	22.37	23.40	24.83	25.71	26.96	27.75
			Interior	29.49	31.12	33.28	34.58	36.37	37.49	39.07	40.06
P-2432	22	0.76	End	5.31	5.71	6.25	6.57	7.02	7.30	7.69	7.93
			Interior	8.31	8.86	9.57	10.01	10.61	10.98	11.51	11.84
	20	0.91	End	7.40	7.95	8.67	9.11	9.71	10.09	10.62	10.95
			Interior	11.64	12.37	13.34	13.92	14.73	15.23	15.93	16.38
	18	1.21	End	12.77	13.65	14.83	15.54	16.53	17.14	18.00	18.54
			Interior	20.22	21.40	22.96	23.91	25.21	26.02	27.16	27.88
	16	1.52	End	19.11	20.38	22.07	23.08	24.49	25.36	26.59	27.37
			Interior	30.46	32.14	34.37	35.71	37.57	38.72	40.35	41.38

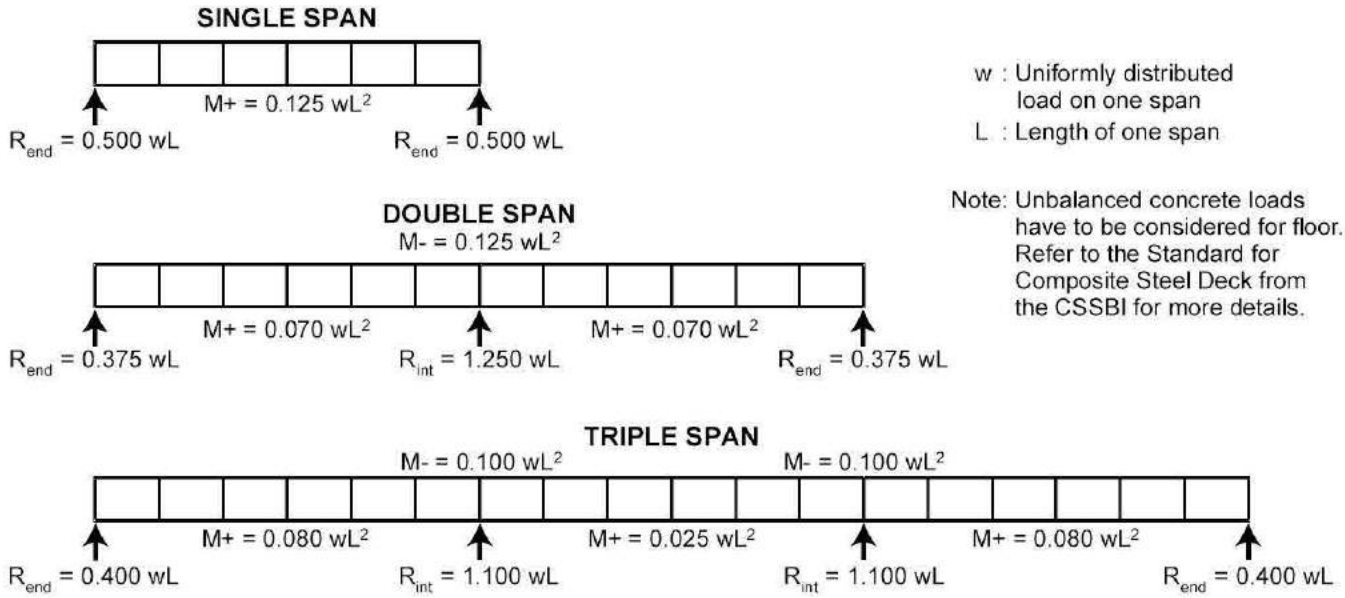
Web Crippling Factored Resistance Table (kip/ft. of width)

Imperial

Profile	Type	Nominal Thickness (in.)	Reaction Type	BEARING LENGTH (in.)							
				1 1/2"	2"	2 1/2"	3"	3 1/2"	4"	4 1/2"	5"
P-3615 P-3606	22	0.030	End	0.74	0.82	0.88	0.94	0.99	1.04	1.09	1.13
			Interior	0.97	1.05	1.12	1.19	1.25	1.31	1.36	1.41
	20	0.036	End	1.03	1.13	1.21	1.29	1.36	1.43	1.49	1.55
			Interior	1.38	1.49	1.59	1.68	1.76	1.84	1.91	1.97
	18	0.048	End	1.75	1.91	2.05	2.18	2.29	2.40	2.50	2.60
			Interior	2.44	2.62	2.78	2.93	3.06	3.19	3.31	3.42
	16	0.060	End	2.61	2.84	3.03	3.21	3.38	3.53	3.67	3.81
			Interior	3.71	3.98	4.21	4.42	4.62	4.80	4.97	5.13
P-2436 P-2404	22	0.030	End	0.72	0.79	0.85	0.91	0.96	1.01	1.05	1.10
			Interior	1.14	1.23	1.32	1.40	1.47	1.53	1.59	1.65
	20	0.036	End	1.00	1.10	1.18	1.26	1.33	1.39	1.46	1.51
			Interior	1.59	1.72	1.83	1.94	2.03	2.12	2.20	2.28
	18	0.048	End	1.73	1.88	2.02	2.15	2.26	2.37	2.47	2.56
			Interior	2.76	2.97	3.15	3.32	3.47	3.62	3.75	3.87
	16	0.060	End	2.59	2.81	3.01	3.19	3.35	3.50	3.64	3.78
			Interior	4.16	4.46	4.72	4.95	5.17	5.37	5.56	5.74
P-3623	22	0.030	End	0.37	0.41	0.44	0.47	0.49	0.52	0.54	0.56
			Interior	0.54	0.59	0.63	0.66	0.70	0.73	0.76	0.78
	20	0.036	End	0.51	0.56	0.61	0.64	0.68	0.71	0.75	0.78
			Interior	0.76	0.82	0.87	0.92	0.97	1.01	1.05	1.09
	18	0.048	End	0.88	0.96	1.03	1.09	1.15	1.20	1.25	1.30
			Interior	1.32	1.42	1.51	1.59	1.66	1.73	1.80	1.86
	16	0.060	End	1.31	1.42	1.52	1.61	1.69	1.77	1.84	1.91
			Interior	2.00	2.14	2.27	2.38	2.48	2.58	2.67	2.76
P-2432	22	0.030	End	0.36	0.39	0.42	0.45	0.48	0.50	0.53	0.55
			Interior	0.56	0.61	0.65	0.69	0.72	0.76	0.79	0.82
	20	0.036	End	0.50	0.55	0.59	0.63	0.66	0.70	0.73	0.75
			Interior	0.79	0.85	0.91	0.96	1.01	1.05	1.09	1.13
	18	0.048	End	0.86	0.94	1.01	1.07	1.13	1.18	1.23	1.28
			Interior	1.37	1.47	1.56	1.65	1.72	1.79	1.86	1.92
	16	0.060	End	1.29	1.40	1.50	1.59	1.67	1.75	1.82	1.89
			Interior	2.06	2.21	2.34	2.46	2.57	2.67	2.76	2.85

* Web crippling is the failure of the vertical element of the deck flute due to high point load or excessive reaction.

TYPICAL MOMENTS AND REACTIONS FOR ROOF



w : Uniformly distributed load on one span

L : Length of one span

Note: Unbalanced concrete loads have to be considered for floor. Refer to the Standard for Composite Steel Deck from the CSSBI for more details.

ROOF EXAMPLE — METRIC

Roof deck P-3615, 0.76 mm thick, span 1 650 mm. Dead load of 1.5 kPa and service load of 2.4 kPa. Exterior bearing width of 50 mm and interior bearing width of 100 mm.

Total factored load = 1.25 x 1.5 + 1.5 x 2.4 = 5.48 kPa

Single span
End reaction = 0.5 x 5.48 x 1 650 / 1 000
= 4.52 kN/m < 11.84 kN/m OK (from the table)

Double span
End reaction = 0.375 x 5.48 x 1 650 / 1 000
= 3.39 kN/m < 11.84 kN/m OK (from the table)
Interior reaction = 1.25 x 5.48 x 1 650 / 1 000
= 11.29 kN/m < 18.96 kN/m OK (from the table)

Triple span
End reaction = 0.4 x 5.48 x 1 650 / 1 000
= 3.61 kN/m < 11.84 kN/m OK (from the table)
Interior reaction = 1.1 x 5.48 x 1 650 / 1 000
= 9.94 kN/m < 18.96 kN/m OK (from the table)

ROOF EXAMPLE — IMPERIAL

Roof deck P-3615, 0.030" thick, span 5'-6". Dead load of 30 psf and service load of 50 psf. Exterior bearing width of 2" and interior bearing width of 4".

Total factored load = 1.25 x 30 + 1.5 x 50 = 112.5 psf

Single span
End reaction = 0.5 x 112.5 x 5.5 / 1 000
= 0.309 kip/ft. < 0.82 kip/ft. OK (from the table)

Double span
End reaction = 0.375 x 112.5 x 5.5 / 1 000
= 0.232 kip/ft. < 0.82 kip/ft. OK (from the table)
Interior reaction = 1.25 x 112.5 x 5.5 / 1 000
= 0.773 kip/ft. < 1.31 kip/ft. OK (from the table)

Triple span
End reaction = 0.4 x 112.5 x 5.5 / 1 000
= 0.248 kip/ft. < 0.82 kip/ft. OK (from the table)
Interior reaction = 1.1 x 112.5 x 5.5 / 1 000
= 0.681 kip/ft. < 1.31 kip/ft. OK (from the table)

FLOOR EXAMPLE — METRIC

Composite deck P-3623, 0.91 mm thick, triple span of 2 250 mm. Slab thickness of 125 mm, 75 mm of concrete over 50 mm deck profile. Exterior bearing width of 50 mm and interior bearing width of 100 mm. During the construction, the steel deck must support itself, the concrete and a construction uniform load of 1 kPa or a transverse load of 2 kN/m specified by the Canadian Sheet Steel Building Institute.

Deck and concrete weight = 2.44 kPa (from page 15)

Factored interior reaction:
P_f = maximum of (1.25 x 2.44 + 1.5 x 1) x 1.2 x 2.25 = 12.29 kN/m
or 1.25 x 2.44 x 1.2 x 2.25 + 1.5 x 2 x 0.575 = 9.96 kN/m
= 12.29 kN/m < 14.67 kN/m OK (from the table)

Factored end reaction:
P_f = maximum of (1.25 x 2.44 + 1.5 x 1) x 0.450 x 2.25 = 4.61 kN/m
or 1.25 x 2.44 x 0.450 x 2.25 + 1.5 x 2 x 0.400 = 4.29 kN/m
= 4.61 kN/m < 8.16 kN/m OK (from the table)

FLOOR EXAMPLE — IMPERIAL

Composite deck P-3623, 0.036" thick, triple span of 7'-6". Slab thickness of 5", 3" of concrete over 2" deck profile. Exterior bearing width of 2" and interior bearing width of 4". During the construction, the steel deck must support itself, the concrete and a construction uniform load of 21 psf or a transverse load of 137 plf specified by the Canadian Sheet Steel Building Institute.

Deck and concrete weight = 52.0 psf (from page 16)

Factored interior reaction:
P_f = maximum of (1.25 x 52.0 + 1.5 x 21) x 1.2 x 7.5 = 0.869 kip/ft.
or 1.25 x 52.0 x 1.2 x 7.5 + 1.5 x 137 x 0.575 = 0.703 kip/ft.
= 0.869 kip/ft. < 1.01 kip/ft. OK (from the table)

Factored end reaction:
P_f = maximum of (1.25 x 52.0 + 1.5 x 21) x 0.450 x 7.5 = 0.326 kip/ft.
or 1.25 x 52.0 x 0.450 x 7.5 + 1.5 x 137 x 0.400 = 0.302 kip/ft.
= 0.326 kip/ft. < 0.56 kip/ft. OK (from the table)

DESIGN AIDS - ROOF CANTILEVER

Maximum Roof Cantilever Table (mm)

Metric

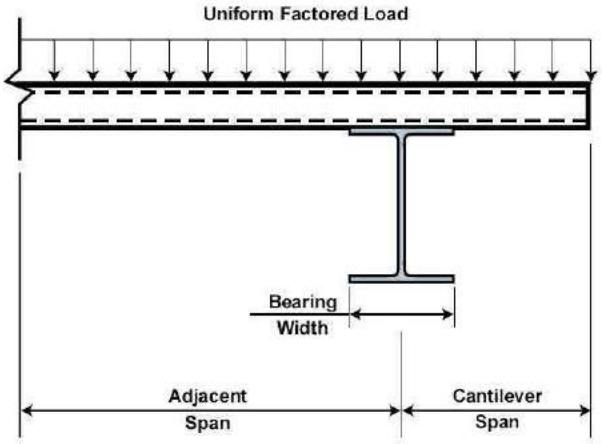
Profile	Type	Nominal Thickness (mm)	FACTORED LOAD (kPa) SERVICE LOAD (kPa)								Bearing Width (mm)
			3.00 2.00	3.60 2.40	4.20 2.80	4.80 3.20	5.40 3.60	6.00 4.00	6.60 4.40	7.20 4.80	
P-3615 P-3606	22	0.76	650	650	650	650	625	595	565	540	100
	20	0.91	825	825	800	750	705	670	635	610	
	18	1.21	955	910	870	840	815	775	735	705	
	16	1.52	1 015	965	925	895	865	840	820	785	
P-2436 P-2404	22	0.76	1 395	1 270	1 175	1 075	955	860	780	715	150
	20	0.91	1 540	1 405	1 300	1 215	1 145	1 085	1 035	985	
	18	1.21	1 680	1 600	1 505	1 405	1 325	1 255	1 200	1 145	
	16	1.52	1 785	1 700	1 630	1 570	1 480	1 400	1 335	1 280	

Maximum Roof Cantilever Table (ft.-in.)

Imperial

Profile	Type	Nominal Thickness (in.)	FACTORED LOAD (psf) SERVICE LOAD (psf)								Bearing Width (in.)
			45 30	60 40	75 50	90 60	105 70	120 80	135 90	150 100	
P-3615 P-3606	22	0.76	2' - 1"	2' - 1"	2' - 1"	2' - 1"	2' - 1"	2' - 0"	1' -10"	1' - 9"	4"
	20	0.91	2' - 7"	2' - 7"	2' - 7"	2' - 6"	2' - 4"	2' - 2"	2' - 0"	1' - 11"	
	18	1.21	3' - 5"	3' - 2"	2' - 11"	2' - 10"	2' - 8"	2' - 7"	2' - 5"	2' - 3"	
	16	1.52	3' - 7"	3' - 4"	3' - 2"	3' - 0"	2' - 10"	2' - 9"	2' - 8"	2' - 7"	
P-2436 P-2404	22	0.76	5' - 2"	4' - 6"	4' - 0"	3' - 8"	3' - 4"	2' -11"	2' - 7"	2' - 4"	6"
	20	0.91	5' - 7"	5' - 0"	4' - 5"	4' - 1"	3' - 9"	3' - 6"	3' - 4"	3' - 1"	
	18	1.21	6' - 0"	5' - 7"	5' - 3"	4' - 9"	4' - 5"	4' - 2"	3' - 11"	3' - 8"	
	16	1.52	6' - 4"	5' -11"	5' - 7"	5' - 3"	5' - 0"	4' - 8"	4' - 5"	4' - 2"	

- The maximum roof cantilevers shown in the tables are checked for bending under the factored uniform load, for web crippling with the specified bearing length, and for the deflection to be less than the span over 120 (L/120) or 19 mm (3/4 in.).
- Also, the maximum roof cantilevers are verified to support a transverse load of 2 kN/m (137 plf).
- The sidelaps must be attached at the end of the cantilever and at a maximum of 300 mm (12 in.) on center from the end.
- The deck must be completely attached to the supports and at the sidelaps before any load is applied to the cantilever.
- A structural engineer must be consulted if the cantilever span exceeds one third (1/3) of the adjacent span.



Maximum Cantilever Span for Concrete Pour Table (mm)

Metric

Profile	Type	Nominal Thickness (mm)	SLAB THICKNESS (mm)								Bearing Width (mm)
			100	115	125	140	150	165	190	200	
P-3615 P-3606	22	0.76	570	555	545	530	525	510	495	490	100
	20	0.91	610	590	580	560	550	540	520	510	
	18	1.21	650	630	615	600	590	575	555	550	
P-3623	22	0.76	720	710	705	695	690	685	600	565	125
	20	0.91	740	715	700	680	675	670	660	655	
	18	1.21	795	765	750	730	715	700	675	665	
P-2432	22	0.76	N/A	N/A	1 030	1 015	1 005	940	780	730	150
	20	0.91	N/A	N/A	1 010	1 000	990	980	965	955	
	18	1.21	N/A	N/A	1 080	1 045	1 025	1 000	960	945	

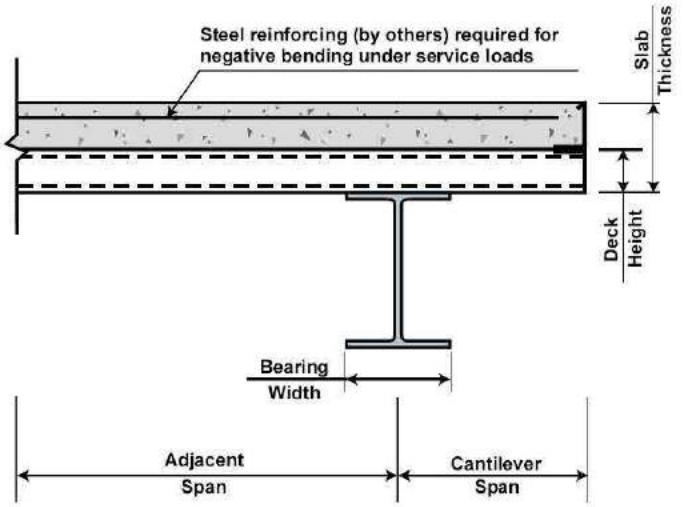
Maximum Cantilever Span for Concrete Pour Table (ft.-in.)

Imperial

Profile	Type	Nominal Thickness (in.)	SLAB THICKNESS (in.)								Bearing Width (in.)
			4"	4 1/2"	5"	5 1/2"	6"	6 1/2"	7 1/2"	8"	
P-3615 P-3606	22	0.76	1' -10"	1' - 9"	1' - 9"	1' - 9"	1' - 8"	1' - 8"	1' - 7"	1' - 7"	4"
	20	0.91	2' - 0"	1' -11"	1' -10"	1' -10"	1' - 9"	1' - 9"	1' - 8"	1' - 8"	
	18	1.21	2' - 1"	2' - 0"	2' - 0"	1' - 11"	1' - 11"	1' -10"	1' - 9"	1' - 9"	
P-3623	22	0.76	2' - 4"	2' - 3"	2' - 3"	2' - 3"	2' - 3"	2' - 2"	1' -11"	1' -10"	5"
	20	0.91	2' - 5"	2' - 4"	2' - 3"	2' - 2"	2' - 2"	2' - 2"	2' - 1"	2' - 1"	
	18	1.21	2' - 7"	2' - 6"	2' - 5"	2' - 4"	2' - 4"	2' - 3"	2' - 2"	2' - 2"	
P-2432	22	0.76	N/A	N/A	3' - 4"	3' - 3"	3' - 3"	3' - 1"	2' - 6"	2' - 4"	6"
	20	0.91	N/A	N/A	3' - 3"	3' - 3"	3' - 2"	3' - 2"	3' - 1"	3' - 1"	
	18	1.21	N/A	N/A	3' - 6"	3' - 5"	3' - 4"	3' - 3"	3' - 1"	3' - 1"	

N/A Not applicable

- The tables are based on a concrete weight of 2 400 kg/m^3 (150 lb/ft^3).
- The maximum floor cantilevers shown in the table are checked for bending under the self weight and the construction loads, for web crippling with the specified bearing length, and for the deflection under wet concrete to be less than the span over 120 (L/120) or 19 mm (3/4").
- During the construction, the steel deck must support itself, the wet concrete and a construction uniform load of 1 kPa (21 psf) or a transverse load of 2 kN/m (137 plf) as specified by the Canadian Sheet Steel Building Institute.
- The sidelaps must be attached at the end of the cantilever and at a maximum of 300 mm (12 in.) on center from the end.
- The deck must be completely attached to the supports and at the sidelaps before any load is applied to the cantilever.
- A structural engineer must be consulted if the cantilever span exceeds one third (1/3) of the adjacent span.
- The designer is responsible to add steel reinforcement for negative bending under service loads in order to respect the standard CAN/CSA A23.3-94.



DESIGN AIDS - POUR STOP

POUR STOP SELECTION TABLE — METRIC

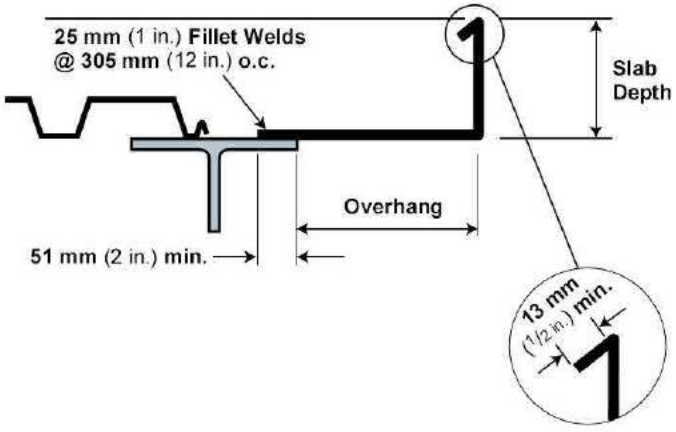
Slab Depth	OVERHANG (mm)												
(mm)	0	25	50	75	100	125	150	175	200	225	250	275	300
100	20	20	20	20	18	16	14	14	12	12	12	10	10
110	20	20	20	18	18	16	14	12	12	12	10	10	10
120	20	20	20	18	16	16	14	12	12	12	10	10	10
130	20	20	18	18	16	14	14	12	12	12	10	10	
140	20	20	18	18	16	14	12	12	12	10	10	10	
150	18	18	18	16	16	14	12	12	12	10	10		
160	18	18	18	16	14	14	12	12	12	10	10		
170	18	18	16	16	14	12	12	12	10	10	10		
180	16	16	16	14	14	12	12	12	10	10			
190	16	16	16	14	14	12	12	12	10	10			
200	16	16	14	14	12	12	12	10	10	10			
210	14	14	14	14	12	12	12	10	10				
220	14	14	14	12	12	12	10	10	10				
230	14	14	14	12	12	12	10	10	10				
240	14	12	12	12	12	12	10	10					
250	12	12	12	12	12	10	10	10					
260	12	12	12	12	12	10	10	10					
270	12	12	12	12	10	10	10						
280	12	12	12	12	10	10	10						
290	12	12	12	10	10	10							
300	12	12	10	10	10	10							

TYPES	DESIGN THICKNESS	
	(mm)	(in.)
20	0.91	0.0358
18	1.20	0.0474
16	1.52	0.0598
14	1.90	0.0747
12	2.66	0.1046
10	3.42	0.1345

POUR STOP SELECTION TABLE — IMPERIAL

Slab Depth	OVERHANG (in.)												
(in.)	0	1	2	3	4	5	6	7	8	9	10	11	12
4	20	20	20	18	18	16	14	14	12	12	10	10	10
4 1/2	20	20	20	18	16	16	14	12	12	12	10	10	10
5	20	20	18	18	16	14	14	12	12	12	10	10	
5 1/2	20	20	18	18	16	14	12	12	12	10	10	10	
6	18	18	18	16	14	14	12	12	12	10	10		
6 1/2	18	18	16	16	14	14	12	12	10	10	10		
7	18	16	16	14	14	12	12	12	10	10			
7 1/2	16	16	16	14	14	12	12	10	10	10			
8	16	16	14	14	12	12	12	10	10				
8 1/2	14	14	14	12	12	12	12	10	10				
9	14	14	14	12	12	12	10	10	10				
9 1/2	14	12	12	12	12	12	10	10					
10	12	12	12	12	12	10	10	10					
10 1/2	12	12	12	12	10	10	10						
11	12	12	12	12	10	10	10						
11 1/2	12	12	12	10	10	10							
12	10	10	10	10	10	10							

- The tables are based on a concrete weight of 2 400 kg/m^3 (150 lb/ft^3).
- The concrete dead load is temporarily increased by one-third for the construction load.
- The pour stop is calculated to support the concrete weight and the construction load assumed as a uniform load of 1 kPa (21 psf) or a transverse load of 2 kN/m (137 plf).
- Horizontal and vertical deflections are limited to 6.3 mm (0.25 in.).
- The pour stop selection table does not consider the effect of the performance, deflection, or rotation of the pour stop support, which may include both the supporting composite deck and/or the frame.
- Vertical leg return lip is recommended for all types.
- The designer is responsible to add steel reinforcement for slab under service loads in order to respect the standard CAN/CSA-A23.3-94.
- These selection tables are not meant to replace the judgment of experienced structural engineers and should be considered as a reference only.



Closure Strip Selection Table — Metric

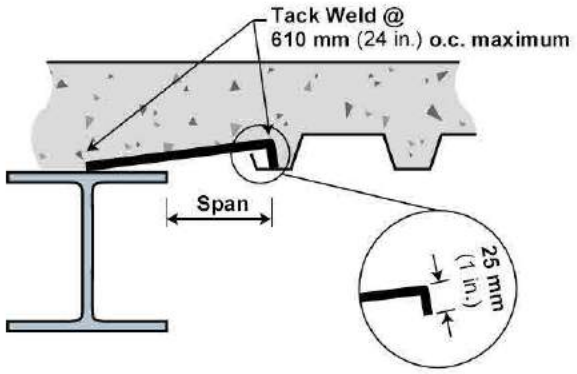
Slab Depth	SPAN (mm)					
(mm)	100	125	150	175	200	225
100	20	18	18	16	16	14
110	20	18	18	16	16	14
120	20	18	18	16	14	14
130	20	18	18	16	14	14
140	20	18	18	16	14	14
150	20	18	16	16	14	14

Closure Strip Selection Table — Imperial

Slab Depth	SPAN (in.)					
(in.)	4	5	6	7	8	9
4	20	18	18	16	16	14
4 1/2	20	18	18	16	14	14
5	20	18	18	16	14	14
5 1/2	20	18	16	16	14	14
6	20	18	16	16	14	14

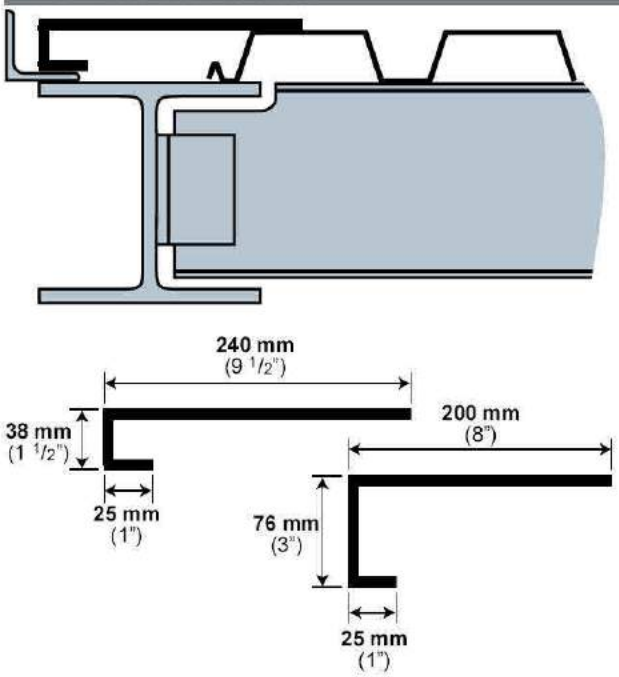
- The tables are based on a concrete density of 2 400 kg/m^3 (150 lb/ft^3).
- The closure strip is calculated to support the concrete weight and the construction load assumed as a uniform load of 1 kPa (21 psf) or a transverse load of 2 kN/m (137 plf).
- The deflection is limited to 6.3 mm (0.25 in.).
- The closure strip selection table does not consider the effect of the performance, deflection, or rotation of the closure strip supports, which may include both the steel deck and the frame.
- These selection tables are not meant to replace the judgment of experienced structural engineers and shall be considered as a reference only.

TYPES	DESIGN THICKNESS	
	(mm)	(in.)
20	0.91	0.0358
18	1.20	0.0474
16	1.52	0.0598
14	1.90	0.0747
12	2.66	0.1046
10	3.42	0.1345



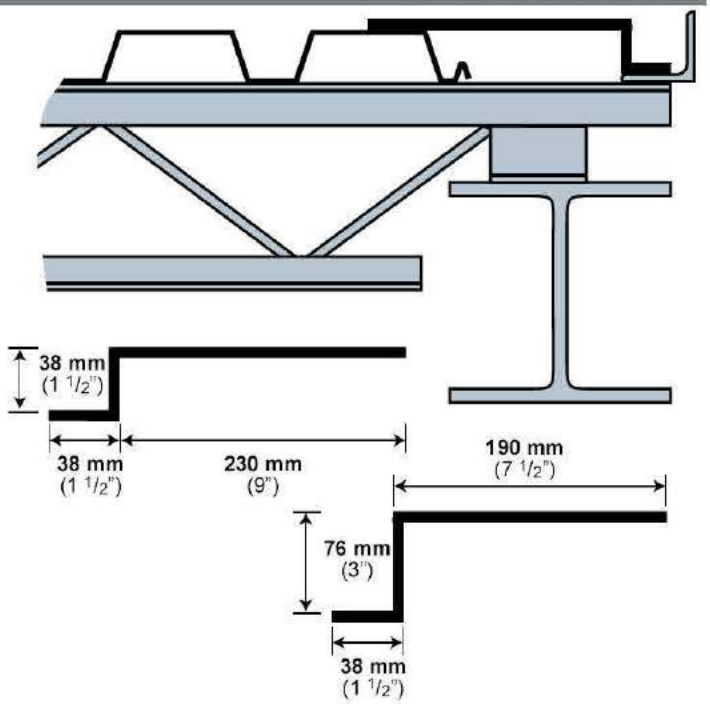
ACCESSORIES

"C" EDGE STRIP

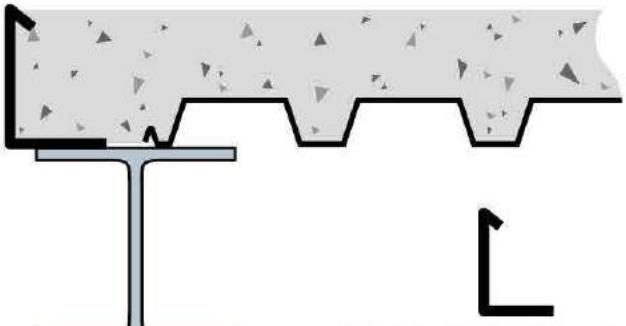


Note: Pieces are 3 048 mm (10 feet) long.

"Z" EDGE STRIP

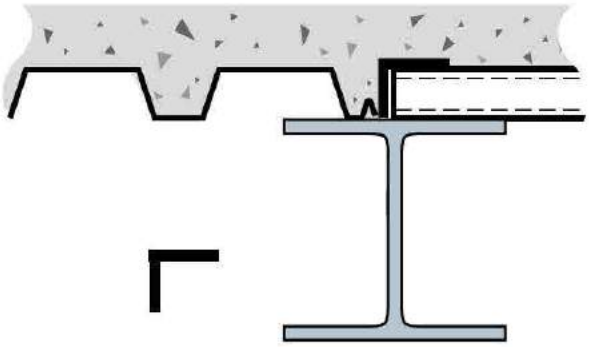


POUR STOP



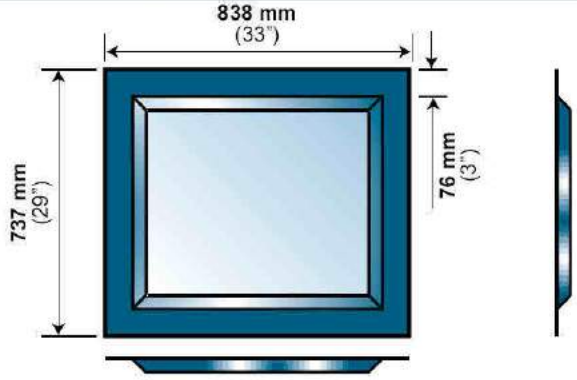
Pour stop can be selected using the table on page 28 and obtained by contacting our sales office.

CELL CLOSURE



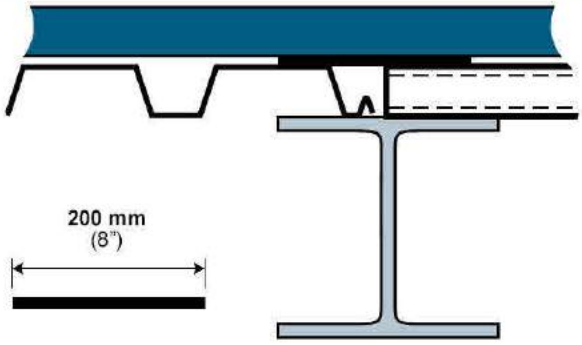
Note: Pieces are 3 048 mm (10 feet) long.

SUMP PAN



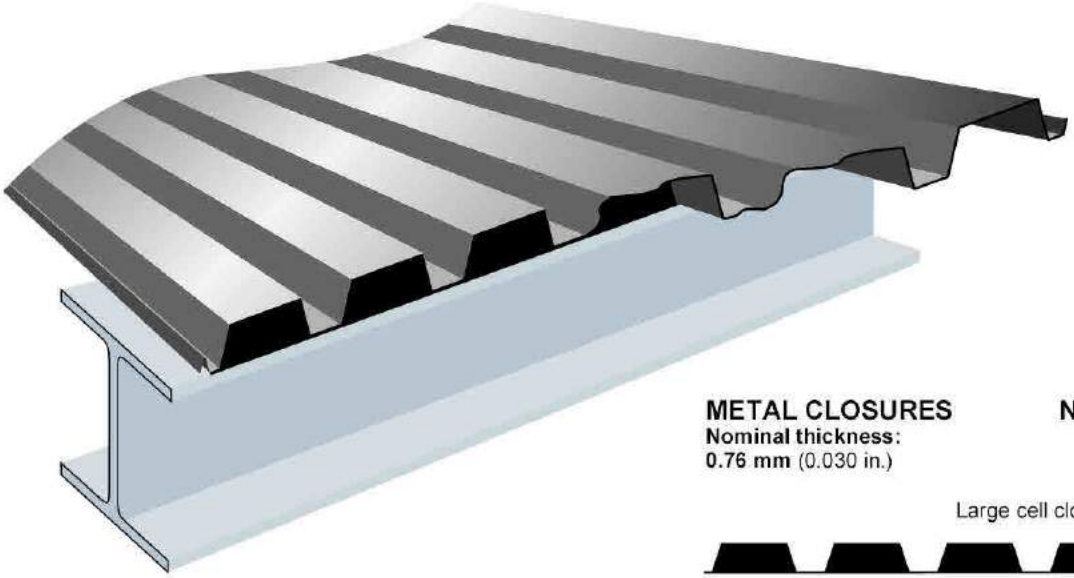
Note: Thickness of 1.90 mm (0.075 in.).

COVER PLATE



Note: Pieces are 3 048 mm (10 feet) long.

NEOPRENE AND METAL CLOSURES



METAL CLOSURES
Nominal thickness:
0.76 mm (0.030 in.)

NEOPRENE CLOSURES
Thickness:
25 mm (1 in.)

Large cell closure

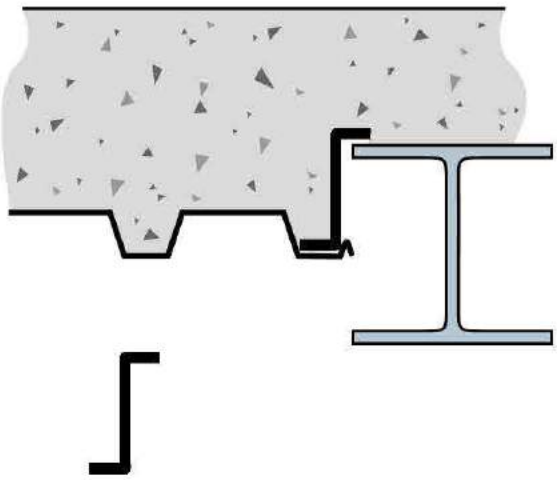
Small cell closure

AVAILABILITY

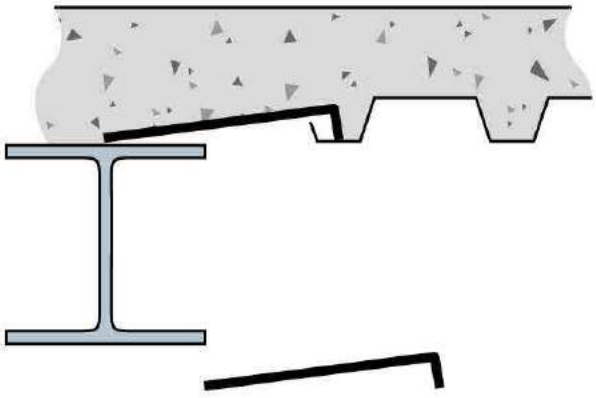
Deck Profile	Neoprene		Metal	
	Small	Large	Small	Large
P-3615 & P-3606	Yes	Yes	Yes	Yes
P-2436 & P-2404	Yes	Yes	Yes	Yes
P-3623	Yes		Yes	
P-2432	Yes		Yes	
P-3012	No		No	

Note: Please specify whether you need metal closures or L-shaped cell closures.

"Z" CLOSURE



CLOSURE STRIP



Closure strip can be selected using the table on page 29 and obtained by contacting our sales office.

Note: Pieces are 3 048 mm (10 feet) long.