

Pitched-Chord Longspans

Bethlehem Longspans can be furnished with the top chord sloping in one direction or sloping in both directions from the mid-point to provide sufficient slope for roof drainage.

Pitched-chord Longspan Joists are available in any combination of top- or bottom-bearing ends, with either structural or bar webs.

Pitched-chord Longspan Joists with top chords sloping in two directions are made with an even number of panels only. Panel lengths may not be greater than those of parallel-chord joists of corresponding size.

When the slope is in one direction the number and length of panels are the same as in parallel-chord Longspan Joists of corresponding size.

The design of Longspans limits the drop of top chords to the values shown in the table of depths of single and double pitched Longspan Joists. Greater drops reduce the safe carrying capacities. Carry-

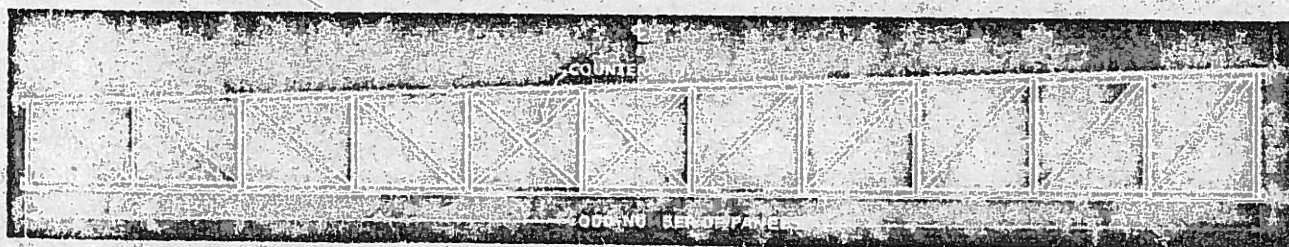
ing capacity and weight are determined by the depth at the middle of the clear span.

Camber

All Longspans are built with cambers of approximately $\frac{1}{2}$ in. for 30-ft spans— $\frac{3}{4}$ in. for 40-ft spans—1 in. for 50-ft spans— $1\frac{1}{2}$ in. for 60-ft spans.

Extra Counter Diagonals

Longspans are designed for uniformly distributed loads. In roof construction where upward wind forces may exceed the deadweight of the roof, where monorail loads are carried by the lower chord, or where joists are framed into the columns to stiffen the structure, the web system should be checked. In such cases counter diagonals should be specified where necessary. Similarly in floor construction where the live load may cover less than one-half of the span, counter diagonals should be used to accommodate shear reversals.

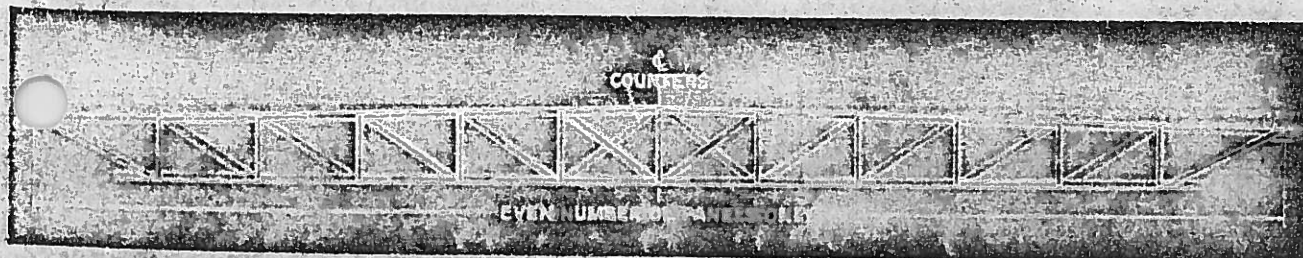


Depths of Single Pitched Longspan Joists

Minimum Depth at Shallow End, Ins.	Depth at Middle, Ins.	Maximum Depth at Deep End, Ins.	Minimum Depth at Shallow End, Ins.	Depth at Middle, Ins.	Maximum Depth at Deep End, Ins.
14	18	22	22	26	30
16	20	24	24	28	32
18	22	26	26	30	34
20	24	28	28	32	36

Depths of Double Pitched Longspan Joists

Depth at Middle, Ins.	Minimum Depth at Ends, Ins.	Depth at Middle, Ins.	Minimum Depth at Ends, Ins.
18	14	26	22
20	16	28	20
22	18	30	22
24	20	32	24



Specifications

Longspan Open-Web Steel Joist Construction

JOISTS

All joists called for on the plans or in the specifications which are designated Longspan Joists shall be either Bethlehem Open-Web Longspan Steel Joists as manufactured by Bethlehem Steel Company, or joists of an approved equal.

MATERIALS

Chords shall be composed of hot-rolled angles or other shapes. Web members shall consist of hot-rolled angles or bars.

No member shall be less than 3/16-in. thick.

The grade of steel shall conform to A.S.T.M. specifications, "Structural Steel for Buildings," designation A7 of latest adoption.

All Longspan Joists shall receive a shop coat of protective paint before shipment.

CONNECTIONS

All joints shall be made by electric-arc welding in accordance with the latest standards of the American Welding Society Code for Fusion Welding. Welded joints shall be designed to develop the stresses in the web members forming the joint.

DESIGN AND UNIT STRESSES

The maximum L/R of any compression member in joists shall not exceed 120, in which L may be taken as the distance clear of welds or connections.

The top chord shall be designed as a continuous member subject to direct and bending stresses. Combined compressive stress at panel points shall not exceed 18,000 psi. Combined compressive stress at midpanel and compressive web stress shall not exceed 15,000 psi or

$$1 + \frac{18,000}{18,000 R^2}$$

Maximum allowable tensile stress shall not exceed 18,000 psi.

The top chord shall be stayed laterally by floor slab or roof deck.

SPAN

The clear span of joists for roof construction shall not exceed 24-times the depth of the joist, for floor construction not more than 21-times the depth of the joist.

SPACING

Spacing of Longspan Joists shall be limited by the safe span of floor slab or roof deck.

BEARING

The lengths of bearing shall be not less than 6 inches on masonry or concrete, or 4 inches on steel.

The bearing areas shall be sufficient to prevent excessive bearing pressures.

ANCHORAGE

Where supports consist of masonry or concrete walls, Longspan Joists shall be anchored by means of one 3/4-inch round bar 12 inches long. Where Longspan Joists rest on steel beams, they shall be connected with not less than two 3/4-inch bolts or welds of equal strength.

BRIDGING

Bridging shall consist of a cross bracing of not less than 1 1/4-inch x 1 1/4-inch x 1/8-inch angles, bolted together at midpoints.

Bridging lines shall be spaced not over 10 feet apart.

ERECTION

Longspan Joists shall be hoisted into place by hooking to top chord joints at approximately third points. Hoisting ropes shall not be released until the line of bridging nearest mid-span is installed, and in the case of bottom-bearing joists the ends of the top chords shall be restrained laterally. Care shall be exercised at all times to avoid damage through careless handling. As soon as Longspan Joists are erected they shall be permanently fastened in place and bridging completely installed before the application of loads.

DESIGN TABLE

LONGSPAN OPEN-WEB STEEL JOISTS

TOTAL SAFE UNIFORM LOADS PER LINEAR FOOT

Longspan				Clear Span in Feet											
Type	Depth in Inches	Approx. wt. in lbs. per foot	Maximum End Reaction	25	26	27	28	29	30	31	32	33	34	35	36
181	18	11	3,775	302	285	269	252	236	221	208	196	184	174	165	156
182		12	4,213	337	320	298	277	259	242	226	212	200	188	178	168
183		13	4,700	376	356	337	319	302	283	265	248	234	220	208	196
184		15	5,625	450	422	392	364	340	317	297	278	262	247	233	220
185		17	6,113	489	462	437	414	392	366	343	322	303	285	269	254
186		19	6,966	557	536	516	480	448	418	392	368	346	326	307	291
187		21	7,279	582	560	539	520	502	470	442	415	391	369	349	330
188		23	7,635	611	587	566	545	527	509	478	449	423	399	377	357
189		25	8,144	650	626	603	582	561	542	525	509	479	452	426	404
1810		27	8,531	682	656	632	609	588	568	550	533	517	487	460	434
1811		29	8,768	701	674	649	626	605	584	566	548	531	516	501	473
1812		32	9,288	743	714	688	663	640	619	598	580	563	546	531	516
				Clear Span in Feet											
				29	30	31	32	33	34	35	36	37	38	39	40
201	20	11	3,625	250	238	226	215	203	192	182	172	163	155	148	141
202		12	4,031	278	267	253	237	223	210	198	187	177	168	160	152
203		13	4,510	311	296	282	269	257	246	232	219	208	197	187	178
204		15	5,409	373	354	332	312	293	276	261	246	233	221	210	199
205		17	5,858	404	385	367	350	334	319	301	284	269	255	242	230
206		19	7,091	489	464	439	412	387	365	344	325	308	292	277	264
207		21	7,560	521	504	479	456	433	409	387	366	347	330	314	299
208		23	7,984	550	532	515	499	471	444	420	398	377	358	340	324
209		25	8,517	587	568	549	532	516	501	474	449	426	404	385	366
2010		27	8,995	619	598	580	562	544	528	514	487	462	438	416	395
2011		29	9,306	642	620	600	582	564	547	532	517	503	477	453	431
2012		32	9,880	681	658	637	617	598	581	564	549	534	520	493	469
2013		34	10,023	691	668	647	626	607	590	573	557	542	528	514	489
2014		36	10,660	735	710	688	665	646	627	608	592	576	561	547	533
				Clear Span in Feet											
				33	34	35	36	37	38	39	40	41	42	43	44
221	22	11	3,498	212	203	194	186	178	169	161	154	147	140	134	128
222		12	3,911	237	227	218	207	196	186	176	168	160	152	145	139
223		13	4,340	263	252	242	232	223	214	206	196	187	178	170	162
224		15	5,214	316	302	288	273	258	245	233	221	210	200	191	183
225		17	5,643	342	328	315	302	290	279	268	255	242	231	220	210
226		19	6,848	415	396	379	360	341	323	307	292	278	265	252	241
227		21	7,442	451	431	412	394	378	361	344	327	312	298	285	272
228		23	8,481	514	486	460	436	414	393	374	356	340	324	310	296
229		25	8,855	537	521	506	484	464	443	421	401	383	365	349	334
2210		27	9,380	568	552	536	521	507	481	458	436	416	397	379	362
2211		29	9,750	590	574	557	542	527	513	500	476	454	433	413	395
2212		32	10,360	628	609	592	575	560	545	531	518	494	471	450	429
2213		34	10,558	640	621	603	587	571	556	541	528	515	491	468	447
2214		36	10,987	666	646	625	610	594	578	563	549	536	523	511	488
				Clear Span in Feet											
				37	38	39	40	41	42	43	44	45	46	47	48
242	24	12	3,774	204	197	190	183	175	167	159	152	145	139	133	128
243		13	4,200	227	219	211	203	196	189	183	176	170	162	156	149
244		15	5,069	274	263	253	242	233	220	209	200	191	183	176	168
245		17	5,458	295	284	274	264	255	246	238	229	220	211	202	194
246		19	6,642	359	345	331	318	305	290	277	264	253	242	232	222
247		21	7,215	390	374	360	346	333	321	309	296	283	271	260	250
248		23	8,288	448	427	406	387	369	353	337	322	309	296	284	272
249		25	8,862	479	460	442	426	409	394	379	363	347	333	320	307
2410		27	9,937	537	523	498	475	453	432	413	395	378	363	348	334
2411		29	10,360	560	545	531	518	494	471	450	431	413	395	379	364
2412		32	10,773	582	567	552	539	526	513	490	469	449	430	413	396
2413		34	11,073	598	583	568	554	540	527	515	492	470	450	431	413
2414		36	11,543	624	608	592	577	563	550	537	525	513	491	470	451

DESIGN TABLE

LONGSPAN OPEN-WEB STEEL JOISTS

TOTAL SAFE UNIFORM LOADS PER LINEAR FOOT

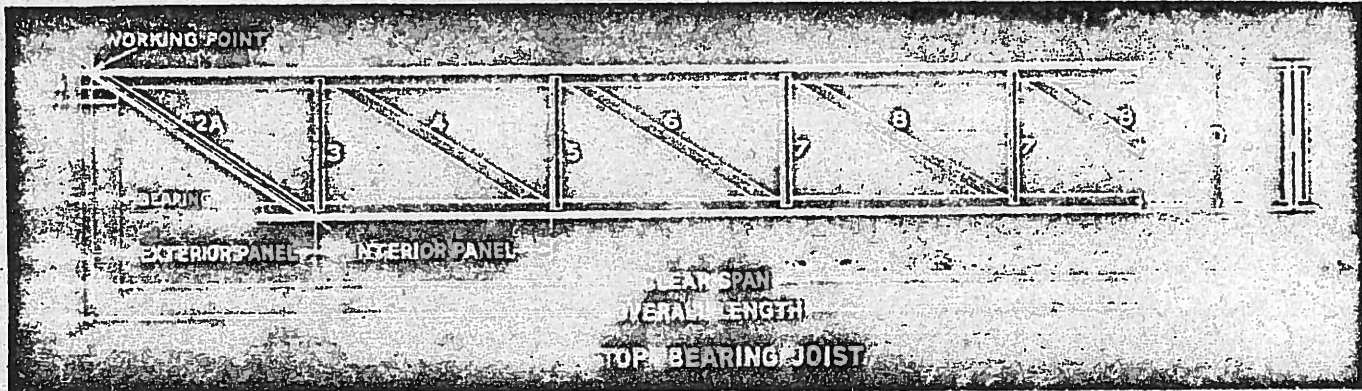
Longspan				Clear Span in Feet											
Type	Depth in Inches	Approx. wt. in lbs. per foot	Maximum End Reaction	41	42	43	44	45	46	47	48	49	50	51	52
264	26	15	4,920	240	232	223	216	208	201	193	185	178	171	165	159
265		17	5,310	259	250	242	234	227	220	213	206	199	191	184	178
266		19	6,478	316	304	294	283	273	263	252	242	232	223	214	206
267		21	7,011	342	330	319	308	297	287	278	269	259	249	240	231
268		23	8,057	393	380	364	348	333	319	307	294	283	272	262	252
269		25	8,631	421	406	392	378	365	353	342	330	318	306	295	284
2610		27	9,984	487	466	445	426	408	392	376	361	347	334	321	309
2611		29	10,563	514	503	484	465	445	427	410	393	378	364	350	337
2612		32	11,000	537	524	512	500	483	465	446	423	411	396	381	367
2613		34	11,543	563	550	537	525	513	491	470	451	432	415	399	384
2614	36	12,032	587	573	560	547	535	523	512	491	471	452	435	418	
				Clear Span in Feet											
				45	46	47	48	49	50	51	52	53	54	55	56
284	28	15	4,815	214	207	200	194	187	182	175	169	162	156	151	145
285		17	5,153	229	223	216	210	204	198	190	184	177	171	165	160
286		19	6,323	281	272	263	254	247	239	232	223	214	206	199	192
287		21	6,840	304	294	285	276	268	259	252	244	237	230	222	215
288		23	7,875	350	338	326	315	303	292	281	271	261	252	243	235
289		25	8,415	374	362	351	340	329	319	310	300	291	283	273	264
2810		27	9,765	434	419	403	387	372	358	345	332	320	309	298	288
2811		29	10,463	465	449	434	420	405	390	376	362	349	337	325	314
2812		32	11,183	497	481	465	450	436	422	409	394	379	366	353	341
2813		34	12,190	542	530	509	488	468	449	432	416	400	385	371	358
2814	36	12,495	555	543	532	521	510	489	470	452	436	420	404	390	
				Clear Span in Feet											
				49	50	51	52	53	54	55	56	57	58	59	60
304	30	15	4,704	192	187	181	176	171	166	161	156	151	145	140	136
305		17	5,023	205	200	194	188	182	175	170	164	159	154	149	144
306		19	6,174	252	245	237	231	224	218	211	206	199	192	186	180
307		21	6,689	273	265	257	250	243	236	230	223	217	211	205	199
308		23	7,718	315	305	296	287	278	269	259	250	242	234	227	219
309		25	8,232	336	326	316	307	299	291	282	275	267	259	251	243
3010		27	9,555	390	378	367	354	341	329	318	307	297	287	278	269
3011		29	10,241	418	405	393	381	370	359	347	335	324	313	303	293
3012		32	10,952	447	433	420	408	396	385	374	363	352	340	329	319
3013		34	12,103	494	479	464	447	430	415	400	386	372	359	347	336
3014	36	12,825	523	513	498	483	468	451	435	420	405	391	378	366	
				Clear Span in Feet											
				53	54	55	56	57	58	59	60	61	62	63	64
328	32	23	7,553	285	277	270	263	255	249	241	233	226	219	212	206
329		25	8,056	304	296	288	280	273	266	259	252	244	236	229	223
3210		27	9,381	354	344	334	325	315	305	295	286	277	268	260	253
3211		29	10,044	379	368	358	348	339	330	321	311	302	293	284	275
3212		32	10,733	405	394	383	373	363	353	344	335	326	317	308	299
3213		34	11,819	446	433	422	410	398	385	372	360	348	337	326	316
3214		36	12,720	480	467	454	442	430	418	404	391	379	366	355	344

Note: Total safe loads consist of live load and dead load including weight of Longspan, uniformly distributed along the top chord. When otherwise loaded, Longspans must be investigated. The top chord is considered as stayed laterally by floor slab or roof deck. When holes are punched in governing members, the safe load must be reduced accordingly.

Spans shown to the right of the heavy vertical line in the table should be used for roof construction only. Loads shown below broken lines are limited by end reaction.

DIMENSIONS AND DETAILS

LONGSPAN OPEN-WEB STEEL JOISTS



ALL JOISTS ARE FURNISHED EITHER WITH TOP OR BOTTOM BEARING

Joist Type	Joist Depth Inches "D"	Panel Lengths		Interior	Chords		Web Members								
		Exterior			Top 2 Angles	Bottom 2 Angles	Struts—2 Angles (except bar webs)				Diagonals—1 pc. (except members 2 and 2A)				
		Min.	Max.				1	3	5	7	2	2A	4	6	8
181	18	1' 10 1/4"	3' 1 1/4"	2' 6"	2x1 1/2x3/4*	1 1/2x1 1/2x3/4	1 1/2x1 1/2x3/4	1 1/4" dia.	1 1/4" dia.	1 1/4" dia.	1 1/2x3/4	1 1/2x1 1/2x3/4	1 1/4" dia.	1 1/4" dia.	1 1/4" dia.
182	"	"	"	"	2x2x1/4	"	"	3/4" dia.	3/4" dia.	3/4" dia.	"	"	3/4" dia.	3/4" dia.	3/4" dia.
183	"	"	"	"	2 1/2x2x1/4	2x1 1/2x3/4	"	3/4" dia.	3/4" dia.	3/4" dia.	"	"	3/4" dia.	3/4" dia.	3/4" dia.
184	"	"	"	"	2 1/2x2 1/2x1/4	2x2x1/4	"	3/4" dia.	3/4" dia.	3/4" dia.	1 1/2x3/4	1 1/2x1 1/2x3/4	3/4" dia.	3/4" dia.	3/4" dia.
185	"	"	"	"	2 1/2x2x1/4	2 1/2x2x1/4	"	3/4" dia.	3/4" dia.	3/4" dia.	1 1/2x3/4	1 1/2x1 1/2x3/4	3/4" dia.	3/4" dia.	3/4" dia.
186	"	"	"	"	2 1/2x2 1/2x1/4	2x2x1/4	1 1/2x1 1/2x3/4	1 1/2x1 1/2x3/4	1 1/2x1 1/2x3/4	1 1/2x1 1/2x3/4	3x3/4	2x2x1/4	2 1/2x3/4	2x3/4	1 1/2x3/4
187	"	"	"	"	3x2 1/2x1/4	2 1/2x2x1/4	"	"	"	"	3 1/2x3/4	"	"	2 1/2x3/4	"
188	"	"	"	"	3x3x1/4	2 1/2x2 1/2x1/4	"	"	"	"	"	"	"	"	2x3/4
189	"	"	"	"	3x2 1/2x1/4	3x2 1/2x1/4	"	"	"	"	3x3/4	"	2 1/2x3/4	"	"
1810	"	"	"	"	3x3x1/4	3x3x1/4	"	"	"	"	4x3/4	2 1/2x2 1/2x1/4	3x3/4	2 1/2x3/4	"
1811	"	"	"	"	3 1/2x3x1/4	3 1/2x3x1/4	"	"	"	"	"	"	"	"	2 1/2x3/4
1812	"	"	"	"	4x3x1/4	4x3x1/4	"	"	"	"	"	"	"	"	"
201	20	2' 0 1/4"	3' 5 1/4"	2' 9"	2x1 1/2x3/4*	1 1/2x1 1/2x3/4	1 1/2x1 1/2x3/4	1 1/4" dia.	1 1/4" dia.	1 1/4" dia.	1 1/2x3/4	1 1/2x1 1/2x3/4	1 1/4" dia.	1 1/4" dia.	1 1/4" dia.
202	"	"	"	"	2x2x1/4	"	"	1 1/4" dia.	1 1/4" dia.	1 1/4" dia.	"	"	1 1/4" dia.	1 1/4" dia.	1 1/4" dia.
203	"	"	"	"	2 1/2x2x1/4	2x1 1/2x3/4	"	3/4" dia.	3/4" dia.	3/4" dia.	"	"	3/4" dia.	3/4" dia.	3/4" dia.
204	"	"	"	"	2 1/2x2 1/2x1/4	2x2x1/4	"	1 1/4" dia.	1 1/4" dia.	1 1/4" dia.	1 1/2x3/4	1 1/2x1 1/2x3/4	1 1/4" dia.	1 1/4" dia.	1 1/4" dia.
205	"	"	"	"	2 1/2x2x1/4	2 1/2x2x1/4	"	3/4" dia.	3/4" dia.	3/4" dia.	"	"	3/4" dia.	3/4" dia.	3/4" dia.
206	"	"	"	"	2 1/2x2 1/2x1/4	2x2x1/4	1 1/2x1 1/2x3/4	1 1/2x1 1/2x3/4	1 1/2x1 1/2x3/4	1 1/2x1 1/2x3/4	3x3/4	2x2x1/4	2 1/2x3/4	2x3/4	1 1/2x3/4
207	"	"	"	"	3x2 1/2x1/4	2 1/2x2x1/4	"	"	"	"	3 1/2x3/4	"	"	2 1/2x3/4	"
208	"	"	"	"	3x3x1/4	2 1/2x2 1/2x1/4	"	"	"	"	"	"	"	"	2x3/4
209	"	"	"	"	3x2 1/2x1/4	3x2 1/2x1/4	"	"	"	"	3x3/4	"	2 1/2x3/4	"	"
2010	"	"	"	"	3x3x1/4	3x3x1/4	"	"	"	"	4x3/4	2 1/2x2 1/2x1/4	3x3/4	2 1/2x3/4	"
2011	"	"	"	"	3 1/2x3x1/4	3 1/2x3x1/4	"	"	"	"	"	"	"	"	2 1/2x3/4
2012	"	"	"	"	4x3x1/4	4x3x1/4	"	"	"	"	3 1/2x3/4	"	3x3/4	"	"
2013	"	"	"	"	3 1/2x3x3/4	3x3x1/4	"	"	"	"	"	"	"	2 1/2x3/4	"
2014	"	"	"	"	4x3x3/4	3 1/2x3x1/4	"	"	"	"	"	"	"	"	2x3/4
221	22	2' 3"	3' 9"	3' 0"	2x1 1/2x3/4*	1 1/2x1 1/2x3/4	1 1/2x1 1/2x3/4	3/4" dia.	3/4" dia.	3/4" dia.	1 1/2x3/4	1 1/2x1 1/2x3/4	3/4" dia.	3/4" dia.	3/4" dia.
222	"	"	"	"	2x2x1/4	"	"	3/4" dia.	3/4" dia.	3/4" dia.	"	"	3/4" dia.	3/4" dia.	3/4" dia.
223	"	"	"	"	2 1/2x2x1/4	2x1 1/2x3/4	"	3/4" dia.	3/4" dia.	3/4" dia.	"	"	3/4" dia.	3/4" dia.	3/4" dia.
224	"	"	"	"	2 1/2x2 1/2x1/4	2x2x1/4	"	1 1/4" dia.	1 1/4" dia.	1 1/4" dia.	1 1/2x3/4	1 1/2x1 1/2x3/4	1 1/4" dia.	1 1/4" dia.	1 1/4" dia.
225	"	"	"	"	2 1/2x2x1/4	2 1/2x2x1/4	"	1 1/4" dia.	1 1/4" dia.	1 1/4" dia.	"	"	1 1/4" dia.	1 1/4" dia.	1 1/4" dia.
226	"	"	"	"	2 1/2x2 1/2x1/4	2x2x1/4	1 1/2x1 1/2x3/4	1 1/2x1 1/2x3/4	1 1/2x1 1/2x3/4	1 1/2x1 1/2x3/4	3x3/4	2x2x1/4	2 1/2x3/4	2x3/4	1 1/2x3/4
227	"	"	"	"	3x2 1/2x1/4	2 1/2x2x1/4	"	"	"	"	3 1/2x3/4	"	2 1/2x3/4	"	"
228	"	"	"	"	3x3x1/4	2 1/2x2 1/2x1/4	"	"	"	"	"	"	"	2 1/2x3/4	2x3/4
229	"	"	"	"	3x2 1/2x1/4	3x2 1/2x1/4	"	"	"	"	3x3/4	"	2 1/2x3/4	"	"
2210	"	"	"	"	3x3x1/4	3x3x1/4	"	"	"	"	4x3/4	2 1/2x2 1/2x1/4	3x3/4	2 1/2x3/4	"
2211	"	"	"	"	3 1/2x3x1/4	3 1/2x3x1/4	"	"	"	"	"	"	"	"	2 1/2x3/4
2212	"	"	"	"	4x3x1/4	4x3x1/4	"	"	"	"	3 1/2x3/4	"	3x3/4	"	"
2213	"	"	"	"	3 1/2x3x3/4	3x3x1/4	"	"	"	"	"	"	"	2 1/2x3/4	"
2214	"	"	"	"	4x3x3/4	3 1/2x3x1/4	"	"	"	"	"	"	"	"	2x3/4
242	24	2' 5 1/4"	4' 0 1/4"	3' 3"	2x2x1/4	1 1/2x1 1/2x3/4	1 1/2x1 1/2x3/4	1 1/2x1 1/2x3/4	1 1/2x1 1/2x3/4	1 1/2x1 1/2x3/4	2 1/2x3/4	1 1/2x1 1/2x3/4	1 1/2x3/4	1 1/2x3/4	1 1/2x3/4
243	"	"	"	"	2 1/2x2x1/4	2x1 1/2x3/4	"	"	"	"	"	"	"	"	"
244	"	"	"	"	2 1/2x2 1/2x1/4	2x2x1/4	1 1/2x1 1/2x3/4	"	"	"	3x3/4	1 1/2x1 1/2x3/4	2x3/4	"	"
245	"	"	"	"	2 1/2x2x1/4	2 1/2x2x1/4	"	"	"	"	2 1/2x3/4	"	"	"	"
246	"	"	"	"	2 1/2x2 1/2x1/4	2x2x1/4	"	"	"	"	3x3/4	2x2x1/4	2 1/2x3/4	2x3/4	"
247	"	"	"	"	3x2 1/2x1/4	2 1/2x2x1/4	"	"	"	"	"	"	2 1/2x3/4	"	"
248	"	"	"	"	3x3x1/4	2 1/2x2 1/2x1/4	2x2x1/4	"	"	"	3 1/2x3/4	"	"	2 1/2x3/4	2x3/4

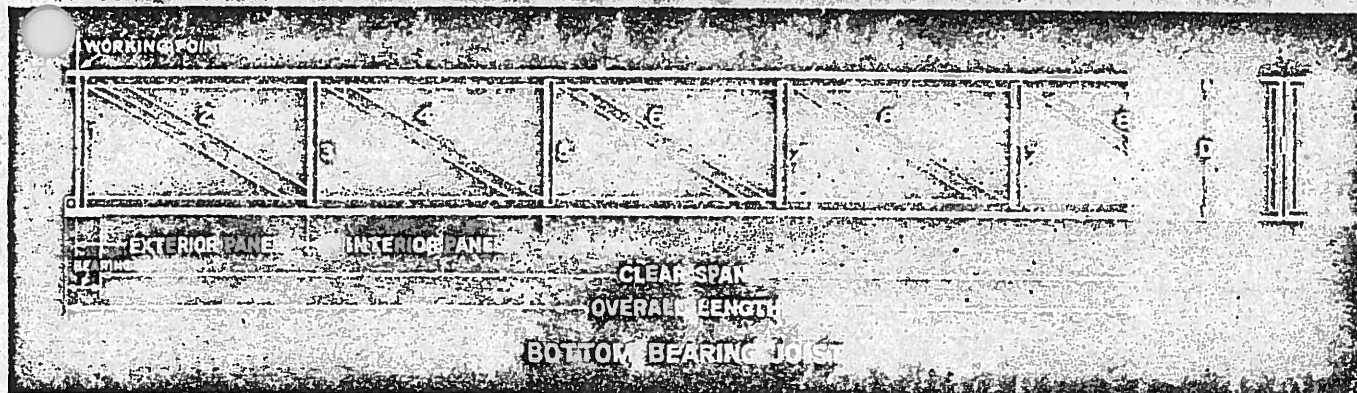
Note: Joist types 181 to 185, 201 to 205, and 221 to 225, are constructed with continuous bar webs.

All Longspans may be furnished with either parallel or pitched top chord construction.

*Longer legs outstanding except angles marked.

†All diagonal web members one piece except members 2A, and members 2 where marked †. These exceptions are two pieces.

DIMENSIONS AND DETAILS LONGSPAN OPEN-WEB STEEL JOISTS



ALL JOISTS ARE FURNISHED EITHER WITH TOP OR BOTTOM BEARING

Joist Type	Joist Depth Inches "D"	Panel Lengths		Interior	Chords		Web Members									
		Exterior			Top 2 Angles	Bottom 2 Angles	Struts—2 Angles (except bar webs)				Diagonals—1 pc. (except member 2A)					
		Min.	Max.				1	3	5	7	2	12A	4	6	8	
249	24	2' 5 1/4"	4' 0 1/4"	3' 3"	3x2 1/2x3/4	3x2 1/2x3/4	2x2x3/4	1 1/2x1 1/2x3/4	1 1/2x1 1/2x3/4	1 1/2x1 1/2x3/4	1 1/2x1 1/2x3/4	3 1/2x3/4	2x2x3/4	2 1/2x3/4	2 1/2x3/4	2x3/4
2410	"	"	"	"	3x3x3/4	3x3x3/4	"	"	"	"	"	4x3/4	2 1/2x2 1/2x3/4	3x3/4	2 1/2x3/4	"
2411	"	"	"	"	3 1/2x3x3/4	3 1/2x3x3/4	"	"	"	"	"	3 1/2x3/4	2 1/2x2 1/2x3/4	3x3/4	"	2 1/2x3/4
2412	"	"	"	"	4x3x3/4	4x3x3/4	"	"	"	"	"	"	"	"	"	"
2413	"	"	"	"	3 1/2x3x3/4	3x3x3/4	"	1 1/2x1 1/2x3/4	"	"	"	"	"	"	2 1/2x3/4	"
2414	"	"	"	"	4x3x3/4	3 1/2x3x3/4	"	"	"	"	"	"	2 1/2x2 1/2x3/4	"	"	2x3/4
264	26	2' 7 1/2"	4' 4 1/2"	3' 6"	2 1/2x2 1/2x3/4	2x2x3/4	1 1/2x1 1/2x3/4	1 1/2x1 1/2x3/4	1 1/2x1 1/2x3/4	1 1/2x1 1/2x3/4	1 1/2x1 1/2x3/4	3x3/4	1 1/2x1 1/2x3/4	2x3/4	1 1/2x3/4	1 1/2x3/4
265	"	"	"	"	2 1/2x2x3/4	2 1/2x2x3/4	"	"	"	"	"	2 1/2x3/4	"	"	"	"
266	"	"	"	"	2 1/2x2 1/2x3/4	2x2x3/4	"	"	"	"	"	3x3/4	2x2x3/4	2 1/2x3/4	2x3/4	"
267	"	"	"	"	3x2 1/2x3/4	2 1/2x2x3/4	"	"	"	"	"	"	"	"	"	"
268	"	"	"	"	3x3x3/4	2 1/2x2 1/2x3/4	2x2x3/4	"	"	"	"	3 1/2x3/4	"	2 1/2x3/4	2 1/2x3/4	2x3/4
269	"	"	"	"	3x2 1/2x3/4	3x2 1/2x3/4	"	"	"	"	"	"	"	"	"	"
2610	"	"	"	"	3x3x3/4	3x3x3/4	"	"	"	"	"	4x3/4	2 1/2x2 1/2x3/4	3x3/4	2 1/2x3/4	"
2611	"	"	"	"	3 1/2x3x3/4	3 1/2x3x3/4	"	1 1/2x1 1/2x3/4	"	"	"	3 1/2x3/4	"	3x3/4	"	2 1/2x3/4
2612	"	"	"	"	4x3x3/4	4x3x3/4	"	"	"	"	"	"	"	"	"	"
2613	"	"	"	"	3 1/2x3x3/4	3x3x3/4	"	"	"	"	"	"	"	"	2 1/2x3/4	"
2614	"	"	"	"	4x3x3/4	3 1/2x3x3/4	"	"	"	"	"	4x3/4	2 1/2x2 1/2x3/4	"	"	2x3/4
284	28	2' 9 1/4"	4' 8 1/4"	3' 9"	2 1/2x2 1/2x3/4	2x2x3/4	1 1/2x1 1/2x3/4	1 1/2x1 1/2x3/4	1 1/2x1 1/2x3/4	1 1/2x1 1/2x3/4	1 1/2x1 1/2x3/4	3x3/4	1 1/2x1 1/2x3/4	2x3/4	1 1/2x3/4	1 1/2x3/4
285	"	"	"	"	2 1/2x2x3/4	2 1/2x2x3/4	"	"	"	"	"	2 1/2x3/4	"	2 1/2x3/4	2x3/4	"
286	"	"	"	"	2 1/2x2 1/2x3/4	2x2x3/4	"	"	"	"	"	3x3/4	2x2x3/4	"	"	"
287	"	"	"	"	3x2 1/2x3/4	2 1/2x2x3/4	"	"	"	"	"	3 1/2x3/4	"	2 1/2x3/4	2 1/2x3/4	2x3/4
288	"	"	"	"	3x3x3/4	2 1/2x2 1/2x3/4	2x2x3/4	"	"	"	"	3x3/4	"	"	"	"
289	"	"	"	"	3x2 1/2x3/4	3x2 1/2x3/4	"	"	"	"	"	"	"	2 1/2x3/4	"	"
2810	"	"	"	"	3x3x3/4	3x3x3/4	"	"	"	"	"	3 1/2x3/4	2 1/2x2 1/2x3/4	3x3/4	2 1/2x3/4	2 1/2x3/4
2811	"	"	"	"	3 1/2x3x3/4	3 1/2x3x3/4	"	1 1/2x1 1/2x3/4	"	"	"	4x3/4	"	"	"	"
2812	"	"	"	"	4x3x3/4	4x3x3/4	"	"	"	"	"	"	"	"	"	"
2813	"	"	"	"	3 1/2x3x3/4	3x3x3/4	"	"	1 1/2x1 1/2x3/4	"	"	3 1/2x3/4	2 1/2x2 1/2x3/4	"	2 1/2x3/4	"
2814	"	"	"	"	4x3x3/4	3 1/2x3x3/4	"	"	"	"	"	"	"	3 1/2x3/4	2x3/4	"
304	30	3' 0"	5' 0"	4' 0"	2 1/2x2 1/2x3/4	2x2x3/4	1 1/2x1 1/2x3/4	1 1/2x1 1/2x3/4	1 1/2x1 1/2x3/4	1 1/2x1 1/2x3/4	1 1/2x1 1/2x3/4	3x3/4	1 1/2x1 1/2x3/4	2x3/4	1 1/2x3/4	1 1/2x3/4
305	"	"	"	"	2 1/2x2x3/4	2 1/2x2x3/4	"	"	"	"	"	2 1/2x3/4	"	"	"	"
306	"	"	"	"	2 1/2x2 1/2x3/4	2x2x3/4	"	"	"	"	"	3x3/4	2x2x3/4	2 1/2x3/4	2x3/4	"
307	"	"	"	"	3x2 1/2x3/4	2 1/2x2x3/4	"	"	"	"	"	"	"	2 1/2x3/4	"	"
308	"	"	"	"	3x3x3/4	2 1/2x2 1/2x3/4	2x2x3/4	"	"	"	"	3 1/2x3/4	"	"	2 1/2x3/4	2x3/4
309	"	"	"	"	3x2 1/2x3/4	3x2 1/2x3/4	"	"	"	"	"	3x3/4	"	2 1/2x3/4	"	"
3010	"	"	"	"	3x3x3/4	3x3x3/4	"	1 1/2x1 1/2x3/4	"	"	"	3 1/2x3/4	2 1/2x2 1/2x3/4	3x3/4	2 1/2x3/4	2 1/2x3/4
3011	"	"	"	"	3 1/2x3x3/4	3 1/2x3x3/4	"	"	"	"	"	"	"	3x3/4	"	"
3012	"	"	"	"	4x3x3/4	4x3x3/4	"	"	"	"	"	4x3/4	2 1/2x2 1/2x3/4	"	2 1/2x3/4	"
3013	"	"	"	"	3 1/2x3x3/4	3x3x3/4	"	"	1 1/2x1 1/2x3/4	"	"	3 1/2x3/4	"	3 1/2x3/4	"	2x3/4
3014	"	"	"	"	4x3x3/4	3 1/2x3x3/4	"	"	"	"	"	"	"	"	3x3/4	"
328	32	3' 2 1/4"	5' 3 3/4"	4' 3"	3x3x3/4	2 1/2x2 1/2x3/4	2x2x3/4	1 1/2x1 1/2x3/4	1 1/2x1 1/2x3/4	1 1/2x1 1/2x3/4	1 1/2x1 1/2x3/4	3 1/2x3/4	2x2x3/4	2 1/2x3/4	2 1/2x3/4	2x3/4
329	"	"	"	"	3x2 1/2x3/4	3x2 1/2x3/4	"	"	"	"	"	"	"	"	"	"
3210	"	"	"	"	3x3x3/4	3x3x3/4	"	1 1/2x1 1/2x3/4	"	"	"	4x3/4	2 1/2x2 1/2x3/4	3x3/4	2 1/2x3/4	2 1/2x3/4
3211	"	"	"	"	3 1/2x3x3/4	3 1/2x3x3/4	"	"	"	"	"	3 1/2x3/4	"	"	"	"
3212	"	"	"	"	4x3x3/4	4x3x3/4	"	"	"	"	"	"	"	"	"	"
3213	"	"	"	"	3 1/2x3x3/4	3x3x3/4	"	"	1 1/2x1 1/2x3/4	"	"	4x3/4	2 1/2x2 1/2x3/4	"	2 1/2x3/4	"
3214	"	"	"	"	4x3x3/4	3 1/2x3x3/4	"	"	"	"	"	3 1/2x3/4	"	"	"	2x3/4

Note: Joist types 181 to 185, 201 to 205, and 221 to 225, are constructed with continuous bar webs.
 All Longspans may be furnished with either parallel or pitched top chord construction.
 † All diagonal web members one piece except members 2A, which are two pieces.

BEHLERMAN STANDARD AND LONGSPAN OPEN-WEB STEEL JOISTS