

## Beam conversions to Nordic Lam+

### Conventional Glulam Beam Conversions – Spruce-Lodgepole Pine-Jack Pine

Wood species or product Stress grade Width (mm) Depths (mm)	Spruce-Lodgepole Pine-Jack Pine	Nordic Lam+			
	20f-E or 20f-EX	24F-ES/NPG			
	80	38	%	86	%
	114	171	28.7	140	-
	152	248	22.5	140	1.0
	190	298	25.5	191	-
	228	352	26.7	241	-
	266	403	28.0	292	-
	304	454	29.1	292	-
	342			343	-
	380			394	-
	418			394	-
	456			445	-
	494			495	-
	532			495	-
	570			546	-

Wood species or product Stress grade Width (mm) Depths (mm)	Spruce-Lodgepole Pine-Jack Pine	Nordic Lam+					
	20f-E or 20f-EX	24F-ES/NPG					
	130	38	%	86	%	137	%
	152	378	27.3	191	16.9	191	-
	190			241	16.1	191	-
	228			292	15.3	241	-
	266			343	14.7	292	-
	304			343	25.4	292	-
	342			394	23.8	343	-
	380			445	22.5	394	-
	418			495	21.7	394	0.7
	456			546	20.8	445	-
	494			597	20.1	495	-
	532			648	19.4	495	1.9
	570			648	24.8	546	-
	608			699	23.9	597	-
	646			749	23.3	597	2.6
	684			803	22.3	648	0.2
	722			854	21.8	699	-
	760			854	25.7	749	-
	798			905	25.0	749	1.1
	836			956	24.4	803	-
	874			1 006	23.9	854	-
	912					854	1.3
	950					905	-

#### Notes :

- For preliminary design use only. Final design shall include a complete analysis including the verification of the factored bearing resistance, lateral stability, and appropriate modification factors. Smaller Nordic Lam+ sizes may be obtained with engineering calculations based on actual span and loading conditions. Reverse use of this table is non-conservative in all cases.
- The percentage (%) shown is the reduction of the cross section from conventional glulam to Nordic Lam+ 24F-ES/NPG.
- Members of dimensions in black are cold pressed for lengths up to 18.9 m (optimum dimensions for straight members) and hot pressed for lengths between 18.9 and 24.4 m (maximum length).
- Members of dimensions in grey are cold pressed (maximum length of 24.4 m).

## Conventional Glulam Beam Conversions – Spruce-Lodgepole Pine-Jack Pine (continued)

Wood species or product Stress grade Width (mm) Depths (mm)	Spruce-Lodgepole Pine-Jack Pine		Nordic Lam+			
	20f-E or 20f-EX		24F-ES/NPG			
	175	86    %	137    %	184    %		
	190	292    24.5	241    0.7	184	-	
	228	343    26.1	241    17.3	241	-	
	266	394    27.2	292    14.1	292	-	
	304	445    28.1	343    11.7	292	-	
	342	495    28.9	394    9.8	343	-	
	380	546    29.4	394    18.8	394	-	
	418	597    29.8	445    16.7	394	0.9	
	456	699    24.7	495    15.0	445	-	
	494	749    25.5	546    13.5	495	-	
	532	803    25.8	597    12.1	495	2.2	
	570	854    26.4	597    18.0	546	-	
	608	905    26.9	648    16.6	597	-	
	646	956    27.3	699    15.3	648	-	
	684	1 006    27.7	749    14.3	648	0.4	
	722		749    18.8	699	-	
	760		803    17.3	749	-	
	798		854    16.2	749	1.3	
	836		905    15.3	803	-	
	874		905    18.9	854	-	
	912		956    17.9	854	1.5	
	950		1 006    17.1	905	-	
	988		1 057    16.2	956	-	
	1 026		1 108    15.5	956	2.0	
	1 064		1 108    18.5	1 006	0.6	
	1 102		1 159    17.7	1 057	-	
	1 140		1 210    16.9	1 057	2.5	
	1 178		1 260    16.3	1 108	1.1	
	1 216		1 260    18.9	1 159	-	
	1 254		1 311    18.2	1 210	-	

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- The percentage (%) shown is the reduction of the cross section from conventional glulam to Nordic Lam+ 24F-ES/NPG.
- Members of dimensions in black are cold pressed for lengths up to 18.9 m (optimum dimensions for straight members) and hot pressed for lengths between 18.9 and 24.4 m (maximum length).
- Members of dimensions in grey are cold pressed (maximum length of 24.4 m).

## Conventional Glulam Beam Conversions – Spruce-Lodgepole Pine-Jack Pine (continued)

Wood species or product Stress grade Width (mm) Depths (mm)	Spruce-Lodgepole Pine-Jack Pine		Nordic Lam+					
	20f-E or 20f-EX		24F-ES/NPG					
	215	137    %	184    %	215    %	241    %			
266	343	17.8	292	6.1	292	-	241	-
304	394	17.4	343	3.4	292	3.9	292	-
342	394	26.6	343	14.2	343	-	343	-
380	445	25.4	394	11.3	394	-	394	-
418	495	24.5	445	8.9	394	5.7	394	-
456	546	23.7	495	7.1	445	2.4	445	-
494	597	23.0	495	14.2	495	-	495	-
532	648	22.4	546	12.2	546	-	495	-
570	699	21.9	597	10.4	546	4.2	546	-
608	699	26.7	648	8.8	597	1.8	597	-
646	749	26.1	648	14.2	648	-	597	-
684	803	25.2	699	12.5	648	5.3	648	-
722	854	24.6	749	11.2	699	3.2	699	-
760	905	24.1	803	9.6	749	1.4	699	-
798	956	23.7	803	13.9	803	-	749	-
836	1 006	23.3	854	12.6	803	3.9	803	-
874	1 006	26.7	905	11.4	854	2.3	803	-
912	1 057	26.1	905	15.1	905	0.8	854	-
950	1 108	25.7	956	13.9	905	4.7	905	-
988	1 159	25.3	1 006	12.9	956	3.2	905	-
1 026	1 210	24.9	1 057	11.8	1 006	1.9	956	-
1 064	1 260	24.5	1 057	15.0	1 006	5.5	1 006	-
1 102	1 311	24.2	1 108	14.0	1 057	4.1	1 006	-
1 140	1 311	26.7	1 159	13.0	1 108	2.8	1 057	-
1 178	1 362	26.3	1 210	12.1	1 108	5.9	1 108	-
1 216	1 413	26.0	1 210	14.8	1 159	4.7	1 108	-
1 254	1 464	25.6	1 260	14.0	1 210	3.5	1 159	-
1 292	1 514	25.3	1 311	13.2	1 260	2.5	1 210	-
1 330	1 565	25.0	1 362	12.4	1 260	5.3	1 210	-
1 368	1 565	27.1	1 362	14.8	1 311	4.2	1 260	-
1 406	1 619	26.6	1 413	14.0	1 362	3.1	1 311	-
1 444			1 464	13.2	1 362	5.7	1 311	-
1 482			1 514	12.6	1 413	4.7	1 362	-
1 520			1 514	14.8	1 464	3.7	1 413	-
1 558			1 565	14.0	1 514	2.8	1 413	-
1 596			1 619	13.2	1 514	5.1	1 464	-

### Notes :

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- The percentage (%) shown is the reduction of the cross section from conventional glulam to Nordic Lam+ 24F-ES/NPG.
- Members of dimensions in black are cold pressed for lengths up to 18.9 m (optimum dimensions for straight members) and hot pressed for lengths between 18.9 and 24.4 m (maximum length).
- Members of dimensions in grey are cold pressed (maximum length of 24.4 m).

## Conventional Glulam Beam Conversions – Spruce-Lodgepole Pine-Jack Pine (continued)

Wood species or product Stress grade Width (mm) Depths (mm)	Spruce-Lodgepole Pine-Jack Pine		Nordic Lam+					
	20f-E or 20f-EX		24F-ES/NPG					
	265	184 %	215 %	241 %	292 %			
342	394	20.0	394	6.5	343	8.8	343	-
380	445	18.7	394	15.9	394	5.7	394	-
418	495	17.8	445	13.6	445	3.2	394	-
456	546	16.9	495	11.9	445	11.3	445	-
494	546	23.3	546	10.3	495	8.9	495	-
532	597	22.1	546	16.7	546	6.7	495	-
570	648	21.1	597	15.0	597	4.7	546	-
608	699	20.2	648	13.5	597	10.7	597	-
646	749	19.5	699	12.2	648	8.8	597	-
684	803	18.5	699	17.1	699	7.1	648	-
722	803	22.8	749	15.8	749	5.7	699	-
760	854	22.0	803	14.3	749	10.4	699	-
798	905	21.3	854	13.2	803	8.5	749	-
836	956	20.6	854	17.1	854	7.1	803	-
874	1 006	20.1	905	16.0	854	11.1	803	-
912	1 006	23.4	956	15.0	905	9.8	854	-
950	1 057	22.7	1 006	14.1	956	8.5	905	-
988	1 108	22.1	1 006	17.4	1 006	7.4	905	-
1 026	1 159	21.6	1 057	16.4	1 006	10.8	956	-
1 064	1 210	21.0	1 108	15.5	1 057	9.7	1 006	-
1 102	1 210	23.8	1 159	14.7	1 108	8.6	1 006	-
1 140	1 260	23.3	1 159	17.5	1 108	11.6	1 057	-
1 178	1 311	22.7	1 210	16.7	1 159	10.5	1 108	-
1 216	1 362	22.2	1 260	15.9	1 210	9.5	1 108	-
1 254	1 413	21.8	1 311	15.2	1 260	8.6	1 159	-
1 292	1 464	21.3	1 311	17.7	1 260	11.3	1 210	-
1 330	1 464	23.6	1 362	16.9	1 311	10.4	1 260	-
1 368	1 514	23.2	1 413	16.2	1 362	9.5	1 260	-
1 406	1 565	22.7	1 464	15.5	1 413	8.6	1 311	-
1 444	1 619	22.2	1 464	17.7	1 413	11.0	1 362	-
1 482	1 670	21.8	1 514	17.1	1 464	10.2	1 362	-
1 520	1 670	23.7	1 565	16.5	1 514	9.4	1 413	-
1 558	1 721	23.3	1 619	15.7	1 514	11.6	1 464	-
1 596	1 772	22.9	1 619	17.7	1 565	10.8	1 464	-
1 634	1 822	22.6	1 670	17.1	1 619	9.9	1 514	-
1 672	1 873	22.2	1 721	16.5	1 670	9.2	1 565	-
1 710	1 924	21.9	1 772	15.9	1 670	11.2	1 565	-
1 748	1 924	23.6	1 822	15.4	1 721	10.5	1 619	-
1 786	1 975	23.2	1 822	17.2	1 772	9.8	1 670	-
1 824	2 026	22.9	1 873	16.7	1 772	11.6	1 670	-
1 862	2 076	22.6	1 924	16.2	1 822	11.0	1 721	-
1 900	2 127	22.3	1 975	15.7	1 873	10.3	1 772	-
1 938	2 127	23.8	1 975	17.3	1 924	9.7	1 772	-
1 976	2 178	23.5	2 026	16.8	1 924	11.4	1 822	-

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- Members of dimensions in black are cold pressed for lengths up to 18.9 m (optimum dimensions for straight members) and hot pressed for lengths between 18.9 and 24.4 m (maximum length).
- Members of dimensions in grey are cold pressed (maximum length of 24.4 m).

## Conventional Glulam Beam Conversions – Spruce-Lodgepole Pine-Jack Pine (continued)

Wood species or product Stress grade Width (mm) Depths (mm)	Spruce-Lodgepole Pine-Jack Pine		Nordic Lam+					
	20f-E or 20f-EX		24F-ES/NPG					
	315	215 %	241 %	292 %	346 %			
380	445	20.1	445	10.4	394	3.9	394	-
418	495	19.2	445	18.6	445	1.3	394	-
456	546	18.3	495	16.9	445	9.5	445	-
494	597	17.5	546	15.4	495	7.1	495	-
532	597	23.4	597	14.1	546	4.9	495	-
570	648	22.4	597	19.9	597	2.9	546	-
608	699	21.5	648	18.5	597	9.0	597	-
646	749	20.9	699	17.2	648	7.0	597	-
684	803	19.9	749	16.2	699	5.3	648	-
722	803	24.1	803	14.9	699	10.3	699	-
760	854	23.3	803	19.2	749	8.6	699	-
798	905	22.6	854	18.1	803	6.7	749	-
836	956	21.9	905	17.2	854	5.3	803	-
874	1 006	21.4	956	16.3	854	9.4	803	-
912	1 057	20.9	956	19.8	905	8.0	854	-
950	1 057	24.1	1 006	19.0	956	6.7	905	-
988	1 108	23.5	1 057	18.1	956	10.3	905	-
1 026	1 159	22.9	1 108	17.4	1 006	9.1	956	-
1 064	1 210	22.4	1 159	16.7	1 057	7.9	1 006	-
1 102	1 260	22.0	1 159	19.5	1 108	6.8	1 006	-
1 140	1 311	21.5	1 210	18.8	1 108	9.9	1 057	-
1 178	1 311	24.0	1 260	18.2	1 159	8.8	1 108	-
1 216	1 362	23.6	1 311	17.5	1 210	7.8	1 108	-
1 254	1 413	23.1	1 311	20.0	1 210	10.6	1 159	-
1 292	1 464	22.7	1 362	19.3	1 260	9.6	1 210	-
1 330	1 514	22.3	1 413	18.7	1 311	8.6	1 260	-
1 368	1 514	24.5	1 464	18.1	1 362	7.7	1 260	-
1 406	1 565	24.0	1 514	17.6	1 362	10.2	1 311	-
1 444	1 619	23.5	1 514	19.8	1 413	9.3	1 362	-
1 482	1 670	23.1	1 565	19.2	1 464	8.4	1 362	-
1 520	1 721	22.7	1 619	18.5	1 514	7.7	1 413	-
1 558	1 772	22.4	1 670	18.0	1 514	9.9	1 464	-
1 596	1 772	24.2	1 670	19.9	1 565	9.1	1 464	-
1 634	1 822	23.9	1 721	19.4	1 619	8.2	1 514	-
1 672	1 873	23.5	1 772	18.9	1 619	10.2	1 565	-
1 710	1 924	23.2	1 822	18.5	1 670	9.5	1 565	-
1 748	1 975	22.9	1 873	18.0	1 721	8.7	1 619	-
1 786	1 975	24.5	1 873	19.8	1 772	8.0	1 670	-
1 824	2 026	24.2	1 924	19.3	1 772	9.9	1 670	-
1 862	2 076	23.9	1 975	18.8	1 822	9.3	1 721	-
1 900	2 127	23.6	2 026	18.4	1 873	8.6	1 772	-
1 938	2 178	23.3	2 026	20.0	1 873	10.4	1 772	-
1 976	2 229	23.0	2 076	19.6	1 924	9.7	1 822	-
2 014	2 229	24.5	2 127	19.2	1 975	9.1	1 873	-
2 052	2 280	24.2	2 178	18.8	2 026	8.5	1 873	-
2 090	2 330	23.9	2 229	18.4	2 026	10.1	1 924	-
2 128	2 384	23.5	2 229	19.9	2 076	9.6	1 975	-

### Notes :

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- The percentage (%) shown is the reduction of the cross section from conventional glulam to Nordic Lam+ 24F-ES/NPG.
- Members of dimensions in black are cold pressed for lengths up to 18.9 m (optimum dimensions for straight members) and hot pressed for lengths between 18.9 and 24.4 m (maximum length).
- Members of dimensions in grey are cold pressed (maximum length of 24.4 m).

## Conventional Glulam Beam Conversions – Spruce-Lodgepole Pine-Jack Pine (continued)

Wood species or product Stress grade Width (mm) Depths (mm)	Spruce-Lodgepole Pine-Jack Pine		Nordic Lam+					
	20f-E or 20f-EX		24F-ES/NPG					
	365	241 %	292 %	346 %	395 %			
380	445	22.7	394	17.1	394	1.7	395	-
418	495	21.8	445	14.8	445	-	395	-
456	546	20.9	495	13.2	445	7.5	445	-
494	597	20.2	546	11.6	495	5.0	495	-
532	648	19.6	546	17.9	546	2.7	495	-
570	648	24.9	597	16.2	546	9.2	546	-
608	699	24.1	648	14.7	597	6.9	597	-
646	749	23.4	699	13.4	648	4.9	597	-
684	803	22.5	699	18.2	699	3.1	648	-
722	854	21.9	749	17.0	699	8.2	699	-
760	905	21.4	803	15.5	749	6.6	699	0.5
798	905	25.1	854	14.4	803	4.6	749	-
836	956	24.5	854	18.3	803	8.9	803	-
874	1 006	24.0	905	17.2	854	7.4	803	0.6
912	1 057	23.5	956	16.1	905	5.9	854	-
950	1 108	23.0	1 006	15.3	956	4.6	905	-
988	1 159	22.5	1 057	14.4	956	8.3	905	0.9
1 026	1 159	25.4	1 057	17.6	1 006	7.1	956	-
1 064	1 210	24.9	1 108	16.7	1 057	5.8	1 006	-
1 102	1 260	24.5	1 159	15.9	1 057	9.1	1 057	-
1 140	1 311	24.1	1 210	15.1	1 108	7.9	1 057	-
1 178	1 362	23.7	1 210	17.8	1 159	6.7	1 108	-
1 216	1 413	23.3	1 260	17.1	1 210	5.7	1 159	-
1 254	1 413	25.6	1 311	16.4	1 210	8.5	1 159	-
1 292	1 464	25.2	1 362	15.7	1 260	7.6	1 210	-
1 330	1 514	24.8	1 362	18.1	1 311	6.6	1 260	-
1 368	1 565	24.5	1 413	17.4	1 311	9.2	1 260	0.3
1 406	1 619	24.0	1 464	16.7	1 362	8.2	1 311	-
1 444	1 670	23.6	1 514	16.1	1 413	7.2	1 362	-
1 482	1 670	25.6	1 514	18.3	1 464	6.4	1 362	0.5
1 520	1 721	25.2	1 565	17.6	1 464	8.7	1 413	-
1 558	1 772	24.9	1 619	16.9	1 514	7.9	1 464	-
1 596	1 822	24.6	1 670	16.3	1 565	7.0	1 464	0.7
1 634	1 873	24.3	1 670	18.2	1 565	9.2	1 514	-
1 672	1 924	24.0	1 721	17.7	1 619	8.2	1 565	-
1 710	1 924	25.7	1 772	17.1	1 670	7.4	1 619	-
1 748	1 975	25.4	1 822	16.6	1 721	6.7	1 619	-
1 786	2 026	25.1	1 873	16.1	1 721	8.7	1 670	-
1 824	2 076	24.9	1 873	17.9	1 772	7.9	1 721	-
1 862	2 127	24.6	1 924	17.3	1 822	7.2	1 721	-
1 900	2 178	24.3	1 975	16.8	1 822	9.1	1 772	-
1 938	2 178	25.8	2 026	16.4	1 873	8.4	1 822	-
1 976	2 229	25.5	2 026	18.0	1 924	7.7	1 822	0.2
2 014	2 280	25.3	2 076	17.5	1 975	7.0	1 873	-
2 052	2 330	25.0	2 127	17.1	1 975	8.8	1 924	-
2 090	2 384	24.7	2 178	16.6	2 026	8.1	1 924	0.4
2 128	2 435	24.4	2 178	18.1	2 076	7.5	1 975	-

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- The percentage (%) shown is the reduction of the cross section from conventional glulam to Nordic Lam+ 24F-ES/NPG.
- Members of dimensions in black are cold pressed for lengths up to 18.9 m (optimum dimensions for straight members) and hot pressed for lengths between 18.9 and 24.4 m (maximum length).
- Members of dimensions in grey are cold pressed (maximum length of 24.4 m).

## Conventional Glulam Beam Conversions – Douglas Fir-Larch

Wood species or product Stress grade Width (mm) Depths (mm)	Douglas Fir-Larch		Nordic Lam+		
	20f-E or 20f-EX		24F-ES/NPG		
	80	38	%	86	%
	114	197	17.9	140	-
	152	273	14.7	191	-
	190	327	18.2	191	-
	228	403	16.0	241	-
	266	454	18.9	292	-
	304			343	-
	342			343	-
	380			394	-
	418			445	-
	456			495	-
	494			495	-
	532			546	-
	570			597	-

Wood species or product Stress grade Width (mm) Depths (mm)	Douglas Fir-Larch		Nordic Lam+				
	20f-E or 20f-EX		24F-ES/NPG				
	130	38	%	86	%	137	%
	152	429	17.5	191	16.9	191	-
	190			241	16.1	191	-
	228			292	15.3	241	-
	266			343	14.7	292	-
	304			394	14.3	343	-
	342			445	13.9	343	-
	380			495	13.8	394	-
	418			546	13.6	445	-
	456			597	13.4	495	-
	494			648	13.2	495	-
	532			648	19.4	546	-
	570			699	18.9	597	-
	608			749	18.5	648	-
	646			803	17.8	648	-
	684			854	17.4	699	-
	722			905	17.1	749	-
	760			956	16.8	749	-
	798			1 006	16.6	803	-
	836					854	-
	874					905	-
	912					905	-
	950					956	-

### Notes :

- For preliminary design use only. Final design shall include a complete analysis including the verification of the factored bearing resistance, lateral stability, and appropriate modification factors. Smaller Nordic Lam+ sizes may be obtained with engineering calculations based on actual span and loading conditions. Reverse use of this table is non-conservative in all cases.
- The percentage (%) shown is the reduction of the cross section from conventional glulam to Nordic Lam+ 24F-ES/NPG.
- Members of dimensions in black are cold pressed for lengths up to 18.9 m (optimum dimensions for straight members) and hot pressed for lengths between 18.9 and 24.4 m (maximum length).
- Members of dimensions in grey are cold pressed (maximum length of 24.4 m).

## Conventional Glulam Beam Conversions – Douglas Fir-Larch (continued)

Wood species or product Stress grade Width (mm) Depths (mm)	Douglas Fir-Larch		Nordic Lam+			
	20f-E or 20f-EX		24F-ES/NPG			
	175	86    %	137    %	184    %		
	190	343    11.3	241    0.7	241	-	
	228	394    15.1	292    -	241	-	
	266	445    17.8	292    14.1	292	-	
	304	495    20.0	343    11.7	343	-	
	342	597    14.2	394    9.8	343	-	
	380	648    16.2	445    8.3	394	-	
	418	699    17.8	495    7.3	445	-	
	456	749    19.3	495    15.0	495	-	
	494	854    15.0	546    13.5	495	-	
	532	905    16.4	597    12.1	546	-	
	570	956    17.6	648    11.0	597	-	
	608	1 006    18.7	699    10.0	648	-	
	646		749    9.2	648	-	
	684		749    14.3	699	-	
	722		803    12.9	749	-	
	760		854    12.0	749	-	
	798		905    11.2	803	-	
	836		956    10.5	854	-	
	874		956    14.4	905	-	
	912		1 006    13.6	905	-	
	950		1 057    12.9	956	-	
	988		1 108    12.2	1 006	-	
	1 026		1 159    11.6	1 057	-	
	1 064		1 159    14.7	1 057	-	
	1 102		1 210    14.0	1 108	-	
	1 140		1 260    13.5	1 159	-	
	1 178		1 311    12.9	1 159	-	
	1 216		1 362    12.3	1 210	-	
	1 254		1 362    15.0	1 260	-	

### Notes :

- For preliminary design use only. Final design shall include a complete analysis including the verification of the factored bearing resistance, lateral stability, and appropriate modification factors. Smaller Nordic Lam+ sizes may be obtained with engineering calculations based on actual span and loading conditions. Reverse use of this table is non-conservative in all cases.
- The percentage (%) shown is the reduction of the cross section from conventional glulam to Nordic Lam+ 24F-ES/NPG.
- Members of dimensions in black are cold pressed for lengths up to 18.9 m (optimum dimensions for straight members) and hot pressed for lengths between 18.9 and 24.4 m (maximum length).
- Members of dimensions in grey are cold pressed (maximum length of 24.4 m).



## Conventional Glulam Beam Conversions – Douglas Fir-Larch (continued)

Wood species or product Stress grade Width (mm) Depths (mm)	Douglas Fir-Larch		Nordic Lam+					
	20f-E or 20f-EX		24F-ES/NPG					
	215	137 %	184 %	215 %	241 %			
266	343	17.8	292	6.1	292	-	292	-
304	394	17.4	343	3.4	343	-	343	-
342	445	17.1	394	1.4	343	-	343	-
380	495	17.0	445	-	394	-	394	-
418	546	16.8	445	8.9	445	-	445	-
456	597	16.6	495	7.1	495	-	445	-
494	648	16.4	546	5.4	495	-	495	-
532	699	16.3	597	4.0	546	-	546	-
570	749	16.3	648	2.7	597	-	597	-
608	803	15.8	648	8.8	648	-	597	-
646	854	15.8	699	7.4	648	-	648	-
684	905	15.7	749	6.3	699	-	699	-
722	956	15.6	803	4.8	749	-	699	-
760	956	19.8	803	9.6	803	-	749	-
798	1 006	19.7	854	8.4	803	-	803	-
836	1 057	19.4	905	7.4	854	-	854	-
874	1 108	19.2	956	6.4	905	-	854	-
912	1 159	19.0	1 006	5.6	956	-	905	-
950	1 210	18.8	1 006	9.4	956	-	956	-
988	1 260	18.7	1 057	8.4	1 006	-	956	-
1 026	1 311	18.6	1 108	7.6	1 057	-	1 006	-
1 064	1 362	18.4	1 159	6.8	1 108	-	1 057	-
1 102	1 413	18.3	1 210	6.0	1 108	-	1 108	-
1 140	1 464	18.2	1 210	9.2	1 159	-	1 108	-
1 178	1 514	18.1	1 260	8.5	1 210	-	1 159	-
1 216	1 565	18.0	1 311	7.7	1 260	-	1 210	-
1 254	1 619	17.7	1 362	7.0	1 260	-	1 210	-
1 292			1 362	9.8	1 311	-	1 260	-
1 330			1 413	9.1	1 362	-	1 311	-
1 368			1 464	8.4	1 413	-	1 362	-
1 406			1 514	7.8	1 413	-	1 362	-
1 444			1 565	7.2	1 464	-	1 413	-
1 482			1 565	9.6	1 514	-	1 464	-
1 520			1 619	8.8	1 565	-	1 464	-
1 558			1 670	8.3	1 565	-	1 514	-
1 596			1 721	7.7	1 619	-	1 565	-

### Notes :

- For preliminary design use only. Final design shall include a complete analysis including the verification of the factored bearing resistance, lateral stability, and appropriate modification factors. Smaller Nordic Lam+ sizes may be obtained with engineering calculations based on actual span and loading conditions. Reverse use of this table is non-conservative in all cases.
- The percentage (%) shown is the reduction of the cross section from conventional glulam to Nordic Lam+ 24F-ES/NPG.
- Members of dimensions in black are cold pressed for lengths up to 18.9 m (optimum dimensions for straight members) and hot pressed for lengths between 18.9 and 24.4 m (maximum length).
- Members of dimensions in grey are cold pressed (maximum length of 24.4 m).

## Conventional Glulam Beam Conversions – Douglas Fir-Larch (continued)

Wood species or product Stress grade Width (mm) Depths (mm)	Douglas Fir-Larch		Nordic Lam+					
	20f-E or 20f-EX		24F-ES/NPG					
	265	184 %	215 %	241 %	292 %			
342	445	9.7	394	6.5	394	-	343	-
380	445	18.7	445	5.0	394	5.7	394	-
418	495	17.8	495	3.9	445	3.2	445	-
456	546	16.9	495	11.9	495	1.3	445	-
494	597	16.1	546	10.3	546	-	495	-
532	648	15.4	597	9.0	597	-	546	-
570	699	14.9	648	7.8	597	4.7	597	-
608	749	14.5	699	6.7	648	3.1	597	-
646	749	19.5	699	12.2	699	1.6	648	-
684	803	18.5	749	11.2	749	0.4	699	-
722	854	17.9	803	9.8	749	5.7	749	-
760	905	17.3	854	8.8	803	3.9	749	-
798	956	16.8	905	8.0	854	2.7	803	-
836	1 006	16.4	905	12.2	905	1.6	854	-
874	1 057	16.0	956	11.3	905	5.8	854	-
912	1 057	19.5	1 006	10.5	956	4.7	905	-
950	1 108	19.0	1 057	9.7	1 006	3.7	956	-
988	1 159	18.5	1 108	9.0	1 057	2.7	1 006	-
1 026	1 210	18.1	1 108	12.4	1 108	1.8	1 006	-
1 064	1 260	17.8	1 159	11.6	1 108	5.3	1 057	-
1 102	1 311	17.4	1 210	10.9	1 159	4.4	1 108	-
1 140	1 362	17.0	1 260	10.3	1 210	3.5	1 108	-
1 178	1 362	19.7	1 311	9.7	1 260	2.7	1 159	-
1 216	1 413	19.3	1 311	12.5	1 260	5.8	1 210	-
1 254	1 464	18.9	1 362	11.9	1 311	4.9	1 260	-
1 292	1 514	18.6	1 413	11.3	1 362	4.1	1 260	-
1 330	1 565	18.3	1 464	10.7	1 413	3.4	1 311	-
1 368	1 619	17.8	1 514	10.2	1 413	6.1	1 362	-
1 406	1 670	17.5	1 514	12.6	1 464	5.3	1 362	-
1 444	1 670	19.7	1 565	12.1	1 514	4.6	1 413	-
1 482	1 721	19.4	1 619	11.4	1 565	4.0	1 464	-
1 520	1 772	19.1	1 670	10.9	1 619	3.1	1 514	-
1 558	1 822	18.8	1 721	10.4	1 619	5.5	1 514	-
1 596	1 873	18.5	1 721	12.5	1 670	4.8	1 565	-
1 634	1 924	18.2	1 772	12.0	1 721	4.2	1 619	-
1 672	1 975	18.0	1 822	11.6	1 772	3.6	1 619	-
1 710	1 975	19.8	1 873	11.1	1 772	5.8	1 670	-
1 748	2 026	19.5	1 924	10.7	1 822	5.2	1 721	-
1 786	2 076	19.3	1 924	12.6	1 873	4.6	1 772	-
1 824	2 127	19.0	1 975	12.2	1 924	4.1	1 772	-
1 862	2 178	18.8	2 026	11.7	1 924	6.0	1 822	-
1 900			2 076	11.4	1 975	5.5	1 873	-
1 938			2 127	11.0	2 026	4.9	1 924	-
1 976			2 127	12.7	2 076	4.5	1 924	-

### Notes :

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- The percentage (%) shown is the reduction of the cross section from conventional glulam to Nordic Lam+ 24F-ES/NPG.
- Members of dimensions in black are cold pressed for lengths up to 18.9 m (optimum dimensions for straight members) and hot pressed for lengths between 18.9 and 24.4 m (maximum length).
- Members of dimensions in grey are cold pressed (maximum length of 24.4 m).

## Conventional Glulam Beam Conversions – Douglas Fir-Larch (continued)

Wood species or product Stress grade Width (mm) Depths (mm)	Douglas Fir-Larch		Nordic Lam+					
	20f-E or 20f-EX		24F-ES/NPG					
	315	215 %	241 %	292 %	346 %			
	380	495 11.1	445 10.4	394 3.9	394	-		
	418	495 19.2	495 9.4	445 1.3	445	-		
	456	546 18.3	546 8.4	495 -	445	-		
	494	597 17.5	546 15.4	546 -	495	-		
	532	648 16.9	597 14.1	546 4.9	546	-		
	570	699 16.3	648 13.0	597 2.9	597	-		
	608	749 15.9	699 12.0	648 1.2	597	-		
	646	803 15.2	749 11.3	699 -	648	-		
	684	803 19.9	749 16.2	749 -	699	-		
	722	854 19.3	803 14.9	749 3.8	749	-		
	760	905 18.7	854 14.0	803 2.1	749	-		
	798	956 18.2	905 13.2	854 0.8	803	-		
	836	1 006 17.9	956 12.5	905 -	854	-		
	874	1 057 17.5	956 16.3	905 4.0	854	-		
	912	1 108 17.1	1 006 15.6	956 2.8	905	-		
	950	1 159 16.7	1 057 14.9	1 006 1.8	956	-		
	988	1 159 19.9	1 108 14.2	1 057 0.8	1 006	-		
	1 026	1 210 19.5	1 159 13.6	1 057 4.5	1 006	-		
	1 064	1 260 19.2	1 210 13.0	1 108 3.5	1 057	-		
	1 102	1 311 18.8	1 210 16.0	1 159 2.5	1 108	-		
	1 140	1 362 18.5	1 260 15.4	1 210 1.6	1 108	-		
	1 178	1 413 18.1	1 311 14.9	1 210 4.8	1 159	-		
	1 216	1 464 17.8	1 362 14.3	1 260 3.9	1 210	-		
	1 254	1 514 17.6	1 413 13.8	1 311 3.1	1 260	-		
	1 292	1 565 17.3	1 413 16.3	1 362 2.3	1 260	-		
	1 330	1 565 19.7	1 464 15.8	1 413 1.5	1 311	-		
	1 368	1 619 19.2	1 514 15.3	1 413 4.3	1 362	-		
	1 406	1 670 18.9	1 565 14.8	1 464 3.5	1 413	-		
	1 444	1 721 18.7	1 619 14.2	1 514 2.8	1 413	-		
	1 482	1 772 18.4	1 670 13.8	1 565 2.1	1 464	-		
	1 520	1 822 18.2	1 670 15.9	1 565 4.6	1 514	-		
	1 558	1 873 17.9	1 721 15.5	1 619 3.7	1 514	-		
	1 596	1 873 19.9	1 772 15.1	1 670 3.0	1 565	-		
	1 634	1 924 19.6	1 822 14.7	1 721 2.4	1 619	-		
	1 672	1 975 19.4	1 873 14.3	1 721 4.6	1 670	-		
	1 710	2 026 19.1	1 873 16.2	1 772 3.9	1 670	-		
	1 748	2 076 18.9	1 924 15.8	1 822 3.4	1 721	-		
	1 786	2 127 18.7	1 975 15.4	1 873 2.8	1 772	-		
	1 824	2 178 18.5	2 026 15.0	1 873 4.8	1 772	-		
	1 862	2 229 18.3	2 076 14.7	1 924 4.2	1 822	-		
	1 900	2 229 19.9	2 127 14.4	1 975 3.6	1 873	-		
	1 938	2 280 19.7	2 127 16.0	2 026 3.1	1 924	-		
	1 976	2 330 19.5	2 178 15.7	2 076 2.6	1 924	-		
	2 014	2 384 19.2	2 229 15.3	2 076 4.4	1 975	-		
	2 052	2 435 19.0	2 280 15.0	2 127 3.9	2 026	-		
	2 090		2 330 14.7	2 178 3.4	2 026	-		
	2 128		2 330 16.2	2 229 2.9	2 076	-		

### Notes :

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- The percentage (%) shown is the reduction of the cross section from conventional glulam to Nordic Lam+ 24F-ES/NPG.
- Members of dimensions in black are cold pressed for lengths up to 18.9 m (optimum dimensions for straight members) and hot pressed for lengths between 18.9 and 24.4 m (maximum length).
- Members of dimensions in grey are cold pressed (maximum length of 24.4 m).

## Conventional Glulam Beam Conversions – Douglas Fir-Larch (continued)

Wood species or product Stress grade Width (mm) Depths (mm)	Douglas Fir-Larch		Nordic Lam+					
	20f-E or 20f-EX		24F-ES/NPG					
	365	241 %	292 %	346 %	395 %			
380	495	14.0	445	6.3	394	1.7	395	-
418	546	13.8	495	5.3	445	-	445	-
456	597	13.6	495	13.2	495	-	445	-
494	648	13.4	546	11.6	546	-	495	-
532	648	19.6	597	10.2	546	2.7	546	-
570	699	19.0	648	9.1	597	0.7	597	-
608	749	18.7	699	8.0	648	-	597	-
646	803	17.9	699	13.4	699	-	648	-
684	854	17.6	749	12.4	699	3.1	699	-
722	905	17.2	803	11.0	749	1.7	749	-
760	956	16.9	854	10.1	803	-	749	-
798	1 006	16.8	905	9.3	854	-	803	-
836	1 057	16.5	905	13.4	854	3.2	854	-
874	1 108	16.3	956	12.5	905	1.8	854	-
912	1 108	19.8	1 006	11.8	956	0.6	905	-
950	1 159	19.4	1 057	11.0	1 006	-	956	-
988	1 210	19.1	1 108	10.3	1 006	3.5	1 006	-
1 026	1 260	18.9	1 108	13.6	1 057	2.3	1 006	-
1 064	1 311	18.6	1 159	12.9	1 108	1.3	1 057	-
1 102	1 362	18.4	1 210	12.2	1 159	0.3	1 108	-
1 140	1 413	18.2	1 260	11.6	1 210	-	1 159	-
1 178	1 464	17.9	1 311	11.0	1 210	2.6	1 159	-
1 216	1 514	17.8	1 311	13.8	1 260	1.8	1 210	-
1 254	1 565	17.6	1 362	13.1	1 311	0.9	1 260	-
1 292	1 619	17.3	1 413	12.5	1 362	0.1	1 260	-
1 330	1 619	19.6	1 464	11.9	1 362	2.9	1 311	-
1 368	1 670	19.4	1 514	11.5	1 413	2.1	1 362	-
1 406	1 721	19.2	1 565	11.0	1 464	1.3	1 413	-
1 444	1 772	19.0	1 565	13.3	1 514	0.6	1 413	-
1 482	1 822	18.8	1 619	12.6	1 514	3.2	1 464	-
1 520	1 873	18.6	1 670	12.1	1 565	2.4	1 514	-
1 558	1 924	18.5	1 721	11.6	1 619	1.5	1 565	-
1 596	1 975	18.3	1 721	13.7	1 670	0.8	1 565	-
1 634	2 026	18.1	1 772	13.2	1 670	3.1	1 619	-
1 672	2 026	20.0	1 822	12.8	1 721	2.4	1 670	-
1 710	2 076	19.8	1 873	12.4	1 772	1.8	1 670	-
1 748	2 127	19.7	1 924	11.9	1 822	1.2	1 721	-
1 786	2 178	19.5	1 924	13.8	1 822	3.3	1 772	-
1 824	2 229	19.3	1 975	13.4	1 873	2.7	1 822	-
1 862	2 280	19.2	2 026	13.0	1 924	2.0	1 822	-
1 900	2 330	19.0	2 076	12.6	1 975	1.5	1 873	-
1 938	2 384	18.8	2 127	12.2	1 975	3.4	1 924	-
1 976	2 435	18.6	2 178	11.8	2 026	2.8	1 975	-
2 014			2 178	13.5	2 076	2.3	1 975	-
2 052			2 229	13.1	2 127	1.7	2 026	-
2 090			2 280	12.7	2 178	1.2	2 076	-
2 128			2 330	12.4	2 178	3.0	2 076	-

Notes :

- For preliminary design use only. Final design shall include a complete analysis including the verification of the factored bearing resistance, lateral stability, and appropriate modification factors. Smaller Nordic Lam+ sizes may be obtained with engineering calculations based on actual span and loading conditions. Reverse use of this table is non-conservative in all cases.
- The percentage (%) shown is the reduction of the cross section from conventional glulam to Nordic Lam+ 24F-ES/NPG.
- Members of dimensions in black are cold pressed for lengths up to 18.9 m (optimum dimensions for straight members) and hot pressed for lengths between 18.9 and 24.4 m (maximum length).
- Members of dimensions in grey are cold pressed (maximum length of 24.4 m).