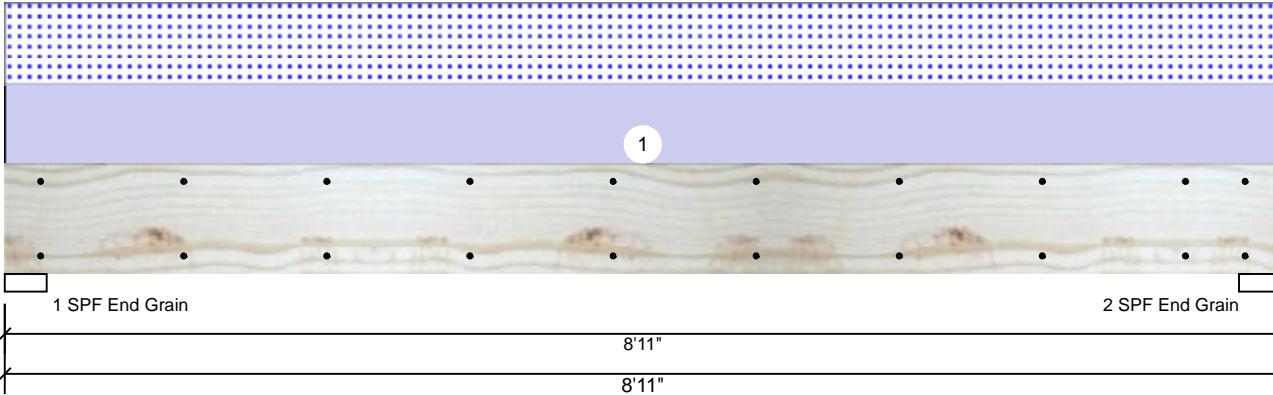


**Front Triple Window Kerto-S LVL 1.750" X 9.250" 2-Ply - PASSED**

Level: Level



**Member Information**

Type:	Girder	Application:	Floor
Plies:	2	Design Method:	ASD
Moisture Condition:	Dry	Building Code:	IBC/IRC 2015
Deflection LL:	480	Load Sharing:	No
Deflection TL:	360	Deck:	Not Checked
Importance:	Normal		
Temperature:	Temp <= 100°F		

**Reactions UNPATTERNED Ib (Uplift)**

Brg	Live	Dead	Snow	Wind	Const
1	0	2208	2176	0	0
2	0	2208	2176	0	0

**Bearings**

Bearing	Length	Cap.	React D/L	Ib	Total	Ld. Case	Ld. Comb.
1 - SPF End Grain	3.500"	41%	2208 / 2176	4383	L	D+S	
2 - SPF End Grain	3.500"	41%	2208 / 2176	4383	L	D+S	

**Analysis Results**

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	8793 ft-lb	4'5 1/2"	14423 ft-lb	0.610 (61%)	D+S	L
Unbraced	8793 ft-lb	4'5 1/2"	8812 ft-lb	0.998 (100%)	D+S	L
Shear	3400 lb	7'11"	7943 lb	0.428 (43%)	D+S	L
LL Defl inch	0.137 (L/739)	4'5 9/16"	0.211 (L/480)	0.650 (65%)	S	L
TL Defl inch	0.277 (L/367)	4'5 9/16"	0.282 (L/360)	0.980 (98%)	D+S	L

**Design Notes**

- 1 Fasten all plies using 2 rows of 10d Box nails (.128x3") at 12" o.c. Maximum end distance not to exceed 6".
- 2 Refer to last page of calculations for fasteners required for specified loads.
- 3 Girders are designed to be supported on the bottom edge only.
- 4 Top loads must be supported equally by all plies.
- 5 Top must be laterally braced at a maximum of 7'11 5/8" o.c.
- 6 Bottom braced at bearings.
- 7 Lateral slenderness ratio based on single ply width.

ID	Load Type	Location	Trib Width	Side	Dead	0.9	Live	1	Snow	1.15	Wind	1.6	Const.	1.25	Comments
1	Uniform			Top	488	PLF	0	PLF	488	PLF	0	PLF	0	PLF	
	Self Weight				7	PLF									

**Notes**

Calculated Structural Designs is responsible only of the structural adequacy of this component based on the design criteria and loadings shown. It is the responsibility of the customer and/or the contractor to ensure the component suitability of the intended application, and to verify the dimensions and loads.

**Lumber**

1. Dry service conditions, unless noted otherwise
2. LVL not to be treated with fire retardant or corrosive

chemicals

**Handling & Installation**

1. LVL beams must not be cut or drilled
2. Refer to manufacturer's product information regarding installation requirements, multi-ply fastening details, beam strength values, and code approvals
3. Damaged Beams must not be used
4. Design assumes top edge is laterally restrained
5. Provide lateral support at bearing points to avoid lateral displacement and rotation

6. For flat roofs provide proper drainage to prevent ponding

This design is valid until 10/18/2021

**Manufacturer Info**

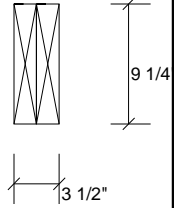
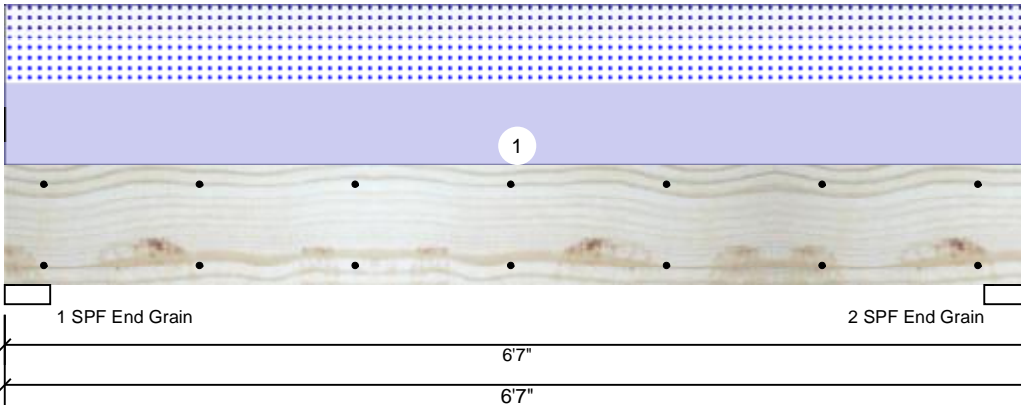
Metsä Wood  
 301 Merritt 7 Building, 2nd Floor  
 Norwalk, CT 06851  
 (800) 622-5850  
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 ICC-ES: ESR-3633

Comtech, Inc.  
 1001 S. Reilly Road, Suite #639  
 Fayetteville, NC  
 USA  
 28314  
 910-864-TRUS



**Double Door Header Kerto-S LVL 1.750" X 9.250" 2-Ply - PASSED**

Level: Level



**Member Information**

Type:	Girder
Plies:	2
Moisture Condition:	Dry
Deflection LL:	480
Deflection TL:	360
Importance:	Normal
Temperature:	Temp <= 100°F

Application:	Floor
Design Method:	ASD
Building Code:	IBC/IRC 2015
Load Sharing:	No
Deck:	Not Checked

**Reactions UNPATTERNED lb (Uplift)**

Brg	Live	Dead	Snow	Wind	Const
1	0	1291	1267	0	0
2	0	1291	1267	0	0

**Bearings**

Bearing	Length	Cap. React	D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF End Grain	3.500"	24%	1291 / 1267	2558	L	D+S
2 - SPF End Grain	3.500"	24%	1291 / 1267	2558	L	D+S

**Analysis Results**

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	3645 ft-lb	3' 1/2"	14423 ft-lb	0.253 (25%)	D+S	L
Unbraced	3645 ft-lb	3' 1/2"	10451 ft-lb	0.349 (35%)	D+S	L
Shear	1781 lb	1'	7943 lb	0.224 (22%)	D+S	L
LL Defl inch	0.033 (L/2239)	3' 1/2"	0.153 (L/480)	0.210 (21%)	S	L
TL Defl inch	0.066 (L/1109)	3' 1/2"	0.204 (L/360)	0.320 (32%)	D+S	L

**Design Notes**

- 1 Fasten all plies using 2 rows of 10d Box nails (.128x3") at 12" o.c. Maximum end distance not to exceed 6".
- 2 Refer to last page of calculations for fasteners required for specified loads.
- 3 Girders are designed to be supported on the bottom edge only.
- 4 Top loads must be supported equally by all plies.
- 5 Top braced at bearings.
- 6 Bottom braced at bearings.
- 7 Lateral slenderness ratio based on single ply width.

ID	Load Type	Location	Trib Width	Side	Dead 0.9	Live 1	Snow 1.15	Wind 1.6	Const. 1.25	Comments
1	Uniform			Top	385 PLF	0 PLF	385 PLF	0 PLF	0 PLF	
	Self Weight				7 PLF					

**Notes**  
 Calculated Structured Designs is responsible only of the structural adequacy of this component based on the design criteria and loadings shown. It is the responsibility of the customer and/or the contractor to ensure the component suitability of the intended application, and to verify the dimensions and loads.

**Lumber**  
 1. Dry service conditions, unless noted otherwise  
 2. LVL not to be treated with fire retardant or corrosive chemicals

**Handling & Installation**  
 1. LVL beams must not be cut or drilled  
 2. Refer to manufacturer's product information regarding installation requirements, multi-ply fastening details, beam strength values, and code approvals  
 3. Damaged Beams must not be used  
 4. Design assumes top edge is laterally restrained  
 5. Provide lateral support at bearing points to avoid lateral displacement and rotation

6. For flat roofs provide proper drainage to prevent ponding

This design is valid until 10/18/2021

**Manufacturer Info**  
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