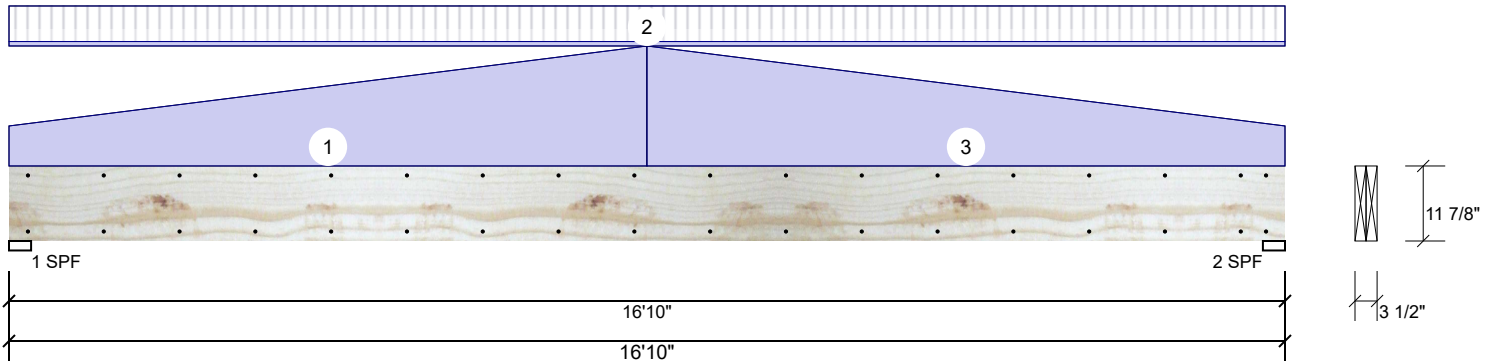


GDH Kerto-S LVL 1.750" X 11.875" 2-Ply - PASSED

Level: Level



Member Information

Type:	Girder	Application:	Floor
Plies:	2	Design Method:	ASD
Moisture Condition:	Dry	Building Code:	IBC 2012
Deflection LL:	480	Load Sharing:	No
Deflection TL:	360	Deck:	Not Checked
Importance:	Normal		
Temperature:	Temp <= 100°F		

Reactions UNPATTERNED lb (Uplift)

Brg	Live	Dead	Snow	Wind	Const
1	337	877	0	0	0
2	337	877	0	0	0

Bearings

Bearing	Length	Cap. React	D/L lb	Total Ld.	Case	Ld. Comb.
1 - SPF	3.500"	23%	877 / 337	1214	L	D+L
2 - SPF	3.500"	23%	877 / 337	1214	L	D+L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	5365 ft-lb	8'5"	19911 ft-lb	0.269 (27%)	D+L	L
Unbraced	5365 ft-lb	8'5"	6063 ft-lb	0.885 (88%)	D+L	L
Shear	1085 lb	15'7 3/8"	8867 lb	0.122 (12%)	D+L	L
LL Defl inch	0.070 (L/2809)	8'5 1/16"	0.409 (L/480)	0.170 (17%)	L	L
TL Defl inch	0.276 (L/712)	8'5 1/16"	0.546 (L/360)	0.510 (51%)	D+L	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	Tapered Start	0-0-0		Top	45 PLF	0 PLF	0 PLF	0 PLF	0 PLF	Gable
	End	8-5-0			135 PLF	0 PLF	0 PLF	0 PLF	0 PLF	
2	Tie-In	0-0-0 to 16-10-0	1-0-0	Top	5 PSF	40 PSF	0 PSF	0 PSF	0 PSF	Roof
3	Tapered Start	8-5-0		Top	135 PLF	0 PLF	0 PLF	0 PLF	0 PLF	Gable
	End	16-10-0			45 PLF	0 PLF	0 PLF	0 PLF	0 PLF	
	Self Weight				9 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

Manufacturer Info

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

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



This design is valid until 2/26/2023

GDH Kerto-S LVL 1.750" X 11.875" 2-Ply - PASSED

Level: Level



Multi-Ply Analysis

Fasten all plies using 2 rows of 10d Box nails (.128x3") at 12" o.c.. Maximum end distance not to exceed 6"

Capacity	0.0 %
Load	0.0 PLF
Yield Limit per Foot	163.7 PLF
Yield Limit per Fastener	81.9 lb.
Yield Mode	IV
Edge Distance	1 1/2"
Min. End Distance	3"
Load Combination	
Duration Factor	1.00

Notes

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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

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