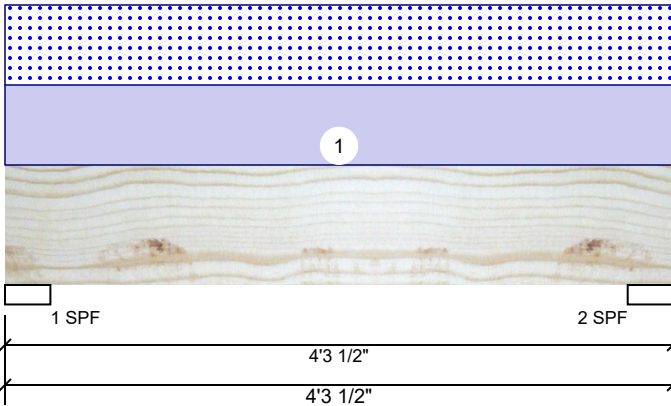


BM1 S-P-F #1 2.000" X 10.000" 2-Ply - PASSED

Level: Level



Member Information

Type:	Girder
Plies:	2
Moisture Condition:	Dry
Deflection LL:	480
Deflection TL:	240
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	886	886	0	0
2	0	886	886	0	0

Bearings

Bearing	Length	Cap. React	D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	3.500"	40%	886 / 886	1772	L	D+S
2 - SPF	3.500"	40%	886 / 886	1772	L	D+S

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	1517 ft-lb	2'1 3/4"	3946 ft-lb	0.384 (38%)	D+S	L
Unbraced	1517 ft-lb	2'1 3/4"	3770 ft-lb	0.402 (40%)	D+S	L
Shear	946 lb	3'3 1/2"	2872 lb	0.330 (33%)	D+S	L
LL Defl inch	0.007 (L/6351)	2'1 13/16"	0.096 (L/480)	0.080 (8%)	S	L
TL Defl inch	0.014 (L/3175)	2'1 13/16"	0.192 (L/240)	0.080 (8%)	D+S	L

Design Notes

- Girders are designed to be supported on the bottom edge only.
- Multiple plies must be fastened together as per manufacturer's details.
- Top loads must be supported equally by all plies.
- Top braced at bearings.
- Bottom braced at bearings.
- 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	413 PLF	0 PLF	413 PLF	0 PLF	0 PLF	H2

Manufacturer Info

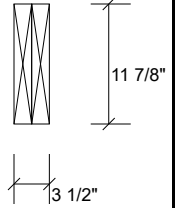
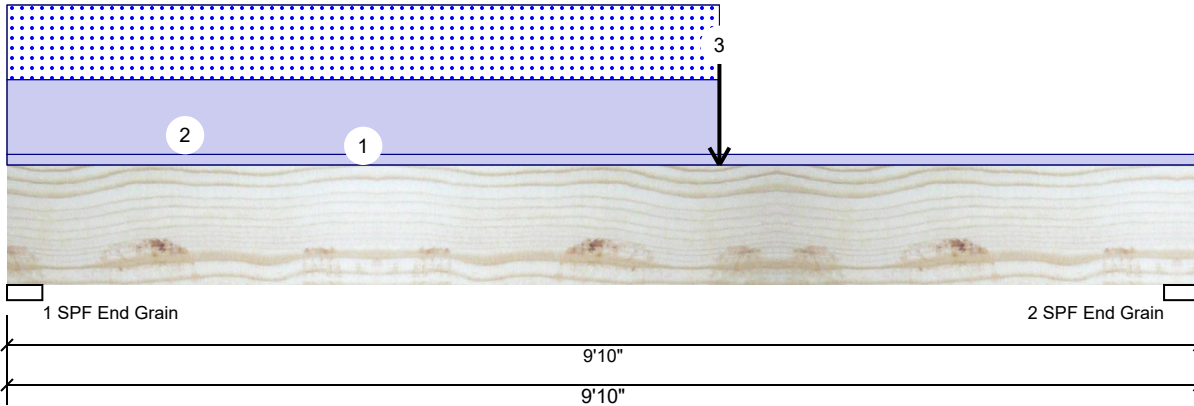
Comtech, Inc.
 1001 S. Reilly Road, Suite #639
 Fayetteville, NC
 USA
 28314
 910-864-TRUS



This design is valid until 4/24/2023

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/IRC 2015
Deflection LL:	480	Load Sharing:	No
Deflection TL:	240	Deck:	Not Checked
Importance:	Normal		
Temperature:	Temp <= 100°F		

Reactions UNPATTERNED lb (Uplift)

Brg	Live	Dead	Snow	Wind	Const
1	0	2938	2598	0	0
2	0	2323	1983	0	0

Bearings

Bearing	Length	Cap. React D/L lb	Total Ld. Case	Ld. Comb.
1 - SPF End Grain	3.500"	52% 2938 / 2598	5536 L	D+S
2 - SPF End Grain	3.500"	40% 2323 / 1983	4306 L	D+S

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	15516 ft-lb	5'10 1/2"	22897 ft-lb	0.678 (68%)	D+S	L
Unbraced	15516 ft-lb	5'10 1/2"	15525 ft-lb	0.999 (100%)	D+S	L
Shear	4423 lb	1'2 5/8"	10197 lb	0.434 (43%)	D+S	L
LL Defl inch	0.129 (L/869)	5' 3/4"	0.234 (L/480)	0.550 (55%)	S	L
TL Defl inch	0.273 (L/412)	5' 11/16"	0.469 (L/240)	0.580 (58%)	D+S	L

Design Notes

- Girders are designed to be supported on the bottom edge only.
- Multiple plies must be fastened together as per manufacturer's details.
- Top loads must be supported equally by all plies.
- Top must be laterally braced at a maximum of 5'3 3/8" o.c.
- Bottom braced at bearings.
- 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	60 PLF	0 PLF	0 PLF	0 PLF	0 PLF	Wall
2	Part. Uniform	0-0-0 to 5-10-8		Top	422 PLF	0 PLF	422 PLF	0 PLF	0 PLF	H1
3	Point	5-10-8		Top	2101 lb	0 lb	2101 lb	0 lb	0 lb	H1-GR
	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

- Dry service conditions, unless noted otherwise
- LVL not to be treated with fire retardant or corrosive chemicals

Handling & Installation

- LVL beams must not be cut or drilled
- Refer to manufacturer's product information regarding installation requirements, multi-ply fastening details, beam strength values, and code approvals
- Damaged Beams must not be used
- Design assumes top edge is laterally restrained
- 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 4/24/2023

Manufacturer Info

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 301 Merritt 7 Building, 2nd Floor
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 ICC-ES: ESR-3633

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