

Anthony POWER HEADER®

2600F_b - 1.9E



Anthony POWER HEADER® Advantages

- ◆ Less Expensive than LVL or PSL
- ◆ Lighter than Steel, LVL or PSL
- ◆ Pre-Cut Lengths
- ◆ Renewable Resource
- ◆ Cambered or Non-cambered
- ◆ 3-1/2" Width to Match Framing
- ◆ One Piece - No Nail Laminating
- ◆ Lifetime Warranty

**Garage Header
Sizing Tables**



3-1/2" WIDTH GARAGE HEADER APPLICATION - SINGLE STORY

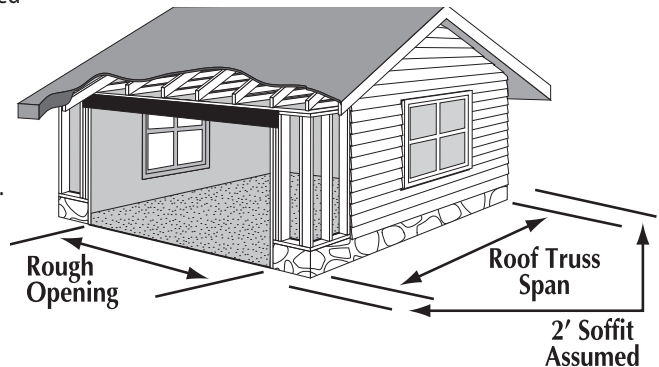
HEADER SUPPORTING: 1/2 ROOF SPAN

ROOF LOAD LL = (PSF) DL =	SNOW LOAD AREAS USING LOAD DURATION FACTOR = 1.15																				
	25			30			30			35			40			50					
	15			15			17			17			17			17					
ROUGH OPENING =	9'-3"	16'-3"	18'-3"	9'-3"	16'-3"	18'-3"	9'-3"	16'-3"	18'-3"	9'-3"	16'-3"	18'-3"	9'-3"	16'-3"	18'-3"	9'-3"	16'-3"	18'-3"			
20	8-3/8	11-1/4	12-5/8	8-3/8	12-5/8	14	8-3/8	12-5/8	14	8-3/8	12-5/8	14	8-3/8	14	15-3/8	8-3/8	14	16-3/4	8-3/8	14	16-3/4
22	8-3/8	12-5/8	14	8-3/8	12-5/8	14	8-3/8	12-5/8	14	8-3/8	12-5/8	14	8-3/8	12-5/8	15-3/8	8-3/8	14	15-3/8	8-3/8	15-3/8	16-3/4
24	8-3/8	12-5/8	14	8-3/8	12-5/8	14	8-3/8	12-5/8	15-3/8	8-3/8	14	15-3/8	8-3/8	14	16-3/4	9-3/4	15-3/8	**			
26	8-3/8	12-5/8	14	8-3/8	12-5/8	15-3/8	8-3/8	14	15-3/8	8-3/8	14	15-3/8	8-3/8	15-3/8	16-3/4	9-3/4	16-3/4	**			
28	8-3/8	12-5/8	14	8-3/8	14	15-3/8	8-3/8	14	15-3/8	8-3/8	15-3/8	16-3/4	9-3/4	15-3/8	16-3/4	9-3/4	16-3/4	**			
30	8-3/8	14	15-3/8	8-3/8	14	15-3/8	8-3/8	14	16-3/4	8-3/8	15-3/8	16-3/4	9-3/4	15-3/8	**	9-3/4	16-3/4	**			
32	8-3/8	14	15-3/8	8-3/8	14	16-3/4	8-3/8	15-3/8	16-3/4	9-3/4	15-3/8	**	9-3/4	16-3/4	**	9-3/4	**	**			
34	8-3/8	14	15-3/8	8-3/8	15-3/8	16-3/4	8-3/8	15-3/8	16-3/4	9-3/4	15-3/8	**	9-3/4	16-3/4	**	11-1/4	**	**	**		
36	8-3/8	14	16-3/4	8-3/8	15-3/8	16-3/4	9-3/4	15-3/8	**	9-3/4	16-3/4	**	9-3/4	16-3/4	**	11-1/4	**	**	**	**	**

ROOF LOAD LL = (PSF) DL =	NON-SNOW LOAD AREAS USING LOAD DURATION FACTOR = 1.25														
	20			20			20			20			20		
	12			15			17			20			25		
ROUGH OPENING =	9'-3"	16'-3"	18'-3"	9'-3"	16'-3"	18'-3"	9'-3"	16'-3"	18'-3"	9'-3"	16'-3"	18'-3"	9'-3"	16'-3"	18'-3"
20	8-3/8	11-1/4	12-5/8	8-3/8	11-1/4	12-5/8	8-3/8	11-1/4	12-5/8	8-3/8	11-1/4	12-5/8	8-3/8	12-5/8	14
22	8-3/8	11-1/4	12-5/8	8-3/8	11-1/4	12-5/8	8-3/8	11-1/4	12-5/8	8-3/8	12-5/8	14	8-3/8	12-5/8	14
24	8-3/8	11-1/4	12-5/8	8-3/8	11-1/4	12-5/8	8-3/8	12-5/8	14	8-3/8	12-5/8	14	8-3/8	12-5/8	14
26	8-3/8	11-1/4	12-5/8	8-3/8	12-5/8	14	8-3/8	12-5/8	14	8-3/8	12-5/8	14	8-3/8	12-5/8	14
28	8-3/8	11-1/4	12-5/8	8-3/8	12-5/8	14	8-3/8	12-5/8	14	8-3/8	12-5/8	14	8-3/8	12-5/8	15-3/8
30	8-3/8	12-5/8	14	8-3/8	12-5/8	14	8-3/8	12-5/8	14	8-3/8	12-5/8	14	8-3/8	14	15-3/8
32	8-3/8	12-5/8	14	8-3/8	12-5/8	14	8-3/8	12-5/8	14	8-3/8	12-5/8	15-3/8	8-3/8	14	15-3/8
34	8-3/8	12-5/8	14	8-3/8	12-5/8	14	8-3/8	12-5/8	15-3/8	8-3/8	14	15-3/8	8-3/8	14	15-3/8
36	8-3/8	12-5/8	14	8-3/8	12-5/8	14	8-3/8	14	15-3/8	8-3/8	14	15-3/8	8-3/8	15-3/8	16-3/4

NOTES:

- Table assumes a simple span header supporting a uniform load transferred from 1/2 the roof span plus a 2' soffit.
- Roof live and dead loads shown are applied vertically to the horizontal projection. No reductions in roof live loads or snow loads were considered. The header weight is accounted for in the table.
- Deflection is limited to L/240 for live load and L/180 for total load.
- Headers are assumed to have continuous lateral support along top edge.
- Bearing length based on full width bearing is indicated as follows:
 - Non-shaded sizes require two trimmers (3" bearing).
 - Shaded sizes require three trimmers (4.5" bearing).
 - Shaded and outlined sizes require four trimmers (6" bearing).
- ** Applications where load carrying capacity of 16-3/4" depth has been exceeded. See AFP 30F_p POWER BEAM® literature or AFP's Power-Sizer Software.



3-1/2" WIDTH GARAGE HEADER PLF CAPACITY

GARAGE HEADER SUPPORTING ROOF LOADS ONLY - 115% SNOW LOAD AREA														
ROUGH OPENING	8-3/8"		9-3/4"		11-1/4"		12-5/8"		14"		15-3/8"		16-3/4"	
	LIVE LOAD L/240	TOTAL LOAD L/180	LIVE LOAD L/240	TOTAL LOAD L/180	LIVE LOAD L/240	TOTAL LOAD L/180	LIVE LOAD L/240	TOTAL LOAD L/180	LIVE LOAD L/240	TOTAL LOAD L/180	LIVE LOAD L/240	TOTAL LOAD L/180	LIVE LOAD L/240	TOTAL LOAD L/180
9'3"	844	896	1216		1573		1790		2048		2322		2568	
16'3"	161	207	254	330	390	510	552	669	752	824	974	980	1165	
18'3"	114	145	180	231	277	359	391	510	534	653	707	789	896	925

GARAGE HEADER SUPPORTING ROOF LOADS ONLY - 125% NON-SNOW LOAD AREA														
ROUGH OPENING	8-3/8"		9-3/4"		11-1/4"		12-5/8"		14"		15-3/8"		16-3/4"	
	LIVE LOAD L/240	TOTAL LOAD L/180	LIVE LOAD L/240	TOTAL LOAD L/180	LIVE LOAD L/240	TOTAL LOAD L/180	LIVE LOAD L/240	TOTAL LOAD L/180	LIVE LOAD L/240	TOTAL LOAD L/180	LIVE LOAD L/240	TOTAL LOAD L/180	LIVE LOAD L/240	TOTAL LOAD L/180
9'3"	844	975	1322		1683		1947		2227		2481		2793	
16'3"	161	207	254	330	390	510	552	724	752	897	974	1067	1259	1267
18'3"	114	145	180	231	277	359	391	510	534	699	693	847	896	1007

GARAGE HEADER SUPPORTING ROOF, WALL, AND FLOOR LOADS - 100% LOAD DURATION														
ROUGH OPENING	8-3/8"		9-3/4"		11-1/4"		12-5/8"		14"		15-3/8"		16-3/4"	
	LIVE LOAD L/360	TOTAL LOAD L/240	LIVE LOAD L/360	TOTAL LOAD L/240	LIVE LOAD L/360	TOTAL LOAD L/240	LIVE LOAD L/360	TOTAL LOAD L/240	LIVE LOAD L/360	TOTAL LOAD L/240	LIVE LOAD L/360	TOTAL LOAD L/240	LIVE LOAD L/360	TOTAL LOAD L/240
9'3"	562	778	888	1056	1363	1367	1582		1779		2018		2272	
16'3"	107	153	169	245	260	380	368	540	501	715	664	864	840	1011
18'3"	76	107	120	171	185	267	261	380	356	521	471	684	609	813

NOTES:

1. Values shown are the maximum uniform loads in pounds per lineal foot (PLF) that can be applied to the header. Header weight has been subtracted from the allowable total load.
2. Tables are based on simple span uniform load conditions using a design span equal to the center-to-center of bearing. Non-shaded areas are based on 3" of bearing at each support, shaded areas on 4.5" of bearing, and shaded and outlined areas on 6" of bearing at supports.
3. Headers are assumed to be loaded on the top edge with continuous lateral support along compression edge.
4. When no live load is listed, total load controls.
5. Deflection limits are listed within the PLF table heading.

GARAGE HEADER SIZING USING PLF TABLES:

To size a garage header supporting roof only, determine the total load and live load in pounds per lineal foot (PLF). Check the appropriate PLF table for a header supporting roof loads only (125% Non-Snow vs. 115% Snow) and select a member with a total load and live load capacity which meets or exceeds the design load for the rough opening size. For a garage header supporting roof, wall, and floor framing, determine the total load and live load in pounds per lineal foot (PLF). Select a header size from the roof, wall, and floor table (100% load duration) which has a total load and live load capacity equal to or greater than the design load for the appropriate rough opening.

ENGINEERED WOOD SECTION PROPERTIES AND LOAD CAPACITIES

ALLOWABLE DESIGN STRESSES (PSI): FLEXURAL STRESS (F_b)= 2600
 COMPRESSION PERP. TO GRAIN (F_{c1})= 740
 HORIZONTAL SHEAR (F_v)= 225
 MODULUS OF ELASTICITY (MOE)= 1.9 x 10⁶

Standard Beam Width (in): Standard Beam Depth (in):	3-1/2 8-3/8	9-3/4	11-1/4	12-5/8	14	15-3/8	16-3/4
WEIGHT (lbs/lin. ft)	7.7	9.0	10.4	11.7	12.9	14.2	15.5
EI x 10 ⁶ (lbs-in ²)	326	514	789	1115	1521	2014	2604
MOMENT CAPACITY (ft-lbs)	8865	12015	15996	20145	24772	29877	35460
SHEAR CAPACITY (lbs)	3908	4550	5250	5892	6533	7175	7817

NOTES:

1. Beam weights are based on 38 pcf.
2. Moment capacities are based on a span of 21 feet and must be modified for other spans.
3. Flexural Stress, F_b, shall be modified by the Volume Factor, C_v, as outlined in AITC 117 - Design 2001 and the NDS for Wood Construction 2002.
4. Allowable design properties and load capacities are based on a load duration of 100 percent and dry use conditions.
5. The AITC NER 466 was used in calculating the above allowable design stresses for POWER HEADER®.

GARAGE HEADER COMPARISONS

ROUGH OPENING	DESIGN LOADS TL / LL LDF = 1.15	GARAGE HEADER REQUIRED				
		AFP 26F _b -1.9E	SYP GLULAM 24F-V3	DF GLULAM 24F-V4	LVL / PSL 2900F _b -2.0E	LSL 2250F _b -1.5E* 1700F _b -1.3E**
9'3"	810 / 540	3-1/2" x 8-3/8"	3-1/2" x 9-5/8"	3-1/2" x 9"	3-1/2" x 9-1/4"	3-1/2" x 11-1/4"***
9'3"	990 / 720	3-1/2" x 9-3/4"	3-1/2" x 9-5/8"	3-1/2" x 10-1/2"	3-1/2" x 9-1/4"	3-1/2" x 11-1/4"***
16'3"	640 / 400	3-1/2" x 12-5/8"	3-1/2" x 13-3/4"	3-1/2" x 13-1/2"	3-1/2" x 14"	3-1/2" x 14"*
16'3"	765 / 510	3-1/2" x 14"	3-1/2" x 15-1/8"	3-1/2" x 15"	3-1/2" x 14"	3-1/2" x 16"*
18'3"	750 / 480	3-1/2" x 15-3/8"	3-1/2" x 16-1/2"	3-1/2" x 16-1/2"	3-1/2" x 16"	3-1/2" x 18"*
18'3"	900 / 600	3-1/2" x 16-3/4"	3-1/2" x 17-7/8"	3-1/2" x 18"	3-1/2" x 16"	-----

For more information on POWER HEADER®, or other laminated structural products from Anthony Forest Products Company please call 1-800-221-2326 or FAX at 870-862-6502.

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