

GRABBER[®]

CONSTRUCTION PRODUCTS

A 100% Employee Owned Company

PRODUCT SUBMITTAL:

EVALUATION SUBJECT

GRABBER **LAG-MASTER**[™] and **TIE-MASTER**[™] MULTI-PURPOSE WOOD FASTENERS

REPORT HOLDER:

GRABBER CONSTRUCTION PRODUCTS, INC.

20 West Main Street

Alpine, Utah 84004

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1.0 VALUATION SCOPE

Compliance with the following codes:

- 2012, 2009, 2006 *International Building Code*[®] (IBC)
- 2012, 2009, 2006 *International Residential Code*[®] (IRC)

Property evaluated

- Structural

2.0 USES

The Grabber Lag-Master[™] and Tie-Master[™] fasteners described in this report are used as substitutes for engineered connection designs in accordance with the IBC and National Design Specification[®] (NDS) for wood construction where 1/4" diameter wood screws and lag screws are used in engineered connections of solid-sawn

EVIDENCE SUBMITTED

2.1 Data submitted in accordance with the ICC-ES Acceptance Criteria for Alternate Dowel-Type Threaded Fasteners (AC233), approved June 2012 pending recognition by ICC.

2.2 Data in accordance with ASTM B695 Class 55 for plating thick

3.0 IDENTIFICATION

Each container of fasteners has a label bearing the company name (GRABBER[®]), screw series (LAG-MASTER[™] or TIE-MASTER[™]), fastener description (size/diameter and length).

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TABLE 1—LAG-MASTER™ AND TIE-MASTER™ FASTENER SPECIFICATIONS

FASTENER DESIGNATION		OVERALL LENGTH ¹ (inches)	THREAD LENGTH ² (inches)	ROOT THREAD DIAMETER ⁴ D _r (inches)	SHANK DIAMETER ⁴ (inches)	OUTSIDE THREAD DIAMETER ⁴ (inches)	Bending Yield Strength ³ F _{yb} (psi)	ALLOWABLE FASTENER STRENGTH	
								Tension (lbf) [psi]	Shear (lbf) [psi]
Lag-Master	#14 x 2-7/8"	2 7/8	1 1/2	0.187	0.204	0.254	162,860	1,826 [67,927]	905 [33,655]
	#14 x 3-3/8"	3 3/8	2	0.185	0.204	0.253			
	#14 x 3-5/8"	3 5/8	2	0.185	0.205	0.256			
	#14 x 3 7/8"	3 7/8	2	0.186	0.204	0.255			
	#14 x 4 7/8"	4 7/8	2 1/2	0.187	0.204	0.254			
	#14 x 5"	5	2 1/2	0.186	0.204	0.255			
	#14 x 5-7/8"	5 7/8	3	0.187	0.204	0.254			
Tie-Master	#14 x 4"	3 7/8	2 1/2	0.189	0.206	0.253	151,320	1,492 [53,180]	1,046 [37,275]
	#14 x 6"	5 7/8	2 1/2	0.184	0.209	0.258			
	#14 x 8"	7 6/8	2 1/2	0.188	0.205	0.253			
	#14 x 10"	9 7/8	2 1/2	0.184	0.203	0.255			

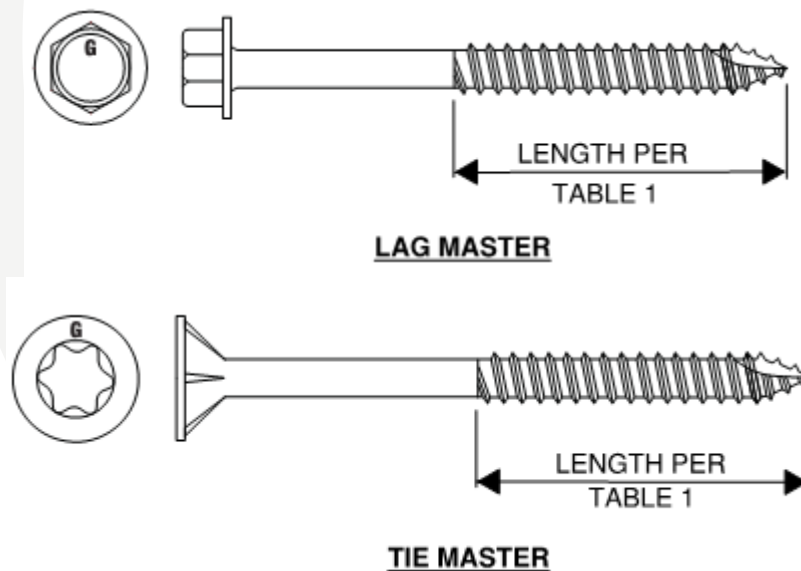
For SI: 1 inch = 25.4 mm; 1 psi = 6.9 kPa.

¹ The overall length of a TIE-MASTER™ fastener is measured from the top of the head to the bottom of the tip. The overall length of the LAG-MASTER™ fastener is measured from the underside of the head to the bottom of the tip. Refer to Figure 1.

² Length of thread includes tip. See Figure 1.

³ Bending yield strength determined in accordance with ASTM F 1575 using the root thread diameter.

⁴ Root diameter and shank diameters are shown in table without manufacturing tolerances.



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