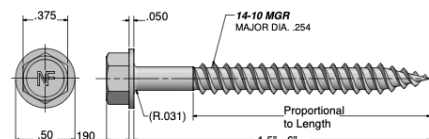


ACS-HWH MT - MASTER GRIPPERS® – TECHNICAL DATA (USA)

- Manufactured by Leland Industries Inc.
- Standard Hex Head with Integrated Washer ($\frac{3}{8}$ " Driver)
- For target fastener performance, driver should have an RPM range of 0-2400
- Fastener capacity reduced by overdriving – limit driver torque/depth setting
- Availability:
ACS U-Clip™: #14-10, Sharp Point, 2 $\frac{1}{2}$ " Length, NZF3000 Coated Carbon Steel
 #14-10, Sharp Point, 2 $\frac{1}{2}$ " Length, NZF3000 Coated 410 S/S (extra cost)
Mass Timber Applications: Available in 1 $\frac{1}{2}$ " – 6" lengths upon request



FASTENER PERFORMANCE¹

FASTENER MECHANICAL PROPERTIES	(Included w/U-Clip)	(Extra Cost/Long Lead)
	Carbon Steel	410 Stainless Steel
Minimum Tensile Strength (lbs)	4300	4350
Minimum Torsional Strength (in-lbs)	156	160
Minimum Shear Strength (lbs)	2580	2610

ALLOWABLE STRESS DESIGN (ASD) FASTENER VALUES – DIMENSIONAL WOOD

- Tabulated Values Based on Normal Duration Loading (1.0)

Dimensional Lumber ² /LSL ³	SPF	D-Fir	LSL
Withdrawal (lbs)	232	302	640
Shear (lbs)	140	150	819

ALLOWABLE STRESS DESIGN (ASD) FASTENER VALUES – EXTERIOR GRADE PLYWOOD

- Tabulated Values Based on Normal Duration Loading (1.0)

D-Fir Exterior Grade Plywood ⁴	$\frac{1}{2}$ "	$\frac{5}{8}$ "	$\frac{3}{4}$ "
Withdrawal (lbs)	98	144	211
Shear (lbs)	109	133	163

CSP Exterior Grade Plywood ⁴	$\frac{1}{2}$ "	$\frac{5}{8}$ "	$\frac{3}{4}$ "
Withdrawal (lbs)	98	159	169
Shear (lbs)	85	144	154

¹ All test results and suggestions are based on laboratory tests and/or relevant Codes. Specific job site conditions should be taken into consideration when specifying the proper fastener. Because applications vary, ACS Composite Systems Inc. assumes no liability for use of this information.

² Calculated based on CSA O86 12.11 Wood Screw Connections (ASD) using 2 $\frac{1}{2}$ " Fasteners and Min. 1 $\frac{1}{2}$ " Embedment with FS = 3, all other Code Factors set to 1.0

³ Test used Weyerhaeuser 1.55E Timberstrand LSL x 1 $\frac{3}{4}$ " and Calculated Based on S100 K2.1.2 Tests for Special Cases, Allowable Strength Design (ASD), using 2 $\frac{1}{2}$ " Fastener and Minimum 1 $\frac{1}{2}$ " Embedment

⁴ Calculated based on AISI S100 K2.1.2 Tests for Special Cases, Allowable Strength Design (ASD) – Tapered Screw Tip Must Clear Inside of Plywood Face