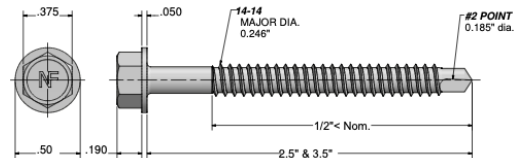


ACS-HWH MD2 - MASTER DRILLERS® – TECHNICAL DATA (USA)

- 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™: #14-14, #2 Drill Point, 2 $\frac{1}{2}$ " Length, NZF3000 Coated Carbon Steel
 #14-14, #2 Drill Point, 2 $\frac{1}{2}$ " Length, NZF3000 Coated 410 S/S (extra cost)



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

TENSION/SHEAR – STEEL ATTACHMENT ALLOWABLE STRESS DESIGN (ASD)

Base Steel Attachment ²	20 Ga.	18 Ga.	16 Ga.
Tension (lbs) ³	133.3	211.0	285.2
Shear (lbs) ⁴	270.5	402.6	599.8

SHEET STEEL PULLOVER – BASED ON NOMINAL $\frac{1}{2}$ " FASTENER HEAD DIAMETER⁵ ALLOWABLE STRESS DESIGN (ASD)

Steel Type ²	16 Ga	18 Ga	20 Ga	22 Ga	24 Ga
Galv. Carbon Steel	849.7	677.0	519.4	448.9	358.8
Stainless Steel	1128.8	899.5	690.1	596.3	476.7

SHEET STEEL DESIGN THICKNESS REFERENCE⁶

Nominal Gauge	16 Ga	18 Ga	20 Ga	22 Ga	24 Ga
Thickness – mm	1.519	1.214	0.912	0.759	0.607
Thickness - Inches	0.0598	0.0478	0.0359	0.0299	0.0239

¹ All test results and suggestions are based on laboratory tests and/or relevant Canadian 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 Steel Grades: A36 Galvanized Steel $F_y = 33$ ksi, $F_u = 60$ ksi; A304 Stainless Steel $F_y = 33$ ksi, $F_u = 80$ ksi

³ Calculated based on S100 K2.1.2 Tests for Special Cases, Allowable Strength Design (ASD)

⁴ Calculated based on S100-16 J4.3 with Outer Material 18 Gauge Stainless Steel, Base Steel as Noted, and $FS = 3.0$

⁵ Calculated based on S100-16 J4.4.2

⁶ Steel to Conform to the Requirements of AISI S100-16