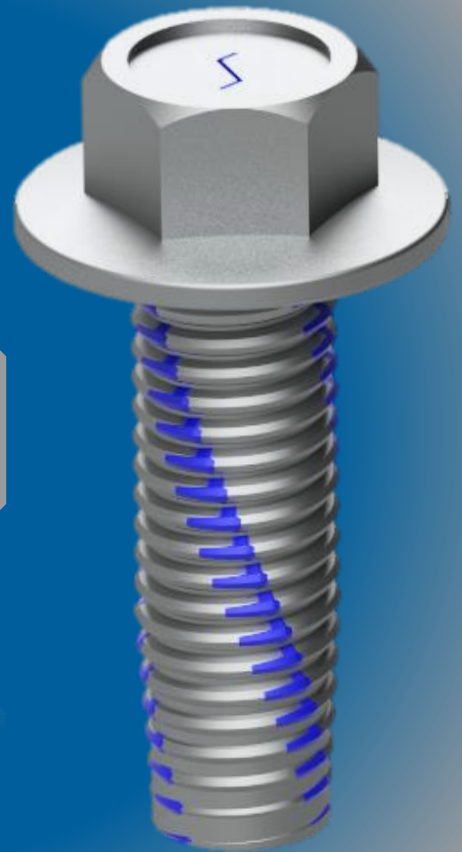




ROLOK[®] HS[®]



Thread Rolling Fastener
for High Strength Steels

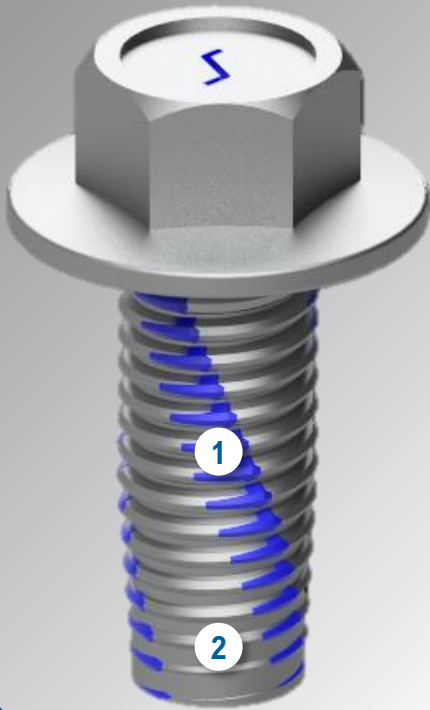
A  **Semblex**
INNOVATION



www.semblex.com



630.833.2880

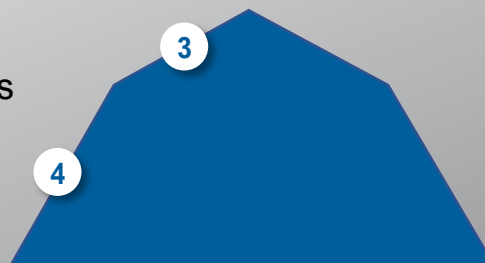


- 1 Rolok[®] spiral lobed feature reduces drive torque
- 2 Taper design provides self alignment during installation

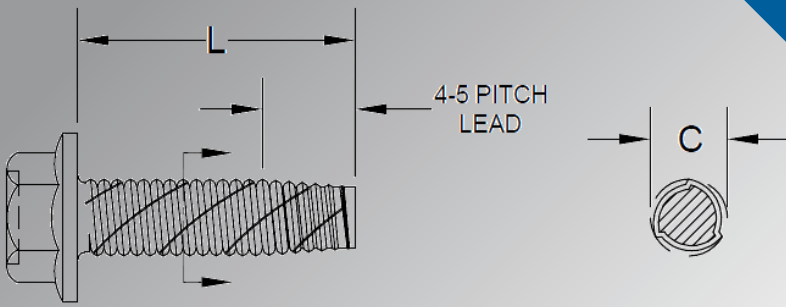
Features & Benefits

Semblex's innovative Rolok HS[®] design has been specifically developed for the joining of high strength steels. Its unique compound thread angle provides exceptional assembly performance while overcoming thread damage and collapse that plague traditional thread rolling screws.

- 3 Large upper flank angle increases compressive strength and reduces shear loading preventing thread collapse
- 4 Narrow lower flank angle allows serviceability with standard machine screws



- Ability to roll form threads into high strength steels between 500-1200 MPa tensile strength
- Excellent drive-to-fail ratio
- High resistance to vibration loosening
- Serviceable with standard machine screws



Rolok HS[®] hole sizing is application dependent, please contact Semblex Engineering Services for details.

Product Characteristics

Screw Length (L)	Tolerance
Up to 20mm	+0.0/-0.8 mm
Over 20mm to 40mm	+0.0/-1.3 mm
Over 40mm	+0.0/-1.5 mm

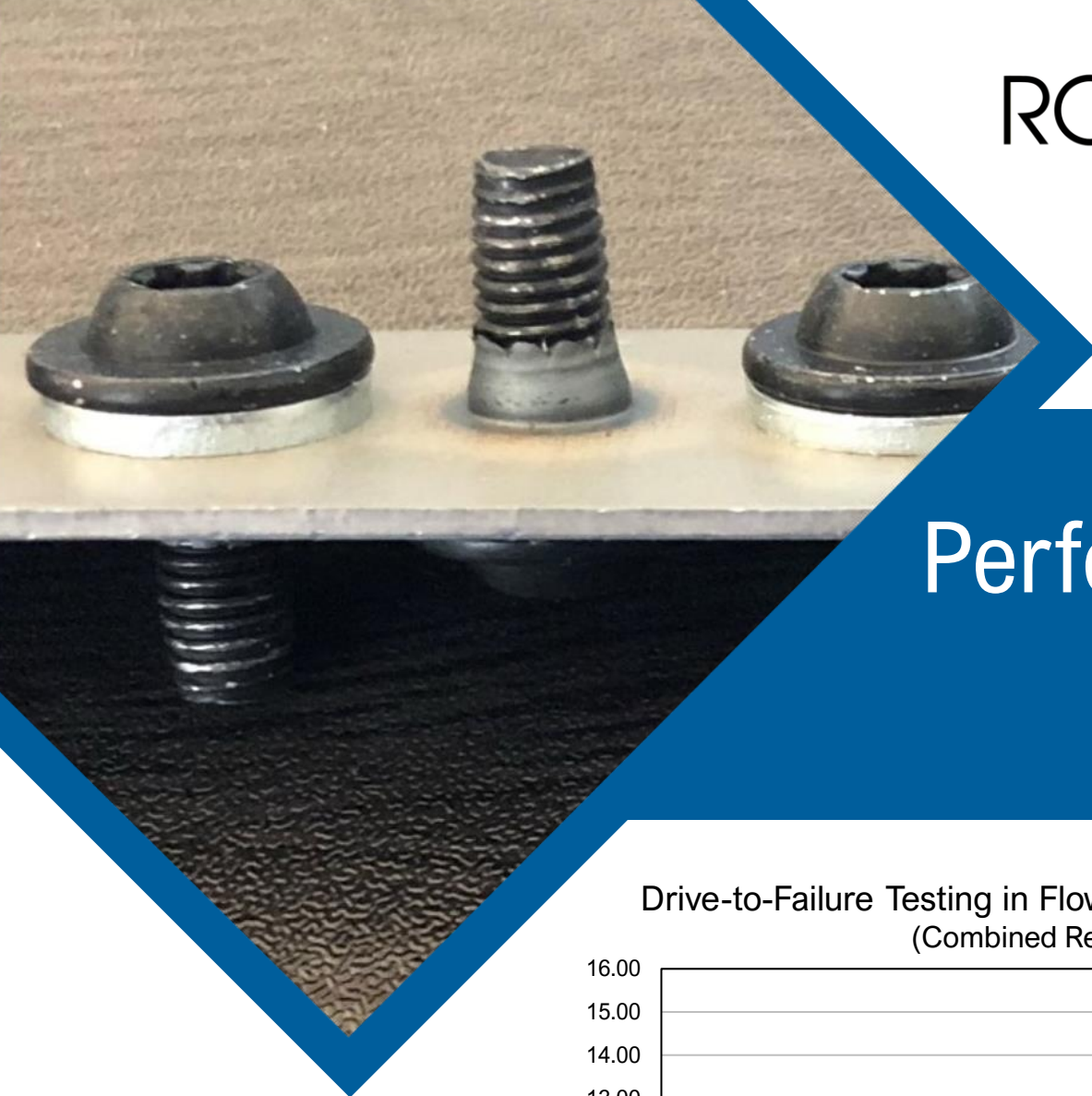
Screw Size	Circumscribing Diameter (C)	
	Max	Min
M4-0.7	4.09	3.93
M5-0.8	5.09	4.94
M6-1.0	6.10	5.95
M8-1.25	8.13	7.98
M10-1.5	10.15	9.98

HEAT TREATMENT

Case hardening is considered for non-safety critical applications when the mating material is 800 MPa tensile strength or less. All other applications should utilize through hardening with induction hardened lead threads.

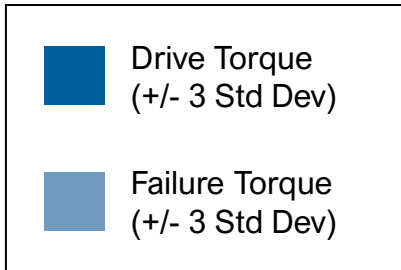
FINISH

A wide variety of coating and plating options are available to meet specific customer requirements for corrosion and joint performance.



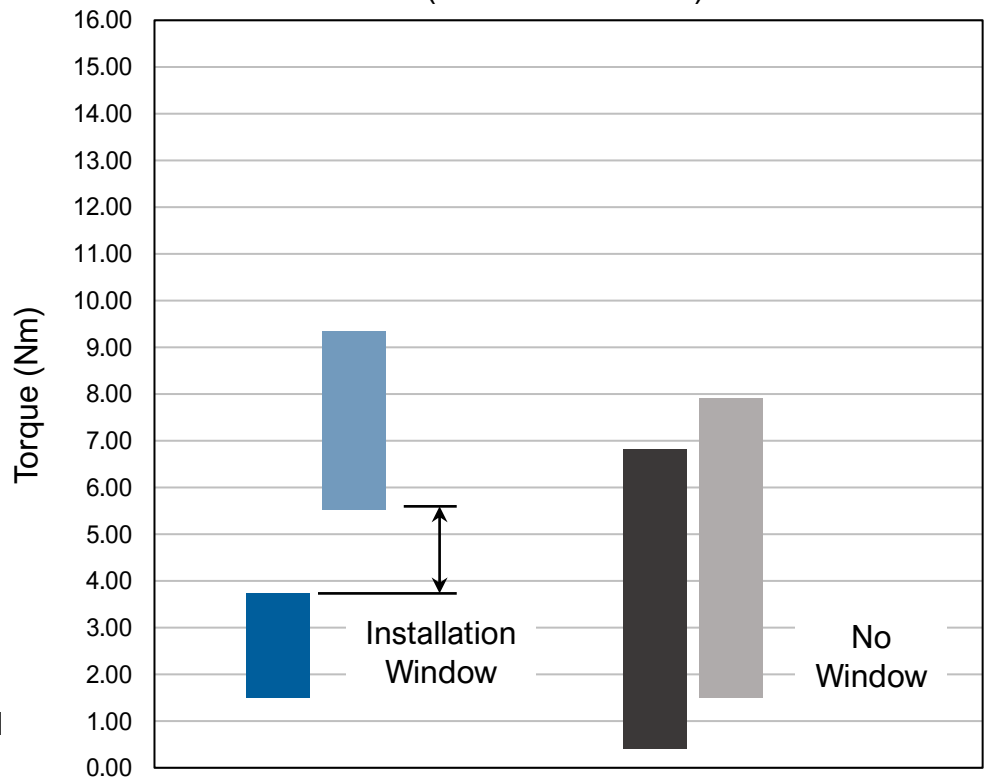
Performance Data

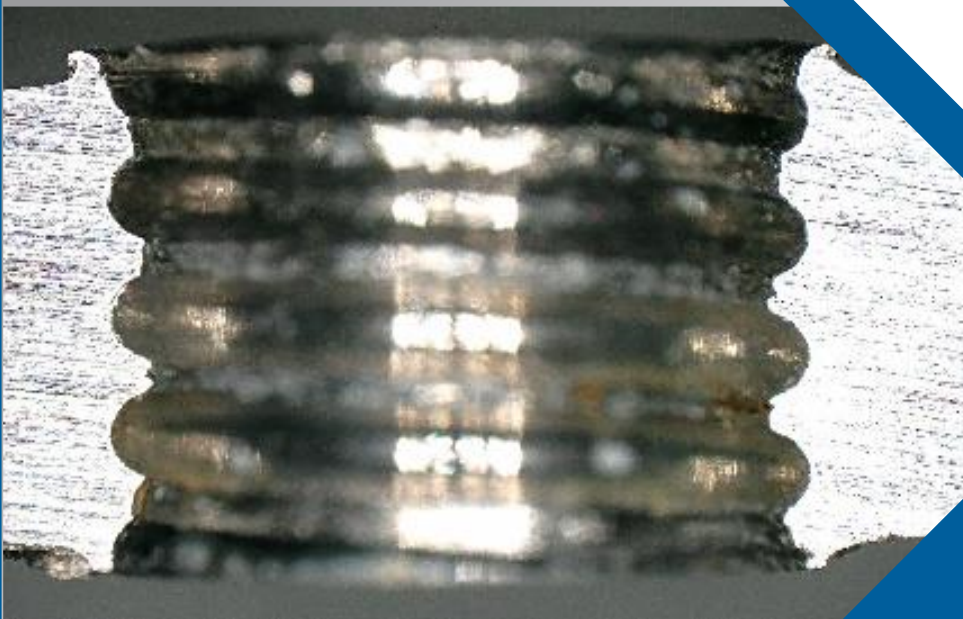
Drive-to-Failure Testing in Flow Drilled QP1200 Steel
(Combined Results)



Testing Details:

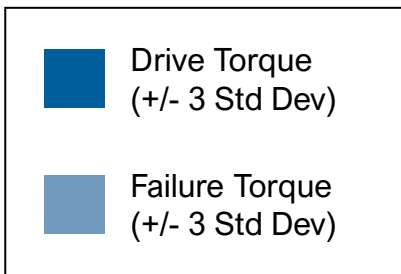
Fasteners: M5-0.8 X 12mm
 Heat Treat: Induction Hardened
 Hole Dia.: 4.60, 4.65, 4.70mm
 Speed: 225 RPM
 # of Tests: 90 Per Fastener
 30 Per Hole Dia.





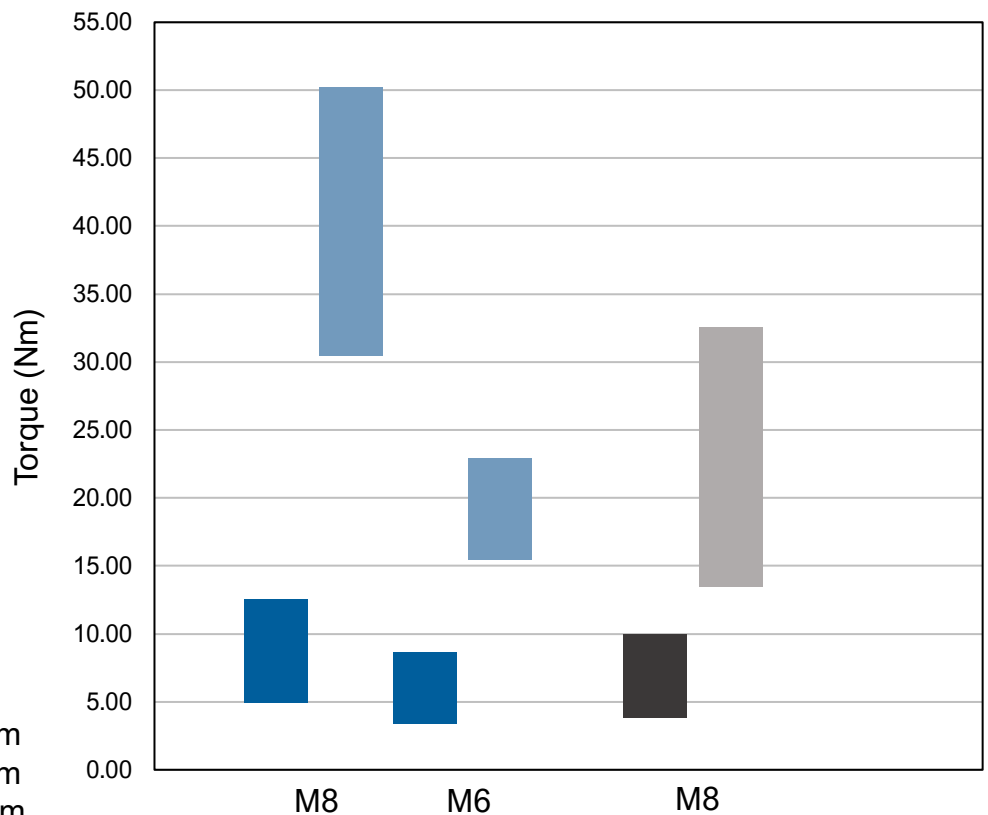
Performance Data

Drive-to-Failure Testing in 3mm MP800 Steel



Testing Details:

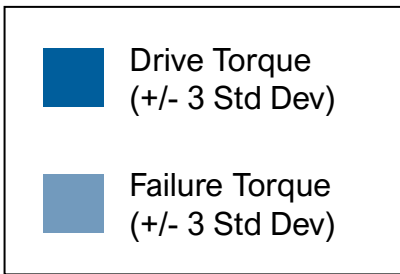
Fasteners: M8-1.25 X 30mm
 M6-1.0 X 20mm
 Heat Treat: Induction Hardened
 Hole Dia.: RHS M8: 7.40, 7.60mm
 RHS M6: 5.55, 5.69mm
 Comp M8: 7.30, 7.50mm
 Speed: 150 RPM
 # of Tests: 60 Per Fastener
 30 Per Hole Dia.





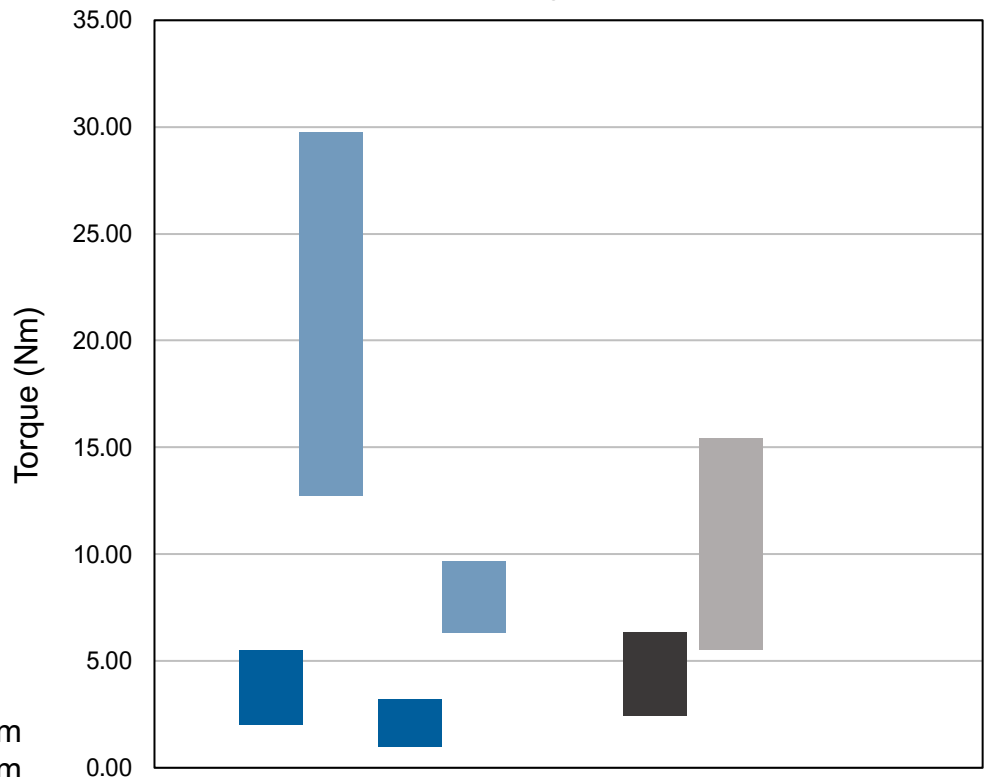
Performance Data

Drive-to-Failure Testing in 1.5mm 980XG3 Steel



Testing Details:

Fasteners: M8-1.25 X 30mm
 M5-0.8 X 12mm
Heat Treat: Induction Hardened
Hole Dia.: RHS M8: 7.40, 7.60mm
 RHS M5: 4.53, 4.67mm
 Comp M8: 7.30, 7.50mm
Speed: 150 RPM
of Tests: 60 Per Fastener
 30 Per Hole Dia.



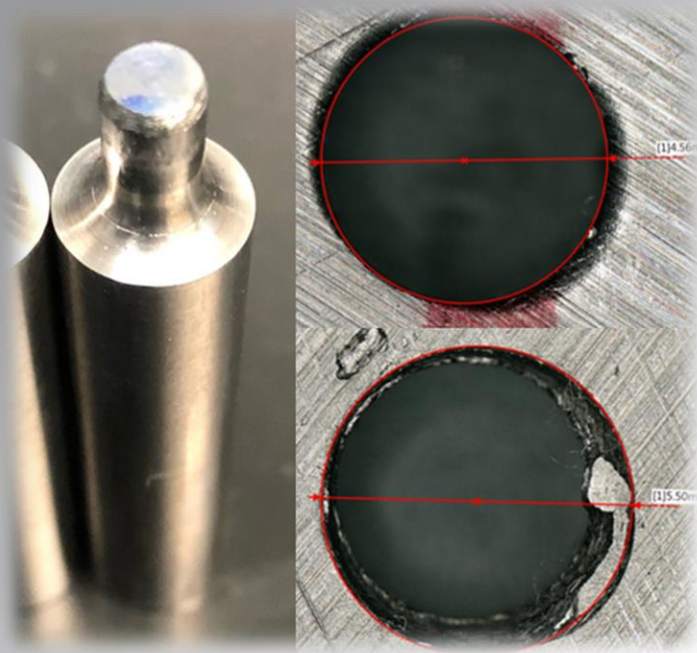
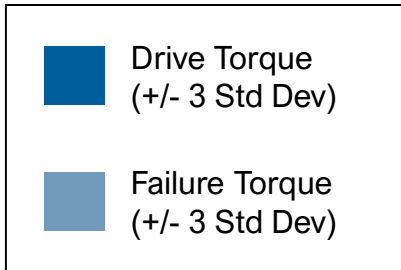


Image of worn punch and resultant holes used for testing

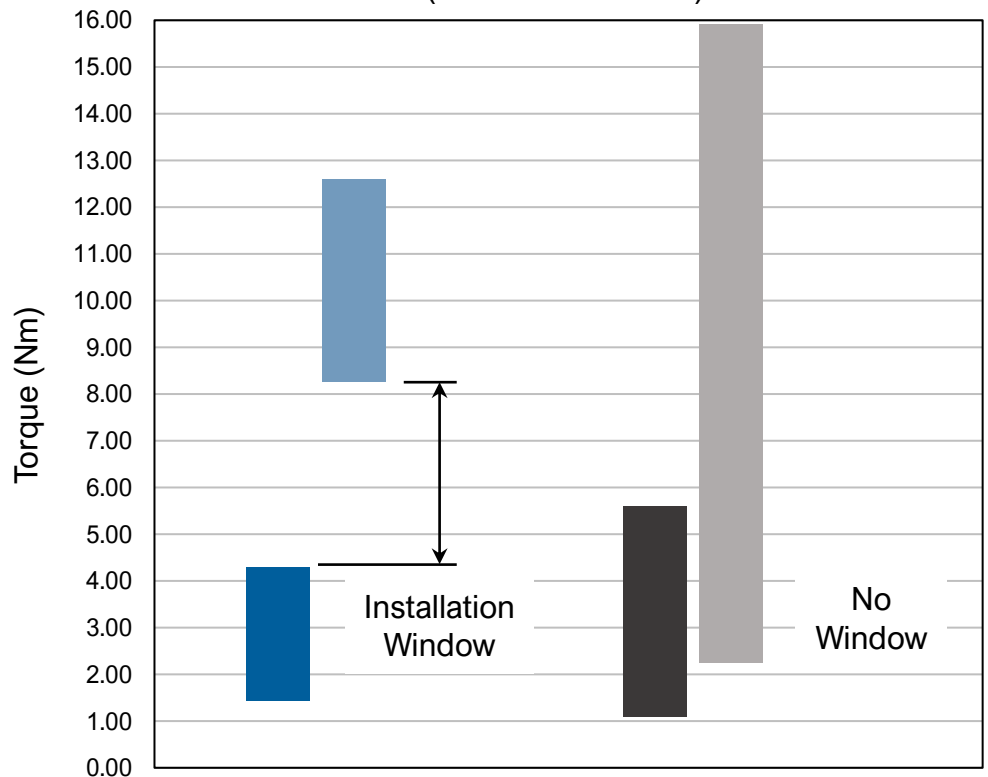
Performance Data

Drive-to-Failure Testing in 3mm HSLA550 (Worn Punch)
(Combined Results)



Testing Details:

Fasteners: M5-0.8 X 12mm
 Heat Treat: Case Hardened
 Hole Dia.: 4.53, 4.60, 4.67mm
 Speed: 225 RPM
 # of Tests: 90 Per Fastener
 30 Per Hole Dia.





900 N. Church Rd, Elmhurst, IL 60126

Mission

To be an innovative, customer-focused team that creates value through cold-formed product solutions for the world's leading manufacturers.

Vision

To be recognized by the world's leading manufacturers as the best supplier of innovative cold-formed product solutions.



Certifications & Accreditations



Semblex is IATF 16949, ISO 14001, and ISO 9001 registered through NSF International Strategic Registrations, Ltd.



Semblex is accredited to perform dimensional, mechanical, and chemical testing to ISO/IEC 17025 through the American Association for Laboratory Accreditation