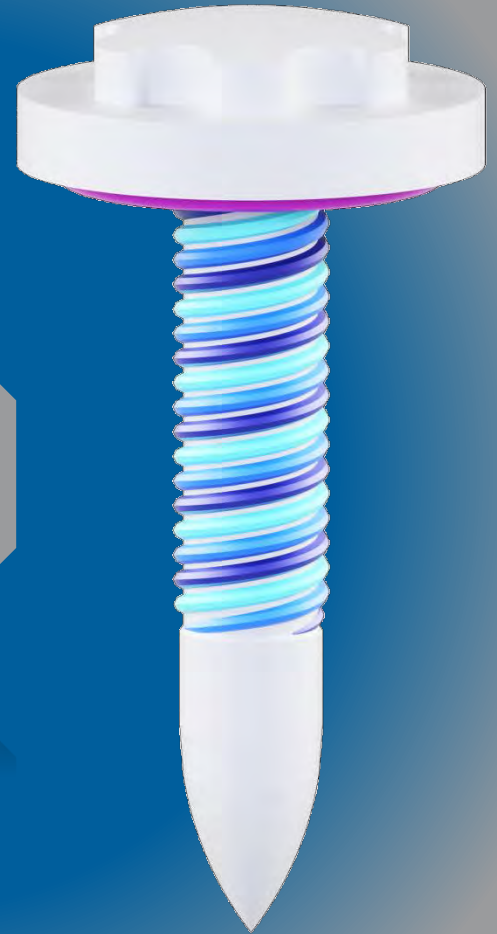




OPTIFLOW™
Next Gen Flow Drill Fastener



Select Your Features

Build Your Solution

Elevate Your Assembly

A  **Semblex**
INNOVATION



www.semblex.com



630.833.2880

Why OptiFlow™?

Traditional Flow Drill Screw Limitations:

- Joint thicknesses without clearance holes limited to 6mm
- Susceptable to detrimental clearance hole collisions
- Joints are not leak resistant
- Long installation time
- Generate significant debris in certain materials
- Inconsistent material flow in brittle castings

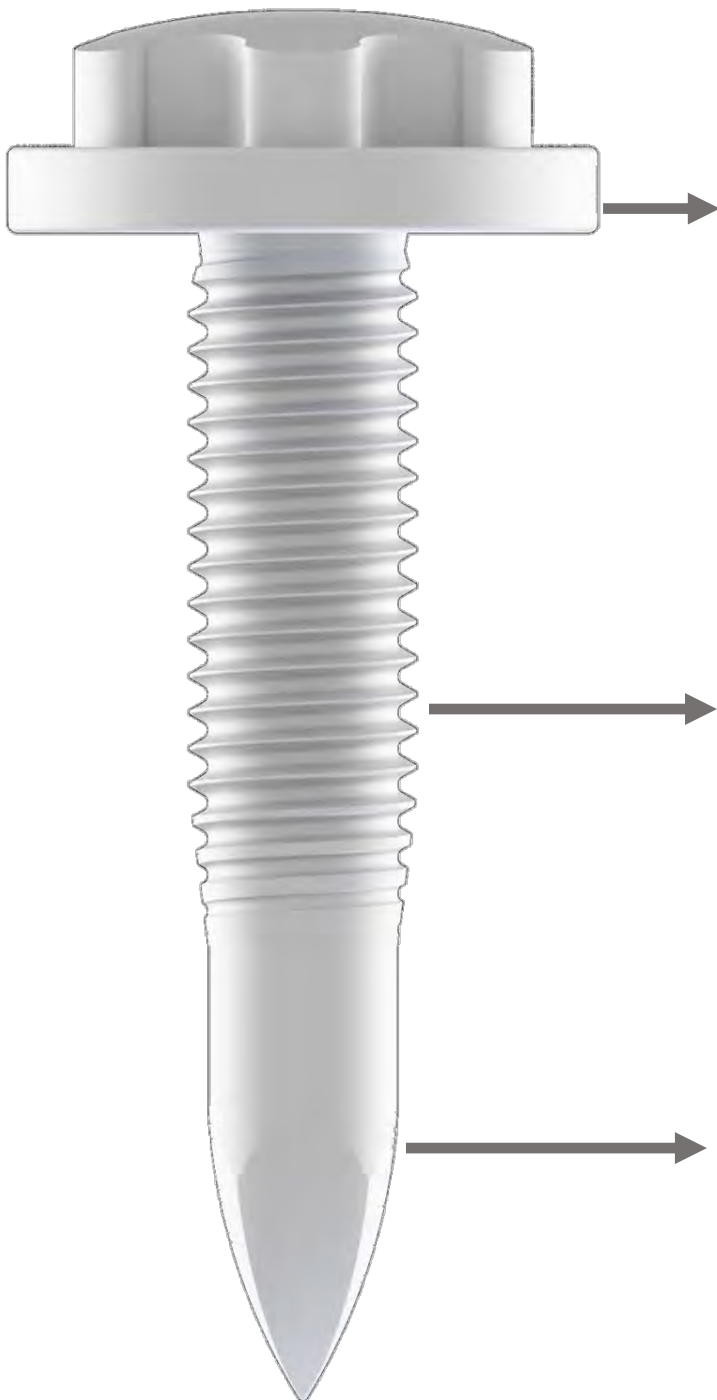
Overcome them all with...



The **OptiFlow™** design builds on the performance of conventional flow drill fasteners through innovative design features that overcome the previous assembly limitations.

OptiFlow™ Overview

The modularity of the **OptiFlow™** fastener allows the designer to build their custom solution through the selection of different head, thread, and tip design features to optimize required installation and joint performance



HEAD

DU: Deep Undercut
LW: Large Washer
SL: Underhead Sealer
SH: Sealing Head
FS: FlowStud®
TD: Traditional

THREAD

FF: FastFlow®
RH: Rolok HS®
TD: Traditional (Metric)

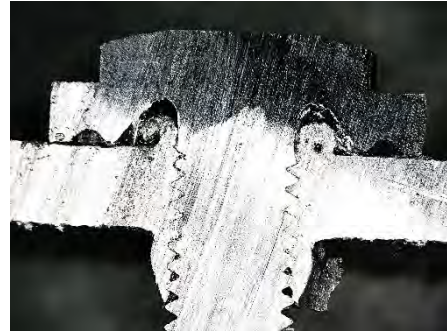
TIP

LT: Low Torque
HP: High Performance
LH: Low Torque High Performance
TD: Traditional

HEAD

SH: Sealing Head

- Sealant material applied to outer cavity ring
- Compatible with no clearance hole joints with inner cavity capturing material flow
- Integrates large washer design



HEAD

DU: Deep Undercut

- Allows joining of thicker top layers without clearance holes
- Reduces 'sheet gaps' by drawing more material upward
- Recommended for use with External Torx Plus® drive



OptiFlow™ Features

HEAD

LW: Large Washer

- Washer head diameter larger than traditional design
- Allows for increase in clearance hole diameter to reduce installation 'strikes'
- Enhanced load distribution in crash events



Traditional

LW

HEAD

SL: Underhead Sealant

- Reduce leak rates in water sensitive areas
- Requires clearance hole in top material(s)
- Wide variety of sealants available to meet joint requirements



OptiFlow™ Features

HEAD

FS: FlowStud®

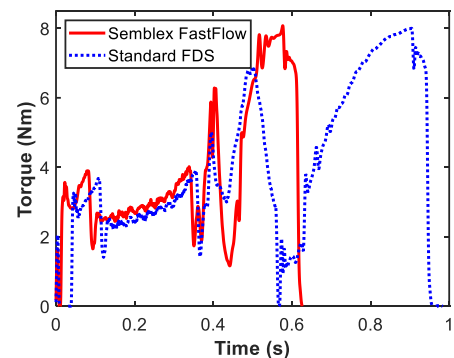
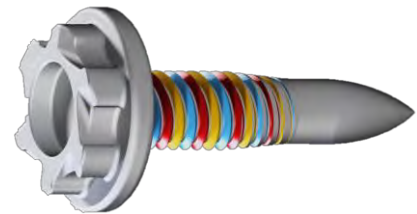
- Combines two fasteners into one
- Non-flow drill end is configurable to your needs
- Allows for process consolidation between weld studs and flow drill fasteners



THREAD

FF: FastFlow®

- Triple helix thread shortens thread forming and tightening steps by 60%
- Same penetration characteristics of standard FDS®
- Critical joint characteristics are maintained

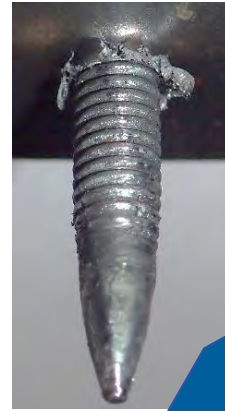


OptiFlow™ Features

THREAD

RH: Rolok HS®

- Optimized thread geometry for high strength steels
- Thread reduces collapse allowing usage in up to 1mm 1200MPa steels
- Typically used on M4 high strength variant

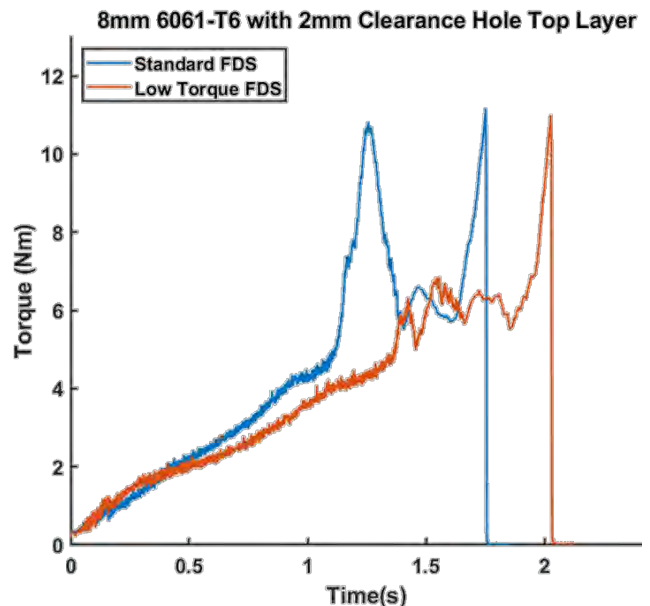


ROLOK HS®

TIP

LT: Low Torque

- Reduces thread forming torque by 20-40%
- Allows for increased joint thicknesses (up to 10mm)
- Increases available thread engagement



TIP

HP: High Performance

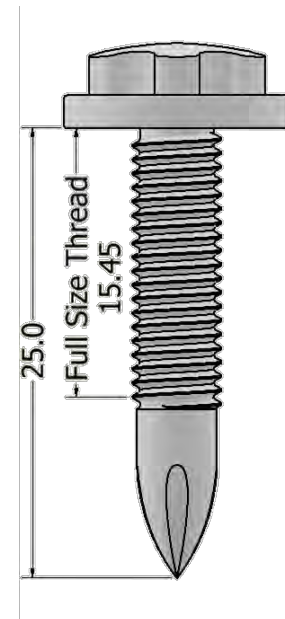
- Optimized tip shape significantly reduces debris generation
- Reduced 'bushing' cracking in cast materials
- Improves 'bushing' formation in extruded materials



TIP

LH: Combination of LT and HP Tips

- Allows for increased joint thicknesses (up to 10mm)
- Increases available thread engagement
- Optimized tip shape significantly reduces debris generation





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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



NSF-ISR

Registered to
IATF 16949

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