Semblex

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
- Suspectable 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…

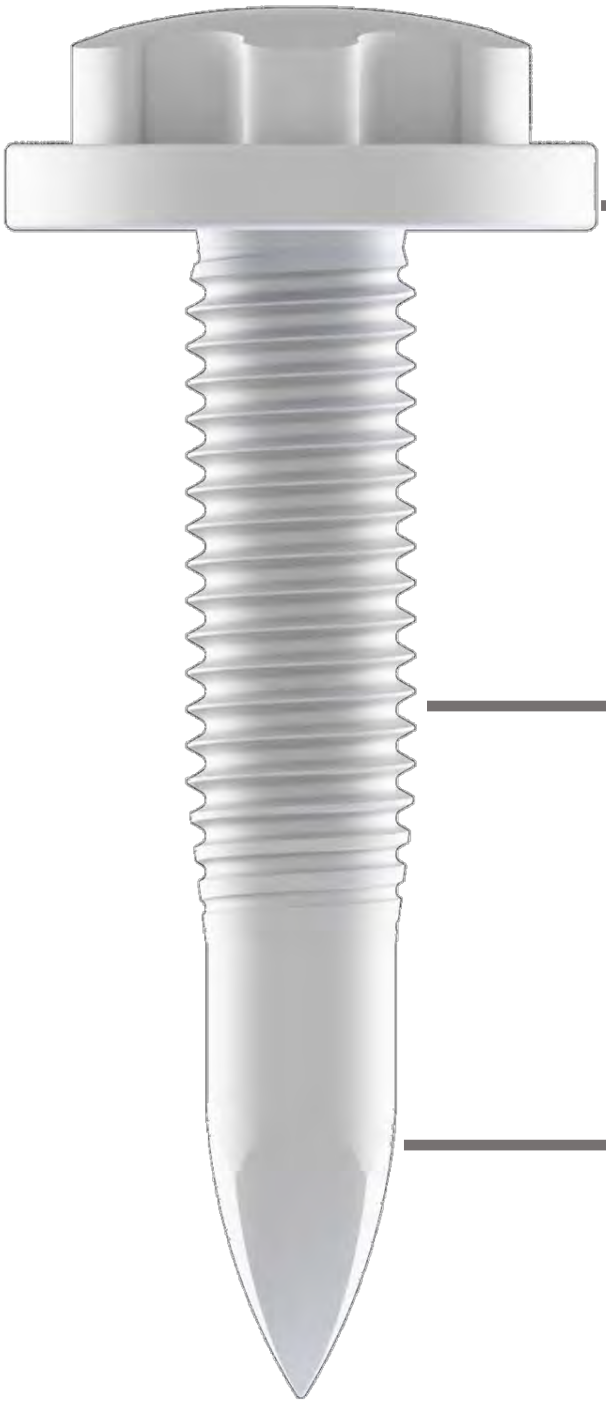
OPTIFLOW™

Next Gen Flow Drill Fastener

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)

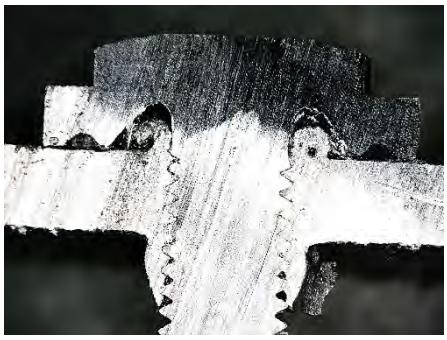
TIP

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

OptiFlow™ Features

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

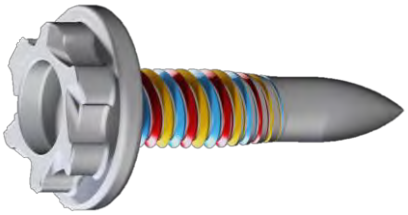
OptiFlow™ Features

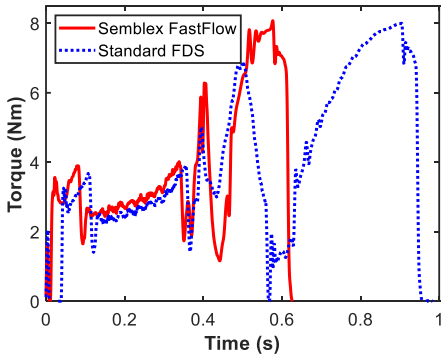
HEAD — FS: FlowStud®

- 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

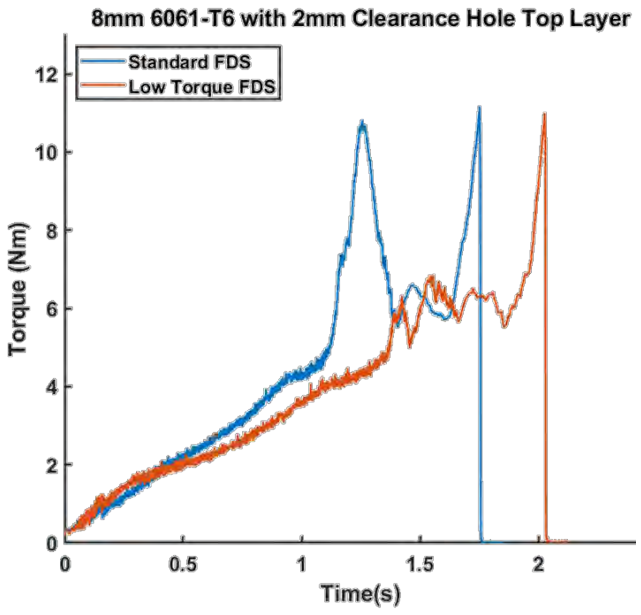
THREAD — RH: Rolok HS®

- 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



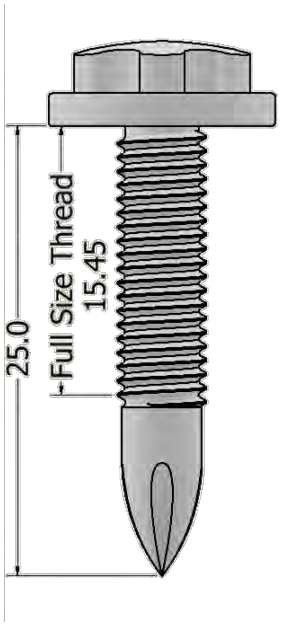
OptiFlow™ Features

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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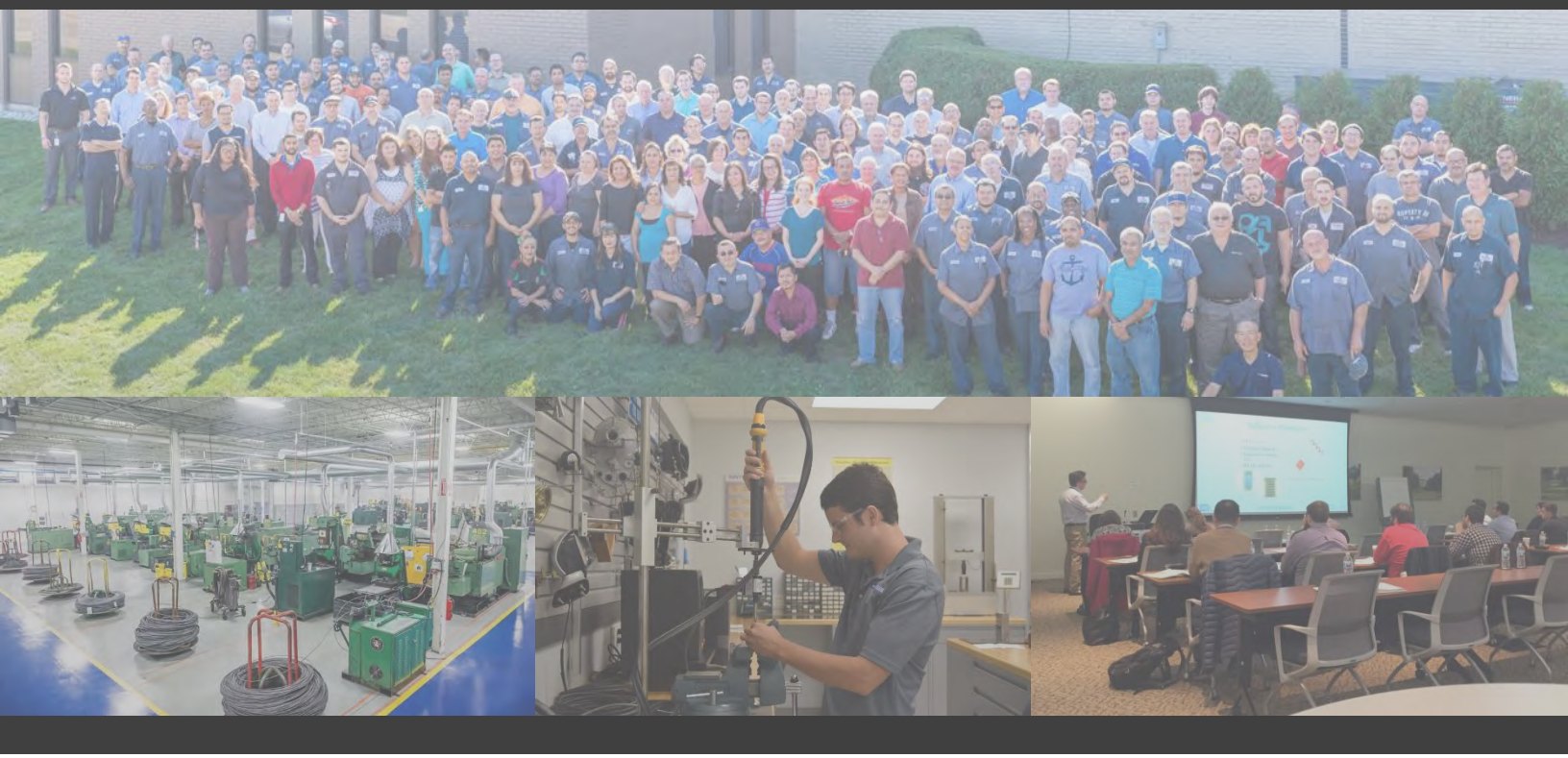
Mission

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.

ACCREDITED
Testing Laboratory
Cert #0794.01

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