

# TORX® PARALOBE®

## HIGH TORQUE TRANSFER DRIVE SYSTEM

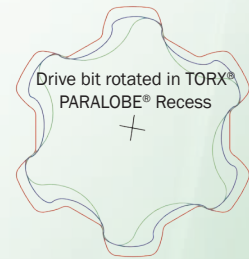
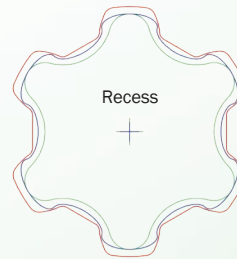
OUTPERFORMING EVERY OTHER DRIVE SYSTEM.

The TORX® PARALOBE® Drive System was developed by Acument Global Technologies, born as a result of listening to our customers' needs and concerns with other drive systems. It also improves upon the benefits of our TORX® and TORX PLUS® drive systems by offering increasing drive bit strength, life, and increasing torque 20% over TORX PLUS® drive system; 50% over TORX® drive system!



### FEATURES

- ▶ Unique geometry, patentable drive system
- ▶ Greater drive system cross-sectional area versus TORX® and TORX PLUS® drive systems
- ▶ 'Full surface drive contact' with reduced drive bit/recess contact stresses versus TORX® and TORX PLUS® drive systems
- ▶ Vertical straight sidewalls and reduced bit/recess wobble producing a more solid 'fit'
- ▶ Controlled gaging and oversized recess lobe option



- TORX® PARALOBE®
- TORX PLUS®
- TORX®

TORX® PARALOBE® drive system has greater cross-sectional area versus TORX® and TORX PLUS® drive systems

### BENEFITS

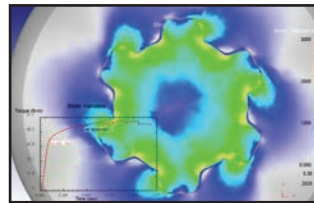
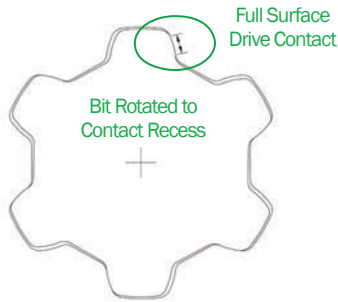
- ▶ Lobe geometry area increased approximately 6% over TORX PLUS® drive system producing:
  - Approximately 20% greater drive bit torsional strength and drive systems strength
  - Approximately 100% greater finite drive bit fatigue life
- ▶ Drive size consideration may improve dead strength ratio and weight reduction
- ▶ Potential for less coating damage during installation
- ▶ Oversized recess lobe option reduces effects of recess fill

### IDEAL APPLICATIONS

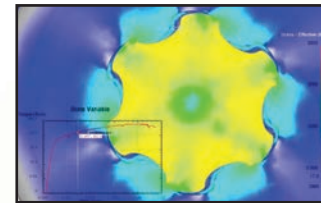
- ▶ Ultra high strength fasteners
- ▶ Aerospace fasteners
- ▶ Torque-to-yield applications
- ▶ Cutter screws
- ▶ Miniature screws
- ▶ Fasteners with heavy coatings

## TORX® PARALOBE® GEOMETRY AND DESIGN

The TORX® PARALOBE® Drive System features unique geometry resulting in 'full surface drive contact' to reduce drive bit/recess contact stresses.



TORX® PARALOBE®  
30SI



TORX PLUS®  
30IP

40 N-m Torque (Mid Penetration)  
Performance - FEA Effective Stress



TORX PLUS® DRIVE	
DRIVE SIZE	ULTIMATE TORQUE (N-m)
15IP	9.62
30IP	47.18
50IP	194.54

TORX® PARALOBE® DRIVE	
DRIVE SIZE	ULTIMATE TORQUE (N-m)
15SI	11.6
30SI	57.6
50SI	237

% INCREASE
20.6%
22.1%
21.8%

TORX® PARALOBE® APPROXIMATELY 20% GREATER DRIVE BIT TORSIONAL STRENGTH VS. TORX PLUS®

TORX® DRIVE	
DRIVE SIZE	ULTIMATE TORQUE (N-m)
T15	7.69
T30	37.4
T50	158.75

TORX® PARALOBE® DRIVE	
DRIVE SIZE	ULTIMATE TORQUE (N-m)
15SI	11.6
30SI	57.6
50SI	237

% INCREASE
50.8%
54.0%
49.3%

TORX® PARALOBE® APPROXIMATELY 50% GREATER DRIVE BIT TORSIONAL STRENGTH VS. TORX®

### STANDARD DESIGN GUIDELINES:

- ▶ Drive sizes: 1SI and 110SI
- ▶ Fastener sizes: M2 thru M25
- ▶ Head design: Can be used with all head designs