mountz®
the torque tool specialists

PRODUCT BROCHURE
FG CLEANROOM PRESET TORQUE SCREWDRIVER

Mountz FG Precision Cleanroom Preset Torque Screwdriver

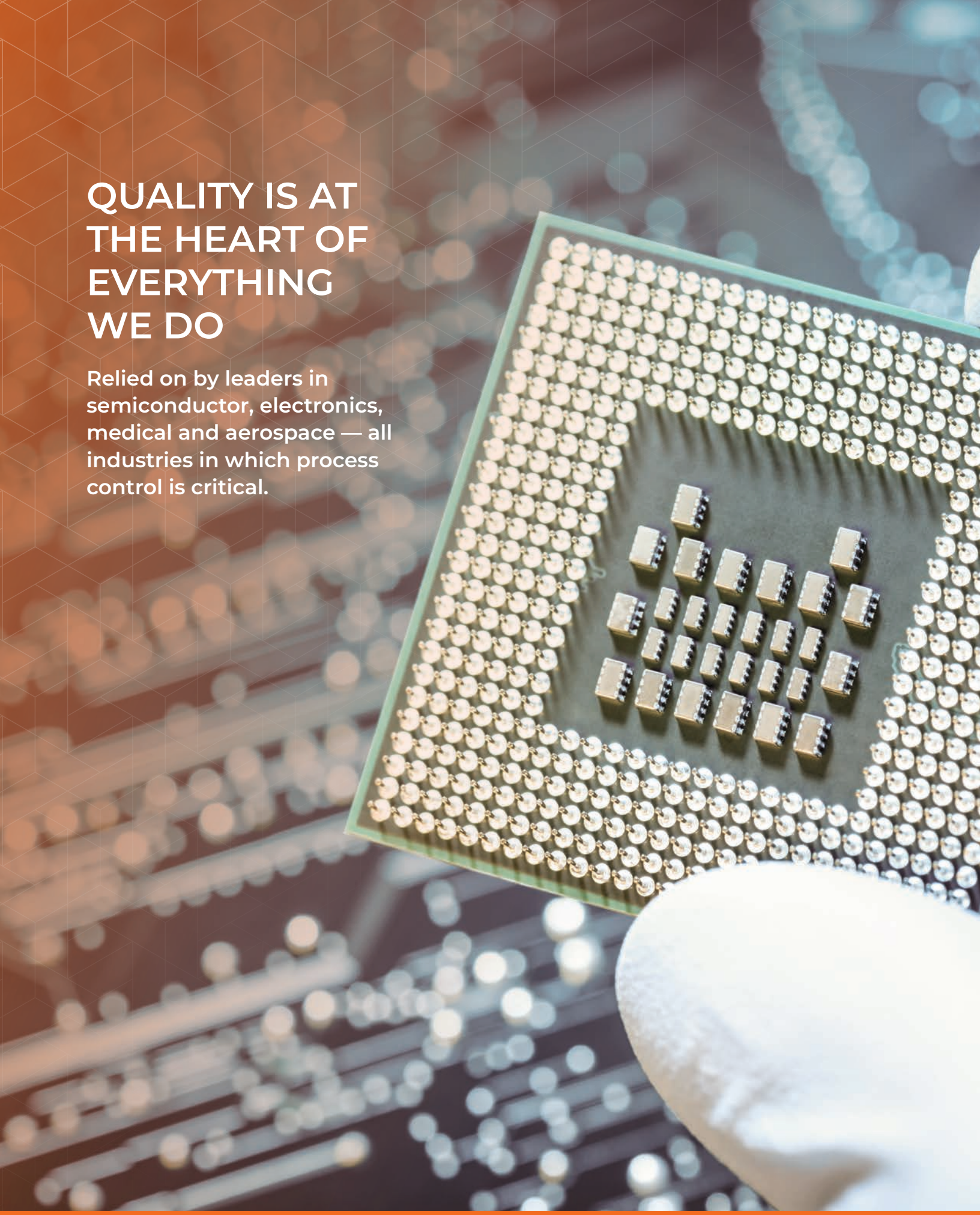
SAFEGUARDING AGAINST FASTENING FAILURES

- Poka-yoke torque screwdriver prevents over-torque
- For use in cleanroom and lab environments
- Special seals prevent airborne contamination and grease leakage
- Made with high-grade anti-corrosion materials, using a high-grade, low-outgassing powder coat
- Accuracy and precision delivered for all fastening applications
- Calibration life 4x ISO standards (for the FG-8i, FG-20i, FG-40i, and FG-125i models)
- Calibration life meets the ISO standards (for the HVG models)
- Two year unlimited warranty, lifetime warranty against manufacturer defects

ENGINEERED IN SILICON VALLEY
MOUNTZ
SINCE 1965

QUALITY IS AT THE HEART OF EVERYTHING WE DO

Relied on by leaders in semiconductor, electronics, medical and aerospace — all industries in which process control is critical.



Quality cam-over technology in the palm of your hand for cleanroom environment

THE STATE-OF-THE-ART PRECISION TORQUE DRIVER

Engineered and assembled in Silicon Valley, the Mountz FG line of precision preset cleanroom torque screwdrivers are the most advanced hand tools for high-level process and quality control. The screwdriver's repeatability, traceability, and precision safeguards against fastening failures.

Designed for a cleanroom environment, the Mountz screwdriver is manufactured using a high-grade, low-outgassing powder coat. The tools feature dynamic wear-resistant internal seals to prevent grease leakage and minimize airborne contamination.

When under or over-torquing puts your products at risk, Mountz cam-over torque screwdrivers deliver the accuracy you need. Mountz cam-over drivers use an internal cam-over mechanism to reduce the risk of operator error by disengaging once torque is reached. Our cam-over technology increases the consistency of torque delivered and joint reliability.

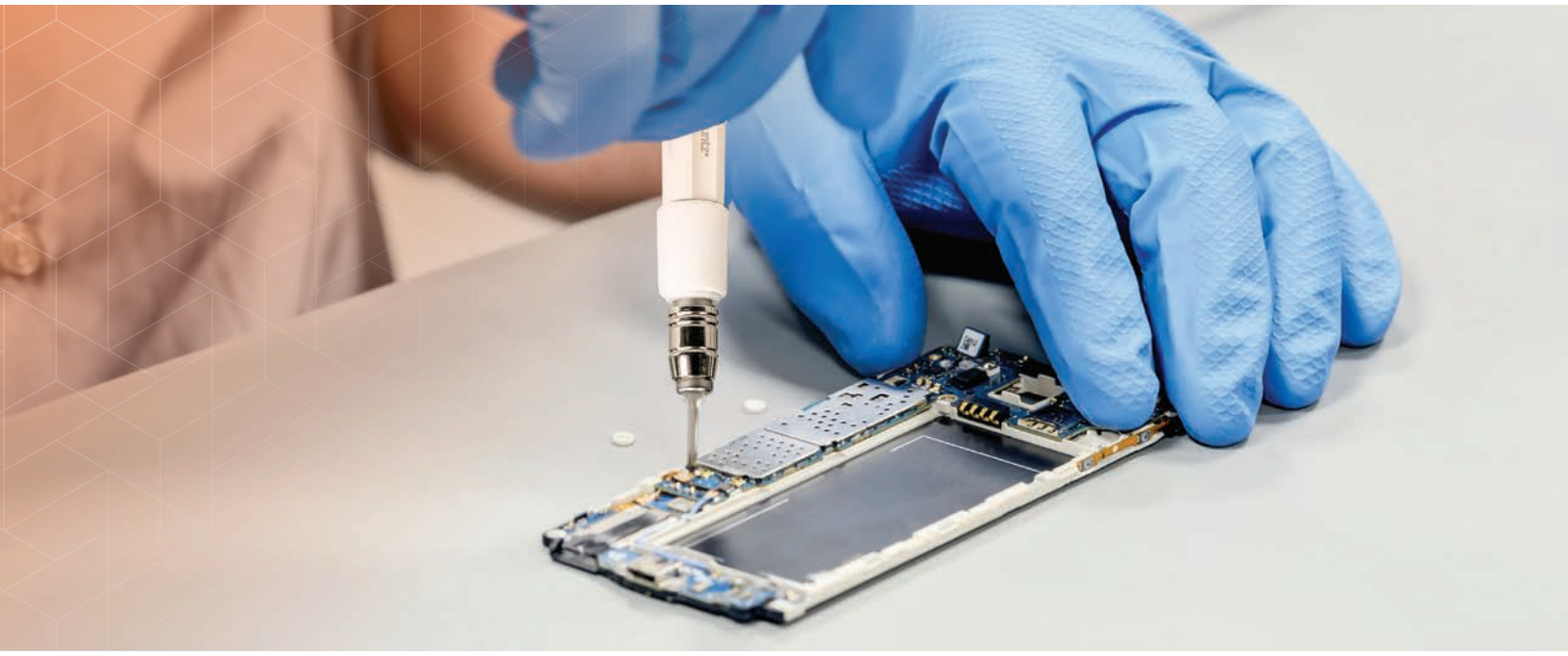
Precision and accuracy delivered every time

BREAKTHROUGH ACCURACY AND REPEATABILITY INCREASES OPERATOR CONFIDENCE AND OVERALL QUALITY OF ASSEMBLY

The Mountz FG cleanroom screwdriver calibration life exceeds the stringent industry standard (ISO 6789). The FG is an error-proofing tool that allows engineers to reduce quality risks for critical fastening applications with a torque range suitable for micro, low, and medium torque applications.

The cam-over technology applies the correct torque and prevents over-torque events. You can give Mountz FG tools to any operator and have the confidence that they will deliver the correct torque, time after time.

Our unique bearing system eliminates axial (end) and side loads by the operator, increasing the consistency of torque delivered and joint reliability.



Cleanroom Torque Screwdrivers

Manufacturing electronics, semiconductors, biotech, and medical devices demand care and precision. Often, a controlled environment is needed during production to limit the amount of dust, particles, and other contaminants in the manufacturing area. A cleanroom environment controls the level of contamination. Eliminating any sub-micron airborne contamination is a controlled process. Cleanrooms are used in many industries where small particles can adversely affect the manufacturing process.

With the demand for cleanroom manufacturing increasing, the need for torque tools that meet stringent cleanliness requirements has increased. Responding to this industry need, Mountz offers a selection of cleanroom torque screwdrivers.

Preset cam-over torque screwdriver improves productivity

Modern, effective preset torque screwdrivers improve productivity by guaranteeing that the correct torque value is consistently applied to each fastener. Preset torque screwdrivers are ideal for fastening applications where operators repeatedly assemble parts at the same torque setting. A preset screwdriver is similar to setting an alarm clock to signal the achievement of a selected time. The screwdriver is pre-set to the application's required torque value. The tool signals once torque is achieved.

A preset screwdriver doesn't have an external torque adjustment scale. These tools have an internal torque adjustment mechanism for setting the torque value using a hex key and a torque analyzer. The locking mechanism prevents accidental torque setting changes. Once the tool is set, the screwdriver's end cap is sealed with a calibration sticker and is ready to be used. However, if the preset torque value needs to be changed for a new fastening application, the flexible tool can easily be adjusted to a new preset torque value.

PRODUCT OVERVIEW

FEATURE	WHAT IS IT?	ADVANTAGE	END USER BENEFIT
Cycles Before Calibration	• ISO 6789-1:2017 calls for maximum of 5,000 torque applications	• Meet and exceeds standards • Mountz 4x ISO standards: 20,000 cycles before re-calibration*	• Longer time on the production line • Reduces calibration budget and down time
Cleanroom	• Minimize contamination	• Special wear-resistant seals prevent leakage and contamination • Manufactured using high-grade, low-outgassing powder coat to inhibit any form of corrosion	• Eliminates contamination risks • Compatible for cleanroom environments • Compliance with stringent government regulations
Cam-Over Technology	• Eliminate over torque • Limits the amount of force applied	• Eliminates fastener breakage issues • Ensures correct torque is applied	• Precision and accuracy • Error-prevention for the assembly process • Safeguards against fastening failures
Handle Flutes	• Sleek 4-flute handle design	• Ergonomic	• Sleek and comfortable • Easy to clean
Needle Thrust Bearing	• Rotary bearing to allow rotation between parts	• Reduces axial load torque dependency • Reduces friction influence on tool output • Longer life on internal components	• Higher accuracy • Durability
End Cap	• Eliminates possibility of damage to end cap	• Durable and doesn't strip out like plastic	• Fewer parts need replacement • Easier to service
Bit Retention (Universal Bit Holder)	• ¼ inch female hex bit holder that grips any type of bit • Patented One Touch bit release	• Safe and secure • No band / spring and captive ball to fall out	• Better quality and productivity on line • Bits don't fall out or into assembly operation
Locking Mechanism	• Double locking mechanism to prevent accidental torque setting change	• Avoids torque setting drift	• Longer period before re-calibration • Higher accuracy over time
Preset Tool	• Internal torque adjustment mechanism • Non-graduated setting torque tool	• Tool is set to a designated torque value • Correct torque value isconsistently applied	• Enhance process reliability • Improve production quality • Increase productivity • Reduce scrap rates

*Calibration life 4x ISO standards (for the FG-8i CR, FG-20i CR, FG-40i CR, and FG-125i CR models).
Calibration life meets the ISO standards (for the HVG models).

SPECIFICATIONS

Mountz FG Preset Precision Cleanroom Screwdriver models

The cleanroom screwdriver models feature a polyurea grease.

MODEL	ITEM NO.	TORQUE RANGES		DRIVE SIZE	WEIGHT	LENGTH
		AMERICAN	S.I.			
FG-8i CR	076452	1.6 – 8 lbf.in	18 – 90 cN.m	1/4" F/Hex	7.3 oz.	5.2"
FG-20i CR	076453	2 – 20 lbf.in	22 – 226 cN.m	1/4" F/Hex	7.3 oz.	5.2"
FG-40i CR	076454	4 – 40 lbf.in	0.4 – 4.5 N.m	1/4" F/Hex	11.5 oz.	6.3"
FG-125i CR	076455	25 – 125 lbf.in	2.8 – 14.1 N.m	1/4" F/Hex	11.5 oz.	6.3"

Mountz FG Cleanroom HVG (High-Vacuum Grease) Screwdriver models

For highly sensitive applications in ultra-high vacuum and optics, Mountz offers HVG cleanroom screwdrivers with a specialized ultra-high vacuum and exceptionally low vapor pressure to prevent further airborne contamination and sustain lubrication performance.

Our ultra-high vacuum grease is crafted using advanced polytetrafluoroethylene. It's characterized by ultra-low outgassing, vast temperature suitability, and superb lubrication. It is an ideal choice for diverse chemical interactions because it is chemically inert, non-toxic, and nonflammable.

MODEL	ITEM NO.	TORQUE RANGES		DRIVE SIZE	WEIGHT	LENGTH
		AMERICAN	S.I.			
FG-8i CR-HVG	076458	1.6 – 8 lbf.in	18 – 90 cN.m	1/4" F/Hex	7.3 oz.	5.2"
FG-20i CR-HVG	076459	2 – 20 lbf.in	22 – 226 cN.m	1/4" F/Hex	7.3 oz.	5.2"
FG-40i CR-HVG	076460	4 – 40 lbf.in	0.4 – 4.5 N.m	1/4" F/Hex	11.5 oz.	6.3"
FG-125i CR-HVG	076461	25 – 125 lbf.in	2.8 – 14.1 N.m	1/4" F/Hex	11.5 oz.	6.3"

	FG CLEANROOM MODELS	FG CLEANROOM HVG MODELS
	STANDARD POLYUREA GREASE	ULTRA-HIGH VACUUM GREASE
Color	Blue Green	Translucent White
Temperature	-40°C to +276°C	-20°C to +325°C
Application	Useful in applications where the external elements in the field cannot always be controlled, such as a high-temperature spike or extreme weather conditions.	For highly sensitive applications in ultra-high vacuum.
Features	• Waterproof • Long operating life • Contains no metals • Inhibits rust and oxidation • Added resistance to extreme pressure • Performs well in harsh environments • Improved performance over time	• Ultra-low outgassing for optimal vacuum performance • Consistent lubrication across extreme temperatures • Superior chemical resistance in diverse environments • Anti-wear properties for extended bearing life
Calibration Intervals	For FG-8i CR, FG-20i CR, FG-40i CR, and FG-125i CR models: 20,000 cycles before re-calibration For FG-25z CR, and FG-50z CR models: 5,000 cycles before re-calibration	For all HVG models: 5,000 cycles before re-calibration
Routine Maintenance Intervals	For FG-8i CR, FG-20i CR, FG-40i CR, and FG-125i CR models: 100,000 cycles	For all HVG models: 50,000 cycles
Compatible Cleaning Solvents	Organic cleaning solvents compatible with Nitrile. Mountz recommends Isopropyl Alcohol.	Fluorinated solvent cleaners such as: • MS-250M PFPE Re-move • Castrol Brayco IC X-100 • TorrLube Solvent TS-86 • TMC-HFE-367E

FG Cleanroom Screwdriver Information

All the models are designed and manufactured to meet or exceed the accuracy and repeatability requirements of ISO 6789: 2017 (+/- 6% of setting).

A removable T-bar is supplied with FG-40i CR, FG-40i CR-HVG, FG-125i CR, and FG-125i CR-HVG models.

Tamper-proof internal adjustment. No external adjustment scale — must be preset using a torque analyzer.

EZ-TORQ III (TORQUE ANALYZER)

Measure, test, and calibrate small torque screwdrivers, wrenches, and power tools to ensure proper torque is applied and reduce manufacturing errors on your assembly line.

Cleaning Regimen: Please note that these tools are not designed to be submerged. Cleansing procedures involving water and isopropyl alcohol-based solvents are permitted.

Cleanroom Environment

HIGH-GRADE, LOW-OUTGASSING POWDER COAT

Reduces particle release during assembly by eliminating paint flaking.

PROTECTIVE POLYURETHANE SLEEVE

Safely encapsulates air contaminants emitted by the tool, providing an extra layer of defense.

HIGH-PERFORMANCE WEAR-RESISTANT INTERNAL SEALS

Designed to prevent any grease leakage, our dynamic wear-resistant internal seals form a dual protective barrier.

ULTRA-HIGH VACUUM GREASE (OPTIONAL)

Grease with exceptionally low vapor pressure, essential for customers particularly sensitive to VOCs emitted by the grease.

CLEANROOM-FRIENDLY T-BAR WITH PRESS-FIT DESIGN

Eliminates traditional through holes to maintain a contaminant-free environment, and only compatible with FG-40i CR, FG-40i CR-HVG, FG-125i CR, and FG-125i CR-HVG models.

At Mountz, we take great pride in knowing that our advanced torque tools will end up in the right hands.

mountz®
the torque tool specialists

mountztorque.com

ABOUT MOUNTZ

Mountz, The Torque Tool Specialists®, has been a leader in the torque tool industry for more than 59 years. Engineered in the Silicon Valley and serving the globe, Mountz focuses on delivering high-quality torque products, services, and solutions to ensure customers can always proceed with confidence. We are committed to forging a safer world through precision and accuracy, and by innovating every day.

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