



Maktest

maktest.com



Since 1985

## WE ARE YOUR PARTNERSHIP

### RELIABLE DIESEL TESTING AND REPAIR SOLUTIONS SINCE 1985

Maktest is a leading manufacturer of diesel injector and pump testing and repair equipment since 1985.

With a strong engineering background and global experience, Maktest offers a wide range of test benches and service tools for Common Rail, HEUI, EUI/EUP, and mechanical systems.

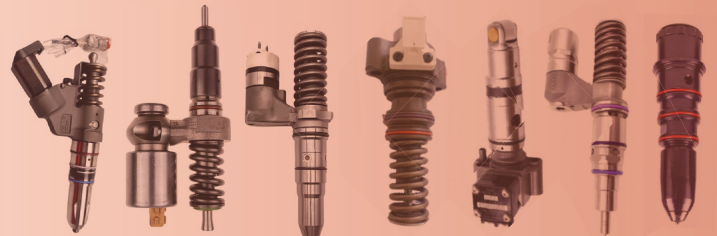
Trusted by service workshops and OEM suppliers in over 80 countries, we are committed to delivering precision, reliability, and long-term support to the diesel aftermarket.

We embrace an approach that understands the needs of diesel professionals and helps them make the most suitable and sustainable investment decisions.

Design & Engineering  
Spare Parts | Adaptors | Tool Sets  
Training  
Technical Support

Export to 80+ countries, technical support network

Target sectors: Service shops, Injector repair and reconditioning, OEM suppliers, rail, construction, public vehicle fleets



## CR TESTING

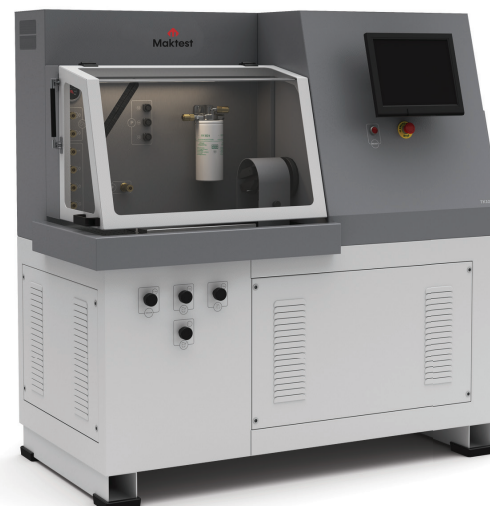
### TK1026 COMMON RAIL INJECTOR TEST BENCH

The TK1026.04, the fourth version of the TK1026 family, goes beyond a standard test bench with its cutting-edge electronic drive system and numerous upgraded features. Designed to meet the latest demands in injector testing, TK1026.04 offers users enhanced control and versatility.



### TK1035 COMMON RAIL PUMP TEST BENCH

With each new generation of common rail systems, testing CR pumps becomes increasingly challenging. The TK1035 is engineered to test all types of CR pumps, including Denso HPO and Bosch CP2 models, offering advanced features like temperature control and fuel metering. It meets the latest requirements for precise pressure control, accurate fuel metering, and exact speed control needed for next-generation CR pump testing.



### TK1029 HEAVY DUTY COMMON RAIL INJECTOR TEST BENCH

The TK1029 Injectester CRH is designed to test high-pressure, high-volume injectors with a measurement capacity of up to 2000 mm<sup>3</sup>/stroke. Equipped with an advanced measurement and cooling system, it efficiently tests heavy-duty injectors used in powerful MTU 4000 and 2000 series engines (12, 16, and 20 cylinders) with L'orange and Bosch injectors. Additionally, the TK1029 is versatile, making it suitable for testing injectors in passenger cars, light commercial vehicles, and trucks.





## CR TESTING

### TK1022 INJECTOR CR MANUAL

The TK1022 Injectester CR Manual is a versatile, manually operated tester ideal for pre-testing common rail injectors. Capable of testing multiple injector types—including common rail, double-stage (dual spring), and mechanical injectors. The TK1022 provides precise monitoring of opening pressures for both springs in dual-stage injectors via on-screen selection.



### PT2012 CRE MECHANICAL & COMMON RAIL PUMP TEST BENCH

The test bench you need to test **both** diesel pumps and common rail pumps



Including:  
Caterpillar C4- C6  
Denso HPO  
Bosch CP2  
Bosch CP4  
Cummins



### PT2012 B UNIVERSAL MECHANICAL PUMP TEST BENCH



Powerful Drive System PT2012 B has a Special design 20 HP AC motor providing high torque at low speed.  
The standard flywheel has a moment of inertia of 1.0 kgm<sup>2</sup>.



# HEUI TESTING

## TK2024

### HYDRAULIC ELECTRONIC INJECTOR TESTER

The TK2024's new design provides a faster, more efficient approach to injector testing with a hydraulic system capable of delivering 300 Bar test oil pressure at up to 4 L/min.

With automatic high-pressure settings and new control applications, testing is uninterrupted, requiring no operator presence. Utilizing ISO4113 standard test oil ensures precise HEUI injector testing, while the PD flowmeter's rapid response and 0.3 mm<sup>3</sup> resolution enhance accuracy and repeatability, making the TK2024 one of the most precise test benches available.



#### Application Kits

Ford Powerstroke 4.5L V6, 6.0L V8, 7.3L V8

Navistar DT444E 7.3L

Navistar DT446E 7.6L

Navistar DT530E 8.7L

Navistar DT570 & HT570 9.3L

Navistar VT275 4.5L

Isuzu Trooper 4JX1 3.1L

Caterpillar 3408 18.0L

Caterpillar 3412 27.0L

Caterpillar 3116E 6.6L

Caterpillar 3126A 7.2L

Caterpillar 3126B 7.2L

Caterpillar C7 7.2L

Caterpillar C9 8.8



# EUI & EUP Testing

## UTS1004

### ELECTRONIC UNIT INJECTOR AND UNIT PUMP TEST BENCH

#### Advanced Test Bench for Electronic Unit Injectors and Pumps

The UTS1004 is the only test equipment specifically designed for precision testing of QSK HPI injectors with advanced timing control. It supports a wide range of applications, including Caterpillar, Cummins, Bosch, Delphi, and Continental injectors. With its patented cam box design and solenoid response time measurement, UTS1004 offers accurate and efficient testing under near-engine conditions. The user-friendly interface and continuously updated software provide a seamless experience for testing and repairing electronic unit injectors and pumps.

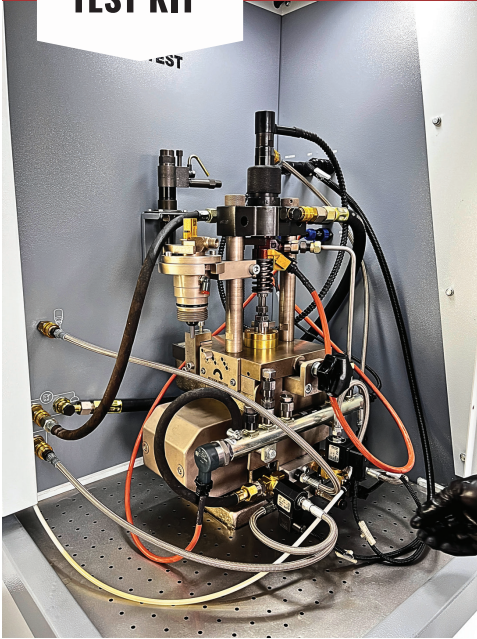




## EUI & EUP Testing

### DELPHI F2 TEST KIT

KO2039 / UTS1004



Delphi Euro-6 F2e Series Pumping & Non-pumping Injector Test Kit. Ko2039 has a high-pressure rail that can control pressure up to 2200 bar.



## REPAIR SOLUTIONS

### KO4000 COMPUTER-AIDED ASSEMBLY SYSTEM



The KO4000 Computer-Aided Assembly System eliminates the trial-and-error process in injector assembly, offering users a fast and accurate assembly experience.

With its precision measuring unit and specialized software, it guides the user step-by-step through each action and calculates the required adjustment shim thickness.

These features reduce the risk of errors during assembly and enhance reliability in repair processes.

**No More Trial and Error  
No Expert Needed  
Anyone can REPAIR**

**KO4000 is ready  
for repairing below Injector groups:**

#### Common Rail Injectors:

Bosch CRI 1.0 – 2.0 – 2.1 –  
22– 2.18, Bosch CRIN 1.0 –  
2.0 – 3.0, Denso G2  
L'Orange MTU 4000.01 &  
4000.03 LEAD Series

#### HEUI Injectors:

Caterpillar C7–C9 Injectors  
EUI Injectors  
Caterpillar C15–3406–C10–  
3500



**KO4000 A4000  
TOOL SETS**



## REPAIR SOLUTIONS

### COMPUTER-AIDED REPAIR SYSTEM

#### A4000

The A4000 Computer Aided Repair System is designed to streamline injector assembly by eliminating trial-and-error methods. Its precision measuring mechanism operates hands-free, reducing human-related measurement errors.

The system's software guides users through each step of the repair and assembly process, calculating the exact adjustment shim thickness required. This ensures accurate assembly and enhances the reliability of injector repairs.



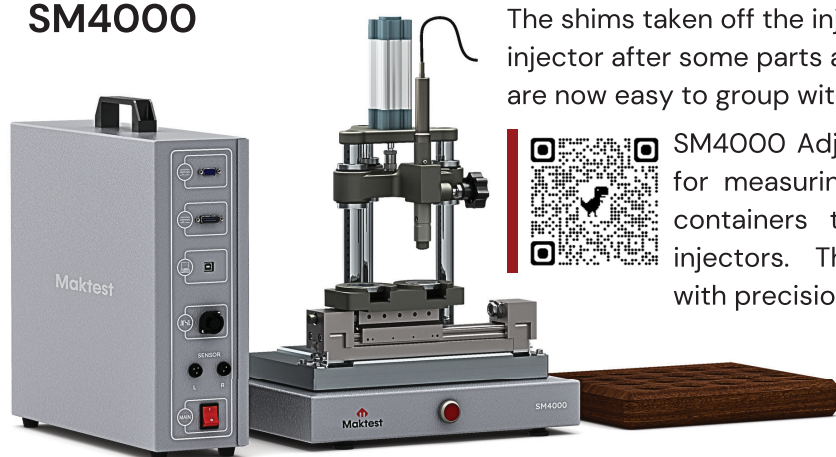
### ADJUSTMENT SHIM GROUPING CENTER

#### SM4000

The shims taken off the injectors usually will not be used in the same injector after some parts are replaced. Those shims you have collected are now easy to group with ranges varying between 2 to 10  $\mu$ .



SM4000 Adjustment Shim Grouping Center is designed for measuring shim thickness and grouping them into containers to use directly in the assembly of the injectors. The sliding measuring seat allows measuring with precision, at the same time, fast operation.



## REPAIR SOLUTIONS

### BOSCH-TYPE CONTROL VALVE TESTER

#### KO1815



Control valve lapping is a repair method not recommended by OEMs due to complex compensation calculations. The Maktest KO4000 CARS system effectively recalculates all critical dimensions after lapping, reducing the risk of failure in the flow test. The KO1816 Bosch Type Control Valve Lapping Unit provides a practical and efficient repair solution for Bosch control valves.

In the repair of common rail injectors, it is extremely important to ensure that each component, especially the control valve, is in proper condition before assembly. The control valve is one of the parts for which it is nearly impossible to determine acceptability or predict failure during flow testing simply by inspecting the surface condition with magnifiers or advanced cameras.

### BOSCH TYPE CONTROL VALVE LAPPING UNIT

#### KO1816

