

# TK1026 injectester•CRb

All Makes Common Rail Injector Test Stand

## Diagnose the Faulty Common Rail Injector Test and Verify after Repairing



TK1026 Injectester•CRb is capable to test both electromagnetic and piezo injectors from Bosch, Delphi, Denso and Siemens.

Computerized controls and 10" LCD screen lets the user to have detailed test report print outs.

Special high pressure pump provides up to 1800 bars electronically regulated pressure for testing all types of common rail injectors with accuracy.

Injection Delay Time Measurement helps to diagnose the inconsistent operation due to wear in solenoid and springs in the injectors.

EFM Electronic Fuel Measurement System can measure delivery and return fuel in a few seconds, providing the fastest test time in the industry.

TK1026 injectester•CRb stores all test plans for BOSCH, DELPHI, DENSO and SIEMENS in the database. The database is upgraded periodically to include test plans for new injectors.

Users can also define their own test plans using Test Plan Menu in the control software.



ISO 9001  
BUREAU VERITAS  
Certification

N° 223176



# TK1026



## Quick Test with Quick-Clamp and Easy-View

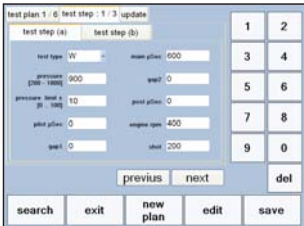
It takes only seconds to mount the injector and test. Quick-Clamp injector clamping system with flexible high pressure hose connection makes life easy for the user. Various sizes of injectors can mount to quick clamp without having to use numerous adaptors while spray pattern checking is even easier with Easy-View adaptor. The fume is extracted off the spray chamber and filtered. Easy-View adapter helps the user to observe the spray pattern successfully.



## Triple Injection at Each Cycle

Perfect performance in testing common rail injectors is standard only at TK1026 injectester•CRb. Triple injection capability at each injection cycle provides higher accuracy in testing and shorter test time for piezo injectors.

## Test Plans for Bosch, Delphi, Denso and Siemens Injectors



TK1026 injectester•CRb has a user friendly database that stores test plans for all types of injectors. Database is upgraded to include test plans for new injectors periodically by Maktest. User can define his own test plans using test plan data base menu.

## Accessories Delivered with TK1026 injectester•CRb

- AA3459 INJECTOR RETURN CONNECTOR
- AP1638 DELPHI CABLE
- AP1639 BOSCH CABLE
- AP1640 DENSO CABLE
- AP1642 SIEMENS CABLE
- KO1365-2 ADAPTOR FOR JOHN DEERE-DENSO
- AP1648 CABLE FOR HEAVY DUTY APPLICATIONS
- AP1675 CABLE FOR MERCEDES APPLICATIONS
- BA1369 FLEXIBLE HIGH PRESSURE HOSE
- AP1713 INJECTION DELAY SENSOR CONNECTION CABLE

## Technical Specifications

|   |  |
|---|--|
| <b>High Pressure Test Oil Transfer System</b> | Pressure is controlled digitally between 100- and 1800 bars.   |
| <b>Injector Drive System System</b>           | System is designed to be able to drive future injectors. It can drive electromagnetic injectors as well as piezo injectors. Drive system is capable to inject 3 times per injection cycle. |
| <b>Control System</b>                         | Control computer with 10" LCD Touch Panel runs Windows XP operating system. Special control software runs TK1026 with high accuracy.   |
| <b>Flow Measurement</b>                       | EFM Technology, patented by Maktest, 0,02 mm <sup>3</sup> resolution and 0,1% accuracy. 38cm <sup>3</sup> Glass Measuring Tubes for delivery and return (optional)                         |

## Optional Accessories Recommended

- KO1382 0445 110 XXX AND 0445 120 XXX TYPE BOSCH CR INJECTOR REPAIR TOOL SET
- KO1475 CLEAN BENCH FOR ELECTRONIC INJECTOR REPAIR
- KO1407 COMMON RAIL TORQUE WRENCH SET

## EFM Fuel Measurement System and Unattended Testing



Fuel Injected (delivery) and Fuel Returned (Return) are measured in EFM System (Electronic Fuel Measurement) with  $\pm 0,02 \text{ mm}^3$  resolution and  $\%0,1$  accuracy. TK 1026 injectester•CRb can automatically test an injector without an operator attended throughout the test time. Operator can review the test result on the screen or print out as a report.

## Injection Delay Time Helps to Diagnose

|                                    |              |          |        |      |      |
|------------------------------------|--------------|----------|--------|------|------|
| Testing                            | injectester  |          |        |      | µSec |
| Vehicle                            | USER DEFINED |          |        |      | 1000 |
| Model                              | USER DEFINED |          |        |      |      |
| <b>Test Step 3 of 3 : Delivery</b> |              |          |        |      |      |
| measuring...                       | bar          | delivery | return | shot |      |
| 45 °C                              | 1600         | 0.0      | 0.0    | 250  |      |
| 11 s                               | 19 ±         | 0.0 ±    | 0.0 ±  |      |      |
| delay (µSec)                       |              |          |        |      |      |
| rand                               | 468          |          |        |      |      |
| max                                | 475          |          |        |      |      |
|                                    |              |          |        |      | rpm  |
|                                    |              |          |        |      | 3000 |

injection delay is measured in usec. TK 1026 injectester•CRb monitors the delay even at high speed and provides information to the user about delay variances between injections. Operator review the delay to conclude about the solenoid and springs.

## Optional Accessories for Various Common Rail Injector Applications

- KO1430 BOSCH - DAEWOO (0445120040)
- KO1431 BOSCH - FORD (0414720025)
- KO1428 BOSCH - IVECO/CUMMINS (0445120-007/ 113/ 114)
- KO1429 BOSCH - MAN (0445120030)
- KO1462 BOSCH - MAN (0445120056)
- KO1427 BOSCH - RENAULT (0445120020)
- KO1459 DENSO - HYUNDAI (095000-5550)
- KO1432 DENSO - JOHN DEERE (095000-5480/ 5050)
- KO1426 DENSO - KOMATSU (095000-0560)

Please contact to the nearest dealer to obtain latest adapter list for Common Rail Injectors. Maktest is continuously working to design adaptors and test plans for newest injectors.

## Product Codes for Ordering

| Product Code | Description  |
|--------------|--|
| TK1026.01.H  | Injectester•CRb with EFM Electronic Fuel Measuring System, Unattended Testing, and 380 V 50/60 Hz 3 ph industrial electricity supply |
| TK1026.01.C  | Injectester•CRb with EFM Electronic Fuel Measuring System, Unattended Testing, and 220 V 50/60 Hz 3 ph industrial electricity supply |
| TK1026.02.H  | Injectester•CRb with glass measuring tubes and 380 V 50/60 Hz 3 ph industrial electricity supply                                     |
| TK1026.02.C  | Injectester•CRb with glass measuring tubes and 220 V 50/60 Hz 3 ph industrial electricity supply                                     |

## TK1026 injectester•CRb Dimensions

|   |  |   |  |
|---|--|---|--|
|  | Width : 850 mm<br>Depth : 650 mm<br>Height : 1750 mm<br>Weight : 220kg |  | Width : 1040 mm<br>Depth : 850 mm<br>Height : 1830 mm<br>Weight : 300 kg |
|---|--|---|--|

