

# TK1026.04 CR TESTING



**Measurement capacity** (Standard):  
Measurement up to 700 HP (400 mm<sup>3</sup>/Str) for on-road vehicles (trucks and construction machinery); measurement accuracy is maximized up to this level.

PD (Positive Displacement):  
Standart sensör

## Reliable results, streamlined workflow.

### User profil:

- Diesel injector maintenance/reconditioning workshops: Businesses with high daily test throughput requiring fast and repeatable measurements.
- On-road services: Services requiring testing and verification of common rail injectors widely used in the field.
- Off-road construction equipment services: Teams that perform fault detection and pre-delivery checks using standardized test plans.
- Multi-brand services: Users requiring an extensive test plan database for Bosch/Delphi/Denso/Siemens/Caterpillar CR injectors.
- Operations seeking speed and practicality: "Fast measurement system" and up-to-date features suitable for intensive testing workflows.

Scania XPI (KO1723)  
Denso – Komatsu (KO1426)  
Bosch – Renault (KO1427)  
Bosch – Iveco/Cummins (KO1428)  
Bosch – MAN (KO1429 / KO1462 examples)  
Bosch – Daewoo (KO1430)  
Bosch – Ford (KO1431)  
Denso – John Deere (KO1432)  
Cummins XPI (QSX11.9) (KO176

CR  
adapter list



**KO1426**  
**DENSO**  
**KOMATSU**



Included in the  
"clamping unit"  
category are Bosch  
(CRI-CRIN), Denso,  
Delphi, Caterpillar,  
and other families.



Maktest TK1026 is equipped with an injector control software suite designed for fast, standardized, and repeatable testing in daily workshop operations. The system includes 600+ built-in test plans covering major Common Rail injector platforms (Bosch, Delphi, Denso, Siemens, and Caterpillar), enabling technicians to start testing immediately with proven reference routines.

The software supports creating and managing custom test plans, so workshops can adapt procedures to specific injector variants or internal quality standards. A structured update package keeps the platform current, including new injector model additions, test and repair instructions, repair manuals, as well as the latest software versions, drivers, user manuals, and troubleshooting guides—helping operators maintain consistent results and reduce diagnostic time.



The screenshot displays a table of test plans. The table has columns for 'Step Name', 'Target', 'Measured', 'Test Temp', 'Error Temp', 'Test Result', and 'Comments'. The data is as follows:

Step Name	Target	Measured	Test Temp	Error Temp	Test Result	Comments
Flowing	10.00	10.00	10.00	10.00	Pass	
Leak	10.00	10.00	10.00	10.00	Pass	
Leak (Leakage)	10.00	10.00	10.00	10.00	Pass	
Leak (Leakage)	10.00	10.00	10.00	10.00	Pass	
Leak (Leakage)	10.00	10.00	10.00	10.00	Pass	
Leak (Leakage)	10.00	10.00	10.00	10.00	Pass	
Leak (Leakage)	10.00	10.00	10.00	10.00	Pass	
Leak (Leakage)	10.00	10.00	10.00	10.00	Pass	
Leak (Leakage)	10.00	10.00	10.00	10.00	Pass	
Leak (Leakage)	10.00	10.00	10.00	10.00	Pass	

The screenshot displays a table of test results. The table has columns for 'Job No', 'Machine No', 'Serial No', 'Test Date', and 'Test Time'. The data is as follows:

Job No	Machine No	Serial No	Test Date	Test Time
1	1000000000	1	2020/01/01	10:00:00

Below this table, there is a larger table with columns for 'Job No', 'Machine No', 'Serial No', 'Test Date', 'Test Time', 'Test Result', and 'Comments'. The data is as follows:

Job No	Machine No	Serial No	Test Date	Test Time	Test Result	Comments
1001	100	1000000000	2020/01/01	10:00:00	Pass	
1002	100	1000000000	2020/01/01	10:00:00	Pass	
1003	100	1000000000	2020/01/01	10:00:00	Pass	
1004	100	1000000000	2020/01/01	10:00:00	Pass	
1005	100	1000000000	2020/01/01	10:00:00	Pass	
1006	100	1000000000	2020/01/01	10:00:00	Pass	
1007	100	1000000000	2020/01/01	10:00:00	Pass	
1008	100	1000000000	2020/01/01	10:00:00	Pass	
1009	100	1000000000	2020/01/01	10:00:00	Pass	
1010	100	1000000000	2020/01/01	10:00:00	Pass	

## Measurement Capacity

**Standard measurement capacity:** Up to 700 HP applications (including on-road trucks and off-highway equipment); measurement capability up to 400 mm<sup>3</sup>/stroke, with accuracy optimized within this range.

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## Measurement Technology Options

PD (Positive Displacement): Standard measurement sensor.

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## Software & Database

**Control software:** Includes 600+ test plans for common rail injectors (Bosch, Delphi, Denso, Siemens, and Caterpillar).

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**Updates include:** Test & repair instruction updates, the latest version control software and drivers, user manuals and troubleshooting guides, and repair manuals for various common rail injectors.

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**Expandable coverage:** The software/database is updated periodically to add newly released injector models.

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## Voltage Options

Standard configuration: 360–415 VAC, 50/60 Hz

Optional configuration: 200–240 VAC supply supported via a Maktest transformer (the bench is primarily designed for 360–415 VAC).

Voltage range stated in technical summary: 200–240 VAC / 360–415 VAC

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## Coding Option

Standard: No coding

**Optional:** Bosch IMA Coding for Bosch solenoid and piezo injectors (including ISA classification)

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## Instrumentation & Electronics

HP sensor: Bosch 2200 bar

NRT (Nozzle Response Time): Piezo + acceleration correction, accurate within 10 microseconds

Electronics: Maktest CR1

## High Pressure System

High-pressure pump: Bosch CP3 or Denso HP3

HP pump motor: 7.5 kW

(1400 rpm @ 50 Hz / 1800 rpm @ 60 Hz)

Maximum pressure: 2200 bar

Pressure regulator: Bosch

Rail volume: 28 cm<sup>3</sup>

## Test Oil Supply System

Test oil tank: 27 L

Low-pressure (LP) supply pump: 4 L/min (max 4 bar)

Heater element: 2 kW

Cooling: Air-cooled

Filtration: 5 micron

**Materials Included in the Standard Product**




- AA3459 Injector delivery nipple (1)
- BA1221 Fitting 1/8-6 (1)
- AP2031 Injector cable – Delphi WP4 (1)
- AP2032 Injector cable – Bosch WP4 (1)
- AP2033 Injector cable – Denso WP4 (1)
- AP2038 VDO injector cable WP2 (1)
- AP2034 Injector cable crocodile clips WP4 (1)
- AP2035 Injector cable – Mercedes WP4 (1)
- AP2089 NRT cable (1)
- AP2036 Cable Hyundai Denso 5550... WP4 (1)
- AP2039 Bosch – Piezo cable WP2 (1)
- AP2037 Injector cable – Delphi (EMBR00002D) WP4 (1)
- BM1055 Delivery hose 160 cm
- BA1161 Rubber feet (4)
- KO1365-2 Adaptor John Deere–Denso (1)
- KO1538 Return adaptor (1)
- KO1472 Adaptor Delphi (4S7Q... / EJDR00504Z) (1)
- KO1449 Adaptor Hyundai Denso 5550... (1)
- KO2025 Bosch–Piezo injector return complete (1)
- KO1746 Bosch (0445 110 369) inj. return complete (1)
- MO243300 Injector adapter group (1)
- MO1321 Injector adapter group (1)
- AG1296 O-ring Ø9x4 (3)
- AG1297 O-ring Ø7x4 (9)
- AG1287 O-ring Ø14x2 (4)
- AP1892 Power cable (1)
- AN243425 Injector wrench (1)
- MO243116 High pressure fuel connection (1)


**Machine Dimensions**

Width: 930 mm  
Depth: 650 mm  
Height: 1690 mm  
Weight: 270 kg

**Packing Dimensions**

Width: 1090 mm  
Depth: 860 mm  
Height: 1890 mm  
Weight: 360 kg

 User Training  Spare parts  2 years warranty

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