
MTBR //X

Diesel System Test Bench



The Preferred Diesel Specialists Solution

The Comprehensive Solution
for Every Advanced Diesel Service Center

MTBR //X



Setting the Benchmark for Test Benches

Our expertise, experience & innovative thinking brought together a New Design, Advanced Hardware & Upgraded Software for our New **MTBR|X**

Applications

- Diesel Passenger cars
- Diesel Light Duty vehicles
- Diesel Medium & Heavy-Duty Commercial, Agriculture and Industrial Equipment
- Diesel Heavy Duty Marines
- Gasoline Passenger Cars, Light Duty Trucks and Marine Engines

CloudX™

- Cloud Based Technology
- Industry 4.0 Complaint
- Remote Sync & Backup
- Machine Fleet Management
- Online Features Activation
- Instant Troubleshooting & Support
- AZO Software v3.0
- Powered by CloudX

Features

- A Continental/VDO Authorized Test Bench
- Xtremely Fast Testing Times without any Compromise
- New Design for every Service Station
- Optimized Working Area access [240°] & Component Set-up Times
- 2800Bar Operating Pressure
- EU6 Systems Testing and Coding*
- CloudX Capabilities



Coding capability for all brands and types available in the market today. Bosch, Denso, Delphi, Continental /VDO, CAT, Cummins*, John Deere, ISUZU*, HINO*, KOMATSU*, E1/ E3/ DAF/ Smart Pump, F2E/ F2P/ F2R* technologies and more added every day...

Off-Highways CR applications testing and coding (John Deere, Komatsu, Hino, Isuzu)

Cummins XPI*, Caterpillar-Perkins C4/C6 and other Medium and Heavy-Duty testing and coding

Advanced water-cooling or air-cooling system to optimize long term nonstop operation at all environmental conditions.

Live Response Time Measurement at every test plan

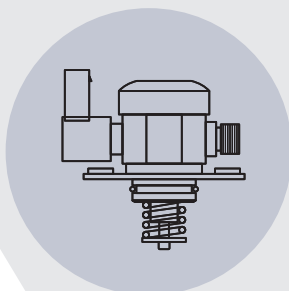
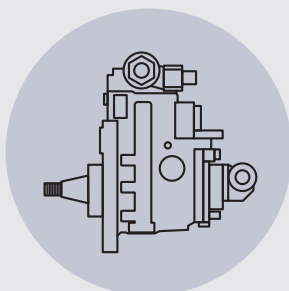
BIP Actuation Measurement for all Heavy-Duty type solenoids (EUI & CR)

Adaptability for every type of Diesel Injectors in the market

Continuous Database updates and new Software capabilities to meet the market needs.

Android Powered 15.6" HMI with unlimited flexibility and connectivity competencies.

Injector & Pump flushing feature pre-installed (optional kits available)



*New database and Coding is continuously being updated to new EU6 applications

MTBR //X

**Authorized Solution
for Continental/VDO**



The New MTBR|X is a unique Standalone Workbench Capable to thoroughly Test and Service every possible Fuel Injection System in the Market today.

Capable to efficiently Diagnose and fully Calibrate all Makes and Types of CRDi's, EUI's, EUP's, HEUI's, CR-pumps, GDi-pumps and GDi injectors.

The machine's Innovative technology is already in compliance with all EU6 Standards and requirements, meantime is prepared for future upgrades.

#carbonzappXseries



////// Evaluation of the New MTBR|X

**Precise, repeatable and rapid Diesel & Gasoline
Components Testing**

6-12 minutes testing and coding* time for:

4 CR / GDi injectors (All Brands and Types). Capable for all EU6 technologies such as VCC and NCC technology, iART, PCRS5, XPI, F2E, F2P, F2R Injectors pumps and more..

2 Heavy Commercial-vehicle injectors CRIN 4.2

Up to 4 Large Diesel CR Engine injectors (MTU, L'Orange, etc..)

HEUI testing and coding*

Cambox operating to test and code

All brands and Types EUI/EUP up to EU6* technology

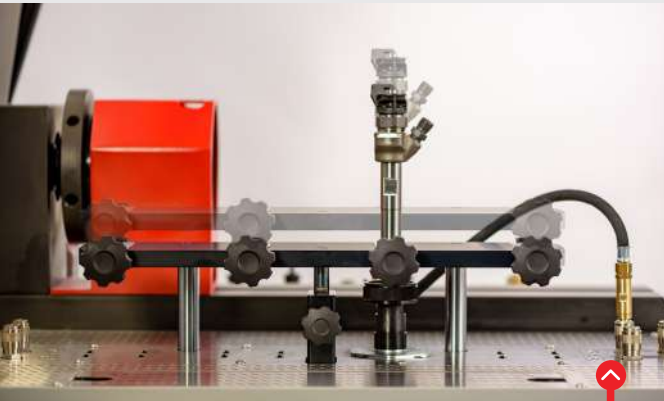
4-6 minutes testing time for:

Any CR / GDi Pump (All Brands and Types). Capable for all EU6 technologies with Sync Operation such as Denso HP5, Bosch CP4-EU6, VDO EU6 technology and more...

Any Heavy Duty or Commercial-vehicle CR pump, such as CPN5S2, CAT, Cummins etc..



*New database and Coding is continuously being updated to new EU6 applications



1 Diesel CRDI testing and coding:

Ergonomic, Fast and Easy Injector Clamping device to minimize mounting times. Fully Adjustable height for all types of CR injectors. Utilizes a spring-loaded injector holder to ease the operation of the user.

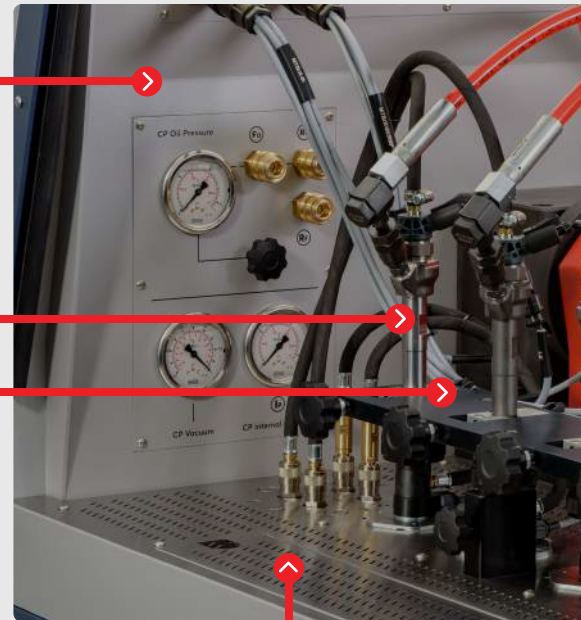
2 Gasoline GDI Injector testing and coding

Quick and Easy Injector Clamping device with adjustable height to fit all types of adapters for Gasoline Direct injectors. Unperceivable testing capabilities, adaptability, global database and coding for newer EU6 applications* as well as for the widely available Siemens/VDO piezo injectors (for BMW) in the market today.



7 Low supply pressure / suction performance

Measures the inlet pressure made by the supply pump or the vacuum produced by the pump itself. Important diagnostic information for many types of pumps and even for newest EU6 generation pumps [CRp-iP3 KIT]



8 HEUI testing and coding*

Pre-order your MTBR|X ready to test and code* HEUI injectors according to the OE standards. Adaptability and database available to test the majority and the diversity of injectors available in the world today. A unique capability of this add-on feature is to save space and cost from an additional standalone unit.

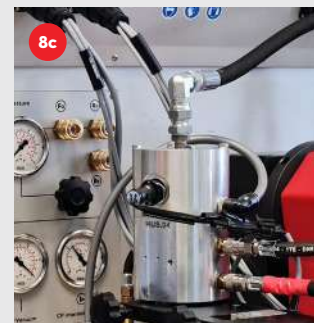
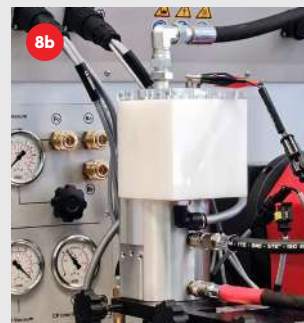
8. CAT C7/C9 testing and coding*. Measuring discharge and overflow at different loads to optimally diagnose faults and characterize the injector to generate the correct trim file for coding.

8a. CAT 3126/Navistar measuring the discharge and overflow at different loads.

8b. CAT 3408/3412 measuring the discharge and overflow at different loads.

8c. Ford Power Stroke 6.0L / 7.3L* Efficiently controlling the dual solenoid control poppet valve we measure the discharge and overflow at different loads.

8d. Isuzu Trooper. Medium load HEUI injectors available in less countries in the world are also able to be fully tested with the New MTBR|X. (not shown in picture)



*New database and Coding is continuously being updated to new EU6 applications



3 Gasoline GDI Pump Testing

The New **MTBRiX** is the first machine in the world to fully test and diagnose faulty GDI (Gasoline Direct Injection) Pumps. Adaptability and operation for All Types and Makes of camshaft or rotary operated high-pressure pumps. Capable to run the pumps up to 6500rpm



4 Diesel Unit Injection Systems testing / Cambox

EUI and EUP testing and coding with OE standards is now made as simple as testing a CR injector. Smart Pumps and Injectors testing and coding (EU6) has never been so accurate, repeatable and correct. Hartridge's HK-1400A Base Cambox optimized and upgraded with our ingenuity to meet all the standards of today's revolution in Medium and Heavy Duty Diesel Unit Systems.



5 Diesel CR pump testing

A well proven pump coupling apparatus provides the flexibility needed for future upgrades, as well as the quick coupling and versatility for today's All-Makes CR pumps. Capable to test all EU6 Common Rail pumps with sync control valve function.

5a: CPN5S2 and other **Heavy-Duty** CR Pump applications require high Power, high Torque and responsive correction of the machine's power transfer through the transmission and flywheel. The New **MTBRiX** is specifically designed to efficiently test these systems.

5b / 5c: EU6 Generation Common Rail Pump testing:

- Denso HP5S/D, HP6, HP7,
- Bosch CP4 new Euro6,
- Continental /VDO new Euro6
- and every other Euro 6 CR Pumps that operate by timing correctly the discharge quantity control valve(s).

The New **MTBRiX** advanced electronics and modern technology provides this unique testing capability for today's and next generation CR pumps.



6 Easily accessible filters and waste area

Quick access to all inline filters for fast check-up and replacement located within your working area. A mess-free compartment to work at, continuously draining to the waste tank.

MTBRX Technical Data

Part Number

MTBRX

Standalone
Add-On
Cooling Type

●
-
[A / W]

TYPE
Test Bench
Simulator / Controller
Cambox
Service / Diagnostic Unit

●
-
-
-

USER LEVEL
Diesel / Gasoline Specialists
Workshop / Garage
Test Slots [injectors / Pumps]

●
-
[4 / 1]

SYSTEMS /
[TESTING MINUTES]
CRDi / Smart Injectors [1 / 4]
GDi Injectors [1 / 4]
CR Pumps [1]
GDi Pumps [1]
EUI / EUP / Smart EUP [1]
HEUI [1 / 4]
Gasoline Injectors [1 / 4]
LPG / CNG Injectors [1 / 4]
Gasoline /Other Engines
Diesel Engines
Gasoline/Diesel Fuel Systems

● / [9]
● / [6']
● / [6']
□ / [6']
□ / [8']
□ / [12']
□ / [8']
□ / [8']
-
-
-

APPLICATIONS
Passenger Car / HEV / PHEV
Motorcycles
Racing (Gasoline)
Light Duty
Medium Duty
Heavy Duty / Industrial
Marine
EV (Electric Vehicles)

●
□
□
□
□
□
□
-

FEATURES
Coding Capability for Passenger Car / Light Duty
Coding Capability for Medium/Heavy Duty
Authorized Solutions



MEASUREMENT
SENSORS
XKM
DFM500
DFM50
Volumetric Tubes

4
-
1
-

SYSTEM PRESSURE
Max (BAR)
Source
Source Power (HP)

2800
MOTOR
18

CHARACTERISTICS
Response Sensor
Response Sensor HD
Pressurized Return Hoses / PIRV's
Exclusive Return Hoses Kit
Spray Chamber
Heavy Duty Injector Adapters & Fittings
Heavy Duty Pump Adapters & Fittings
Exclusive Electrical Connectors
Mains Power 50/60Hz /1-Phase 100-250VAC
Mains Power 50/60Hz/3-Phase/PE 380-480VAC
Air-Supply (Bar / L/min)
Water Cooling (requires connection)
Air Cooling
Tank Capacity [testing / flushing]
HMI (Inches)
Touchscreen
Flushing / MACC
Protective Cover
Calibration Oils
Ultrasonic Bath

□
□
□
●
□
□
□
□
○
●
-
-
-
-
●
●
[45 / 15]
15,6
●
□ / -
●
○
○

PACKAGING
Width (mm)
Depth (mm)
Height (mm)
Weight (kg)

1160
1530
1790
717

EXPLANATIONS

● : Capable / Standard Equipped
□ : Capable / Optionals required
○ : Optional
- : N/A
-A: Air Cooling
-W: Water Cooling

MEASUREMENT SENSORS

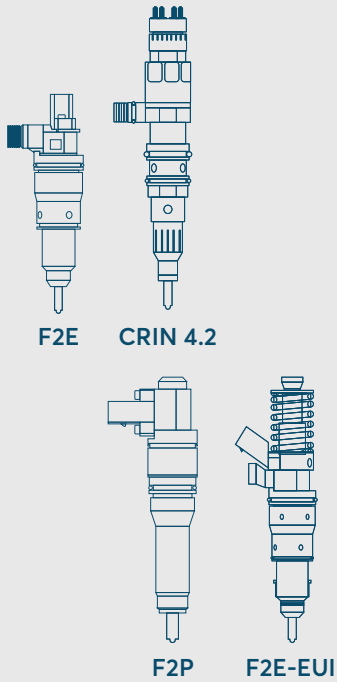
XKM (Dynamic Measurement Sensor): High Accuracy: ± 0.1%, Exceptional Repeatability ±0.05%, Measur. Range: 1-1000ml/min
DFM 500 (Dynamic Measurement Sensor): Accuracy: ± 1%, Repeatability 0.5%, Measurement range: 5-500l/min
DFM 50 (Dynamic Measurement Sensor): Accuracy: ± 1%, Repeatability 0.5%, Measurement range: 0.5-50l/min
Volumetric Tubes (Static Analog Measurement): Accuracy: 1ml, Measurement range: 0.5-65ml

APPLICATIONS

Passenger Car/ Motorcycles: Volumes up to 120mm³/H
Light Duty: Volumes up to 200mm³/H
Medium Duty: Volumes up to 300mm³/H
Heavy Duty: Volumes up to 650mm³/H
Marines: Volumes up to 1500mm³/H

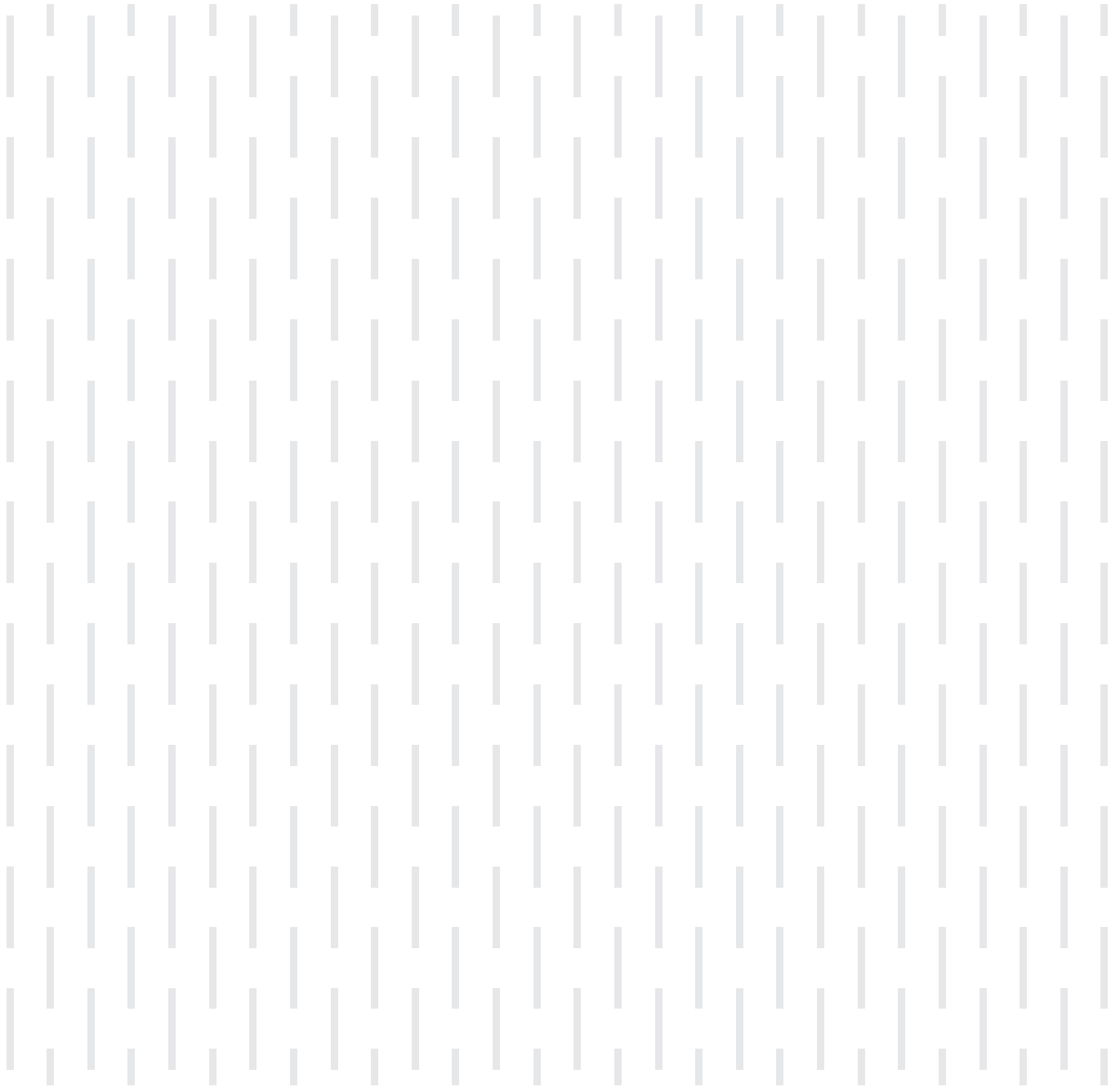
PRESSURE SOURCES

Air: Air Driven High Pressure Pump
Motor: Motor Driven High Pressure CR Pump
External: Pressure coming from another Test Bench or external source
Electr. Pump: Fuel Injection system or Industrial Application
Electrical Pump 12VDC
-: No Pressure Source



EU6 Technologies





Main Offices & Production Plant
364 Varis-Koropiou Ave. Koropi
194 42 Athens, Greece

Headquarters
A.I.S. GmbH
75438 Knittlingen, Germany

email contact@carbonzapp.com
tel +30 210 9856110
fax +30 210 9928655

carbonzapp.com