

DIESEL SPECIALIST SOLUTIONS

CRDi - CRp - EUI - EUp - HEUI

MTBr
CRDi-Kit
CRp All Makes Kit
CRp CP3.3/3.4 Kit
HEUI-Kit

TBCr
BCR-Kit

Cambox HK-1400A
Cambox Adaptability
EZO-Kit

Innovative, Compact and Professional Solutions for every Diesel Workshop to Test and Service All Makes and Types of Heavy Duty, Light Duty and Passenger Car Injection Systems.



Diesel Specialists Solutions

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CRDi - CRp - EUi - EUp - HEUi

MTBR

The Innovative Standalone Solution for the Diesel Specialist, capable to test every Automotive, Commercial, Industrial and Marine Injection System available in the market today...



Technical data

Input frequency	50/60 Hz
Number of phases	3 P/PE
Speed range	0 – 6,500 rpm
Powerful Motor with thermal protection	12.5HP
Maximum operating ambient temperature	50°C
Base to axis center height	125 mm
High Pressure system Max Pressure	2800 Bar
Supply pump pressure	10 – 800 kPa
Test oil tank	35 L
Waste Oil tank	10 L
Dimensions (W x D x H)	750 x 700 x 1610 mm
Weight	450 kg

MTBr

Compact Standalone Diesel Test Bench

Standalone Diesel Test Bench

Testing up to 2800Bar HP

Electronic or Manual Protective Hood Opening

Controls all Types and Makes of Injectors & Pumps

Includes OEM Database and Test Plans

Connects to Carbon Zapp's HEUI-KIT.M2*
solution for HEUI systems

Compact and Robust Unit

Injector Coding Delphi C2i/C3i, Bosch IMA/ISA, Denso QR
Code Piezo/Solenoid and VDO (future update)

CRDi Piezo Stack Regeneration function

Blue Limits Diagnosis

Dynamic Electronic Mass (BK) Measurement
(CRDi, HEUI, EUI/EUP)

Static Electronic Mass (DFAP) Measurement (CRp)

Fully Automatic and fast testing phase

Diesel Specialist level of Diagnosis

Emergency Stop function (Instantaneous electric brake)

Internal cooling system (No water connection needed)

15" Touchscreen HMI



Applications



CRDi/CRp

Fully test automatically 4
CRi/CRiN (CRiN 4.2) solenoid
& piezo injectors and CR pumps
up to 2800bar. For all types and
Makes.



HEUI.Kit.M2

A Kit to connect up to 4 HEUI
injectors. Distribution of low
Pressure oil supply & return and
HP oil-overflow suction pump.



Cambox HK-1400A

Affordable yet full of features,
the HK1400 is highly accurate,
robust, flexible and user
friendly. The essential choice
for any diesel workshop
wanting to increase their EUI
and EUP capability.

* Available Optionals ** Future Updates

HK-1400A Universal EUI & EUP Cambox

The New HK-1400A Cambox manufactured by Hartridge and powered by Carbon Zapp fits onto the MTBr and automatically tests completely all Heavy Duty EUI and EUP systems of the market today utilizing the continuously updated database that meets the OE standards.

We offer a wide-range of easy to fit adapters for every UIS system. Finally, with the use of the EZO-Kit, changing the cam and its position has never been easier and oil mess-free.



The HK-1400A has been engineered to be accurate and repeatable in testing Unit Injection Systems, yet is affordable for all Diesel workshops worldwide.

EZO-Kit*

Use the Easy Oil Supply unit to change the Cam position fast and oil mess-free.

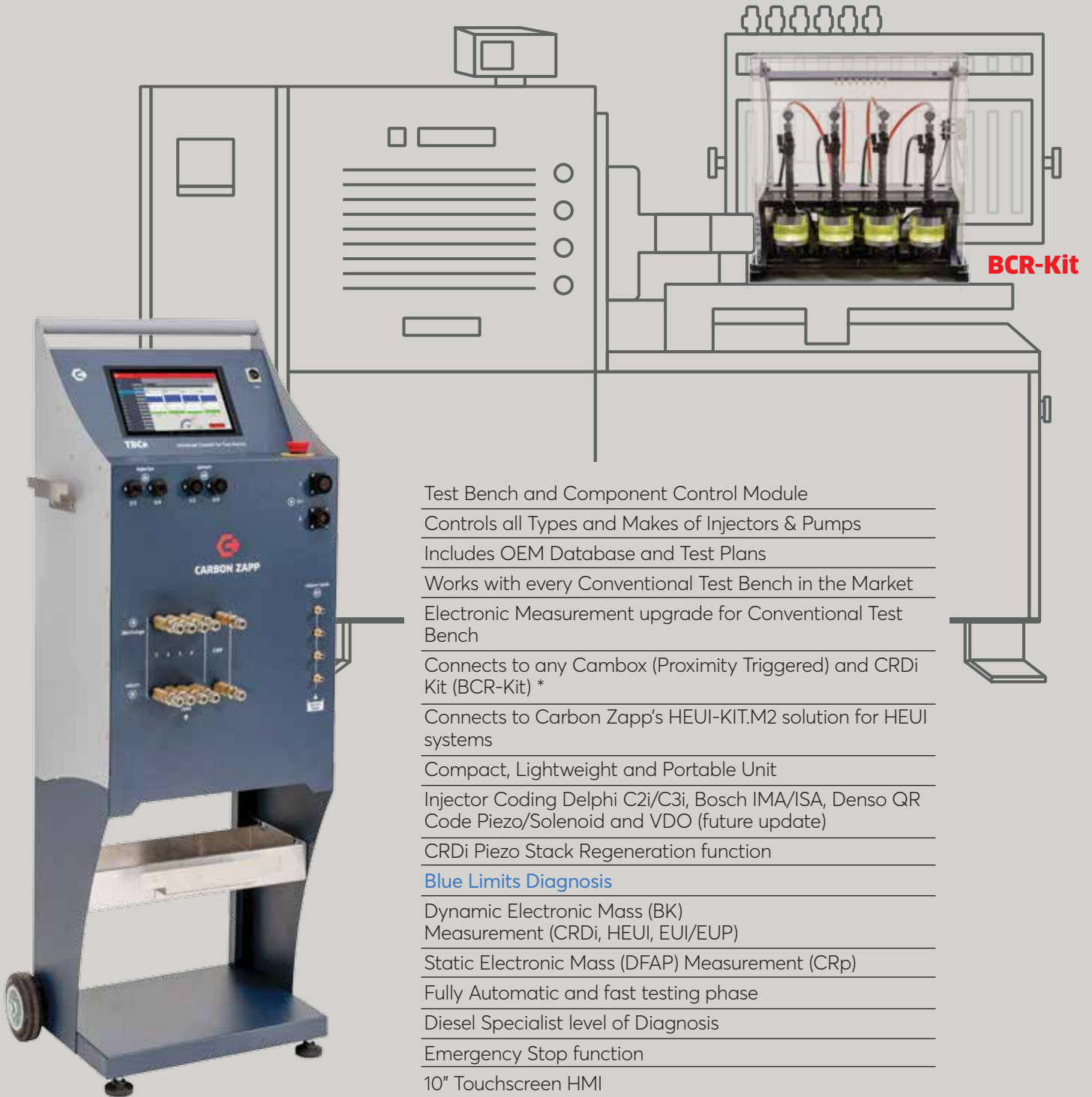


Complete range of UIS adapters

There is a wide-range of easy to fit adapters for every type and make of EUI and EUP injection systems in the market.

TBCr

Carbon Zapp's Revolutionary TBCr Simulator provides the capability for every Conventional Test Bench out in the market to renovate and test All Makes and Types of CRDi – CRp - EUi - EUp - HEUi systems.



- Test Bench and Component Control Module
- Controls all Types and Makes of Injectors & Pumps
- Includes OEM Database and Test Plans
- Works with every Conventional Test Bench in the Market
- Electronic Measurement upgrade for Conventional Test Bench
- Connects to any Cambox (Proximity Triggered) and CRDi Kit (BCR-Kit) *
- Connects to Carbon Zapp's HEUI-KIT.M2 solution for HEUI systems
- Compact, Lightweight and Portable Unit
- Injector Coding Delphi C2i/C3i, Bosch IMA/ISA, Denso QR Code Piezo/Solenoid and VDO (future update)
- CRDi Piezo Stack Regeneration function
- Blue Limits Diagnosis**
- Dynamic Electronic Mass (BK) Measurement (CRDi, HEUI, EUi/EUP)
- Static Electronic Mass (DFAP) Measurement (CRp)
- Fully Automatic and fast testing phase
- Diesel Specialist level of Diagnosis
- Emergency Stop function
- 10" Touchscreen HMI

* Available Optionals ** Future Updates

Extras optional

adapters kit



BCR-Kit

Test bench Common Rail Kit. The unique, compact and Universal solution for every Conventional Test Bench in the market to operate with the latest technology CR injectors.

INCLUDES

Easy Clamp-on for 4 CRi injectors (17-19-21mm) or 4 CRiN

Conventional Testbench base bolt-on feature

Clear protective hood with safety switch

High Pressure Rail - 2800Bar, HP pressure regulator & sensor

4 x HP flexible hoses 3000Bar with 90-degree swivel & accumulator

4 x Led illuminated adjustable Spray Chambers

Connects to any CRDi Simulator



HEUI.Kit.M2 and a wide variety of adapters is available. Comprehensive HEUI Applications in the market with test plans and database included.

TBCr Simulator



CRp All Makes

An extensive range of every Clamping bracket for all Types and Makes CR pumps for passenger cars, light duty and heavy duty applications.



CRp CP3.3/3.4 Kit

Adjustable low pressure engine oil supply kit for lubrication of Heavy Duty CR pumps. Portable 12VDC operation. Adapts to any test bench in the market.



Standard Adapters kit

A wide range of CRDi connection adapters, fittings, electrical connectors and more required to adapt to All Makes and Types of Injectors.



Specifications

All Makes OE, CZ & User Database

Developer and OE customizing mode

Piezo & Solenoid programmable actuation profiles (HV: 0-300 Volts / 0-35A)

Injector & PCB protection circuit (StG, StB, SC, OC, IC)

aDFI injector performance ramp function measurement

Multiple Injections capability User friendly, ergonomic, dynamic & robust design

Electronic Measurement

1. Dynamic Electronic Mass Measurement Kit (BK)
Injector Coding Capability*
Acc: 0.2%FS, repeatability: 0.05%
Applications: CRDi, EUI/EUP, HEUI
2. Electronic Static Mass Measurement Kit (DFAP)
Acc: 0.6%FS
Applications: CRp

Tests Performed

R2LC

Electrical actuator test for $k\Omega/\mu F$, $\Omega/\mu H$

CFL

Check For Leaks test (injector internal or external)

NLT

Nozzle Leakage Test

LKT

Static Back Leak Test

aNOP

Automatic Nozzle Opening Pressure test

iVM (FL, PL, EM, LL, PI)

Injector Volume Measuring test (full-load, part-load, emissions, low-load, pre/post-injection.)

iVM-aDFi

Injector Volume Measuring test (multiple test-points slope, per Pressure)

RSP

Injector nozzle Response-time test

BIP [UIS systems]

Injector Control Valve Response time test

SPR

Dynamic Spray Test performed in all testing conditions

Additionally

High pressure Control Valve operation (DRV, IMV, PCV, etc...) High Pressure Sensor reaction, High Pressure relief safety valve operation CR Pump flow limiter valve operation (ZME, IMV, SCV.)

Features

AZO Software

Advanced Android based HMI/PC, Wi-Fi printing, sharing, syncing, software/hardware & database updating, via USB or Wi-Fi, Real-time Oscilloscope and CSV data export

Reports

Easy fail-track color report for each part tested.

Single-page Quick report or Multi-page Analytic reporting

RSP

RSP Sensor adaptable to all Nozzles

BIP Sensor adaptable to most Control Valves [EUI/EUP]

Precise measurement of C.V. & Nozzle reaction time Easily diagnose a slow acting injector, a retarded injection event, poor engine performance and emissions issues.



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