



**CARBON
ZAPP**

G2.35

ETBR //X

Injector & Pump Control
Bench Extension Module

CloudX

The revolutionary simulator that modernizes any test bench for all types of fuel systems.



INNOVATION DRIVEN



**Engineering Forward
Mobility Solutions!**

ETBR 

Injector & Pump Control
Bench Extension Module



The revolutionary simulator that modernizes any test bench for all types of fuel systems.

Overview to the New ETBR-X**Precise and repeatable Diesel & Gasoline Components Testing****[1] Pump Testing****5-15 minutes testing time per pump**

CRp / GDp 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...

Heavy-Duty CR pump (CPN5S2, CAT, Cummins, HP0 etc..)

Testing of All brands and types PCV's [Pressure Control Valves]

Testing of All brands and types of RDS [Rail Pressure Sensors]

Testing of all types of High Pressure Rails

[4] Injectors Testing & Coding***6-12 minutes testing and coding* time per injector**

CRi / CRiN / GDi injectors (All Brands and Types).

Capable for all EU6 technologies such as VCC and NCC technology, iART, PCRS5,

XPI, F2X and F3X systems and more...

CRIN 4.2 Heavy Commercial-Vehicle injectors (max. 2 Large Diesel Engine CRiN injector (QSK, MTU, L 'Orange, etc..)

[1] HEUi Testing & Coding***6-8 minutes testing and coding* time per injector**

Dynamic and static measurement of the actual overflow

Dual-Coil HEUi Injector testing capable

Accurate and automatic measurement of the NOP without disassembling the injector

[1] EUi/EUp Testing & Coding* (requires HK1400A Cambox)**6-10 minutes testing and coding* time per injector**

Capable for all EU6 technologies

Expandable to Future Systems



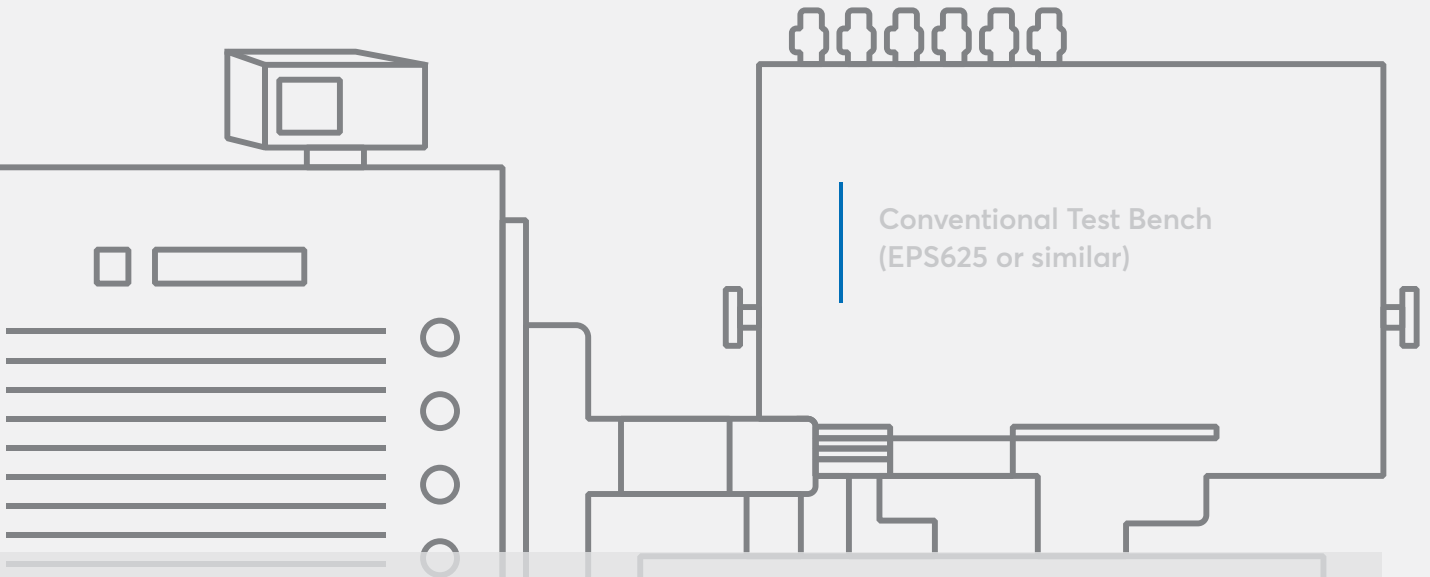
SPECIALISTS

CRDi - EUI/EUP - HEUI - CRP
ENGINE - GDi - EFi - GDi Pumps



 **Service Center**
AUTHORIZED 

The optimized test bench simulator for every fuel system.



Conventional Test Bench
(EPS625 or similar)



BCR.1

Injector holder (1 / 4) injectors, with Common-Rail, Pressure Control and protective hood, ready to mount on a conventional bench.



BCR.4



ETBR-X

Detailed information on next page

ETBR **X** → Points

Expandable and Fully Configurable
Modular Unit for Every Diesel
and Gasoline Specialist.

Electrical and Hydraulic connectors,
fittings and adapters are available
for all Systems in the Market.

1



2



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ETBR //X

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SPECIALISTS

CRDi - EUi/EUP - HEUi - CRP
ENGINE - GDi - EFi - GDi Pumps

**01.**

- 0, 1 or 4 Injectors Measuring Ports
- Actuate 1-4 Injectors / Components
- Measure Response time for 1-4 injectors

02.

- External Control of any Test Bench.
- Connect With Cambox for Operation.

03.

- Measure up to 1 Pump
- Post Measurement Oils return back to Test Bench Tank.

04.

HMI - 10" Touchscreen with CloudX Based AZO.V3 Software.

05.

WiFi, USB and Ethernet Connectivity

06.

Emergency STOP

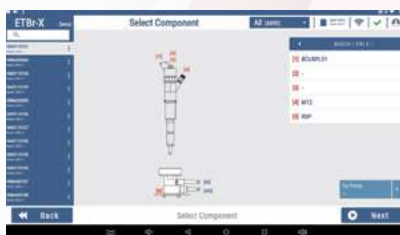
07.

Drain Pan with Waste Port

08.**Cooling System**

CRp pump outlet portable cooling system & stand for the ETBRX bench

AZO SOFTWARE



The unique, compact & Universal solution for every Test Bench in the market to operate with the latest technology Diesel and Gasoline Systems.

→ **Features**

- Control Unit for Every Test Bench in the Market
- Compact Size Attachment for Every Laboratory
- Expandable and Modular Apparatus
- Pressure Control up to 2800 bar
- Up to EU6 System Technologies Capable
- Semi-Automatic Operation of Cambox
- Operating, Measuring & Coding of All Types & Makes
- IoT Cloud computing Platform - Industry 4.0 Complaint
- The Diesel Specialists Affordable Choice

→ **Characteristics**

- Xtremely Fast Testing Times without any Compromise
- New Design for every Service Station
- Optimized Working Area
- EU6 Systems Testing and Coding*
- CloudX Capabilities
- Coding capability for all brands and types available in the market today. Bosch, Denso, Delphi, CAT, Cummins*, John Deere, ISUZU*, HINO*,KOMATSU*, E1/ E3/ DAF/ Smart Pump, F2X and F3X (Beta) EU6 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
- 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 and Gasoline Injectors in the market (optional)
- Continuous Database updates and new Software capabilities to meet the market needs.
- Android Powered 10" HMI with unlimited flexibility and connectivity competencies.



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

SPECIALISTS

CRDi - EUi/EUP - HEUI - CRP
ENGINE - GDi - EfI - GDi Pumps

Build your **ETBR-X** according to your Testing Needs now
and Upgrade it Anytime in the Future on your own.



ETBR-X → SPECIFICATIONS

	DESCRIPTION	UNIT	ETBR-X (CZ-007092)
Machine Dimensions	Length	mm	510
	Width	mm	650
	Height	mm	550
Weight		kg	23 (Basic Version)
HMI	Tablet Touchscreen	Inches	10
Internet Update	WiFi / Ethernet	-	YES / YES
Pressure Source	Type	External: Pressure coming from another Test Bench or external source	
Test Oil	Type	(DxL-ISO) ISO4113 Calibration Oil	
Test Oil Tank	Capacity	Liters	-
Max Pressure	Pressure	Bar	2800
Max RPM	Max Revolutions Per Minute	RPM	-
Max Pumps	Pumps Test (Optional)	Slots	1
		Slots	4
Max Injectors	Test Injectors (Optional)	Types	4 CRI / 1 HEUI / 1 EUi-EUIP
		Phases	Number
Main Power Supply	Voltage	VAC	100 - 240
	Frequency	Hz	50/60
	Current	Ampere	5
	Max Consumption	kVA (100V/240V)	0.5 / 1.2
Operating Temperature	Min / Max Room Temperature	Celsius	6 / 35
IVM Sensors (Optional)	Measurement Sensors (Full Version / Pumps)	Type / Quantity	XKM / 1 *
		Type / Quantity	DFM500 / 1 *

→

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

MEASUREMENT SENSORS
 XKM [Dynamic Meas. Sensor]: High Accuracy: ± 0.1%, Exceptional Repeatability ±0.05%, Measur. Range: -11000ml/min
 DFM 500 [Dynamic Measurement Sensor]: Accuracy: ± 1%, Repeatability 0.5%, Measurement range: 5-500l/min

PRESSURE SOURCES
 External: Pressure coming from another Test Bench or external source Application: Electrical Pump 12VDC



CloudX is Carbon Zapp IoT Cloud computing Platform.

**Powerful innovations at your fingertips
with CZ CloudX computing Platform**

CZ CloudX computing technology Platform as a service (PaaS) is a complete environment in the cloud, with resources that enable clients the full control of their Bench with cloud based Apps access them over a secure Internet connection. With middleware, development tools, business intelligence (BI) services, database management systems and more.

CloudX allows clients to access live online updates of database, remote operation and status report of their bench. Generate remote reports for handling, printing, filling and organizing from machine database. Instant activation of features on a pay-as-you-go basis. Multiple machines management support. Complete machine cloud back-up and instant trouble shooting via X-Connect directly from CZ factory. Receive notifications on your smart devices for machine maintenance tasks like Oils, Filters, Service, and more.

Explore today new powerful innovations at your fingertips with CZ CloudX computing Platform.

CloudX Features



IoT Cloud Platform Industry 4.0

Remote Operation and Status Report of Client Bench

Generating remote reports for handling, printing, filing and organizing from machine database

Multiple machines management

Instant Activation of Features on a pay-as-you-go basis

Notifications on Client smart devices for machine maintenance tasks like Oils, Filters, Service, and more

Complete machine cloud back-up

Instant troubleshooting via CX-Connex directly from CZ Factory

Live Online Updates of Database and supporting new requests from clients

EXPANDING CAPABILITIES



Space saving, accessory organizers for everyday tasks. Increased productivity and uncluttered space.



Extras



MTBR-X & PTBR-X



01.
Desk & Harness Shelf



02.
Hydraulic Hose Side Panel
Pocket with Drain

Ultrasonic Shelf



for GTBR-X,
ITBR-X, HTBR-X





Carbon Zapp Trolley Fully Configured Setup

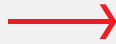


/// CZ Base Trolley



/// Hose & Harness Side Organizer (max. 2 pcs per trolley)

Carbon Zapp Trolley



Ideal workshop organizer to fit most parts of the machine like harnesses, hoses, adapters, tools and flanges. Can be easily transformed to a Cambox and/or pump rack for easy transfer and storing.



/// CRp Flange Drawer Organizer (max. 1 pc per trolley)



/// Cambox/Pump Transfer Rack (max. 2 pcs per trolley)





**VIEW CZ Digital
Product Catalog**



Headquarters & Production

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