

## ITB4R //X

Diesel System Test Bench

### The Optimum Diesel Specialists CRDi Solution

The Professional's Service Station  
for All Types and Makes CRDi systems.

2800 Bar

Standalone Diesel  
CRDi Test Benches  
for Specialists.  
Available in 2 models  
for 4 / 1 injectors



ITB.4R-X

**Authorized Solution  
for Continental/VDO**



## Overview of the New ITB.4R-X

Precise, repeatable and rapid Diesel Injectors Testing

### [1 / 4] Injector(s) Testing & Coding\*

- 6-12 minutes testing and coding\* time for 1 or 4 injectors respectively
- CRi / CRiN 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...
- CRIN 4.2 Heavy Commercial-Vehicle injectors
- Large Diesel Engine CRiN injector (QSK, MTU, L 'Orange, etc...)
- Capable to diagnose failures on GDi Injectors (Optional). Recommended unit for GDi Injector Testing and Servicing is the GTBR-X

**CGL - Authorized Continental / VDO "Blind-Lift"**  
Measurement of Piezo-Stack

## SPECIALISTS

CRDi

EUI/EUP

HEUi

CRP

ENGINE

GDi

EFI

GDi Pumps



ITB.1R-X

## CloudX™

Powerful innovations at your fingertips with Carbon Zapp CloudX computing Platform. Take complete control over your service benches with cloud-based Apps, business intelligence (BI) services and database management systems over a secure Internet connection.

## A Revolution in CRDi Test Benches

Our qualified team, know-how and pioneering thinking developed the New Powerful ITBR-X Generation

# ITBR-X Points



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

# ITB4R //X

## Diesel System Test Bench



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#### 1 Working Area

Ergonomic & easily accessible illuminated working space. Fast mounting for all types of Injectors.

#### 2 Easily Accessible Filters & 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.

#### 3 Machine Interface

New CloudX based AZOV3 software features speed, connectivity and expandability in a user friendly environment.

#### 4 Easily accessible drawer and connection ports.

#### 5 Functional use of test oil tank enhances maintenance.

Tank extends to fill-up, drain and clean.





## AZO SOFTWARE



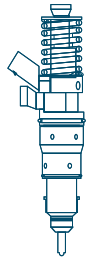
CRIN 4.2



F2E



F2P



F2E-EUI

## EU6 Technologies

### Features

A Continental/VDO Authorized Test Bench

Xtremely Fast Testing Times without any Compromise

New Design for every Service Station

Optimized Working Area to reduce Injector 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, Cum- mins\*, John Deere, ISUZU\*, HINO\*, KOMATSU\*, F2 Smart EUI/ EUP EU6 Technology\*, F2P/ F2E/ E1/ E3/ DAF/ Smart Pump 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

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.

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.

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

Live Response Time Measurement for all injectors

BIP Actuation Measurement for all Heavy-Duty type solenoids

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 flushing feature pre-installed (optional kit available)

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



## SPECIALISTS

CRDi

EUI/EUP

HEUI

CRP

ENGINE

GDi

EFI

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ITBR

## Specifications

DESCRIPTION		UNIT	ITB.4RX-A (CZ-008721)	ITB.4RX-W (CZ-008771)	ITB.1RX-A (CZ-008719)	ITB.1RX-W (CZ-008799)	
Machine Dimensions	Length	mm	770	770	770	770	
	Width	mm	800	800	800	800	
	Height	mm	1650	1650	1650	1650	
Weight		kg	292	294	250	252	
HMI	Tablet Touchscreen	Inches	15	15	15	15	
Internet Update	WiFi / Ethernet	-	YES / YES	YES / YES	YES / YES	YES / YES	
Pressure Source	Type		Motor Driven High Pressure CR Pump				
Test Oil	Type		(DxL-ISO) ISO4113 Calibration Oil				
Test Oil Tank	Capacity	Liters	30	30	30	30	
Max Pressure	Pressure	Bar	2800	2800	2800	2800	
Max RPM	Max Revolutions Per Minute	RPM	1850	1850	1600	1600	
Max Pumps	Pumps Test	Slots	-	-	-	-	
Max Injectors	Test Injectors	Slots	4	4	1	1	
LP Pump	Supply Pressure	Bar	0.1 - 5.4	0.1 - 5.4	0.1 - 5.4	0.1 - 5.4	
Air Supply	Pressure	Bar	-	-	-	-	
	Air Flow	Lt/ Min	-	-	-	-	
Main Power Supply	Phases	Number	3P	3P	1P	1P	
		TYPE	PE	PE	P+N / PE	P+N / PE	
		Voltage	VAC	380-480	380-480	220-240	220-240
		Frequency	Hz	50/60	50/60	50/60	50/60
		Current	Ampere	16	16	25	25
		Max Consumption	kVA (380V/480V) kVA (220V/240V)	10.5-13.3	10.5-13.3	5.5 - 6	5.5 - 6
Motor	Model	TYPE	AK100L-4	AK100L-4	AK100L-4	AK100L-4	
	RPM	RPM 50 / 60Hz	1420 / 1700	1420 / 1700	1420 / 1700	1420 / 1700	
	POWER	KW 50 / 60Hz	3 / 3.6	3 / 3.6	3 / 3.6	3 / 3.6	
		HP 50 / 60Hz	4 / 4.8	4 / 4.8	4 / 4.8	4 / 4.8	
		Connection Δ	Ampere (50HZ)	400 V:6.56 A	380 V: 6.89 A	400 V:6.56 A	380 V: 6.89 A
	Ampere (60HZ)	480 V:6.56 A	460 V: 6.89 A	480 V:6.56 A	460 V: 6.89 A		
Water Supply	Max Input pressure	Bar	-	4	-	4	
	Max Output Pressure	Bar	-	1Bar< Input Pressure	-	1Bar< Input Pressure	
	Min Input Temperature	Celsius	-	5	-	5	
	Max Input Temperature	Celsius	-	15	-	15	
	Min Diameter In/Out Water Hose	mm	-	10	-	10	
	Water Tank Capacity	Liters	-	10	-	10	
	Max Water Flow	Lt / Min (4Bar)	-	4	-	4	
	Min Water Output Temperature	Celsius	-	5	-	5	
	Max Water Output Temperature	Celsius	-	65	-	65	
	Delta T	Celsius	-	0-50	-	0-50	
	Max Cooling Efficiency "Debit" [20 liters of 5° C water in order to Cool Down the Test Oil from 43° C to 36° C (2 tank cycles)]	Tank Cycles	-	-	2	-	2
Operating Temperature	Min / Max Room Temperature	Celsius	6 / 23	6 / 30	6 / 23	6 / 30	
IVM Sensors	Measurement Sensors	Type / Quantity	XKM / 4 *	XKM / 4 *	XKM / 2 *	XKM / 2 *	

### EXPLANATIONS

- : N/A

- A: Air Cooling

- W: Water Cooling

Pressure Sources

At Air Motor High Pressure Pump

Max 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

### MEASUREMENT SENSORS

XKM [Dynamic Meas. Sensor]: High Accuracy: ± 0.1%, Exceptional Repeatability ±0.05%.

Measur. Range: 1-1000ml/min

DPM 500 [Dynamic Measurement Sensor]: Accuracy: ± 1%, Repeatability 0.5%, Measurement range: 5-500l/min

DPM 50 [Dynamic Measurement Sensor]: Accuracy: ± 1%, Repeatability 0.5%, Measurement range: 0.5-50l/min

Volumeetric Tubes [Static Analog Measurement]: Accuracy: 1mi, Measurement range: 0.5-65ml

### APPLICATIONS

Passenger Car/ Motorcycles: Volumes up to 1200mm<sup>3</sup>/H

Light Duty: Volumes up to 200mm<sup>3</sup>/H

Medium Duty: Volumes up to 300mm<sup>3</sup>/H

Heavy Duty: Volumes up to 650mm<sup>3</sup>/H

Marines: Volumes up to 1500mm<sup>3</sup>/H

# eXpanding Capabilities

X Series 2023

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

## Extras MTBR-X & PTBR-X



1 Desk & Harness Shelf



Hydraulic Hose Side Panel  
Pocket with Drain

2



## 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)







## **CloudX is CarbonZapp 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 computing Platform. Industry 4.0 Complaint
- Live Online Updates of Database and supporting new requests from clients
- Remote Operation and Status Report of Client Bench
- Generating 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
- Complete machine cloud back-up
- Instant troubleshooting via X-Connect directly from CZ Factory
- Notifications on Client smart devices for machine maintenance tasks like Oils, Filters, Service, and more



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