



**CARBON
ZAPP**

G2.35

PTBR //X

Diesel System Test Bench

The Comprehensive Diesel Specialists Solutions for Testing Diesel Common Rail and Gasoline GDi Pumps.

CloudX



INNOVATION DRIVEN



**Engineering Forward
Mobility Solutions!**

PTBR //X

—————→
Diesel System Test Bench

CloudX

The Comprehensive Diesel Specialists Solutions for Testing Diesel Common Rail and Gasoline GDi Pumps.



2800Bar+

Standalone Diesel CR
& Gasoline GDi Pump
TestBench for Specialists

SPECIALISTS

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

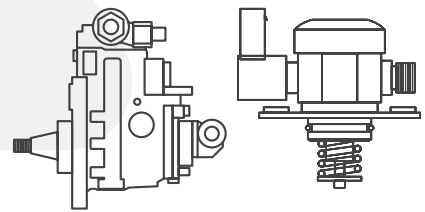
Overview of the New PTBR-X

Precise, repeatable and rapid Diesel & Gasoline High Pressure Pump 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 / HP6 / HP7, 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 VCV's [Volume Control Valves]
- Testing of All brands and types of RDS [Rail Pressure Sensors]
- Testing of all types of High Pressure Rails

EU6 Technologies



→ Features

Xtremely Fast Testing Times without any Compromise

New Design for every Service Station

Optimized Working Area to reduce Pump Set-up Times

2800Bar+ Operating Pressure

EU6 Systems Testing CloudX

Setting the Standard for Diesel & Gasoline High Pressure Pumps Test Benches

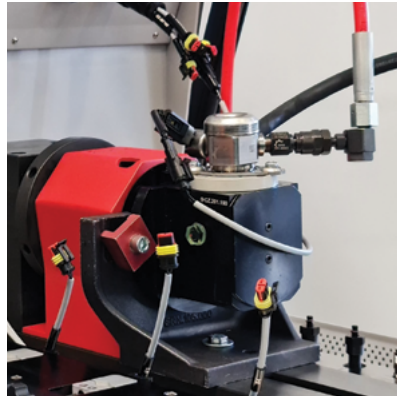


Our expertise, experience & innovative thinking brought together a New Design, Advanced Hardware & Upgraded Software for our New **PTBR-X**.

PTBR X → Points

SPECIALISTS

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



01. Gasoline GDI Pump Testing

The New PTBR-X 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.

02. 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.

03. Diesel CR pump testing

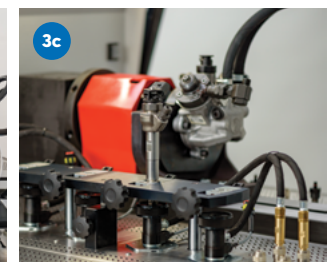
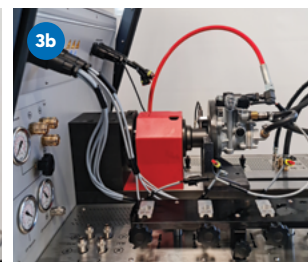
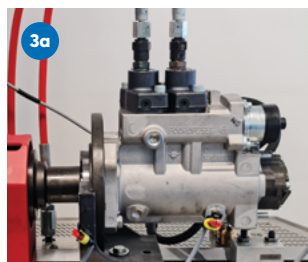
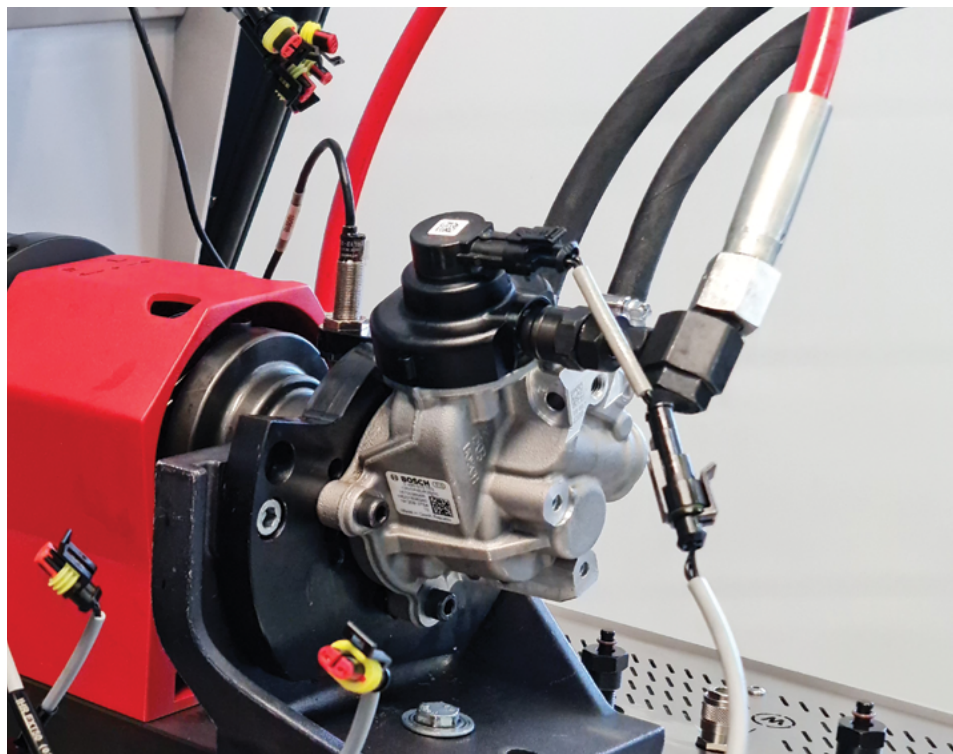
A well proven pump coupling apparatus provides the flexibility needed for future upgrades, as well as the quick coupling & versatility for today's All-Makes CR pumps. Capable to test all EU6 Common Rail pumps with sync control valve function.

3a: 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 PTBR-X is specifically designed to efficiently test these systems.

3b / 3c: 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 **PTBR-X** advanced electronics and modern technology provides this unique testing capability for today's and next generation CR pumps.



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

PTBR  → SPECIFICATIONS

	DESCRIPTION	UNIT	PTBRX-A (CZ-008715)	PTBRX-W (CZ-008785)	
Machine Dimensions	Length	mm	950	950	
	Width	mm	1300	1300	
	Height	mm	1610	1610	
Weight		kg	520	522	
HMI	Tablet Touchscreen	Inches	15	15	
Pressure Source	Type	Motor Driven High Pressure CR Pump			
Test Oil	Type	(DxL-ISO) ISO4113 Calibration Oil			
Test Oil for CPL / EZO	Type	Engine Oil (0W-40 / 10W-40 / 15W-50)			
EZO Oil Tank	Capacity	Liters	0.7	0.7	
CPL Oil Tank	Capacity	Liters	5	5	
Test Oil Tank	Capacity	Liters	44	44	
Flush Tank	Capacity	Liters	11	11	
Max Pressure	Pressure	Bar	2800	2800	
Max RPM	Max Revolutions Per Minute	RPM	4000	4000	
Max Pumps	Diesel Pumps	Slots	1	1	
	Gasoline Pumps	Slots	1	1	
Max Injectors	Test Injectors	Slots	-	-	
		Types	-	-	
LP Pump	Supply Pressure	Bar	0.1 / 5.4	0.1 / 5.4	
CP Vacuum	CP Vacuum Gauge	Bar	0 / -1	0 / -1	
CP IP	CP Internal Pressure Gauge	Bar	0 / 16	0 / 16	
CPL Pressure	CP Oil Pressure	Bar	0.1 / 8	0.1 / 8	
Air Supply	Pressure	Bar	-	-	
	Air Flow	Lt/ Min	-	-	
	Phases	Number	3P	3P	
Main Power Supply		TYPE	PE	PE	
	Voltage	VAC	380-480	380-480	
	Frequency	Hz	50/60	50/60	
	Current	Ampere	32	32	
	Max Consumption	kVA (380V/480V)	21 - 26.6	21 - 26.6	
Motor	RPM	TYPE	AK132-4	AK132-4	
		Model			
		RPM	RPM 50 / 60Hz	1450 / 1740	1450 / 1740
		KW	50 / 60Hz	13 / 15.6	13 / 15.6
	POWER	HP	50 / 60Hz	17.5 / 21	17.5 / 21
		Connection Δ	Ampere (50HZ)	400 V:24.4 A	400 V:24.4 A
			Ampere (60HZ)	480 V: 24.4A	480 V: 24.4A
		Max Input pressure	Bar	-	4
		Max Output Pressure	Bar	-	1Bar< Input Pressure
		Min Input Temperature	Celsius	-	5
	Max Input Temperature	Celsius	-	15	
Water Supply		Min Diameter In/Out Water Hose	-	10	
		Water Tank Capacity	Liters	-	17
		Max Water Flow	Lt / Min (4Bar)	-	4
		Min Water Output Temperature	Celsius	-	5
		Max Water Output Temperature	Celsius	-	65
		Delta T	Celsius	-	0-50
		Max Cooling Efficiency "Debit" [27.2 liters of 5° C water in order to Cool Down the Test Oil from 43° C to 36° C (1.6 tank cycles)]	Tank Cycles	-	1.6
	Operating Temperature	Min / Max Room Temperature	Celsius	6 / 23	6 / 30
	IVM Sensors	Measurement Sensors	Type / Quantity	DMF50 / 1 *	DMF50 / 1 *
				DFM500 / 1**	2/9/23

- : N/A
 A: Air Cooling
 W: Water Cooling
PRESSURE SOURCES
 Motor: Motor Driven High Pressure CR Pump
 Elect: Pump: Fuel Injection system or Industrial Application Electrical Pump 12VDC

MEASUREMENT SENSORS
 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

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



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



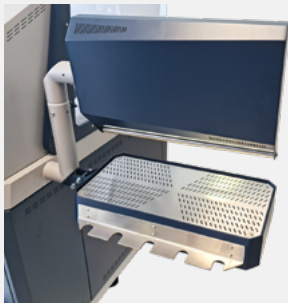
Space saving, accessory organizers for everyday tasks. Increased productivity and uncluttered space.



Extras



MTBR-X & PTBR-X



01.
Desk & Harness Shelf



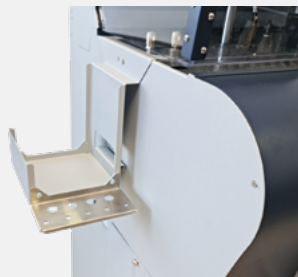
02.
Hydraulic Hose Side Panel
Pocket with Drain

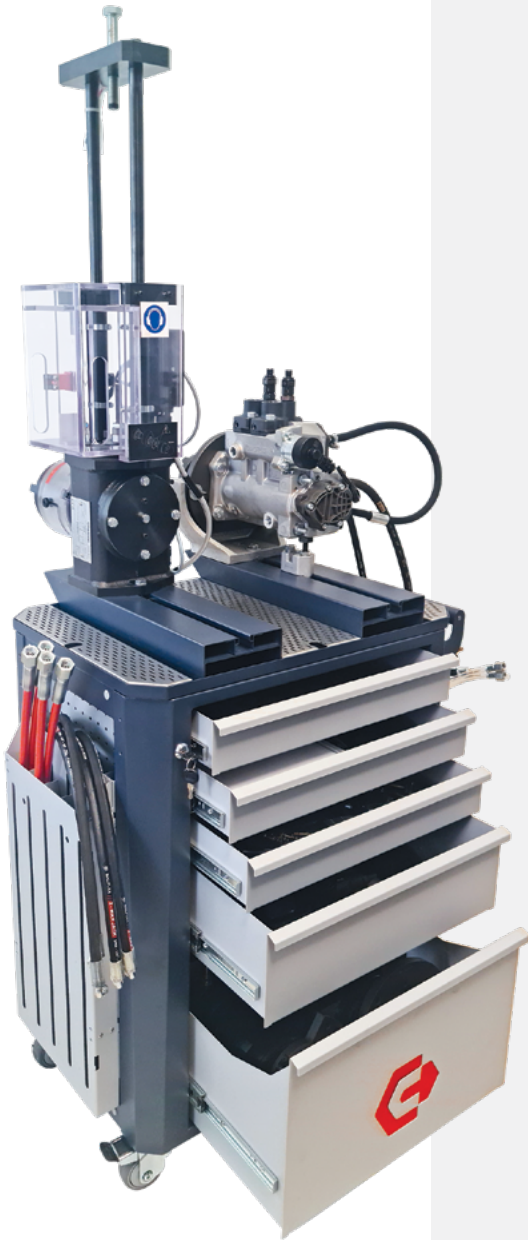


Ultrasonic Shelf



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





**Carbon Zapp Trolley
Fully Configured Setup**

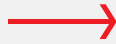


/// CZ Base Trolley



**/// 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**



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