
PTBR //X

Diesel System Test Bench

The Comprehensive Diesel Specialists Solutions

for Testing Diesel Common Rail and
Gasoline GDi Pumps

2800 Bar

**Standalone Diesel CR
& Gasoline GDi PumpTest
Bench for Specialists**

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.



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, Bosch CP4-EU6, VDO EU6 technology and more...
- Heavy-Duty CR pump (CPN5S2, CAT, Cummins etc.)



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



1 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.



2 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]



3 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.

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.

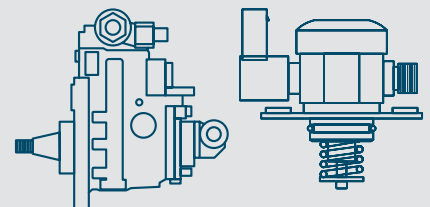
3b / 3c: EU6 Generation Common Rail Pump testing:

- 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.

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



**New database and Coding is continously 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	-	-	
Main Power Supply	Phases	Number	3P	3P	
		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	Model	TYPE	AK132-4	AK132-4	
	RPM	RPM 50 / 60Hz	1450 / 1740	1450 / 1740	
	POWER	KW 50 / 60Hz	13 / 15.6	13 / 15.6	
		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		
Water Supply	Max Input pressure	Bar	-	4	
	Max Output Pressure	Bar	-	1Bar< Input Pressure	
	Min Input Temperature	Celsius	-	5	
	Max Input Temperature	Celsius	-	15	
	Min Diameter In/Out Water Hose	mm	-	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	

SPECIALISTS

CRDi
EUI/EUP
HEUi
CRP
ENGINE
GDi
EFI
GDi Pumps

MEASUREMENT SENSORS
 XKM [Dynamic Meas. 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: 1mi., 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

EXPLANATIONS
 - : N/A
 - A: Air Cooling
 - W: Water Cooling

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

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



Scan CZ Digital
Product Catalog

Headquarters & Production
364 Varis-Koropiou Ave. Koropi
194 42 Athens, Greece

German Branch
A.I.S. GmbH
75438 Knittlingen, Germany

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

carbonzapp.com