COSBER

PTI PRODUCT LIST

2023

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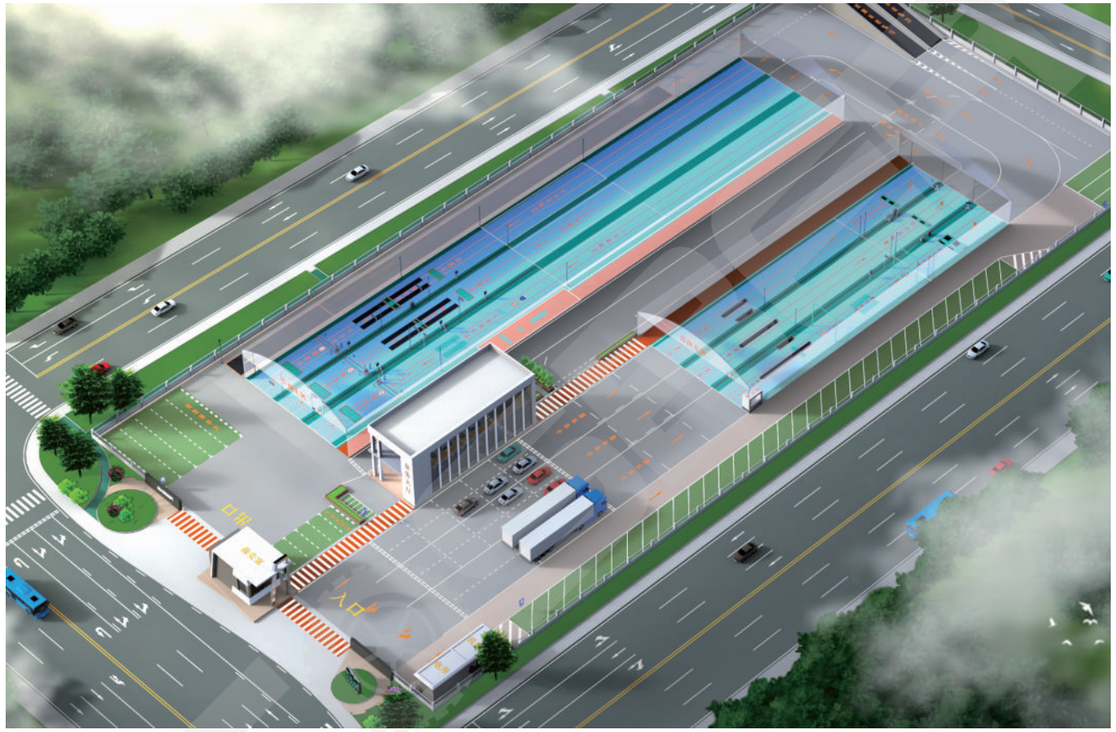
CONTENT

01

AUTOMATIC TESTLANE

COSBER's Motor Vehicle Inspection System -- CVIS

Cosber is a leading manufacture of vehicle tester equipment in the world. Along with new age of Digitization and IT Technology in vehicle inspection Industrial, COSBER has developed a new generation of control and management system （called CVIS）to modernize and simpler the operation of vehicle Inspection, and become a Benchmark system for the PTI solutions provider.



The Aim of CVIS system bringing to Customer

EFFICIENCY

Improving Vehicle Inspection with a fully automatic operation system by computerization

TRANSPARENCY

A complete overview of PTI operations with Database networking technology

FLEXIBILITY

Modular network Software framworks facilitate the multi-functions task and customized Solutions

We have rich experiences and study in industrial daily operation, so we offer the CVIS system to take care the concerns of following customers

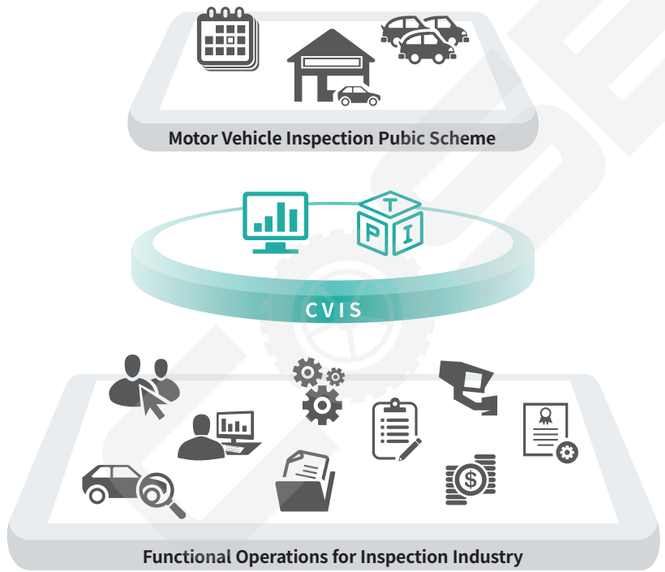
Vehicle Owner:
Easy scheduling, short waiting time, easy access to test results.

Authority:
Big data organization, improvment in regulation of road safety

Station Manager:
Monitoring of operation, high efficiency of performance.

Site Inspector:
User friendly operation of equipment, clear working process

COSBER is working in the middle of Vehicle Inspection Industry



Motor Vehicle Inspection Pubic Scheme

- Vehicle Info. DBS
- V.I.S. Supervision Mgt.
- Scheduling Module

- COSBER CVIS control system
- COSBER Testlane Equipment

Functional Operations for Inspection Industry

- Inspection Registration
- Number Plate Recognition
- Operation Control Program
- Standard Judgement
- Report Form Setting
- User Management
- Database Management
- Accounting Assistant
- CCTV

COSBER CVIS IT Connection

Equipment Machine → Signal → Equipment Mainboard → ComPort → Workstation PC → Hub - LAN → Main control Server PC → LAN → Network Database

PTI Process Steps

Plenty of countries witness our PTI solution

New Zealand

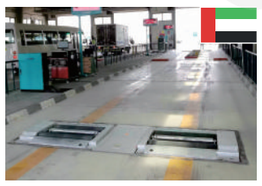
Brunei

Indonesia

Iran

Functional Features

Icon	Test Item	Equipment
	Accuracy of vehicle speedometer	**Speedometer tester**
	1. Gasoline vehicle CO、HC concentration value (High / low idle RPM method); CO、HC & NO Concentration (Accelation method). 2. Diesel vehicle Random acceleration Exhaust Contamination Value and Light Absorption Coefficient (m-1) or Opacity (Rb).	**Gas analyzer** **Opacimeter** **or Smoke meter**
	1. Wheel (axle) load 2. Left / right brake balance 3. Wheel resistance 4. Total brake rate 5. Wheel brake force 6. Park brake	**Roller brake tester** **Pedal force meter** **Wheel (Axle) load tetser**
	Steer wheel sideslip value and direction	**Sideslip tester**
	1. Headlight-High beam Luminous intensity, optical axis deviation (up / down / left / right). 2. Headlight-Low beam Luminous intensity, optical axis deviation (up / down / left / right).	**Automatic headlight tester**
	Horn value & Noise level	**Sound meter**
	1. Vibration frequence 2. Suspension absorption rate 3. Left / right absorption difference	**Suspension tester**
	1. Steer system 2. Powertrain system 3. Rolling system 4. Brake system 5. Chassis system 6. Electronic part	**Special hammer** **Play detector** **Steer angle tester**



UAE

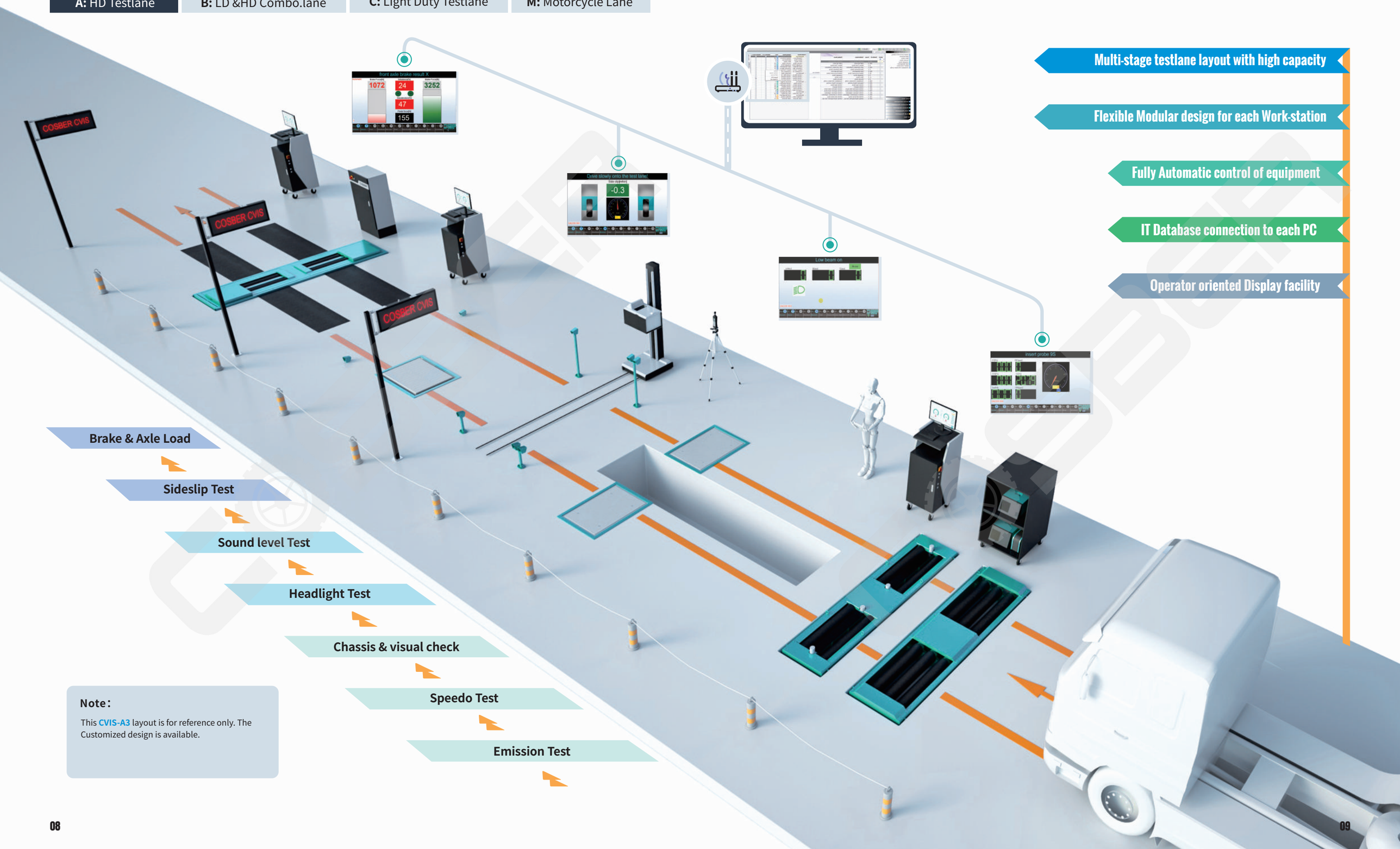
Cambodia

Turkey

Ghana

3-WorkStations Heavy Duty Testlane Layout (A3)

A: HD Testlane | **B:** LD &HD Combo.lane | **C:** Light Duty Testlane | **M:** Motorcycle Lane



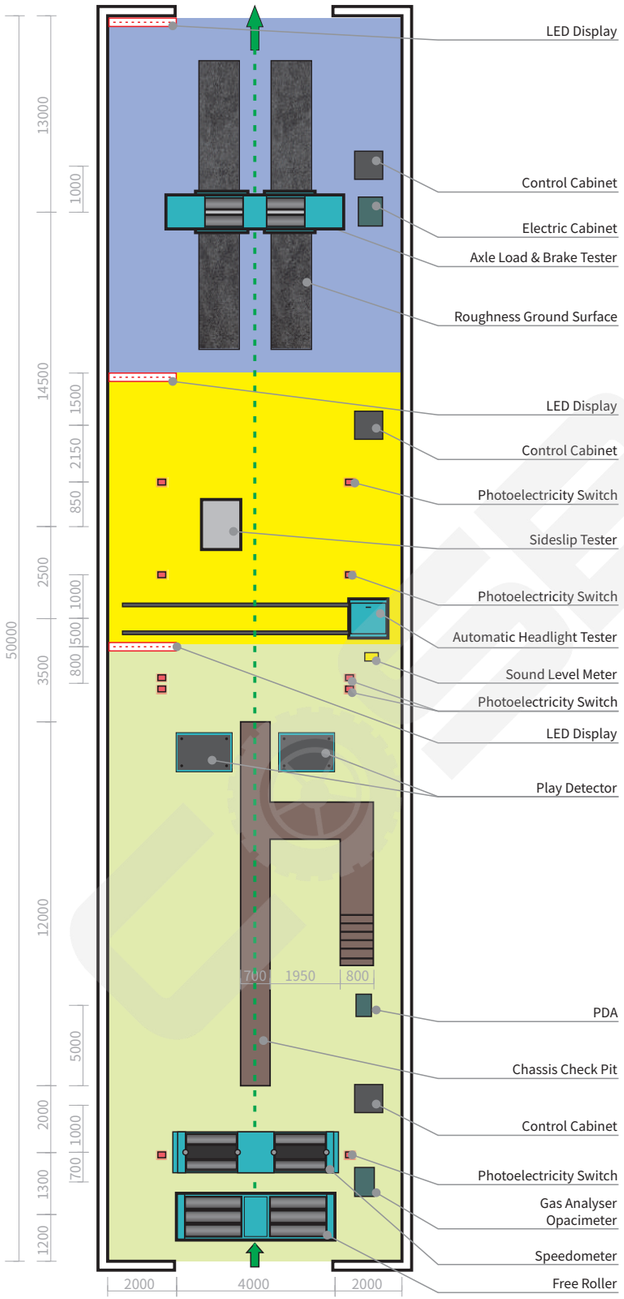
- Multi-stage testlane layout with high capacity
- Flexible Modular design for each Work-station
- Fully Automatic control of equipment
- IT Database connection to each PC
- Operator oriented Display facility

- Brake & Axle Load
- Sideslip Test
- Sound level Test
- Headlight Test
- Chassis & visual check
- Speedo Test
- Emission Test

Note:

This **CVIS-A3** layout is for reference only. The Customized design is available.

3-WorkStations Heavy Duty Testlane Layout (A3)



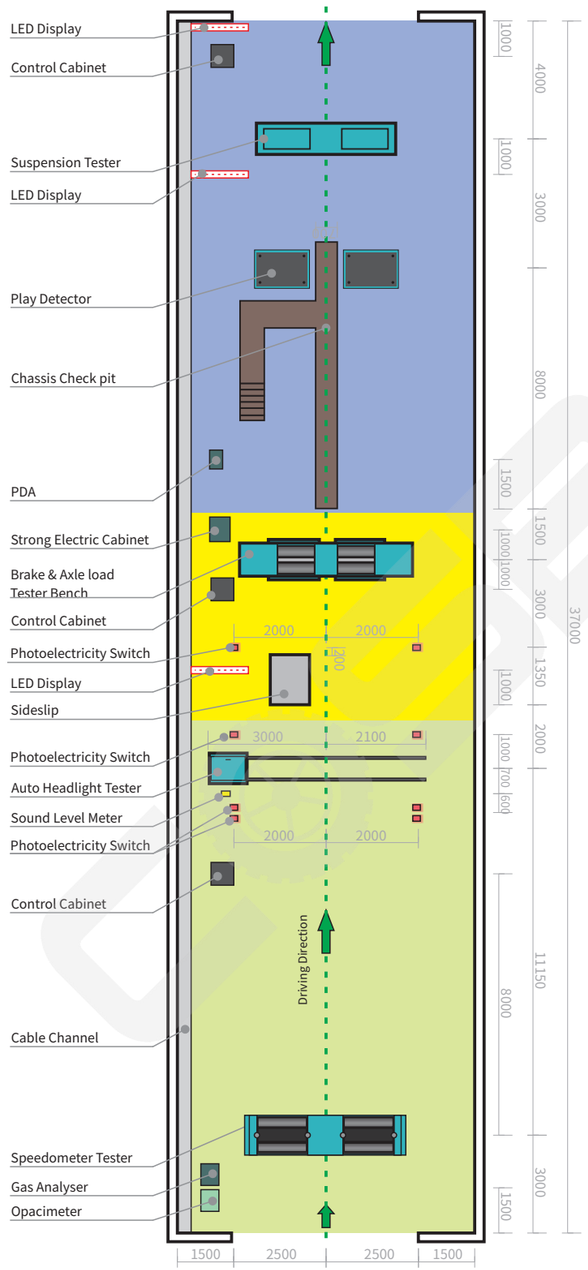
The process is briefly described as follows

WorkStation 1	Emission
	Speedo
	Chassis & visual check
WorkStation 2	Headlight
	Sound level
WorkStation 3	Sideslip
	Axle Load Brake

Note:

This **CVIS-A3** layout is for reference only. The Customized design is available.

3-WorkStations LD & HD Combo. Testlane Layout (B3)



The process is briefly described as follows

WorkStation 1	Emission
	Speed
	Sound level
	Headlight
WorkStation 2	Sideslip
	Axle Load Brake
WorkStation 3	Chassis & visual check
	Suspension

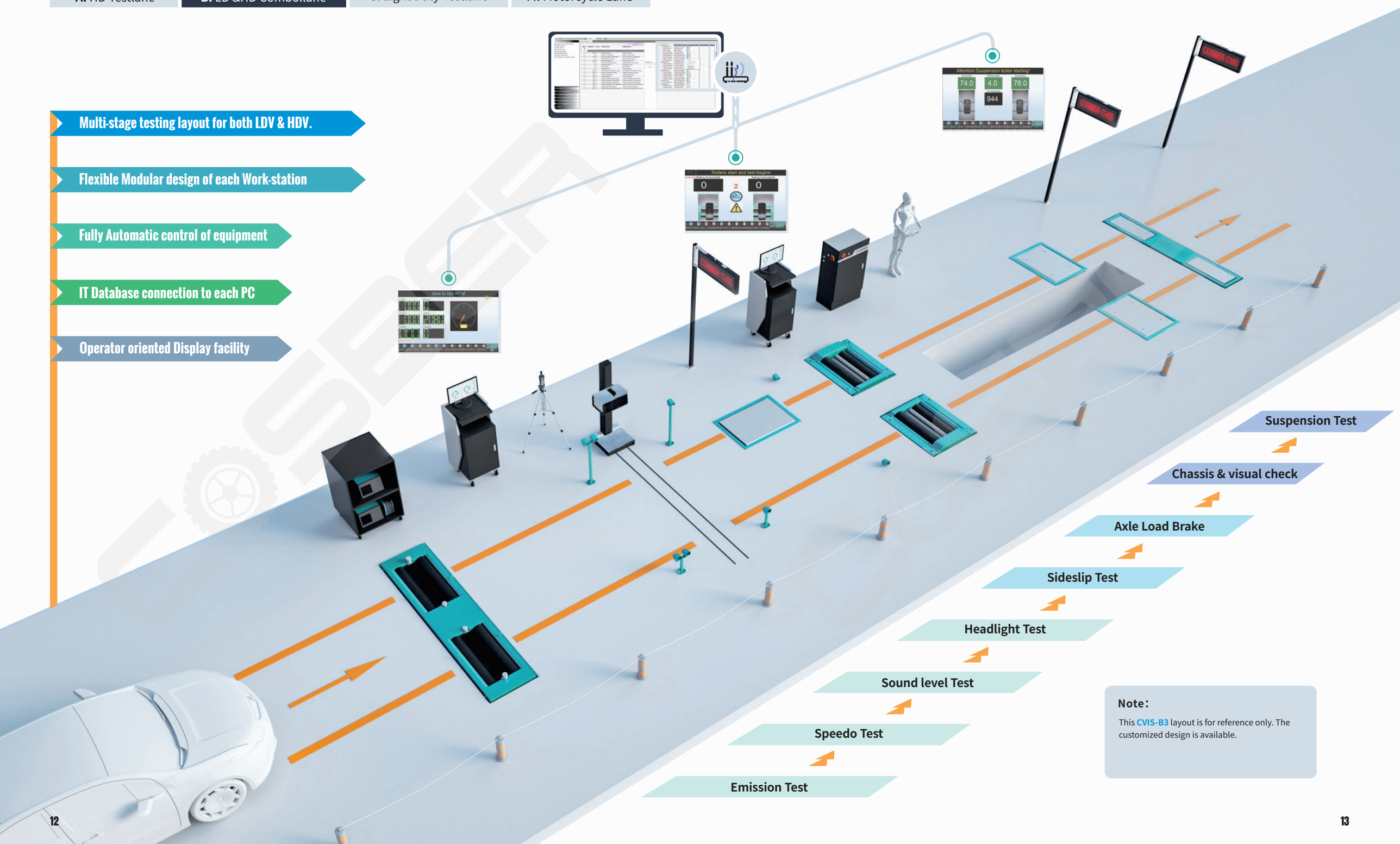
Note:

This **CVIS-B3** layout is for reference only. The Customized design is available.

3-WorkStations Light Duty & Heavy Duty Combo. Testlane Layout (B3)

A: HD Testlane | **B:** LD &HD Combo.lane | **C:** Light Duty Testlane | **M:** Motorcycle Lane

- Multi-stage testing layout for both LDV & HDV.
- Flexible Modular design of each Work-station
- Fully Automatic control of equipment
- IT Database connection to each PC
- Operator oriented Display facility



- Suspension Test
- Chassis & visual check
- Axle Load Brake
- Sideslip Test
- Headlight Test
- Sound level Test
- Speedo Test
- Emission Test

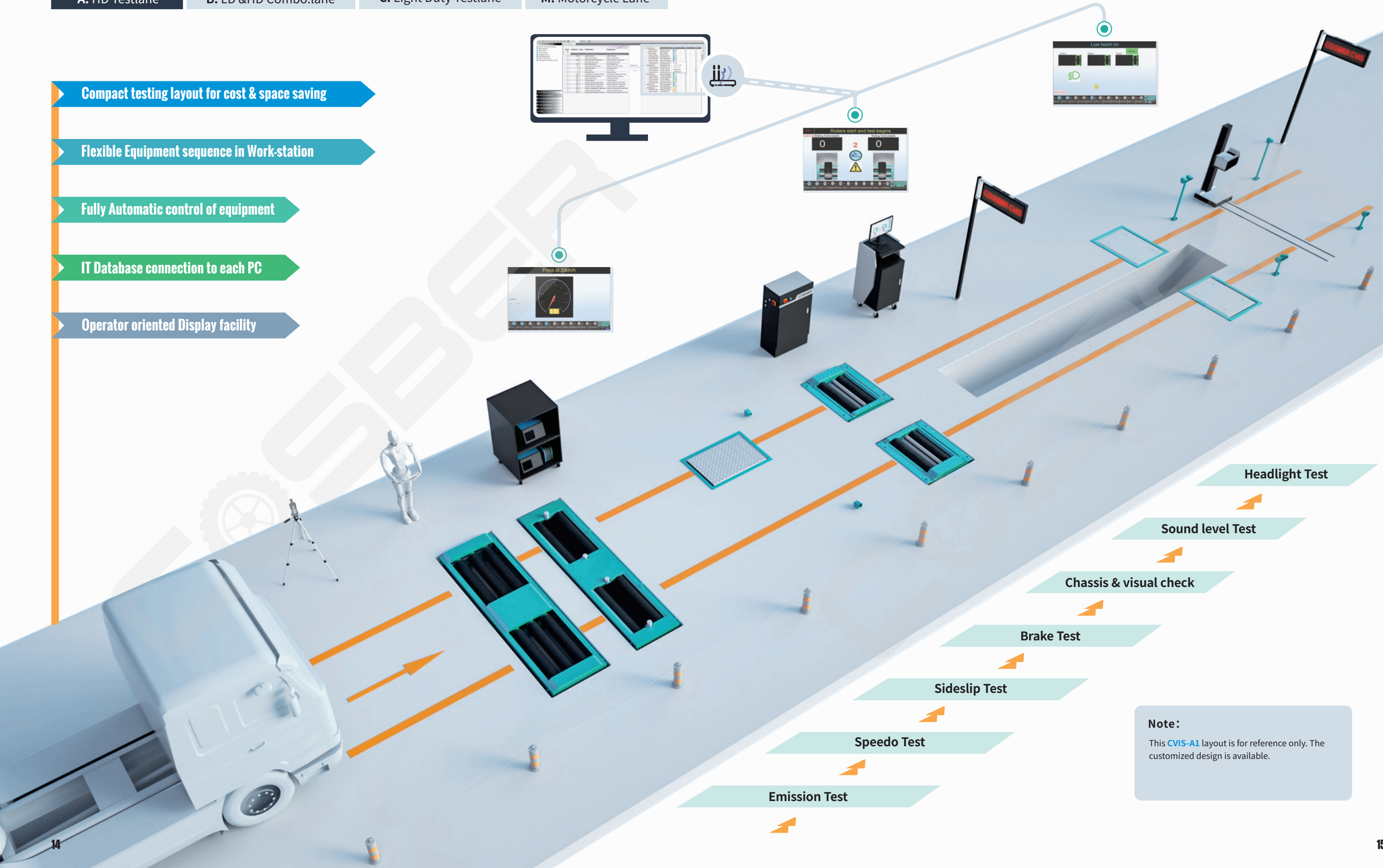
Note:

This **CVIS-B3** layout is for reference only. The customized design is available.

1 Stage Heavy Duty Testlane Layout (A1)

A: HD Testlane | **B:** LD &HD Combo.lane | **C:** Light Duty Testlane | **M:** Motorcycle Lane

- Compact testing layout for cost & space saving
- Flexible Equipment sequence in Work-station
- Fully Automatic control of equipment
- IT Database connection to each PC
- Operator oriented Display facility

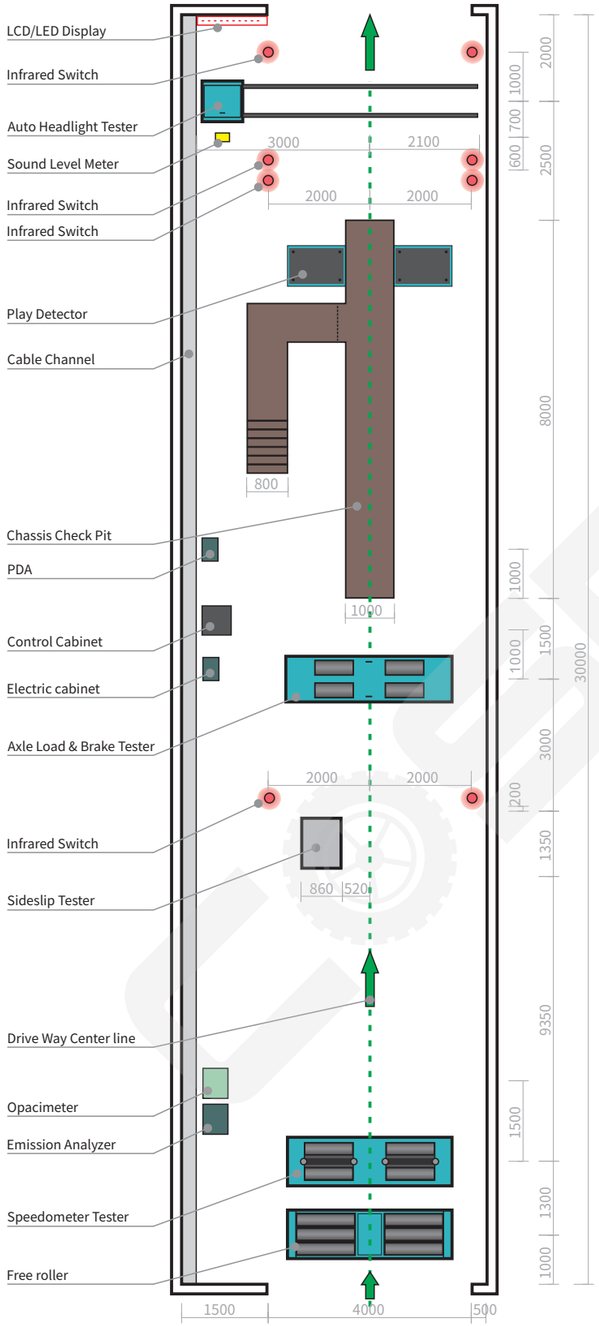


- Headlight Test
- Sound level Test
- Chassis & visual check
- Brake Test
- Sideslip Test
- Speedo Test
- Emission Test

Note:

This **CVIS-A1** layout is for reference only. The customized design is available.

1 Stage Heavy Duty Testlane Layout (A1)



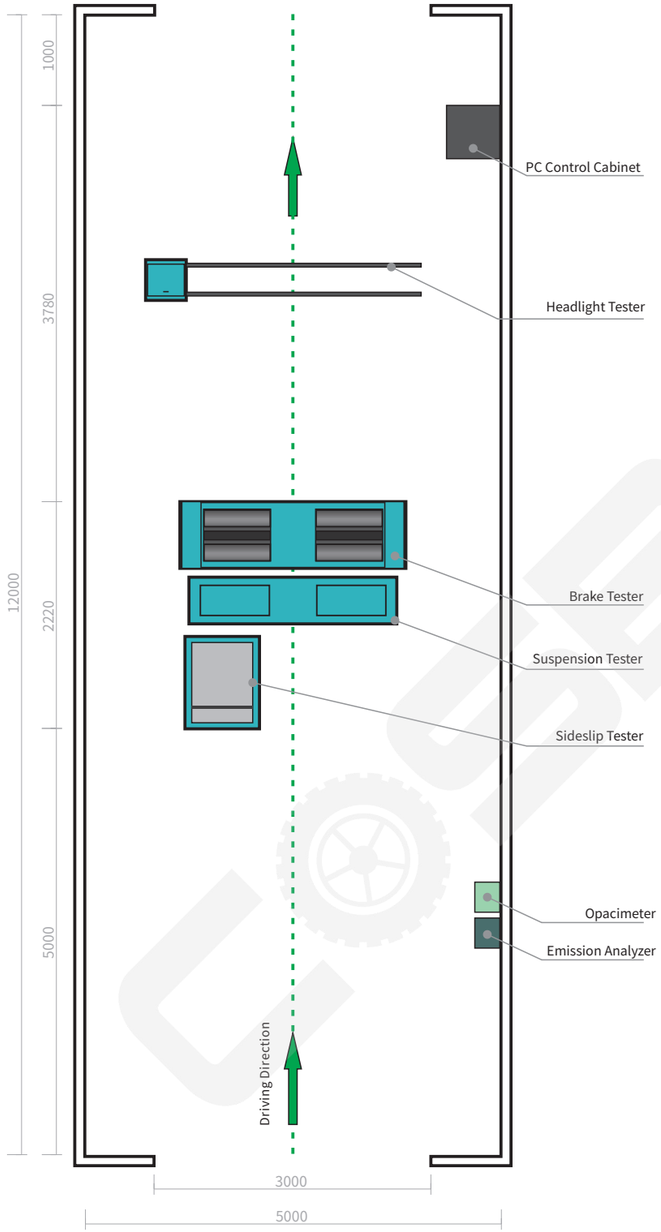
The process is briefly described as follows

Emission
↓
Speedo
↓
Sideslip
↓
Brake
↓
Chassis & visual check
↓
Sound level
↓
Headlight

Note:

This **CVIS-C1** layout is for reference only. The customized design is available.

N in 1 Light Duty vehicle Testlane Layout (C1)



The process is briefly described as follows

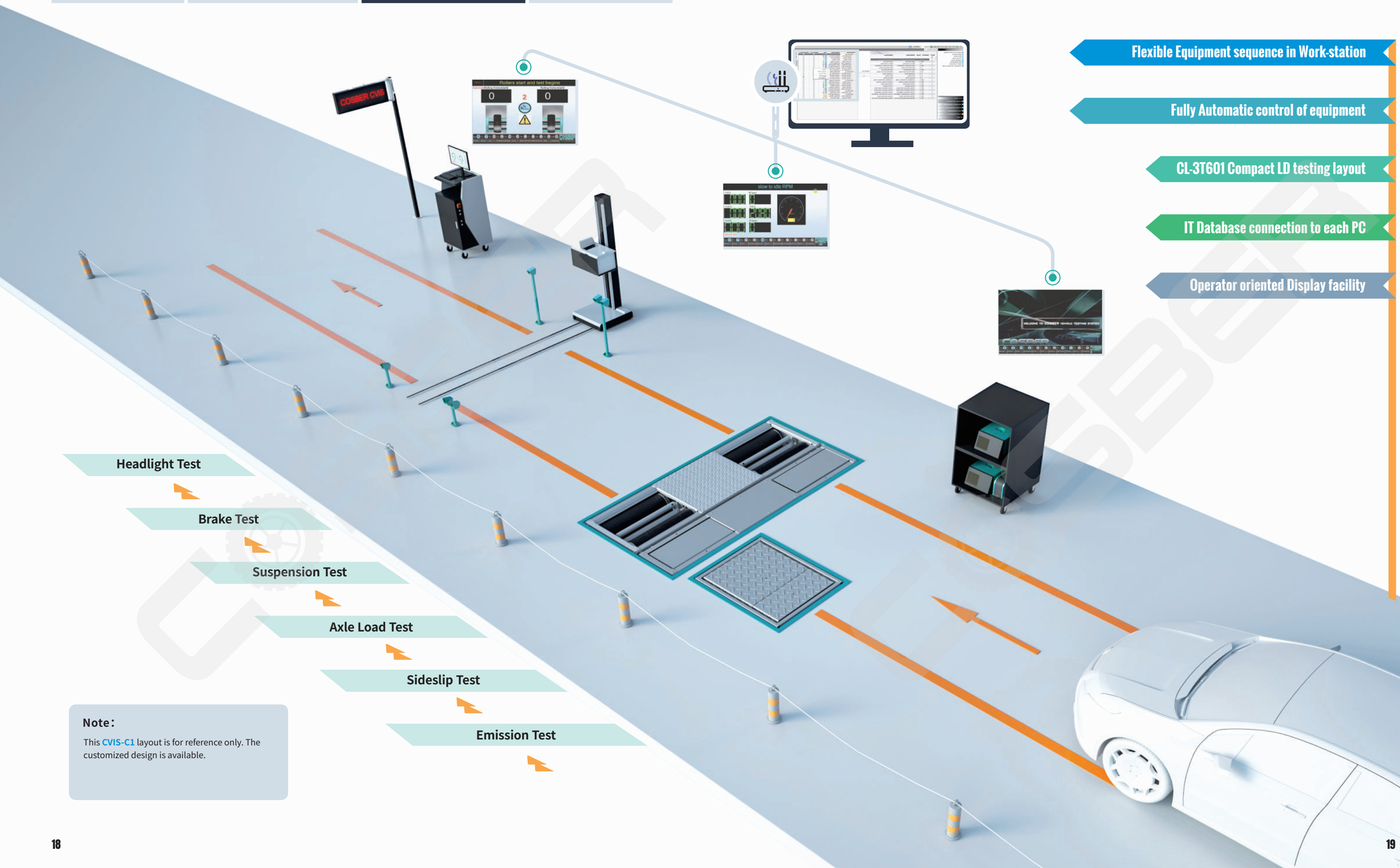
Emission
↓
Sideslip
↓
Axle Load
↓
Suspension
↓
Brake
↓
Headlight

Note:

This **CVIS-C1** layout is for reference only. The customized design is available.

N in 1 Light Duty vehicle Testlane Layout (C1)

A: HD Testlane | **B:** LD &HD Combo.lane | **C:** Light Duty Testlane | **M:** Motorcycle Lane



- Flexible Equipment sequence in Work-station
- Fully Automatic control of equipment
- CL-3T601 Compact LD testing layout
- IT Database connection to each PC
- Operator oriented Display facility

- Headlight Test
- Brake Test
- Suspension Test
- Axle Load Test
- Sideslip Test
- Emission Test

Note:

This **CVIS-C1** layout is for reference only. The customized design is available.

02

SOFTWARE

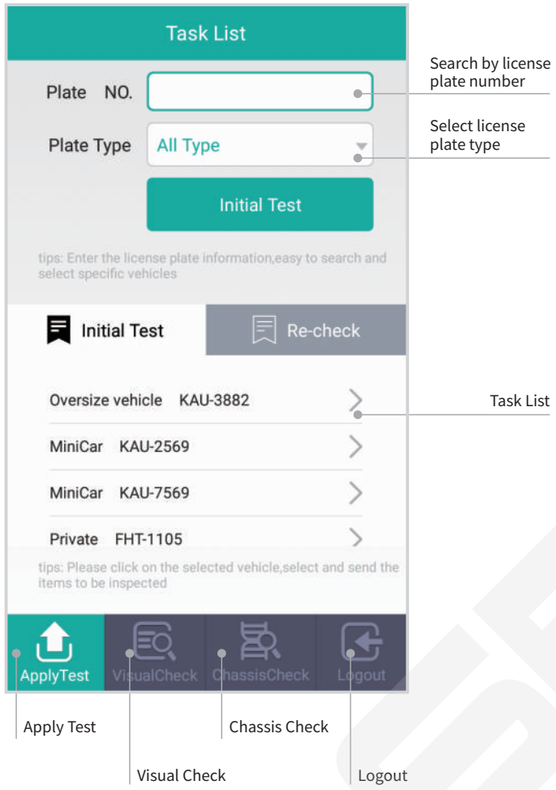
Visual-check Wireless PDA

Overview

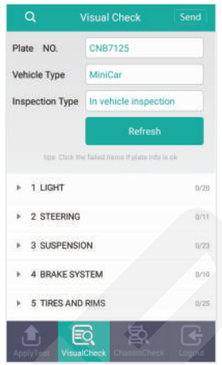
COSBER Visual-check Wireless PDA (CSB-PDA) is designed for users who need a portable and durable terminal for data collection and photographing during vehicle visual checking. It is designed based on Android OS, and applicable to any vehicle.

Key Features

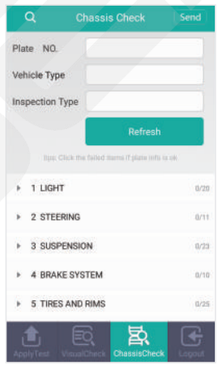
- Multi-language (English/Spanish/French/Thai/German) supported
- Easily accessible & simple net-working
- Multiple input way such as selecting, texting, and photographing
- Real “No-paper” Inspection: High-efficiency & Environmental friendly.
- Compatible with Automatic Number Plate Recognition System (CSB-ANPR) & Underground Sense Coil System (CSB-SCS).



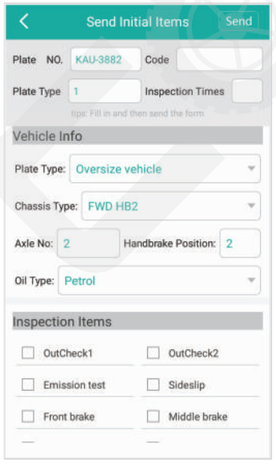
Task List



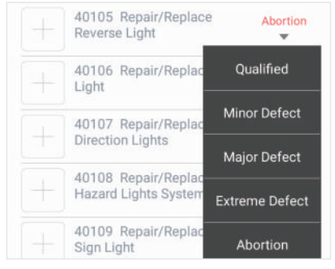
Visual Check



Chassis Check



Select and Send The Test Item



Test Result Classification

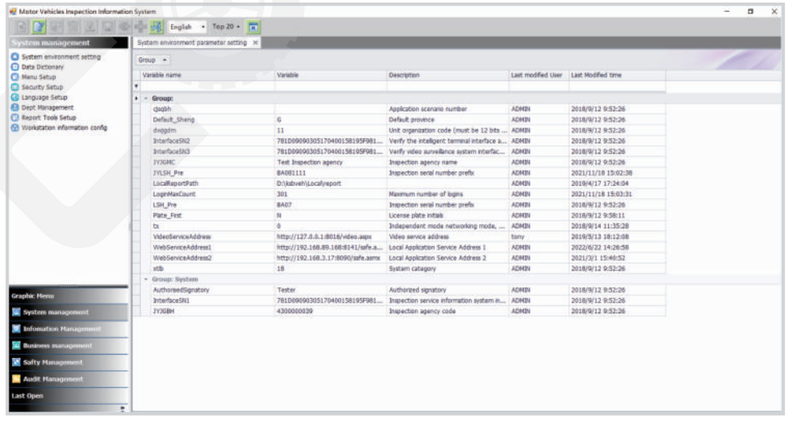
CVIS Software Package

2 Main module of software:

Module 1 WorkStation Equipment Control System: **CVIS-CL** This module is installed on the Industrial Computer(IPC) on the stage and communicates with the equipment through Com Port or USB. The CVIS-CL software is able to control the equipment independently to operate and carry out the calibration. Under LAN mode connected with others IPC and main control PC, it is able complete the steam-line work tasks in the inspection center.

Module 2 Inspection Information Management System: **CVIS-IIS** With a database connected by IP network between the computers of the management system and the IPC of equipment (WorkStation), it can excute the complete task of inspection information management such as vehicle information login, line scheduling, inspection item control, data management, report printing, system management and setting, etc.

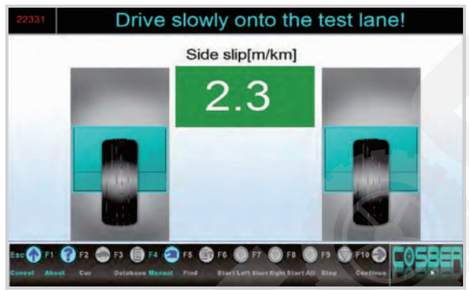
CVIS-CL Work-station Equipment Control System Interface



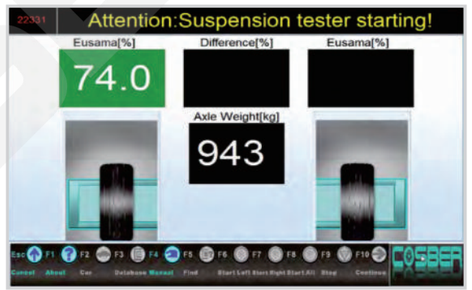
CVIS-IIS Inspection Information Management System Interface

1) Work-Station equipment control system CVIS-CL

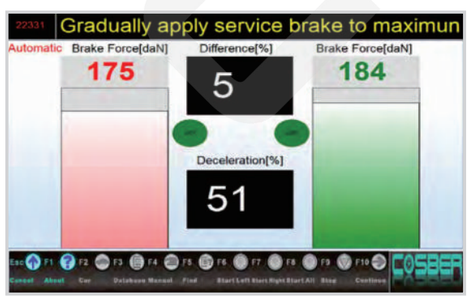
Enter The Vehicle Information of The Vehicle To Be Tested



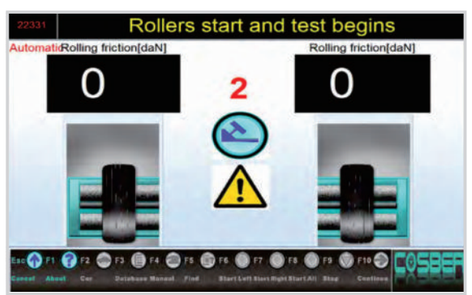
Sideslip Test



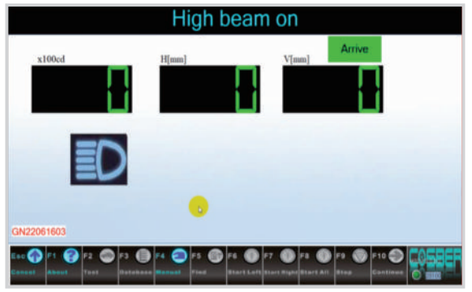
Suspension Test



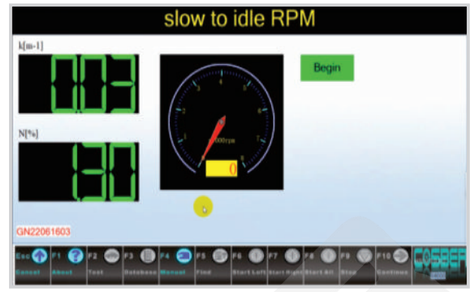
Front and Rear Wheel Resistance and Brake Test



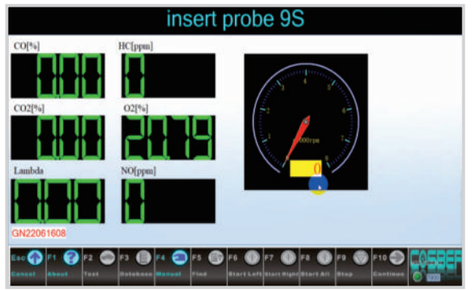
Parking Force Test



Headlight Test Interface

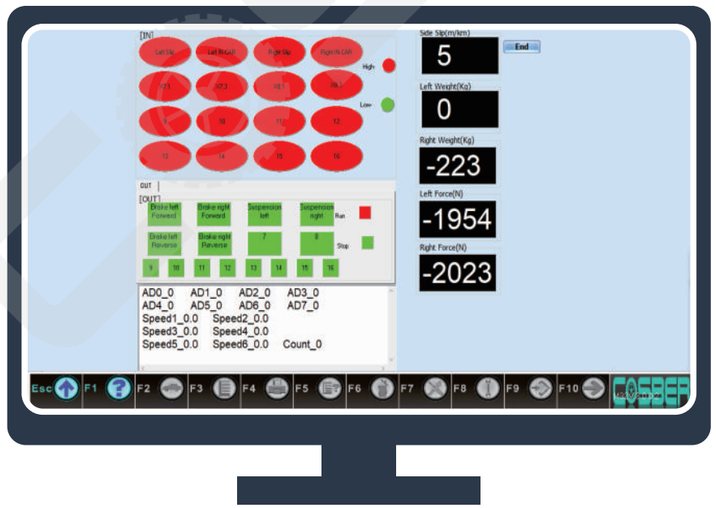


Opacimeter Interface



Gas Analyser Test Interface

Speedometer Test Interface



CVIS-CL Signal Diagnostic & Self-test

2) Inspection Information Management System CVIS-IIS

Overview

CVIS-IIS is a software system developed for motor vehicle inspection business with the core functions such as: inspection data exchange processing, process monitoring, result processing and report printing. This information system realizes vehicle appearance inspection (Visual-checking) by mobile PDA.

Inspection process monitoring program is able to transmit operation video information to the whole CVIS system. The Inspection process control program is able to operate the equipment via CL equipment control software to obtain and store the test result data. At the same time, the system also strictly manages the user rights of the use system, records the system login and operation security login detail, and audits whether the system has potential security risks.

Benefits to Inspection Center Owner

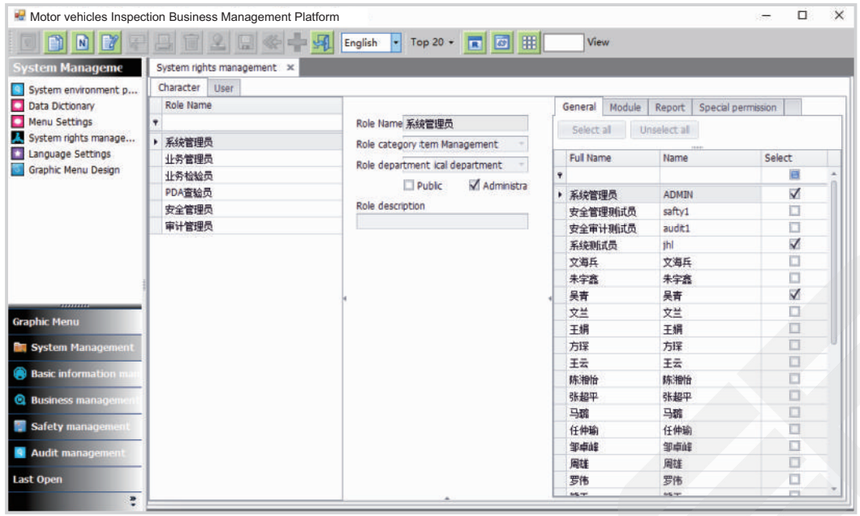
- Integrated computerize control for all inspection process
- Fully automatic control & manual control as optional
- Full-function database management and networking ability.
- One-stop management of Personnel/Equipment/Toll/Data & Images for PTI business.
- Accessible to the Cloud Database and Business Management of multiple test stations.
- Standardization of Inspection Business Management to achieve uniformity and efficiency.

Key features

Stand-alone Version	Cloud Net Version
Modular function design	Modular function design
Integrated one-computer control of multi-working stages	B/S system structure
Automatic process & Smart control	Modular design with extreme function modification ability
Set up of local Database or Server	Accessibility between local database and Cloud database
Good flexibility on working-stage layout	Uniform standard for every PTI stations connected

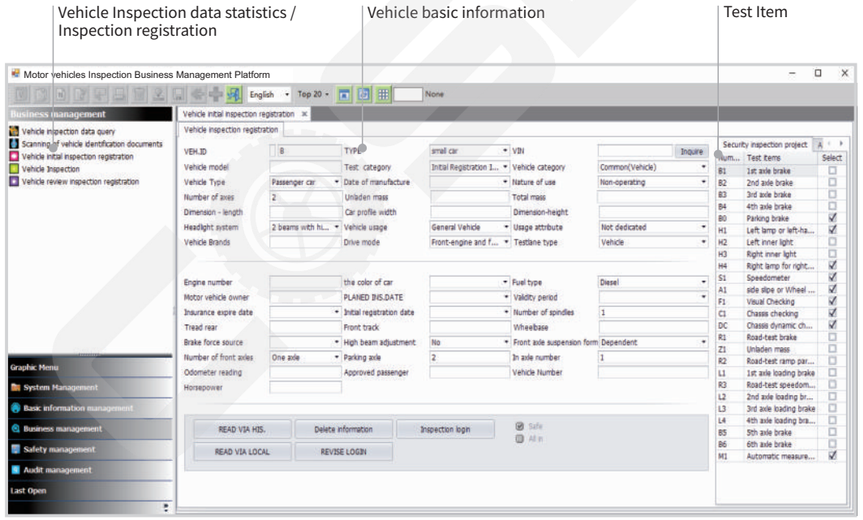
Key Functional Module

Functional Module	Stand-alone Version	Cloud Net Version
Admin. / User Management	Yes	Yes
Test Items Management	Yes	Yes
Operation Statistics Management	Yes	Yes
Report Format Management	Yes	Yes
Visual / Chassis Check Program	Yes	Yes
Inspection Standard Program	Yes	Yes
On-line Booking Management	No	Yes
Business Data Analysis	No	Yes
Toll Accounting Management	No	Yes
Photographic Management	No	Yes
CCTV Video Accessibility	No	Yes
Inspection Certificate Management	No	Yes



System Management

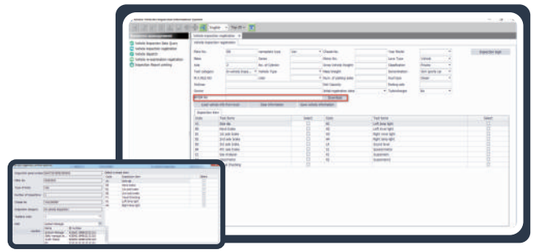
It mainly realizes the functions of operating environment parameter setting, user role management, user authority management, system menu setting, system data dictionary setting and so on.



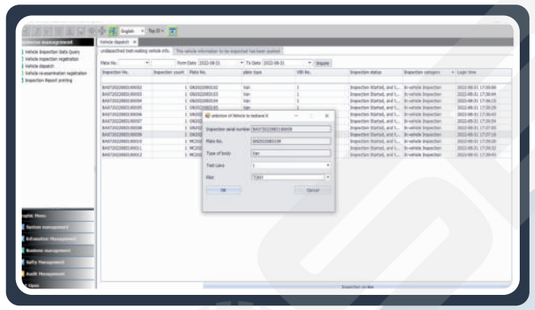
Business Management

It mainly realizes the basic information management setting, inspection process control, inspection result upload processing, signature printing, statistical analysis and other business functions of the vehicle safety technical inspection information system for vehicle inspection.

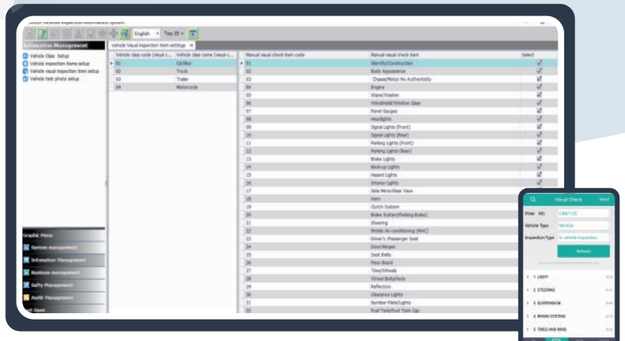
CVIS-IIS Software Interface Example



1) Vehicle Information Login Interface

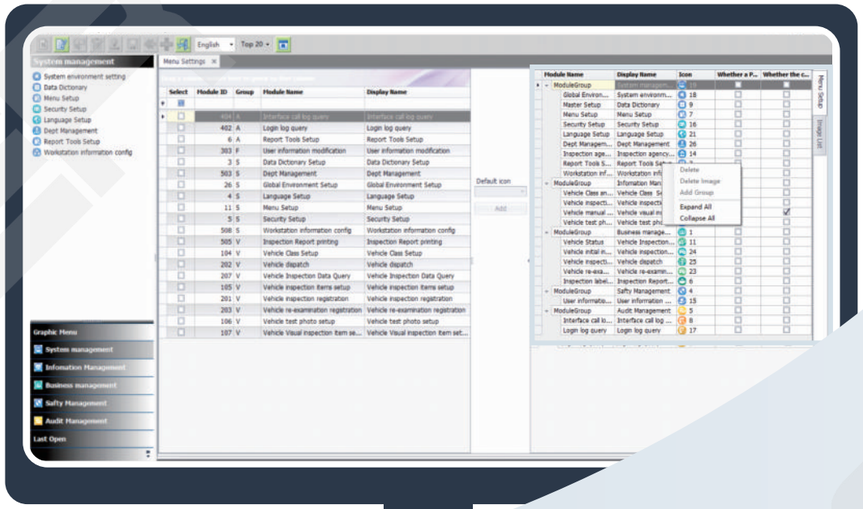


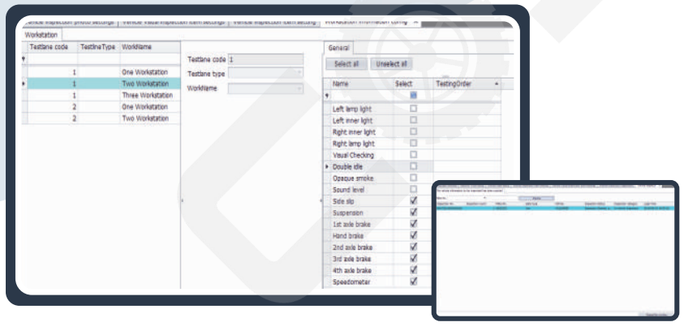
2) Vehicle task Ordering



3) Visual Check and PDA

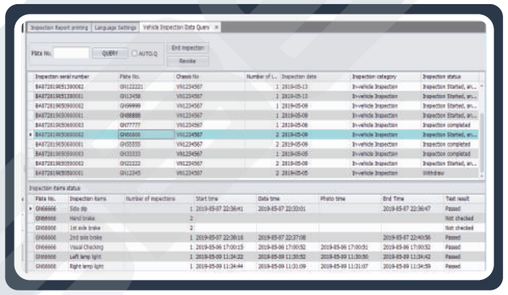
Inspection Operation（Business）Program





4) WorkStation & Equipment Operation Control

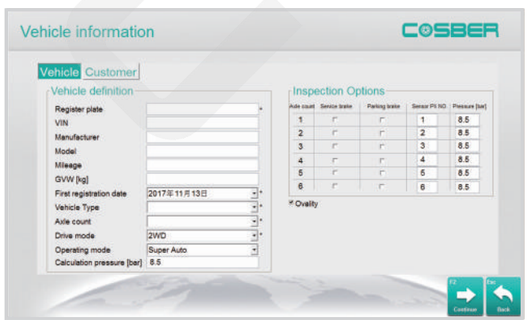
6) Test Report Printing



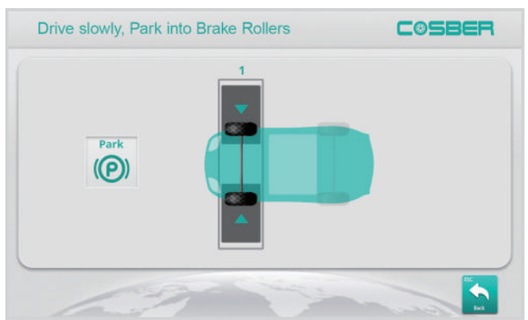
5) Inspection Result Data Management

Stand-alone Software for Brake Tester

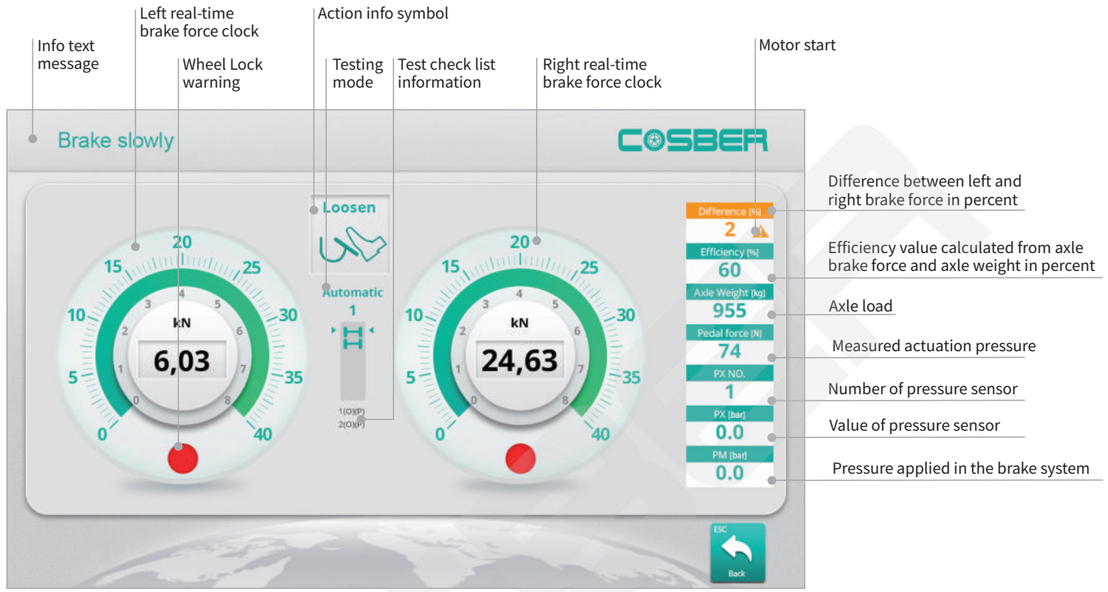
Software Main Interface



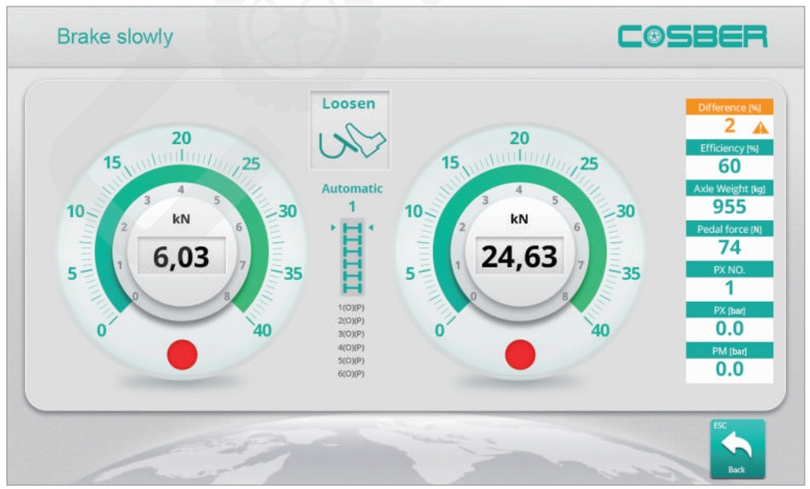
Input The Vehicle Information



Measurement of Axle Weight



3T Brake Tester Software Interface



18t Brake Tester Software Interface

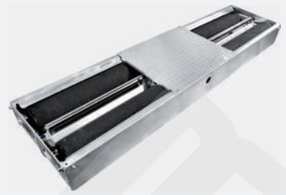
03

PTI EQUIPMENT

FOR MOTOR VEHICLE INSPECTION

Full range of Roller Brake Tester

C-BTC2X



C-BTC3X

KZZD-10K

C-BTT 5X/6X/7X/8X

Cosber has a complete series of different brake tester for Ligh vehicle & Heavy duty vehicle which follows the guidelines of car manufacturers and test organizations.

This modular range of products allows plenty of combinations to meet the customer demands and can be extened to a complete test lane.

Designed by German engineering, equipped with German motors and German sensors.

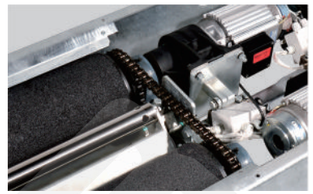
Accessories like 4WD, analog display, drive out support and radio remote control version are available.

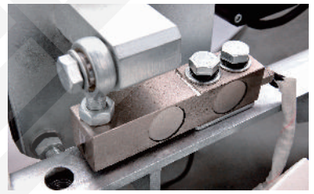
Analog display with Swival-arm

Remote control

Light Vehicle Brake Tester C-BTC 22


C-BTC22





Features

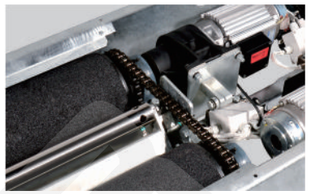
- Light vehicle Roller Brake Tester for accurate and repeatable results.
- Designed and engineered in Germany.
- Core components such as engines, sensors are Made in Germany.
- Easy & low cost replacement of common European brake tester models without pit modification.
- Durable fully galvanized steel frame, designed for heavy and long lasting use.
- Option to be extended to a fully automated test line.

Technical data

Item	C-BTC22
Max. measure load	3 500 kg
Measurement range	0~8 000Nx2
Wheel diameter	400~800 mm
Wheel tread	800~2 200
Roller dimension	Φ205 x700 mm
Coef. friction (dry/wet)	>0.7/0.6
Motor power	3 kW / 4 kW x2
Motor E-Lock	Yes
Test speed	5.1 km/h
Dimensions (L x W x H)	2320 x 660 x 240 mm
Equipment weight	> 430 kg

Light Vehicle Brake Tester C-BTC 32


C-BTC32



Features

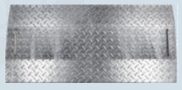
- Roller Brake Tester designed to test light vehicles with wide chassis as SUVs, Vans, light trucks etc.
- Longer rollers for easy and safe testing of vehicles with wide chassis.
- Designed and engineered in Germany.
- Core components such as engines, sensors are Made in Germany.
- Easy & low cost replacement of common European brake tester models without pit modification.
- Durable fully galvanized steel frame, designed for heavy and long lasting use.

Technical data

Item	C-BTC32
Max. measure load	4 000 kg
Measurement range	0 ~8 000N ×2
Wheel diameter	400 ~800 mm
Wheel tread	800~2 500
Roller dimension	Φ205 ×850 mm
Coef. friction (dry/wet)	> 0.7 / 0.6
Motor power	4 kW ×2
Motor E-Lock	Yes
Test speed	5.1 km/h
Dimensions (L x W x H)	2620 ×660 ×240 mm
Equipment weight	> 480 kg

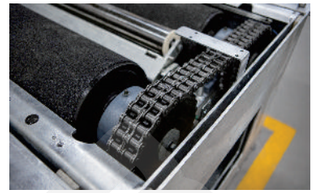
Light Vehicle Brake Tester C-BTC 22 & 32 Accessories

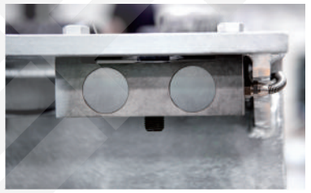
Accessories

Item	Picture	Description
Analog Display		Dimensions (L×W×H): 830×200×610mm Braking force range: 0~8000N Braking force display accuracy: 1N
Control Cabinet		Dimensions (L×W×H): 600×570×240 mm Equipment weight: 20 kg Power Supply: AC 3-phasex400V +PE/50Hz / AC 3-phasex230V+PE/60HZ (optional)
Weighting Load Cell Kit		4 set of 1 Tons load cell sensors for Axle load weighting
Calibration Tools		High precision calibration Easy to operate
Portable free Rollers		Easy to set up Fast and easy 4WD brake test
Remote Control		Infrared remote control Easy operation
Pedal Force Meter		0 - 500N test rang
Roller Cover		2 Pieces per bench
PC Control Software		USB - RS232 connection
PC Cabinet		Empty PC cabinet with wheels

Heavy Vehicle Brake Tester C-BTT 50/52

C-BTT 50/C-BTT 52





Features

- Roller Brake Tester designed to test heavy vehicles up to 13 ton.
- Designed and engineered in Germany.
- Core components such as engines, sensors are Made in Germany.
- Easy & low cost replacement of common European brake tester models without pit modification.
- Durable fully galvanized steel frame, designed for heavy and long lasting use.
- Option to be extended to a fully automated test line.

Technical data

Item	C-BTT 50	C-BTT 52
Maximum drive over load	13 000 kg	13 000 kg
Measurement range	0 ~ 40 000 N	0 ~ 40 000 N
Wheel track width	700 ~ 2 700 / 800 ~ 2 800 / 900 ~ 2 900 mm	700 ~ 2 700 / 800 ~ 2 800 / 900 ~ 2 900 mm
Roller diameter	Ø 208 mm	Ø 208 mm
Roller length	1 000 mm	1 000 mm
Coef. friction (dry / wet)	> 0.7 / 0.6	> 0.7 / 0.6
Test speed	2.5 ~ 5 km/h	2.5 ~ 5 km/h
Roller height difference	30 mm	30 mm
Motor power	9 kW & 11kW	9 kW & 11kW
Motor E-Lock	No	Yes
Dimensions (L ×W × H)	3 220 × 1 040 × 686 mm	3 220 × 1 040 × 686 mm
Equipment weight	> 1 500 kg	> 1 550 kg

Heavy Vehicle Brake Tester C-BTT 62 (with lift up load simulation)

C-BTT 62

Lifting device control

Features

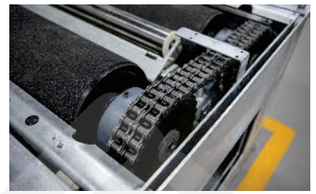
- Roller Brake Tester designed to test heavy vehicles up to 13 ton.
- With hydraulic load simulation for more accurate test results especially for multi axis trucks.
- Designed and engineered in Germany.
- Core components such as engines, sensors are Made in Germany.
- Easy & low cost replacement of common European brake tester models without pit modification.
- Durable fully galvanized steel frame, designed for heavy and long lasting use.

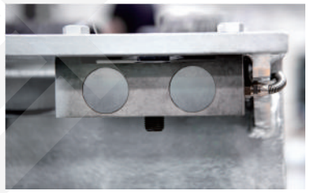
Technical data

Item	C-BTT 62
Maximum drive over load	13 000 kg
Lift up capacity	8 tons @ 200mm
Measurement range	0 ~ 40 000 N
Wheel track width	700 ~ 2 700 / 800 ~ 2 800 / 900 ~ 2 900 mm
Roller diameter	Ø 208 mm
Roller length	1 000 mm
Coef. friction (dry / wet)	> 0.7 / 0.6
Test speed	2.5 ~ 5 km/h
Roller height difference	30 mm
Motor power	9 kW & 11kW
Dimensions (L ×W × H)	3 220 × 1 040 × 686 mm
Equipment weight	> 1 600 kg

Heavy Vehicle Brake Tester C-BTT 72

C-BTT 72





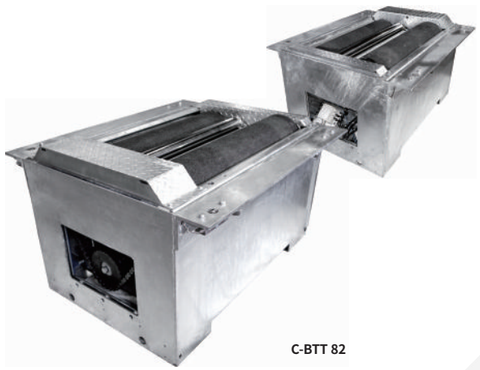
Features

- Roller Brake Tester designed to test heavy vehicles up to 18 ton.
- Designed and engineered in Germany.
- Core components such as engines, sensors are Made in Germany.
- Easy & low cost replacement of common European brake tester models without pit modification.
- Durable fully galvanized steel frame, designed for heavy and long lasting use.
- Option to be extended to a fully automated test line.

Technical data

Item	C-BTT 72
Maximum drive over load	18 000 kg
Measurement range	0 ~ 40 000 N
Wheel track width	1 000 ~ 3 000 / 1 100 ~ 3 100 / 1 200 ~ 3 200 mm
Roller diameter	Ø 248 mm
Roller length	1 000 mm
Coef. friction (dry / wet)	> 0.7 / 0.6
Test speed	2.5 ~ 5 km/h
Roller height difference	50 mm
Motor power	15 kW / 13 ~ 17 kW with motor lock
Dimensions (L ×W × H)	3 490 × 1 240 × 806 mm
Equipment weight	> 1 800 kg

Heavy Vehicle Brake Tester C-BTT 82 (with lift up load simulation)



Features

- Roller Brake Tester designed to test heavy vehicles up to 18 ton.
- With hydraulic load simulation for more accurate test results especially for multi axis trucks.
- Designed and engineered in Germany.
- Core components such as engines, sensors are Made in Germany.
- Easy & low cost replacement of common European brake tester models without pit modification.
- Durable fully galvanized steel frame, designed for heavy and long lasting use.

Technical data

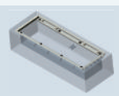
Item	C-BTT 82
Maximum drive over load	18 000 kg
Lift up capacity	8 tons @ 200mm
Measurement range	0 ~ 40 000 N
Wheel track width	1 000 ~ 3 000 / 1 100 ~ 3 100 / 1 200 ~ 3 200 mm
Roller diameter	Ø 248 mm
Roller length	1 000 mm
Coef. friction (dry / wet)	> 0.7 / 0.6
Test speed	2.5 ~ 5 km/h
Roller height difference	50 mm
Motor power	15 kW / 13 ~ 17 kW with motor lock
Dimensions (L × W × H)	3 490 × 1 240 × 806 mm
Equipment weight	> 1 800 kg

Heavy Vehicle Brake Tester C-BTT 5X/6X & 7X/8X Accessories

Accessories

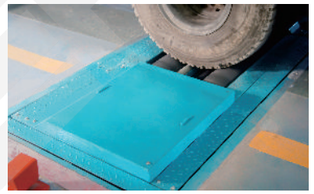
Name	Picture	Name	Picture
Analog Display		Calibration device	
Swivel arm for Analog Display		PC cabinet	
Column		Roller cover plate 13t (C-BTT 5X/6X)	
Lifting device (comtrol box)		Roller cover plate 18t (C-BTT 7X/8X)	
Remote control		Pit safety kit 2 × (1,5 m ×2,5m)	
Weight sensor set		PC - Connection & PC - Visualization heavy vehicle software (+ light vehicle)	
Air pressure sensor		Pedal force meter	
ABB soft start of motor			

Installation Options

C-BTT 5X/6X		C-BTT 7X/8X	
	Separated pit-frame with 1 000 mm rollers		Separated pit-frame with 1 000 mm rollers
	Non-separated (w/o pit) frame, track width 2 700 mm		Non-separated (w/o pit) frame, track width 3 000 mm
	Non-separated (w/o pit) frame, track width 2 800 mm		Non-separated (w/o pit) frame, track width 3 100 mm
	Non-separated (w/o pit) frame, track width 2 900 mm		Non-separated (w/o pit) frame, track width 3 200 mm

Heavy Vehicle Brake Tester KZZD-10K/15K


KZZD-10K/15K



Features

- Heavy Duty Roller Brake Tester for accurate and repeatable brake test results.
- Installed in more than 1000 of test stations in China and around the world.
- Durable Power Paint and solid steel body, Side motor Design for reliable and easy maintenance.
- Option to be extended to a fully automated test line.
- Option to add Weighting sensor unit of 20 tons, and Pneumatic lift dirve-out beam.

Technical data

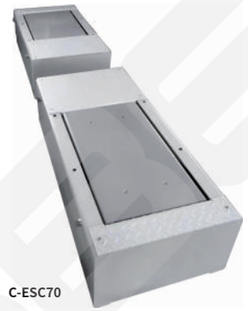
Item	KZZD-10K	KZZD-15K
Max. measure load	10 000 kg	15 000 kg
Measurement range	0 ~30 000N ×2	0 ~40 000N ×2
Wheel diameter	> 600 mm, Pneu. lock-lift	> 600 mm, Pneu. lock-lift
Wheel tread	700 ~2 900	700 ~2 900
Roller dimension	Φ245 ×1 100 mm	Φ245 ×1 100 mm
Coef. friction (dry/wet)	> 0.7 / 0.6	> 0.7 / 0.6
Motor power	11 kW ×2	15 kW ×2
Test speed	2.5 km/h	2.5 km/h
Dimensions (L x W x H)	4 630 ×900 ×627 mm	4 630 ×900 ×627 mm
Equipment weight	> 1 580 kg	> 1 620 kg

Vehicle Suspension Tester

Description

C-ESC20 Vehicle Suspension Tester is used to inspect the shock absorption performance of vehicles with independent suspension system. When the vehicle parks on the platform, the static wheel load will be measured by the sensor and displayed on the Monitor/Display Board. Then the motor will start to drive the Eccentric Wheel in the tester, which subsequently results into the vibration of Vibrating Plate. The motor will shut down automatically after reaching its nominal power. The plate will continue vibrating because of inertia, and result in sympathetic vibration between wheels and suspension. The minimum dynamic wheel load will be obtained during the sympathetic vibration. Then the absorption rate (displayed as percentage) can be calculated. The higher the absorption rate is, the better the suspension performance of the vehicle will be.


C-ESC20


C-ESC70


PC Cabinet

Features

- EUSAMA measurement standard.
- Wheel load function integrated.
- Protection program (plates start vibrating when load is >200kg).
- High precision sensor ensures the accuracy of inspection result.
- Galvanized plates with longer service life.
- Result display in visual graph.

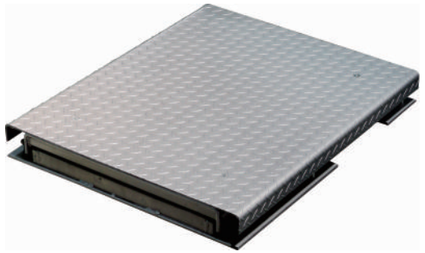
Technical data

Item	C-ESC20	C-ESC70 Split body
Max. drive-over load	4000 kg	10000 kg
Max. test wheel load	1500 kg	1500 kg
Vibrate plate dimensions	700 × 300 mm	650 × 400 mm
Oscillation	6 mm	6 mm
Vibrate frequency	≈24 Hz	≈24 Hz
Motor power	4.0 kw x 2	4.0kw x 2
Power supply	3PH 380V, 50Hz,ground	3PH 380V, 50Hz,ground

Vehicle Sideslip Tester

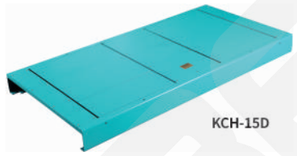
Description

Vehicle Sideslip Tester inspects the axle wheel alignment between camber and toe while the vehicle is driving in a straight direction. The destressing plate guarantees a correct and accurate measurement.



KCH-18B

KCH-3EN



KCH-15D

PC Cabinet

Digital display

Features

- Sideslip Plate & Protection Frame integrated structure
- Sideslip plate locker with inner key.
- Maintenance-free body design.
- Galvanized plate surface for longer service life.
- High precision sensor to ensure the exactitude of result.
- Upper and lower Dual Bearing System makes smooth movement.
- Options of synchronic or independent motion type for different regulation requirements.
- Over-value alarm function.
- Standard RS-232 connection port.

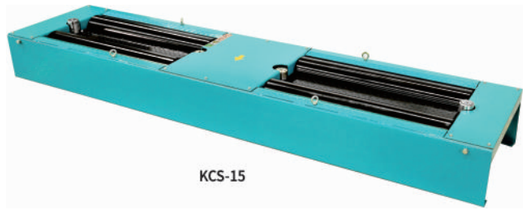
Technical data

Item	KCH-3EN	KCH-15D	KCH-18B
Max. axle weight	3000 kg	15000 kg	18000 kg
Measuring range	±20 m/km	±20 m/km	±20 m/km
Sideslip board dimensions	600×500 mm	1100×1000 mm	750×1000 mm
Release board dimensions	600×250 mm	1100×300 mm	/
Structure form	Single plate with release	L-R double plate	Single test plate
Power supply	AC 220V, 50Hz,ground	AC 220V, 50Hz,ground	AC 220V, 50Hz,ground

Vehicle Speedometer Tester

Description

All models of speedometer are robust build, in order to verify the accuracy of speedometer and odometer of vehicles, fitted with a fast pneumatic lifting system which could facilitate to drive out the vehicles.



KCS-15

PC Cabinet

KCS-3

KZG-15
Pneu. Free Roller

Digital display

Features

- Using of reinforced steel guarantees strong and durable structure-bodies.
- High adhesion coating paint for longer working life.
- High precision sensor and high roundness of roller ensure the exactitude of result.
- Air-lifter and roller brake system easies the exit of vehicles.
- 0-130km/h measurement range, wireless remote controller.
- Optional pneumatic free roller set for AWD vehicle & Tandem truck.
- Standard RS-232 connection port.

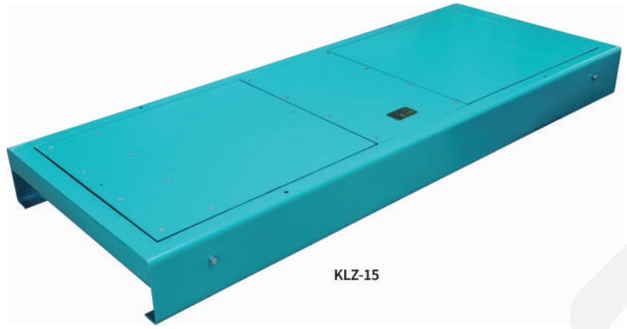
Technical Data

Item	KCS-3	KCS-15	KZG-15 Pneu. Free Rollers
Max. axle load	3000 kg	15000 kg	15000 kg
Measurment range	0-160 km/h	0-130 km/h	0-130 km/h
Roller dimensions	Φ190×900 mm	Φ240×1100 mm	156×1100 mm
Roller tread	380 mm	405 mm	3 sets
Roller width	850-2400 mm	750-2950 mm	0 -700 mm longitudinal
Air supply	0.5-0.6 MPa	0.7-0.8 MPa	0.7-0.8 MPa
Power supply	AC 220V, 50Hz	AC 220V, 50Hz	AC 220V, 50Hz

Vehicle Wheel Load Tester

Description

Wheel Load Tester is designed for weighing the wheel/ axle/ total mass of all kind of vehicles .



KLZ-15

PC Cabinet

Digital display

Features

- Quick drive-through testing mode .
- Anti-slanting weighting design.
- Accurate and stable measure.
- Extra-strong structure boby.
- Wheel load or axle load data display.
- Standard RS-232 connection port.

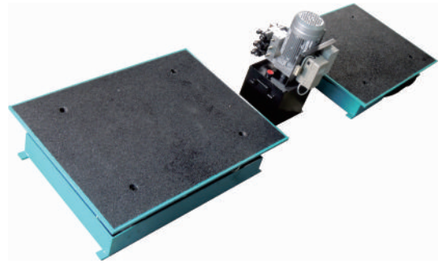
Technical Data

Item	KLZ-15
Max. passing load/axle	30000 kg
Measuring range/axle	0-15000 kg
Max.wheel tread	2700 mm
Plate dimensions	1100x1000 mm
Power supply	AC 220V, 50Hz, ground

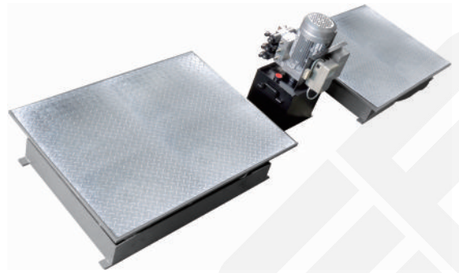
Wheel Play Detector

Description

The wheel play detector equiped with two moving plate, is assisted to verify the joint play condition in a vehicle chassis. The play detector is made by three parts: 2x moving plates, hydraulic system and electric control system (with handhold remote & torch).



KJX-10



C-PD70 / C-PD72

Remote control with LED lamps

Features

- Different movements of the plates are available.
- Hydraulic unit increases user convenience.
- Extra heavy duty structure, robust and lower noise design.

Technical Data

Item	KJX-10	C-PD70/C-PD72
Plate dimensions	1000 x 750 mm	750 x 750 mm / 900 x 750 mm
Maximum displacement of plate	100 x 100 mm	100 x 100 mm
Maximum axle load	15000 kg	15000 kg
Maximum wheel load	7500 kg	7500 kg
Movement direction	6 directions	8 directions
Movement plate	(Left Plate: front / rear & left / right, Right Plate: front / rear)	(Both left and right plate has 4-direction movement)
Max.displacement force of plate control	30 kN Individually per plate	40 kN @130m/s Individually per plate
Power supply to control unit	3PH,380V, 50Hz, ground	3PH, 380V, 50Hz, ground
Motor power	2.2 kw	4.0 kw
Plate surface	Corundum sand	Pattem steel

Chassis Dynamometer

Features

- Extremely Durable Eddy-Current Retarder with Over-temperature Protection.
- Groove cut Roller ensure the high friction with wheels.
- Multiple painting process, long-lasting of metalized paint.
- Display of chassis power, acceleration time, spot speed and traction force.
- High adhesive and well-balanced roller.
- Easy compatibility with external diagnostic equipment, RS-232 port & USB.

KDC-3GT

Dynocosber-1000P

Eddy-Current Retarder

Dynocosber-2000P

Dynocosber-X3000

Technical Data

Item	KDC-3GT	Dynocosber-1000P	Dynocosber-2000P	Dynocosber-X3000
Max. axle load	3500 kg	2000 kg	2000 kg×2	3500 kg
Roller diameter	216 mm	218 mm	218 mm	320 mm
Roller length	1000 mm	860 mm	860 mm	850 mm
Roller center distance	442 mm	430 mm	430 mm	483 mm
Roller set quantity	2 Sets	2 Sets	4 Sets	2+3 Sets
Roller surface	Cross lathe + Chrome coating	Groove cut + Chrome coating	Groove cut + Chrome coating	Groove cut + Chrome coating
Max. test speed	200 km/h	250 km/h	250 km/h	250 km/h
Max. test power	400 P	600 P	1200 P	1500 P
Retarder power	Fly wheel inertia	250 kw	250 kw×2	160 kw×2
Drive out mode	Pneumatic	Retarder brake	Retarder brake	Pneumatic
Speed indication error	±1%	±1%	±1%	±1%
Torque indication error	±2%	±2%	±2%	±2%
Constant speed error	±1 km/h	±1 km/h	±1 km/h	±1 km/h
Wheed tread	800-2700 mm	700-2200 mm	700-2200 mm	700-2200 mm
Power supply	AC 220V, 50Hz, ground	AC 220V, 50Hz, ground	3ph, 380V, 50Hz, ground	3ph, 380V, 50Hz, ground
Equipment dimensions	4000×970×645 mm	3070×850×448 mm	3070×4350×572 mm	3915×3650×548 mm

DYNOCOSBER-M500 Motorcycle Chassis Dyno

Description

The M500 Dyno is a professional horsepower measurement equipment for two-wheel motorcycle. Its top testing speed is over300 km/h with max RPM to 16,000 RPM, and able to test up to 500 Hp on the wheel.

M500 use a compact body design but high efficiency, which is able measure motorcycle' s wheelbase of 1200mm~1800mm, its adjustable wheel base design allows M500 to test from small scooter to also cruiser motorcycle with long wheelbase. Special design of One-person-drive package and user-friendly interface make motor dyno test easy and enjoyable.

Dyno Cabinet

Electric Control Unit

Motorcycle with wheelbase of 1200mm~1800mm

Professional air blower for motor cooling

Smart Wheelbase adjustment platform

Features

- Extremely Durable Eddy-Current Retarder with Over-temperature Protection.
- Low machinery inertia for maximal of power sensibility.
- Display of chassis power, acceleration time, spot speed and traction torque.
- High adhesive and well-balanced roller.
- Long-lasting powder painting, good polishing of metal list part.

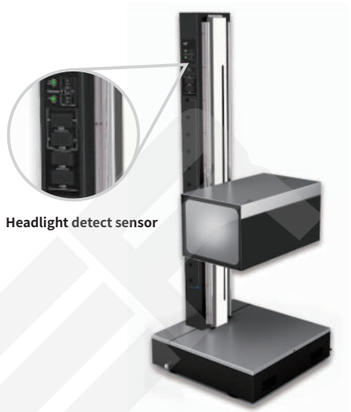
Main technical parameters

Item		Item		Item	
Maximum test speed	300 km/h	Speed display error	⩽±1%	Test wheel diameter	300-800 mm
Maximum test power	500 hp	Force display error	⩽±2%	Wheelbase range Range	1200~1800 mm
Maximum load	1000 kg	Power indication error	⩽±3%	Equipment Dim.	2560×1700×360 mm
Full loaded time	15 min	Equipment weight	700 kg	Power source	AC 220V,50Hz
Max. Absorb.Torque	3600 N	Roller Dim.	Φ318 mm	Max Power consum.	7.5 kW

Automatic Headlight Tester

Features

- Headlight tester is an important item during the inspection of safety performance of motor vehicles, right installation angle and sufficient luminous intensity are important guarantee for safety driving.
- COS2800 headlight tester is totally automatic. Based on the characteristics of luminous intensity distribution of driving and passing beam of headlight, the instrument adopts advanced image processing technology and have feature point accurately located. As a highly intelligent instrument, it can automatically measure the offset of optic axis and luminous intensity of the headlight.
- The instrument can be used in network inspection for safety inspection of motor vehicles, leave factory and car repair workshop.



COS 2800

Technical Data

Item	COS 2800
Application range	Headlight of the vehicle (light- & heavy-duty vehicles): Halogen, Xenon, Led
Positioning ways	Justification: Linear laser aid Centering: Point laser aid
Communication	PC, RS-232
Measurement range	Above:0-350 mm / 10 m (0–2°) Below:0-525 mm / 10 m (0–3°) Left:0-525 mm / 10 m (0–3°) Right:0-525 mm / 10 m (0–3°) Measuring distance:0.5m, can be set in accordance with the practical needs Height measuring range:250-1400 mm
Light intensity	Measuring range of high beam illuminating intensity:0-120000 Candela (cd)
Error of indicating value	Error of indicating value of high beam illuminating intensity:±10% Error of indicating value of high beam & near light axis offset:±12%
Working condition	Temperature:-5 ~ 40°C Relative humidity:20-80%
Voltage supply	Power supply:AC 220V ±10% 50/60Hz Battery:DC 12 V
Net. Dimensions (w x h x d)	703 ×616 ×1810 mm
Weight	120 kg

Manual Headlight Tester

Features

- Accurate inspection for high beam and low beam of automobiles, independent testing, fog light testing option available.
- Bright LCD screen, with professional Windows graphical operating system.
- "Arbitrary" 2D moving mechanism, laser-assisted positioning system to ensure easy lights center alignment operation.
- Standard RS232 communication port (optional) to computer, reliable network software.
- Optional blue-tooth wireless communication module, optional mini-printer a special design to convenient user’ s operation.
- Suitable for manual adjustment and inspection of automobile headlight height.
- Optional rechargeable battery module, adapt to a variety of work environments.
- Optional rail install version.

CSB-600M

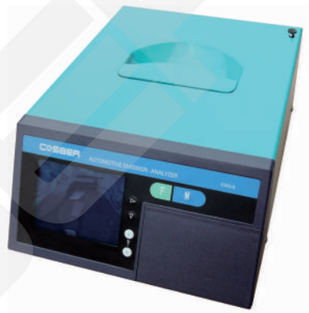
Technical Data

Item	CSB-600M / MQD-3C
Meauring range of high light illuminating intensity	0~120000 cd
Measuring range	vertical direction: up 350mm/10m ~ down 525mm/10m (up2° ~ down3°) horizontal direction: left 525mm/10m ~ right 525mm/10m (left3° ~ right3°)
Height measuring range	35~130 cm
Measuring distance	500m ±5mm
Indicated value error of high light illuminating intensity	±10%
Indicated value error of high light & near light axis offset	±12%
Temperature	-5~40°C
Relative humidity	⩽90%
Power supply	AV 220 ±10% 50/60HZ
Outer dimensions (l×w×h)	680×570×1580 mm
Weight	25 kg

Exhaust Gas Analyser

Features

- It used for measuring automotive emission exhaust CO, HC, CO_2, O_2, and NO.
- LCD display with Chinese/English operation menu. It is easy to operate.
- Inside bench is world advanced bench that meets OIML Class 0, The other sensors are imported world brand products.
- It has the functions with auto zero, auto calibration and leak check.
- Flexible probe can suit almost all kinds of tail tubes.
- It is equipped with the newest aluminum alloy drain separator.
- Original 30 seconds fast warm-up function.
- Auto compensation ambient pressure and environmental temperature.
- Auto calculate engine AFR, with O_2 sensor option.
- It is equipped with double idle test functions.
- Store more than 200 measuring results.
- It equipped standard RS-232 interface.
- Signal output for connecting computer easily.



KWQ-5

Technical Data

Item	KWQ-5
Connection of sample gas	Specitic intake port
Sample gas flow rate	Approx. 6 L/min
Sample gas pressure	From 0.01 kPa to 1.0 kPa
Repeatability	CO: 0-10.00% within ±0.02% vol or ±3% of readings, 10.01-15.00% within ±5% of readings CO_2: 0-16.00% within ±0.3% vol or ±3% of readings, 16.01-18.00% within ±5% of readings HC: 0-2000 ppm within ±4 ppm vol or ±3% of readings, 2001-5000 ppm vol within ±5% of readings, 5001-10000 ppm vol within ±10% of readings O_2: 0-10.00% within ±0.4% vol or ±3% of readings, 10.01-25.00% within ±1.0% vol NO: 0-5000 ppm vol within ±8% ppm vol or ±3% of readings
Power supply	AC 100-220V 50/60Hz
Mass	Approx. 7.5 kg
Warm-up time	30 seconds
Response time	10 seconds

Smoke Opacimeter

Features

- Split structure, separated measuring unit and control unit for easy operation.
- Large LCD screen, Chinese or English interactive menu, with opacity reading and light absorption coefficient reading, simple, direct and convenient operation.
- With functions of free acceleration test, transients, test and automatic test, display of measuring results.
- With functions of License Plate Number entry, data and view.
- 15 minutes warm-up time, automatic zero reset.
- With adoption of advanced partial flow technology, measuring directly smoke emissions of diesel-vehicles. “Scavenge air curtain” technology prevents the optical system from being polluted. With constant temperature control in the sample cell, it avoid condensation and influence of accuracy due to change of temperature.
- With functions of data printing and communication with host computer, serial RS-232C interface.
- The performance meets the requirement of ISO11614 and GB3847-1999.

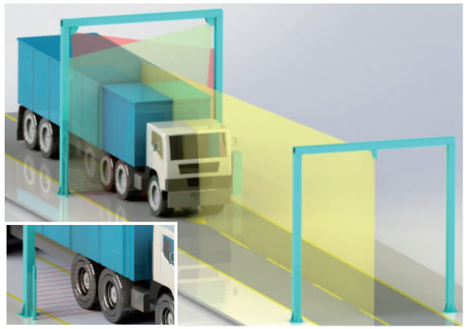
KYD-6

Technical Data

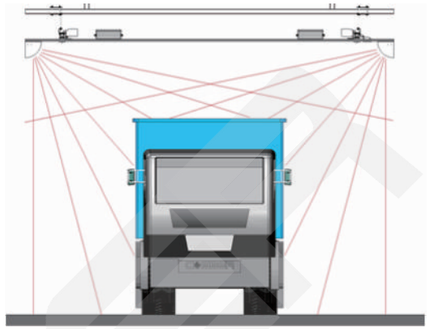
Item	KYD-6
Measuring Range	Opacity N: 0~99.9% Coefficient of light-absorption k: 0~16m^{-1}
Resolution	Opacity N: 0.1% Coefficient of light-absorption k: 0.01m^{-1}
Indication error	±2%
Stability	±1%/h
Ambient temperature	5~40°C
Relative humidity	0~90%
Power	AC 220V ±10% 50Hz ±1%
Weight	10 Kg
Output	RS-232(1200, 2400, 4800, 9600, 19200)

Vehicle Dimension Scanning System

Based on the latest 3D Laser and Cloud data processing technology, COSBER has developed C-VDSS1/2 system, a high precision 3D Laser Radar dimension scanner suitable for all types of vehicles. High performance Laser Radar sensors automatically scan the driving through vehicle and collect the 3D dimension information. The C-VDSS1/2 system stands years of real practice in China inspection centers for millions vehicle test, showing its strong multiple functions and high reliability.



C-VDSS-1



C-VDSS-2

Key Benefits

Automatic

One-key automatic measurement by Drive-through Mode within 30s, Vehicle Static mode within 60s.

Large Dimension

Measurement range of Height from 0~6 m, Length from 0~25 m, depending on site layout condition.

Accuracy

Professional 3D radar technology & Multipoint Matrix Algorithm ensure the result accuracy within 1%, display graduation is mm.

Flexible Installation

Special design of installation kit fits for Indoor, Outdoor and even inside testlane installation case.

All weather operation

Outdoor water-resistant with IP68 certificate, wide range of working temperature: -20°C~ 50 °C.

Database Access

Local Data management integrated and i-Cloud connection accessible.

C-VDSS Working Process

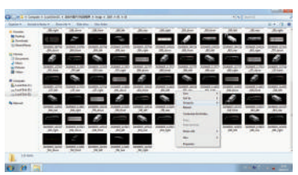
Start PC Software

Vehicle ready in place

Start to Scan

Drive-through the Zone

Dimension Result display

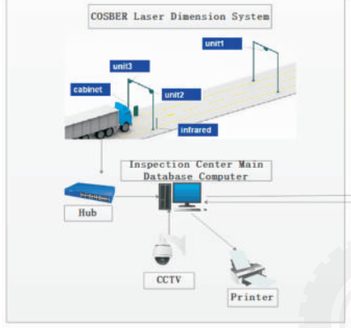


Data management

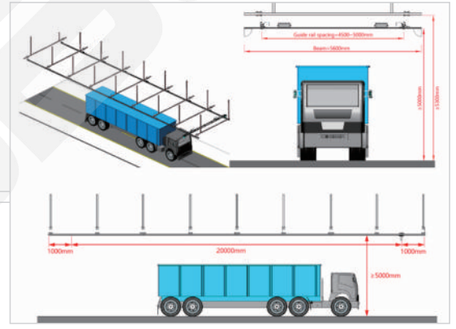
Technical parameters

Model	C-VDSS-1 (Dynamic)	C-VDSS-2 (Static)
Test Mode	Non contact, Vehicle Dynamic	Non contact, Vehicle Static
Test Time	< 30 seconds	< 60 seconds
Length Test range	0 ~22 meters	0 ~20 meters
Width Test range	0 ~ 5 meters	0 ~ 5 meters
Height Test range	0 ~ 6 meters	0 ~ 6 meters
Laser Accuracy	⩽20 mm	⩽20 mm
Test result Repeatability	99%-99.2%	99%
Resolution	1 mm	1 mm
Ground Flatness Requirement	± 20mm per 10 meter	± 10mm per 10 meter
Vehicle drive through speed	average speed within 10km/hour	Static during test
Protocol	Ethernet 100 Mbit TCP/ IP	Ethernet 100 Mbit TCP/ IP
Laser radar scanning unit	3 PCs fix positions	2 PCs movable by rails
Qualification	IP68 & CE	IP68 & CE
Power Supply	200W / 220V / 50Hz	1200W / 220V / 50Hz
Working condition	-30°C to 50 °C Temperature / 20 - 95% Humidity	-10°C + 45 °C Temperature / < 85% Humidity

IT & Equipment Structure of COSBER VDSS



C-VDSS-1

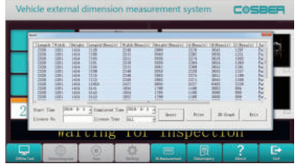


C-VDSS-2

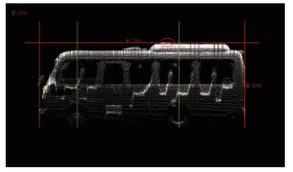
Outdoor Installation

Within Testlane (C-VDD-2)

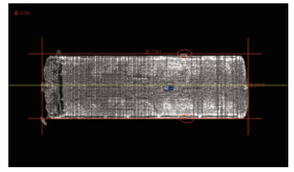
Independent Zone



Data query



Profile Scanned

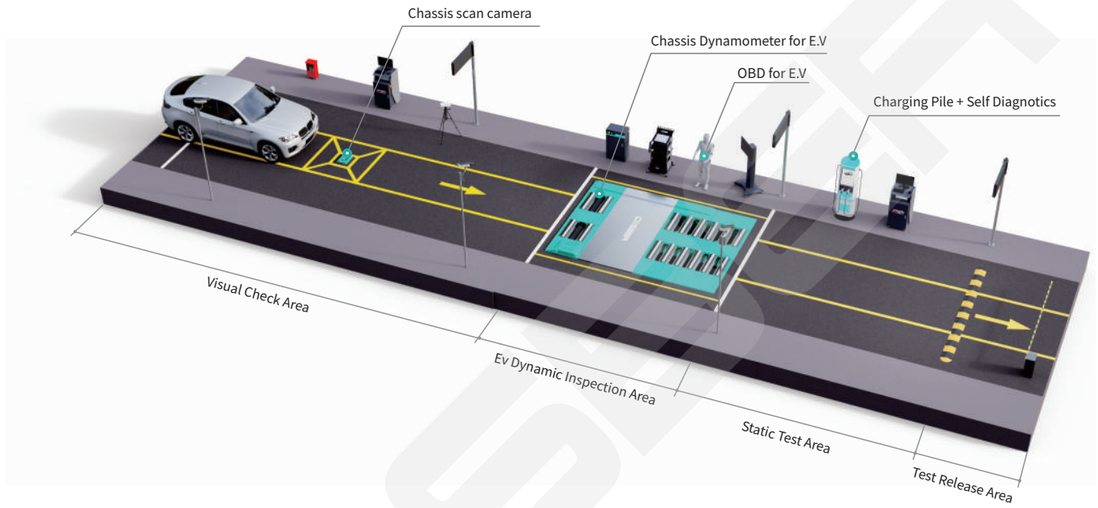


Vertical View

In Used Electric Vehicle Inspection Solutions

Background

According to the requirements of the national New Energy Vehicle Development Plan (2021-2035) in China, the sales of new energy vehicles will represent 20% of the total vehicles sales by 2025. In order to ensure the on road safety, Charging safety, and driver safety with electric vehicles, the in used electric vehicles should be tested and evaluated with effective and pragmatic method.



Inspection Process

Automatic Licence plate recognition → Ev Chassis Scanning, Battery Appearance Check → Dynamic Test Vehicle, Electronic System Diagnosis → Electric Safety Inspection, Interoperability Test → Report Printout

Plan To Introduce

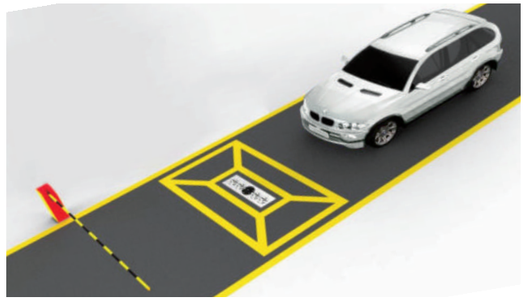
In 2020, the Ministry of Industry and Information Technology organized and formulated three mandatory national standards in China. Based on the Operation safety, Battery health and Personal safety of electric vehicles, this regulation provides after-market services for the electric vehicle industry by setting test procedures for the Electric vehicles: Conducting vehicle appearance, Electrical safety and Charge and discharge tests, and analyzing the overall operation data of electric vehicles.

GB18384-2020
Electric Vehicles Safety Requirements

GB38032-2020
Electric Buses Safety Requirements

GB38031-2020
Electric Vehicles Traction Battery Safety Requirements

Automatic license plate recognition, Battery pack chassis check



By scanning the chassis of the electric vehicle, the appearance of the battery pack attached to chassis of E.V is detected.

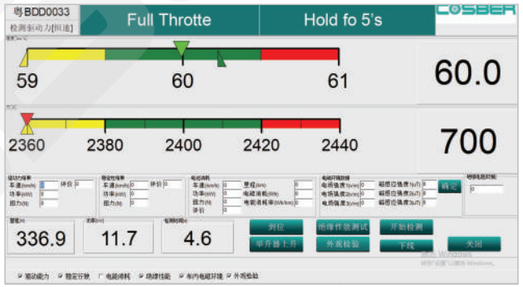
Electrical safety testing & Interoperability testing

E.V safety performance testing with interoperability, communication protocol conformance test, automatically analyze the data and generate test reports.

Vehicle electronic system diagnostic testing

Through E.V OBD tools, the functionality of electronic devices in E.V is diagnosed.

Evaluation of E.V driving Power and driving stably ability



Test of driving power and stable driving performance by a full capable Chassis dyno systems.

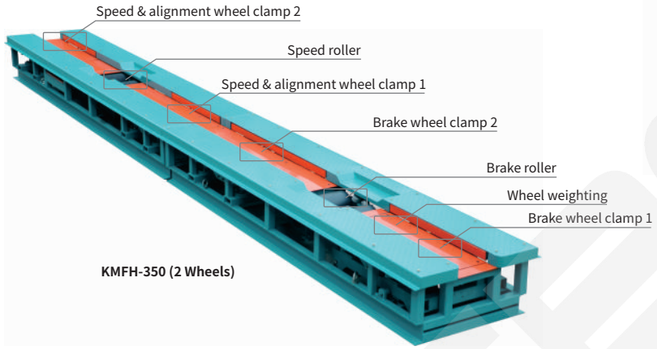
BMS battery test

Evaluate the power pack recharging stage, including voltage ,temperature, SOC, charge and discharge currency difference, and finally collect the total voltage of the battery pack.

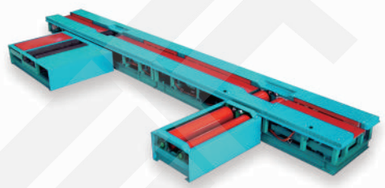
2&3 Wheels Motorcycle Testlane

Description

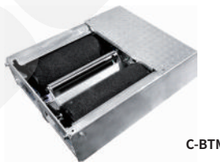
Motorcycle Tester is specially designed to inspect the brake performance and axle-load value of Motorcycle. Combined with the Wheel clamp Speedometer & Wheel Alignment (optional) . It is advanced equipment for Motorcycle Safety Technical Inspection Center, and it is also largely used in Motorcycle repairing industry and Assembly Factory.



KMFH-350 (2 Wheels)



KMFH-350Q (2&3 Wheels)



C-BTM-12

Features

- Automatic&pneumatic clamps control process for smooth and safe operation.
- High adhesion coating paint for longer working life.
- High precision sensor and high roundness of roller ensures the exactitude of result.
- Combination of Wheel load, Brake, Speedometer and wheel alignment test facilities.
- Standard RS-232 connection port.

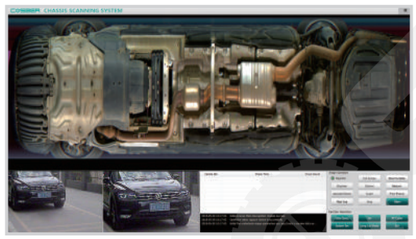
Technical Data

Item	KMX-350	KMX-350Q	C-BTM-12 (Brake Tester)
Measuring range	0-500 kg	0-1000 kg	0-2000 kg
Max. wheel weight	350kg	750 kg	1500 kg
Brake force	0-3000 N	0-3000 N × 2	0-6000 N
Measurement speed	0-80 km/h	0-80 km/h	--
Brake motor power	1.5 kW	2 × 1.5 kW	1 × 3 kW
Speed motor power	1.5 kW	2.2 kW	--
Motor type	Variable speed	Variable speed	--
Equipment weight	1250 kg	1850 kg	200 kg
Air supply	0.5-0.6 MPa	0.5-0.6 MPa	--
Power supply	AC 380V, 50Hz, ground	AC 380V, 50Hz, ground	AC 380V, 50Hz, ground

Chassis Scanning System

Features

- Automatic digital line scan camera, with high-resolution and clarity of the image.
- The complete image of chassis scanning is clear, complete, no distortion, no omission, can be clearly observed that the object is not less 2mm in diameter.
- Preparation of inspection processes to meet a variety of on-site needs.
- Multiple scene image monitoring, recording function.
- Multi-language user interface design.
- Strong scalability to easily achieve a variety of system linkage control.
- ALPR (Automatic Licence Plate Recognition) (optional).
- Multiple devices networked control functions (optional) .



Software interface

C-CSS-1

Technical Data

Item	C-CSS-1
Vertical resolution	2048 pixle
Check the width viewing angle	< 4 meters
Vehicle pass speed	1~30 Km/H
Chassis clearance rang	50 - 600mm
Auxiliary light	2×25 W LED
Water-proof	IP68
Equipment gross weight	30 kg
Equipment dimension L×W×H	400 × 450 × 88 mm
Working temperature	-10~55 °C