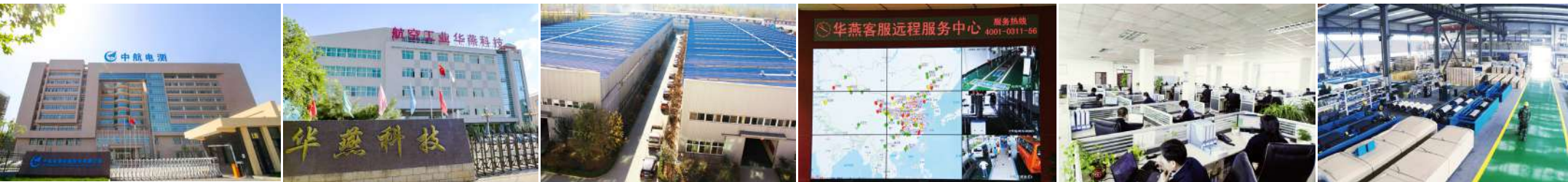




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## VEHICLE INSPECTION SYSTEM FACILITIES AND INSTRUMENTS

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# VEHICLE INSPECTION SYSTEM

## FACILITIES AND INSTRUMENTS



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# INTRODUCTION

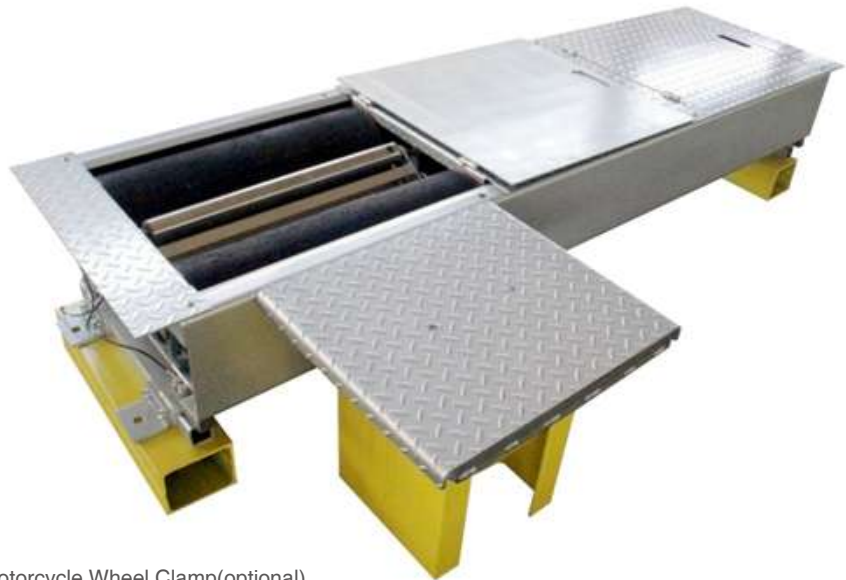
ZEMIC, Zhonghang Electronic Measuring Instruments Co., Ltd. (Stock Name: ZEMIC; Stock Code: 300114), established in 1965, is holding by Aviation Industry of China (AVIC). ZEMIC is a diversified modern high-tech enterprise, specialized in developing and producing national defense and civil construction measuring and controlling system solution.

In 2012, ZEMIC acquired Shijiazhuang Huayan Transportation Technology Co., Ltd, which founded in 1987, and has been one of the earliest manufacturers to research, develop and produce motor vehicle inspection equipment in China.

ZEMIC Huayan has participated in the formulation and revision of national standards for 42 kind of products, achieved 18 items technology awards successively, 48 items utility patents and 5 items invention patents. ZEMIC Huayan is the standing council member unit of China Automobile Maintenance and Repair Equipment Industry Association, the council member unit of China Automobile Maintenance Trade Association, the member unit of China Road Traffic Association, China Measurement Association and China Automobile Maintenance Standardization Technical Committee. ZEMIC Huayan provides to customers the long-term reliable technical support and quality service based on high self-producing capability, steady business operation and abundant service experience over 30 years. Nowadays, with the rapid development of science and technology, ZEMIC Huayan will dedicate on establishing an acknowledged brand widely in the domain of motor vehicle inspection industry and driver training & exam industry, to build the good corporate image and make great contribution for development of motor vehicle after-sales market!

01

ZEMIC 3 IN 1 MOTOR VEHICLE INSPECTION SYSTEM



■ Brake and Axle load Tester + Sideslip Tester+ Removable Motorcycle Wheel Clamp(optional)

Functions

- It is applicable to the detection of the axle(wheel) load, brake force, sideslip and other motor vehicle performance evaluation.

Technical Features

- Applicable vehicle type: two-wheeled motorcycle, four-wheeled automobile (including full-time 4WD automobile).
- Compact and reasonable structure, robust and artistic design.
- Small area occupied for whole system, fast installation, fast calibration and easy maintenance.
- The foldable bench covers with drive-over protection and dustproof function.
- User-friendly automatic operation process.
- Modular structured design, flexible function arrangement.

Technical Parameter



■ ZDCH-3 (Brake & Axle Load Tester)

ITEM	TECHNICAL PARAMETER
MODEL	ZDCH-3 (Brake & Axle Load Tester)
Max. Axle Load, kg	3000
Brake Force Test Range, N	0~8000x2
Brake Force Test Speed, km/h	2.5
Roller Diameter, mm	200
Roller Length, mm	700
Wheel Track, mm	800~2200
Brake Force Test Indication Error%	±3
Scale Value ,daN	1
Axle Load Test Indication Error, %	±2
Scale Value ,kg	1
Power Supply ,V	AC380±10%
Dimension L×W×H ,mm	2490×670×352



■ ZDCH-3 (Sideslip Tester)

ITEM	TECHNICAL PARAMETER
MODEL	ZDCH-3 (Sideslip Tester)
Max Axle Load, kg	3000
Test Range, m/km	-10~+10
Testing Plate Size, mm	570×500
Indication Error, m/km	±0.2
Sensor Power, V	DC12
Dimension L×W×H, mm	570×500×50



■ Removable Motorcycle Wheel Clamp (optional)

ITEM	TECHNICAL PARAMETER
MODEL	Motorcycle Wheel Clamp
Wheel Tread Width, mm	30mm~280mm
Clamp Travel Length(each side), mm	125mm
Weight, kg	20
Dimension L×W×H, mm	673x700x75



## ZEMIC Vehicle Inspection Management System V11.0

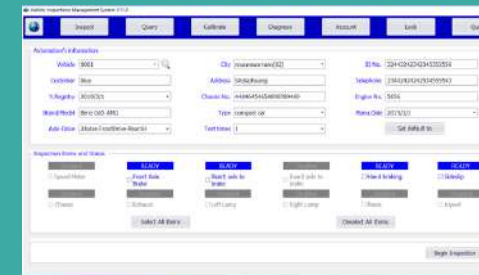


### Function & Feature

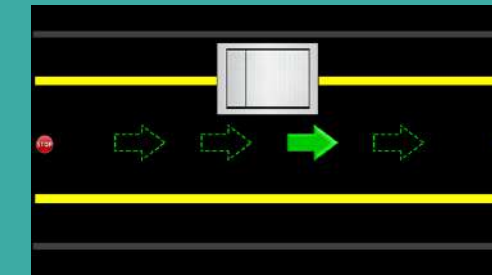
- Operating Condition: Windows Series(Win7/Win8/Win10)
- Fully functional design: It is applicable to detection of four-wheeled automobile (including full-time 4WD automobile) under the standard configuration; The additional detection of two- wheeled motorcycle will be available when the removable motorcycle clamp is applied.
- User-friendly software interface (addable local languages support )
- The graphic, text and voice operation is enabled in this system.
- 1-Wire protocol design enables the system to run in general-purpose computer.
- Modular design, the pluggable modular connection facilitate maintenance.

## Software Interface Display

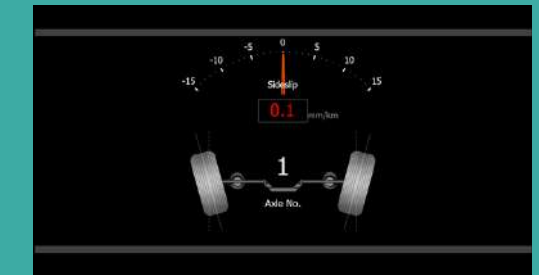
### Information Entry



### Sideslip Test



- Drive over sideslip tester at the speed of 5km/h



- Sideslip test result display interface(test failed)

### Brake Test



- Front Axle In Position



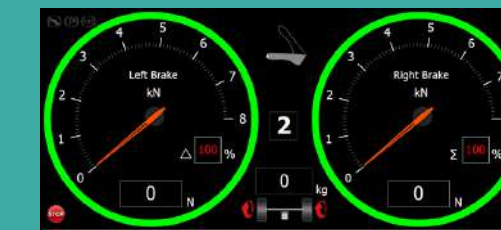
- Start Braking Now



- 2<sup>nd</sup> axle in position



- Start Braking Now

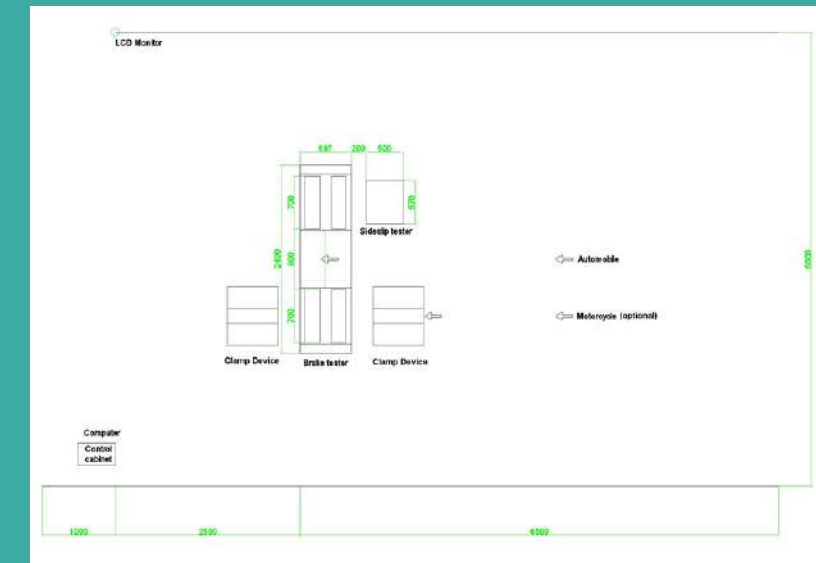
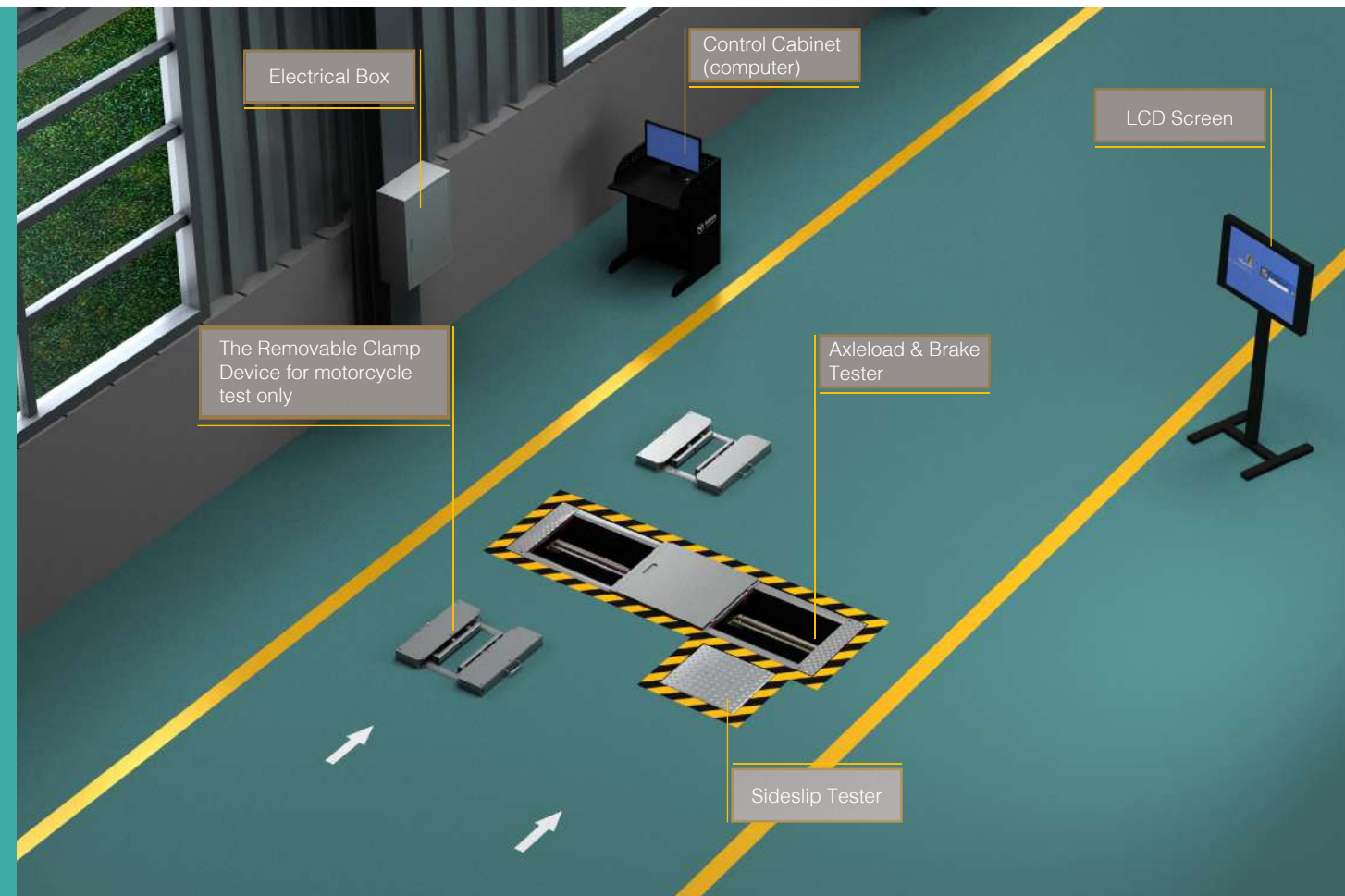


- Service Brake Test Complete

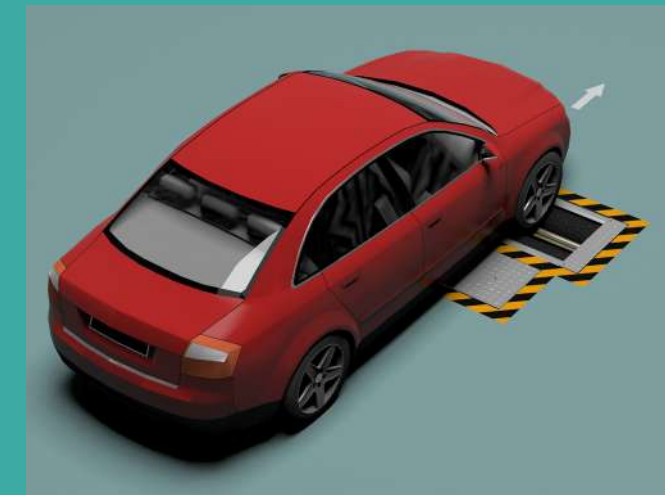


- Parking Brake Test

## Workshop Layout And Test Mode Display



### Test Mode Display



■ Four-wheeled motor vehicle Test (full-time 4WD car test is available)



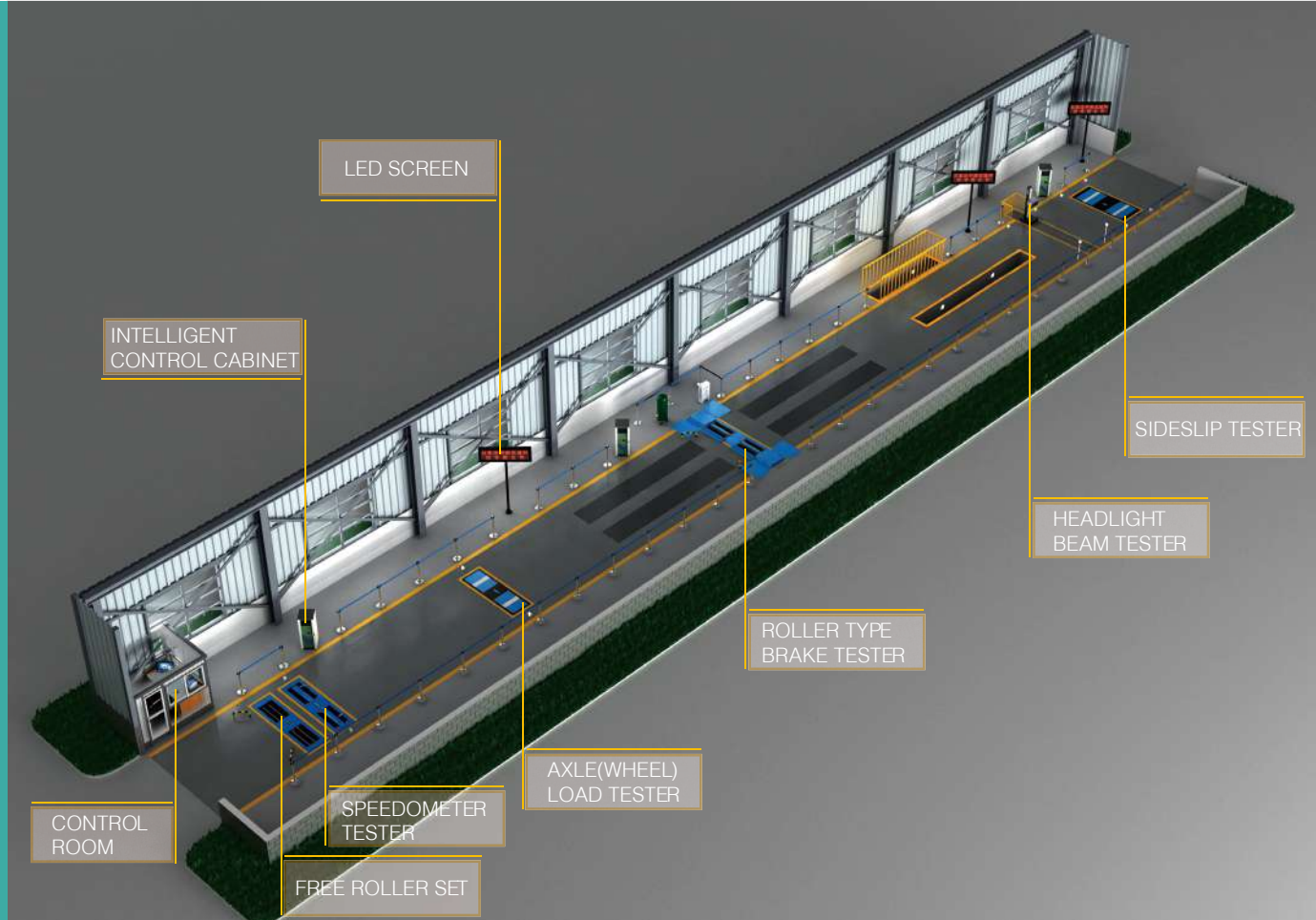
■ Two-Wheeled Motorcycle Test(with the optional removable clamp device)



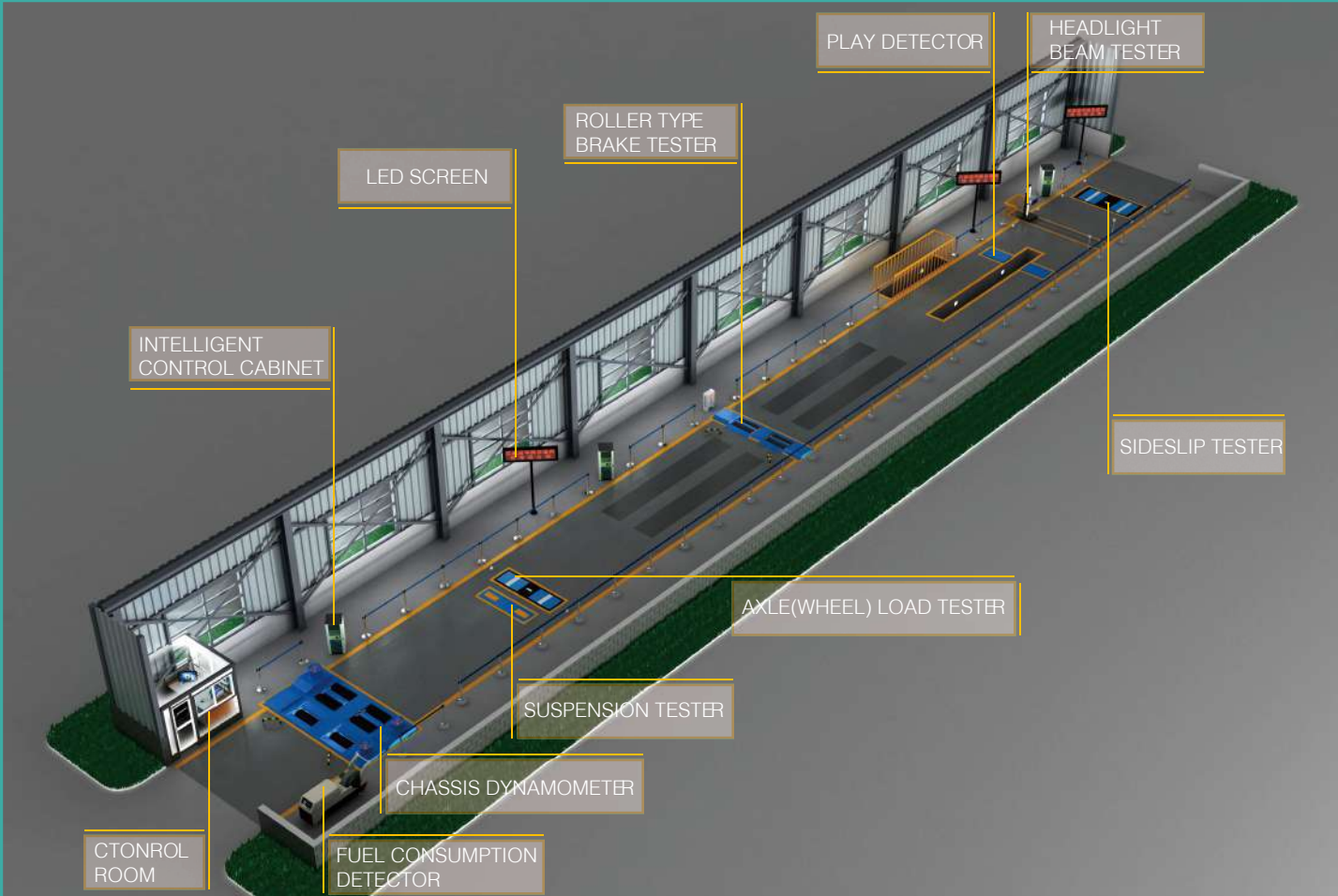
02

ZEMIC MOTOR VEHICLE INSPECTION SYSTEM

ZEMIC MOTOR VEHICLE INSPECTION SYSTEM is widely applicable to the detection of overall performance of motor vehicle, which is providing to customers with a series of testing solutions covers various types of motor vehicles, including: Vehicle Identification (ZEMIC Motor Vehicle Control Software) -- On-line Vehicle Info. Verification (ZEMIC Upper Platform Networking Software)--Vehicle Appearance Inspection (ZEMIC Visual Inspection Auxiliary Tools) -- Vehicle On-line Test (ZEMIC Motor Vehicle Inspection Line)—Road Test (ZEMIC Portable Brake Device)



■ ZEMIC Motor Vehicle Inspection Line

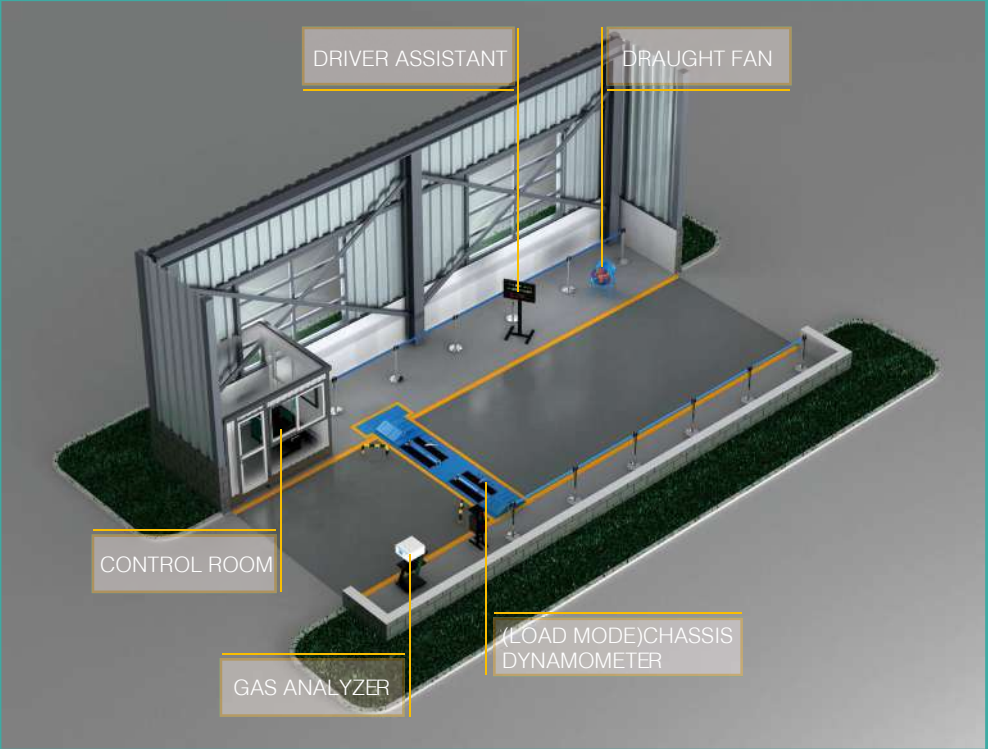


■ ZEMIC Motor Vehicle Inspection Line

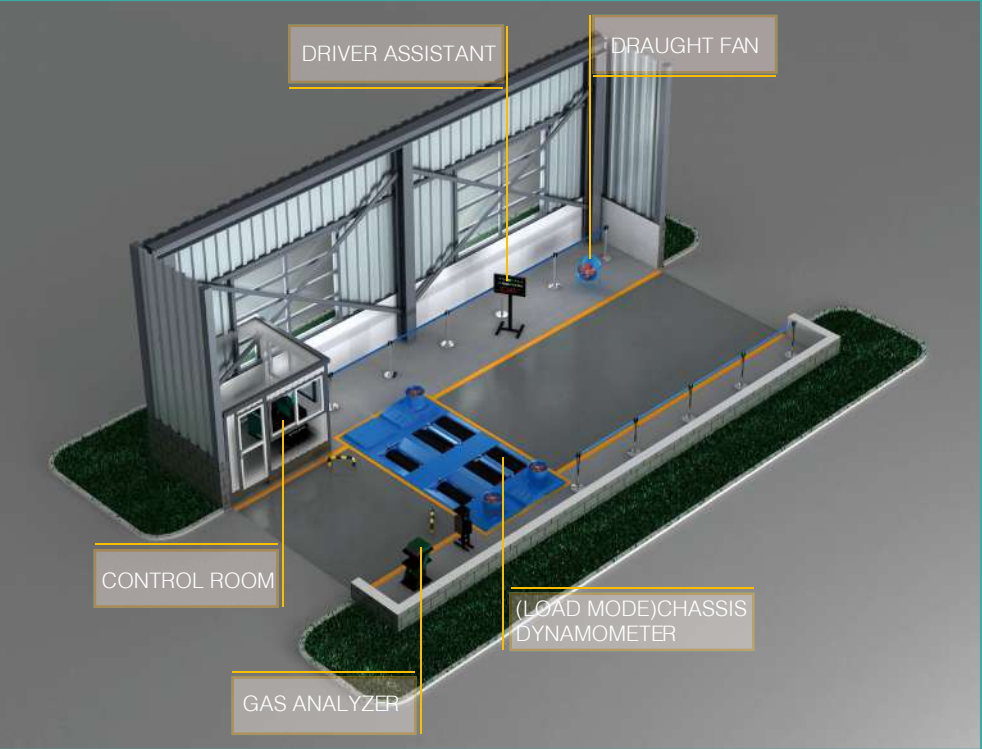
# 02 ZEMIC MOTOR VEHICLE INSPECTION SYSTEM



Motorcycle Inspection Line



A Load Mode Exhaust Emission Inspection System (Light Duty Vehicle)



A Load Mode Exhaust Emission Inspection System (Heavy Duty Vehicle)



03

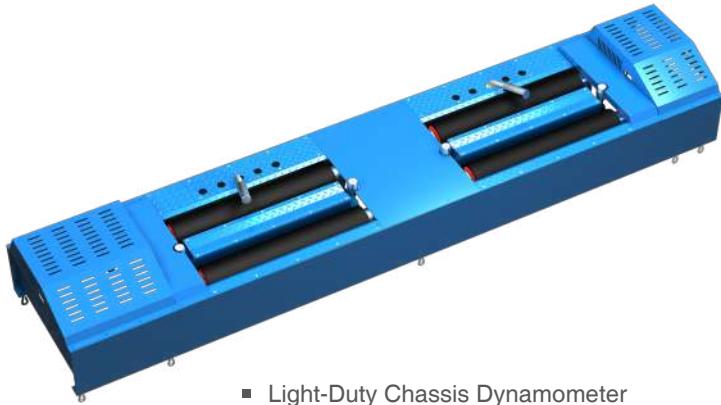
CHASSIS DYNAMOMETER  
(LOAD MODE EXHAUST EMISSION TEST)

Functions

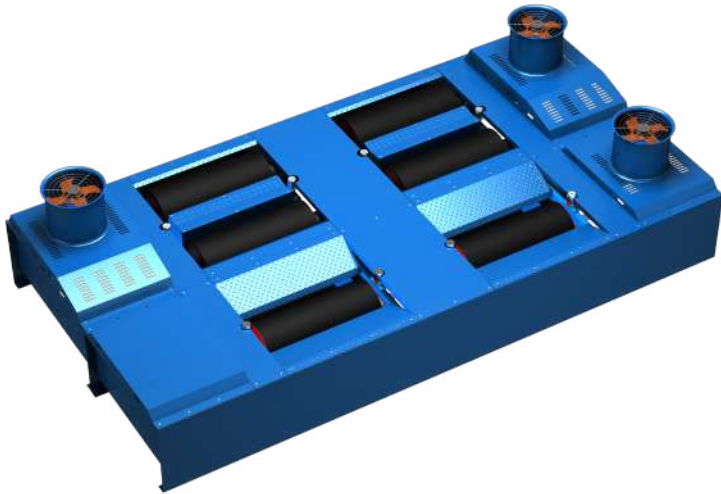
HYCG Series Chassis Dynamometer consists of roller set, loading device, roller preheating motor and synchro-mechanism mainly. It is applicable to the load mode exhaust emission test for gasoline and diesel vehicles.

Application

- Motor Vehicle Inspection Institution
- Automobile and Engineering Machinery Manufacturer



■ Light-Duty Chassis Dynamometer



■ Heavy-Duty Chassis Dynamometer

Technical Features

- High-Power Air-Cooling Electric Eddy Current Dynamometer.
- High Performance & Maintenance-Free.
- Knurled and spray painting roller surface with high abrasion resistance, adhesion coefficient $\geq 0.7$ .(the optional roller surface treatment: nickel coat or zinc coat)
- High-precision belt type synchro-mechanism.
- Integrated frame structure bench, high bearing capacity, stable and durable frame structure.
- High-precision dynamic balanced roller, running smoothly, less vibration and low noise.
- Use the industrial computer as the system main controller.
- Emissions inspection device: 5 Gases Composition Analyzer and Opacimeter.

Technical Parameter

ITEM	TECHNICAL PARAMETER					
MODEL	HYCG-030F	HYCG-030G	HYCG-100H	HYCG-130LD4A	HYCG-130LD6A	HYCG-180LD6A
Max.Axle Weight, t	3	3(drive-on 10t)	10	13		18
Roller	4 ROLLERS				6 ROLLERS	
Eddy Current Retarder Rated Power, kW	160/250(Lug Down Method Test)		250	350x2	350x3	
Driving Force Test Range, N	0~9800			0~8820x2		
Max.Testing speed, km/h	130					
Basic Inertia ,kg	907.2±18.1			1452.8±18.1		
Allowable Indication Error	±0.5% or ±0.2km/h(speed), ±1%(torque force)					
Scale Value	0.1m/h(speed), 1N(torque force)					
Roller Diameter, mm	217			452		
Roller Surface Treatment	nickel coat or zinc coat(optional)					
Wheel Track, mm	750~2550	750~2900		800~3100		800~3200
Roller Preheating Motor Power, kW	7.5			22		
Working Voltage, V	AC220±10%, AC380±10%					
Dimension(LxWxH), mm	3860x970x590	4625x990x670		5280x1450x839	5280x2684x839	5380x2684x836
Weight, t	1.7	2.3		3.6	6.4	6.4

04

CHASSIS  
DYNAMOMETER

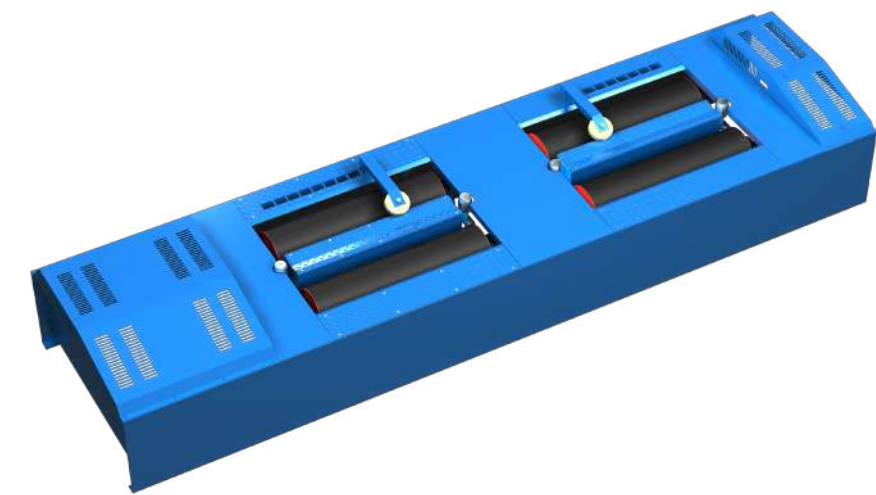
(MOTOR VEHICLE POWER  
PERFORMANCE TEST)

Functions

HYCG Series Chassis Dynamometer (power performance test) consists of roller set, loading device and lifting device mainly. It is applicable to the power performance test and fuel consumption economy efficiency test of the light-duty (heavy-duty) gasoline vehicles and diesel vehicles.

Application

- Motor Vehicle Inspection Institution
- Automobile and Engineering Machinery Manufacturer



■ 10t Chassis Dynamometer

Technical Features

- High-Power Air-Cooling Electric Eddy Current Dynamometer.
- High Performance & Maintenance-Free.
- Knurled and spray painting roller surface with high abrasion resistance, adhesion coefficient≥0.7.(the optional roller surface treatment: nickel coat or zinc coat)
- Integrated frame structure bench, high bearing capacity, stable and durable structure.
- High-precision dynamic balanced roller, running smoothly, less vibration and low noise.
- Use the industrial computer as the system main controller.

Technical Parameter

ITEM	TECHNICAL PARAMETER				
MODEL	HYCG-030G	HYCG-030F	HYCG-100E2	HYCG-130F1	HYCG-130F2
Max.Axle Weight, t	3(drive-on 10t)	3	10	13	
Eddy Current Retarder Rated Power, kW	160/250		350	350x2	350x3
Max.Testing speed, km/h	130				
Speed Test Indication Error, km/h	±0.2				
Driving Force Test Range, N	0~9800		0~11760	0~8820x2	
Power Test Indication Error, %	±1				
Roller Diameter, mm	217		320	452	
Roller	4 ROLLERS				6 ROLLERS
Roller Surface Treatment	nickel coat or zinc coat(optional)				
Wheel Track, mm	750~2900	750~2550	750~2900	800~3100	
Working Voltage, V	AC220±10%, AC380±10%				
Dimension(LxWxH), mm	4625x990x670	3860x970x590	4916x1320x769	5280x1450x839	5280x2684x839
Weight, t	2.3	1.7	2.0	3.6	6.0



05

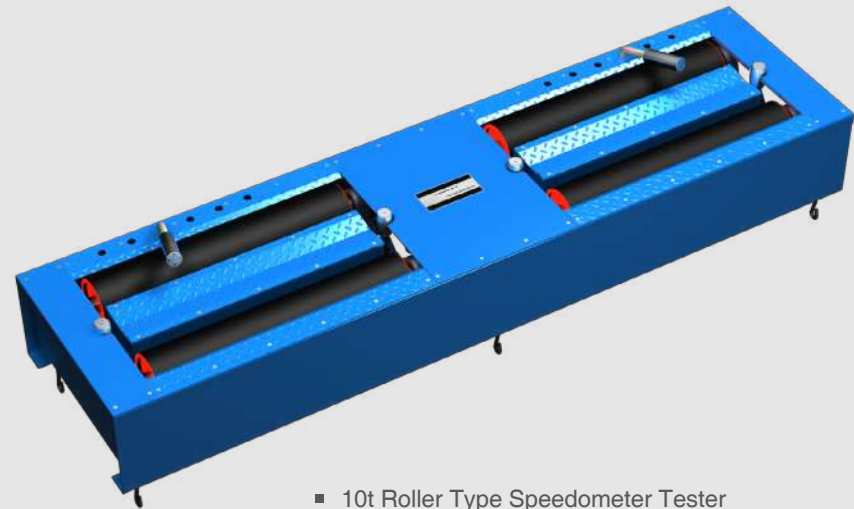
SPEEDOMETER TESTER

Functions

CS Series Speedometer Tester consists of roller set, coupling device, lift device and speed sensors mainly. It is applicable to the measurement of speedometer indication error, odometer indication error (optional) and taximeter indication error (optional).

Application

- Motor Vehicle Inspection Institution
- Automobile and Engineering Machinery Manufacturer



10t Roller Type Speedometer Tester

Technical Features

- Knurled and spray painting roller surface with high abrasion resistance and high adhesion coefficient;( the optional roller surface treatment: zinc coat).
- High-precision dynamic balanced roller, running smoothly, less vibration.
- High-precision encoding sensors, working stably.
- The auxiliary wheel limiter design for providing the safety protection during whole test process.
- The standard communication interface design for fast connection to the network.

Technical Parameter

ITEM	TECHNICAL PARAMETER			
MODEL	CS-030A	CS-100D	CS-130D	CS-180A
Max.Axle Weight,t	3	10	13	18
Test Range,km/h	0~120			
Scale Value,km/h	0.1			
Indication Error,%	±1			
Wheel Track,mm	700~2550	700~3100		800~3200
Roller Diameter,mm	190	215		320
Roller Surface Treatment	spray painting/zinc coat(optional)			
Working Air Pressure,MPa	0.7			
Lift Type	air bag			
Dimension(LxWxH),mm	2980x800x375	3526x880x420		3720x1100x561
Weight,t	0.75	1.32	1.42	2.3

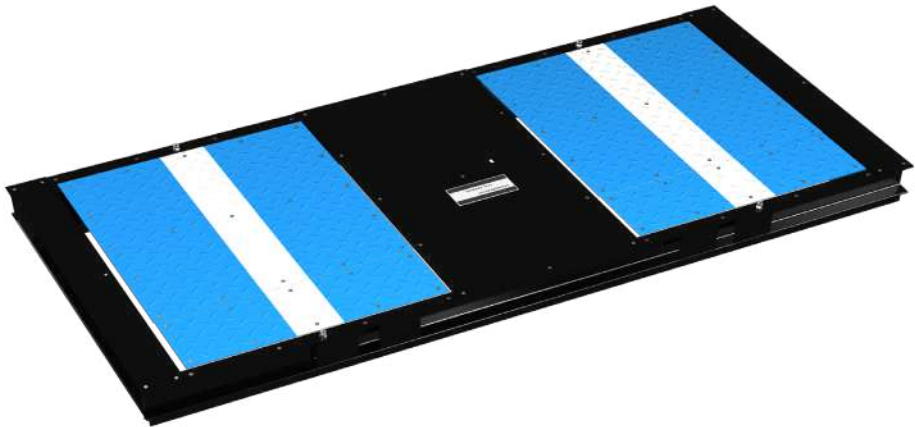
06 SIDESLIP TESTER

Functions

HYCG Series Chassis Dynamometer (power performance test) consists of roller set, loading device and lifting device mainly. It is applicable to the power performance test and fuel consumption economy efficiency test of the light-duty (heavy-duty) gasoline vehicles and diesel vehicles.

Application

- Motor Vehicle Inspection Institution
- Automobile and Engineering Machinery Manufacturer
- Vehicle Maintenance Institution



Sideslip Tester

Technical Features

- Thanks to the double sliding plates linkage type structure, high-synchronism measurement could be achieved.
- The strong hardening treated transmission parts with high abrasion resistance.
- The stable and high precision differential displacement sensors.
- 'F' model is equipped with the fast return device, which for detecting the double steering-axle vehicle specially.
- The standard communication interface design for fast connection to the network.

Technical Parameter

ITEM	TECHNICAL PARAMETER					
SERIES	CH-030	CH-100		CH-130		CH-180
MODEL	CH-030D	CH-100D	CH-100F	CH-130D	CH-130F	CH-180D
Max.Axle Weight, t	3	10		13		18
Fast Return Device(double steering-axle vehicle)	no	no	yes	no	yes	no
Test Range, m/km	-10~+10					
Scale Value, m/km	0.1					
Indication Error, m/km	±0.2					
Synchronism Error, mm	0.1					
Wheel Track, mm	700~2550	700~2800				800~3200
Releasing Plate, mm	885x300	1000x300				1050x300
Drive-over Plate Dimension, (LxW) mm	885x1000	1000x1000				1050x1000
Sensor Power Supply, V	DC12					
Structure Type	double linkage					
Bench Dimension (LxWxH),mm	2886x1421x180	3136x1411x230		3136x1441x230		3370x1461x271
Main Controller	IPC or instrument					
Weight,t	0.7	0.95		0.95		1.33



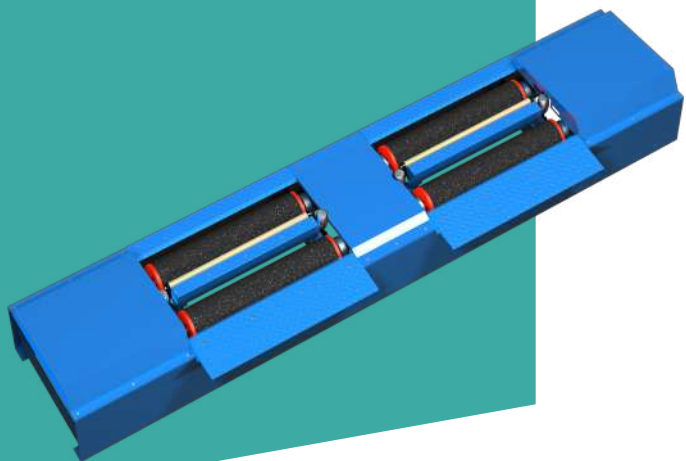
07 ROLLER TYPE BRAKE TESTER

Functions

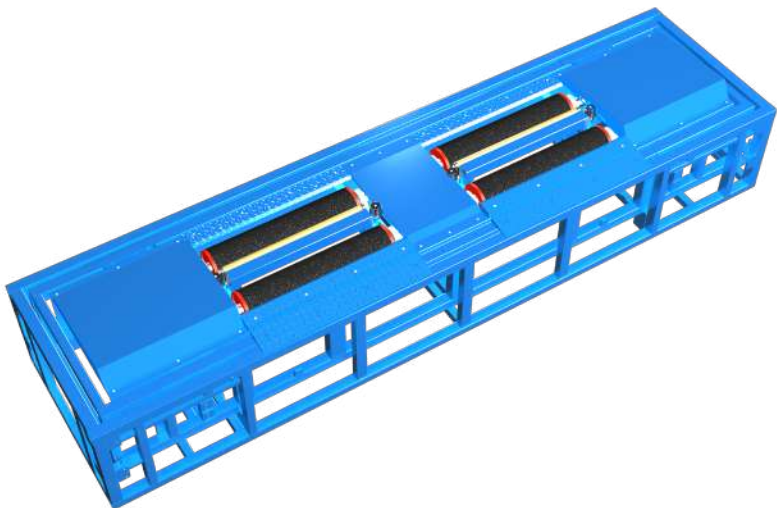
FZ Series Brake Tester consists of emery coated roller set, motors, the third roller (stop device) and load cell mainly. It is applicable to the detection of wheel maximum braking force, wheel resistance, braking dynamic balance and other vehicle braking related performance evaluation.

Application

- Motor Vehicle Inspection Institution
- Automobile and Engineering Machinery Manufacturer
- Vehicle Maintenance Institution



Roller Type Brake Tester



Roller Type Brake Tester (Load Simulation Function)

Technical Features

- European standard large diameter roller set suitable for high speed test.
- Emery coated roller surface, adhesion coefficient  $\geq 0.8$ .
- Lateral mounted gearbox, running smoothly, high-precision test.
- The special circuit design for overvoltage protection and phase dislocation protection for the smooth motor operation.
- Thanks to the high reliability stop device(the third roller) design for preventing the tyre damage in braking test.
- The model '130Q' & '130JY' is applicable to the load simulation mode brake test.
- The model '130D' is applicable to co-axles vehicle brake test.

Technical Parameter

ITEM	TECHNICAL PARAMETER							
SERIES	FZ-030		FZ-100		FZ-130			FZ-180
MODEL	FZ-030G	FZ-030HC	FZ-100G	FZ-100HC	FZ-130D	FZ-130Q	FZ-130JY	FZ-180J
Max.Axle Weight, t	3		10		13			18
Motorcycle Brake Test Unit	no	yes	no	yes	no			no
Brake Test Range, daN	0~1200x2		0~3500x2		0~3900x2			0~5200x2
Scale Value, daN	1	2						
Indication Error,%	±3							
Wheel Track, mm	700~2550		700~2900		700~3100	700~3100	700~2900	800~3200
Roller Diameter, mm	245							
Axle Load Test, kg	--				13000			18000
Roller Surface	emery coated							
Linear Speed on Roller Surface, km/h	2.5							
Lift Type and Slave Roller Max. Lifting Distance, mm	--					pneumatic lift/100	hydraulic lift/100	pneumatic lift/100
Working Air Pressure, MPa	0.6							
Motor Power Supply, V	AC380±10%							
Motor Power, kW	4X2		11X2		15X2			18.5X2
Dimension(LxWxH),mm	3760x870x572		4710x950x662		4950x1775x678	5430x1375x1020	5430x1820x938	5160x2230x1085
Weight	1.3	1.5	1.95	2.3	2.7	4.5	4.0	5.3

08

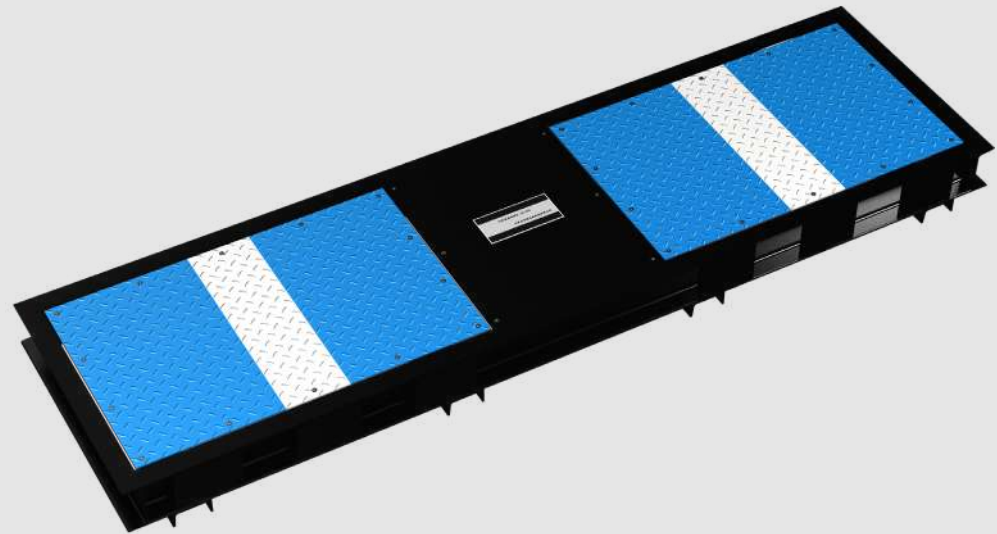
AXLE (WHEEL) LOAD TESTER

Functions

ZCS Series Axle(Wheel) Load Tester consists of left & right bearing plate, bench frame and load cells mainly. It is applicable to the detection of vehicle axle weight.

Application

- Motor Vehicle Inspection Institution
- Automobile and Engineering Machinery Manufacturer
- Vehicle Maintenance Institution



Technical Features

- Thanks to the suspension type weighing structure for realizing the smooth repeatability of the test.
- High-precision and high-stability load cell and pre-amplifier.
- The standard communication interface design for fast connection to the network.

Technical Parameter

ITEM	TECHNICAL PARAMETER				
SERIES	ZCS-030		ZCS-100	ZCS-130	ZCS-180
MODEL	ZCS-030B	ZCS-030HB	ZCS-100E	ZCS-130E	ZCS-180B
Max.Axle Weight,t	3		10	13	18
Test Range,t	0~1.5x2		0~5x2	0~6.5x2	0~9x2
Scale Value,kg	1		2		5
Indication Error,%	±2				
Test Plate Dimension (each side) (LxW), mm	925x600	925x600(L)	1200x800	1200x800	1200x800
		1535x600(R)			
Sensor Power Supply,V	DC12				
Bench Dimension (LxWxH), mm	2666x716x163		3236x936x168	3236x936x168	3346x946x180
Main Controller	IPC or instrument				
Weight,t	0.30	0.32	0.62	6.2	0.67



09

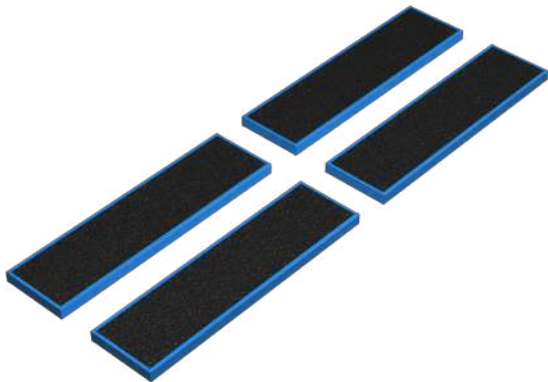
PLATE TYPE BRAKE TESTER

Functions

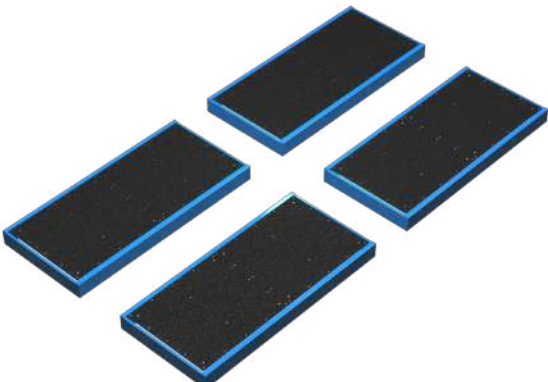
HPZS Series Brake Tester consists of two or four pieces plate type brake test units with same function. It is applicable to the detection of brake force, dynamic wheel load, suspension efficiency and so on.

Application

- Motor Vehicle Inspection Institution
- Automobile and Engineering Machinery Manufacturer
- Vehicle Maintenance Institution



■ Plate Type Brake Tester(3t)



■ Plate Type Brake Tester(10t)

Technical Features

- Integrated framework bearing structure, mesh style emery coated plate surface, high adhesion coefficient, high stability.
- High-precision and high-stability sensor and amplifier.
- Large measurement area.
- Compared with the roller type brake tester, the plate type brake tester can quickly detect the braking force of 4WD Vehicle.
- Thanks to the modularization design, the different combination of testing units can realize the detection of braking performance and suspension shock absorption efficiency for various vehicle types, and the detection of braking performance of two-wheeled and three-wheeled motor-cycle.

Technical Parameter

ITEM		TECHNICAL PARAMETER					
SERIES		HPZS-3		HPZS-10		HPZS-13	
MODEL		HPZS-3D	HPZS-3E	HPZS-10D		HPZS-10E	HPZS-13E
COMBINATION		6 plates	4 plates	6 plates		4 plates	4 plates
Max.Axle Weight,t		3		middle plate	left&right plate	10	13
				3	10		
Wheel Load Test Range, kg		0~1500			0~5000		0~6500
Brake Force Test Range, daN		0~1500			0~4900		
Scale Value	wheel load, kg	1			2		
	brake force, daN	1			2		
Indication Error,%	wheel load	±2					
	brake force	±3					
Bench Dimension (LxWxH) mm		middle plate: 1780x824x230	2387x824x230	middle plate: 1780x824x230		4162x1122x253	
		left&right plate: 2378x824x230		left&right plate: 4162x1122x253			
Test Plate Dimension(each side) (LxW) mm		middle plate: 1700x700	2300x700	middle plate: 1700x700		4050x1000	
		left&right plate: 2300x700		left&right plate: 4050x1000			
Weight, t		4.6	3.48	5.7		4.5	4.6

10

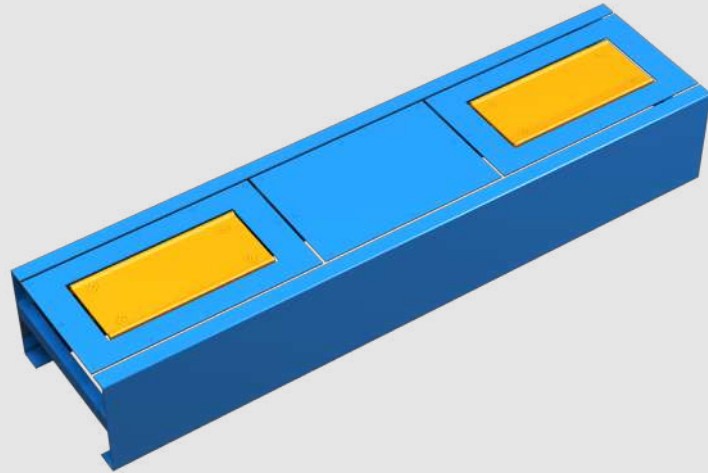
SUSPENSION TESTER

Functions

HY-XX Series Suspension Tester consists of vibration plates, vibration exciter and sensors mainly. It is applicable to the detection of vehicle suspension shock absorption efficiency, resonant frequency and so on relative testing items.

Application

- Motor Vehicle Inspection Institution
- Automobile and Engineering Machinery Manufacturer
- Vehicle Maintenance Institution
- R&D Institution



■ Suspension Tester

Technical Features

- Resonant structure, high-precision and high repeatability.
- The tester is equipped with strain force sensor and special high-precision pre-amplifier.
- Overload protection motor.
- The standard communication interface design for fast connection to the network.

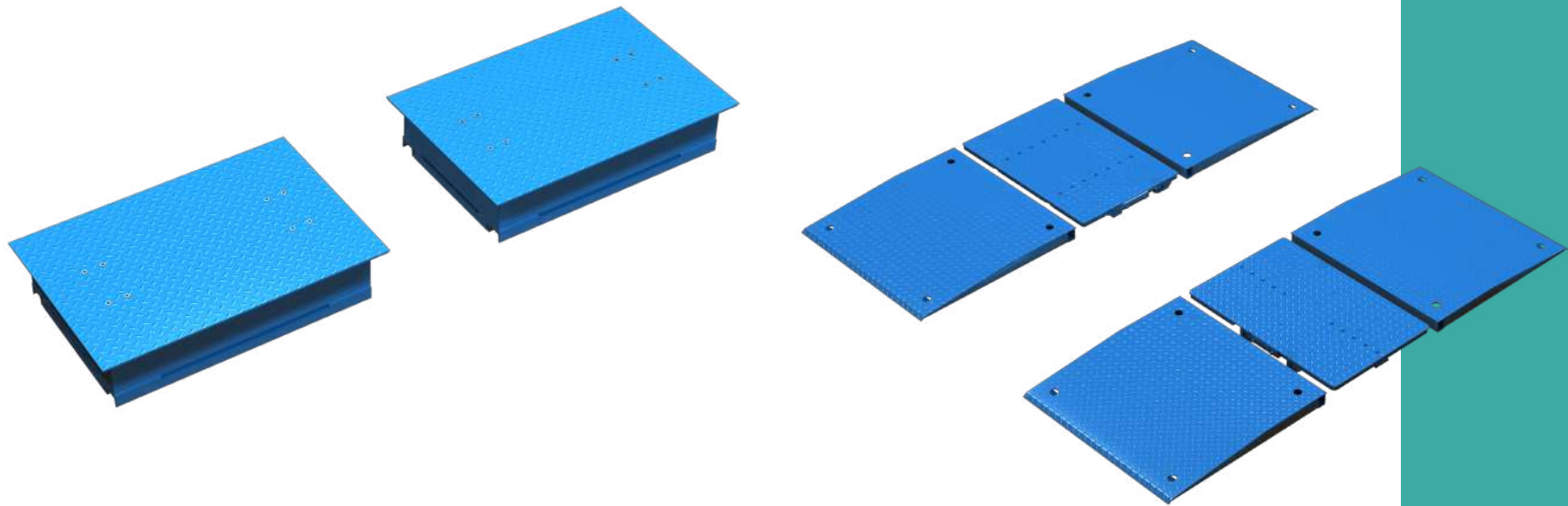
Technical Parameter

ITEM	TECHNICAL PARAMETER	
MODEL	HY-XX-015C	HY-XX-015D
Axle Weight, t (drive-on)	3	13
Test Range, t	0~0.75x2	
Repeatability of Absorption Rate,%	3	
Weighing Indication Error,%	±2	
Weighing Scale Value, kg	1	
Test Plate Dimension,(LxW), mm	600x265	675x400
Sensor Power Supply, V	DC12	
Motor Power, kW	3x2	
Motor Power Supply, V	AC380±10%	
Bench Dimension (LxWxH), mm	2400x600x400	
Main Controller	IPC or instrument	
Weight, t	0.69	



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PLAY DETECTOR



■ Chassis Clearance Play Detector(embedded installation)

■ Chassis Clearance Play Detector( floor type)

Functions

HYJX Series Play Detector consists of left and right movable platforms, oil cylinder and hydraulic system mainly. It is applicable to the auxiliary detection of fit-clearance of vehicle suspension and parts in steering system.

Technical Features

- Hydraulic driven tester with powerful working torque force.
- Baking finish bench surface.

Technical Parameter

ITEM	TECHNICAL PARAMETER				
MODEL	HYJX-100B(floor type)	HYJX-130B(floor type)	HYJX-100C	HYJX-100C	HYJX-180A
Max. Axle Weight,t	10	13	10	13	18
Plate Number,pc	2				
Plate Movement Range,mm	±50				
Plate Moving Force,kN	20	30	20	30	40
Plate Moving Speed,mm/s	60~80		30~40		60~80
Motor Power,kW	4		3		4
Motor Power Supply,V	AC380±10%				
Drive Mode	hydraulic drive				
Bench Dimension (each side) (LxWxH), mm	1210x810x86		1150x750x267		1210x805x260
Weight,t	1.49		1.20		1.25

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FREE ROLLER SET

Functions

It is used to support the non-test axle of double rear axle vehicle during the process of speedometer test and brake test.

Application

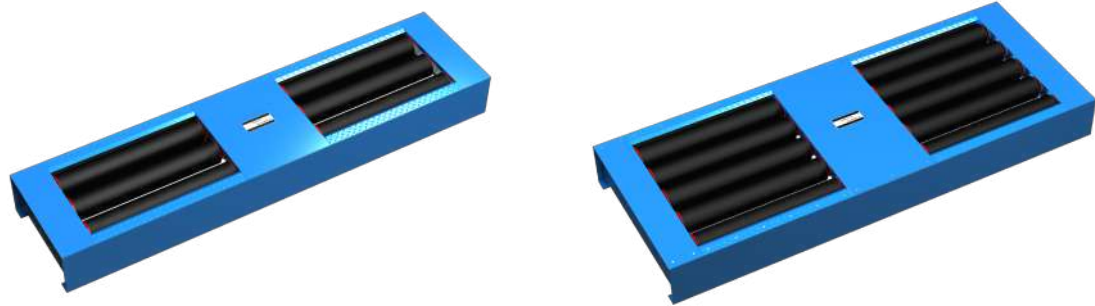
- Motor Vehicle Inspection Institution
- Automobile and Engineering Machinery Manufacturer

Technical Parameter

ITEM	TECHNICAL PARAMETER				
MODEL	HYGT-100A/B	HYGT-130A/B	HYGT-180A/B	HYGT-100C	HYGT-130C
Max. Axle Weight,t	10	13	18	10	13
Roller Diameter,mm	176.8				
Roller Number,pc	6			10	
Roller Surface	spray painting treatment				
Air Pressure,MPa	0.7				
Bench Dimension(LxWxH),mm	3430x850x360		3480x850x376	3430x1326x360	
Weight,t	0.92		1.1	1.4	

Technical Features

- Dynamic balanced roller set with low operation noise;
- The special brake device provides a reliable brake performance.
- Type A: Allowable test speed 120km/h, double electronic control solenoid valve, applicable to the support of non-test wheel at the speedometer test station and dynamometer test station.
- Type B: Allowable test speed 5km/h, single electronic control solenoid valve, applicable to the support of non-test wheel at the brake test station.



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MOTORCYCLE BRAKE TESTER

Functions

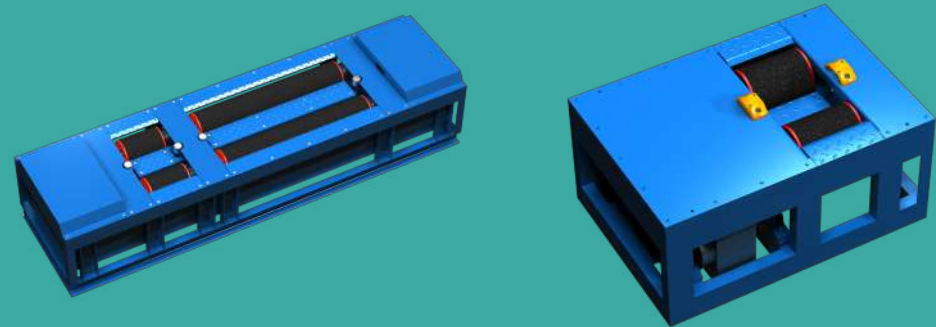
It is applicable to the detection of motorcycle maximum brake force, wheel resistance force and other braking related performance evaluation.

Technical Features

- Emery coated roller surface, adhesion coefficient ≥0.8.
- High-precision test.
- The standard communication interface design for fast connection to the network.

Application

- Motor Vehicle Inspection Institution
- Automobile and Engineering Machinery Manufacturer



Technical Parameter

ITEM	TECHNICAL PARAMETER	
Model	HMZT-750Q	HMZT-750B
Max. Axle Weight,kg	750	300
Test Range,N	0~2250x2	0~2100
Scale Value,daN	1	
Roller Diameter,mm	180	
Roller Surface	emery coated	
Air Pressure,MPa	0.6~0.8	
Bench Dimension(of each side)(LxWxH),mm	2700x745x562	1082x745x500
Weight,t	0.78	0.38

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MOTORCYCLE AXLE(WHEEL) LOAD TESTER

Functions

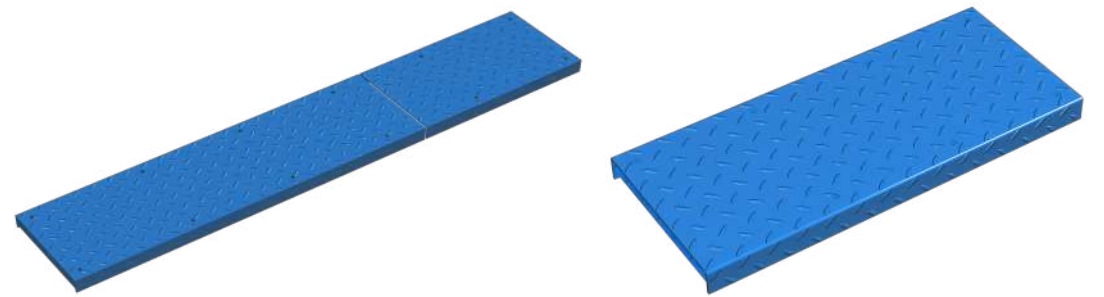
It is applicable to the detection of motorcycle axle(wheel) weight.

Application

- Motor Vehicle Inspection Institution
- Automobile and Engineering Machinery Manufacturer

Technical Features

- Thanks to the suspension type weighing structure for realizing the smooth repeatability of the test.
- High-precision and high-stability load cell and pre-amplifier.
- The standard communication interface design for fast connection to the network.



- Motorcycle Axle(Wheel) Load Tester(two-wheeled and three-wheeled)
- Motorcycle Axle(Wheel) Load Tester(two wheeled)

Technical Parameter

ITEM	TECHNICAL PARAMETER	
Model	HMZY-750Q	HMZY-750
Max. Axle Weight, kg	800	300
Test Range, N	0~400x2	0~300
Scale Value, daN	1	
Indication Error %	±2	
Testing Plate Size, mm	530x300, 1065x300	700x300
Bench Dimension(LxWxH), mm	1600x300x192	700x300x192
Weight, kg	65	25

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HZYB SERIES INTELLIGENT INSTRUMENT

Functions

HZYB Series Intelligent Instrument consists of control system, computer and signal acquisition devices mainly. It is applicable to the control and management of testing units of inspection station.

Technical Features

- Anti-magnetic, dustproof and anti-collision industrial computer.
- Thanks to the high pressure resistant isolation technology of signal acquisition and processing for improving the signal anti-interference capacity;
- Data storage, query and report, serial port communication and network communication function.
- The separated strong current and weak current layout for avoiding the interference to weak current signal mostly.





# 16 MOTOR VEHICLE INSPECTION LINE SUPPORTING EQUIPMENT

## 1 Full Automatic Headlight Tester



### Technical Features

- High-speed DSP6000 image processing system, quick to track the headlamp automatically.
- Dual CCD camera for accurate and reliable testing operation.
- LED display, Powerful on-line adjusting function.
- VGA, PAL, RS232 interface, and confidential communication protocol.
- Runs fast, at average 40s and only 25 seconds with dual-lamp test synchronously.
- Test all halogen xenon, LED headlamps, RHD & LHD cars and trucks.

### Technical Parameter

ITEM	TECHNICAL PARAMETER
Center lens from the ground	(350~1400)mm,±10mm
Luminous Intensity	(0~20000)cd, ±10%
Measurement Range	Up 400mm/dam~Down 560mm/dam, Left 560mm/dam~Right 560mm/dam
Accuracy	±32 mm/dam
Power Supply	AC(220±22)V,(50±1)Hz , 200W/37W
Test Distance	(0.8~1) m

## 2 Manual Headlight Tester



- A counter-weight in the positioned stand allows an easy up-down movement of the optical box.
- Test and adjust high beam, low beam, fog light, and daytime running lamps.
- Test halogen lamps, xenon lamps and LED lamps.
- Test SAE, ECE, and Japanese standard beams, LHD and RHD vehicles.
- Mult-communication of a serial port, Ethernet, Bluetooth and Wifi.

ITEM	TECHNICAL PARAMETER
Center lens from the ground	(250~1350)mm
Luminous Intensity	(0~120000)cd, ±5%
Measurement Range (except fog light)	Up 3°25'~ Down 3°25' Left 5°40'~ Right 5°40'
Accuracy	±1.0cm/dam ( ± 4')
Power Supply	DC 12.6V, 2A
Test Distance	(250~1350) mm

## 3 Automotive Exhaust Gas Analyzer(5 Gas)



- Automatic measure the concentration of HC, CO, CO2, O2 and NOX.
- NDIR gas sensor, HORIBA bench , OIML class I accuracy.
- Automatic zero resetting.
- Automatic calculation and display of Air-Fuel Ratioλ.
- RS232 interface, easy operation, accurate measurement and reliable performance.

Item	Method	Resolution	Measurement Range	Absolute Accuracy	Relative Accuracy
HC	NDIR	1×10 <sup>-6</sup>	(0~5000)×10 <sup>-6</sup>	±12×10 <sup>-6</sup>	±5%
			(5001~9999)×10 <sup>-6</sup>	----	±10%
CO	NDIR	0.01%	(0.00~10.00)×10 <sup>-2</sup>	±0.06×10 <sup>-2</sup>	±5%
			(10.01~16.00)×10 <sup>-2</sup>	----	±10%
CO2	NDIR	0.1%	(0.0~18.0)×10 <sup>-2</sup>	±0.5×10 <sup>-2</sup>	±5%
NO	EC	1×10 <sup>-6</sup>	(0~4000)×10 <sup>-6</sup>	±25×10 <sup>-6</sup>	±4%
			(4001~5000)×10 <sup>-6</sup>	----	±8%
O2	EC	0.02%	(0.0~25.0)×10 <sup>-2</sup>	±0.1×10 <sup>-2</sup>	±5%
Response time		less than 10s(HC,CO,CO2), less than 12s (O2), less than15s (NO)			
Warm-up time		less than 15 min (1min warm up for urgent measurement)			
Power supply		AC 220V±22V~50Hz±1Hz			

4 Opacimeter



Technical Features

- Fast warm up, automatic zero and calibration check.
- With functions of free acceleration test and dynamic measurement.
- RPM and oil temperature measurement.
- RS-232 interface.
- Suitable for free Accelerate & LUGDOWN emission test.

Item	Resolution	Measurement Range	Absolute Accuracy
Opacity (N)	0.01%	0~99.90%	±2.0%
Optical Absorption Coefficient(K)	0.01 m-1	(0~16.08) m-1	0.05 m-1
RPM	1 r/min	(300~6000) r/min	±50r/min
Oil Temperature	1 ℃	(0~200) ℃	±5 ℃
Gas Temperature	1 ℃	(0~150) ℃	±5 ℃
Power supply	AC 220V±22V~50Hz±1Hz, 150W		
Efficient length of Optical Path	215 mm		

5 Sound Level Meter



- Quick Response
- RS232 Serial Interface

6 Automobile Steering Wheel Angle(Force) Tester

Technical Features

- It is applicable to the measurement of turning angle and force of steering wheel.
- Intelligent and user-friendly operation.
- Wireless transmission.
- The standard communication interface design for fast connection to the network.



Item		Technical Parameter	
Model		HZLJ-A	HZLJ-B
Signal Transmission		wire	wireless
Test Range	Steering Torque,N·m	-100~+100	
	Steering Angle,°	-1080~+1080	
Scale Value	Steering Torque,N·m	0.1	
	Steering Angle,°	0.2	
Precision	Steering Torque,%	±2	
	Steering Angle,°	±1	
Battery		Lithium Battery	
Instrument Power Consumption,W		1	
Communication Distance ,m		20	
Applicable Steering Wheel Diameter, mm		380~450	
Receiver Power Consumption,W		10	
Receiver Power Supply,V		AC220±10%	
Weight,kg		5	

7 Automobile Brake Pedal&Handbrake Force Meter

Technical Features

- It is used in the brake test station for measuring the operating force of service brake and parking brake.
- TFT display. user-friendly operation.
- Wireless transmission, multicomputer communication.
- Multimode communication interfaces such as D/A,RS232 Serial Port, TCP/IP Ethernet, easy to connect into the network.

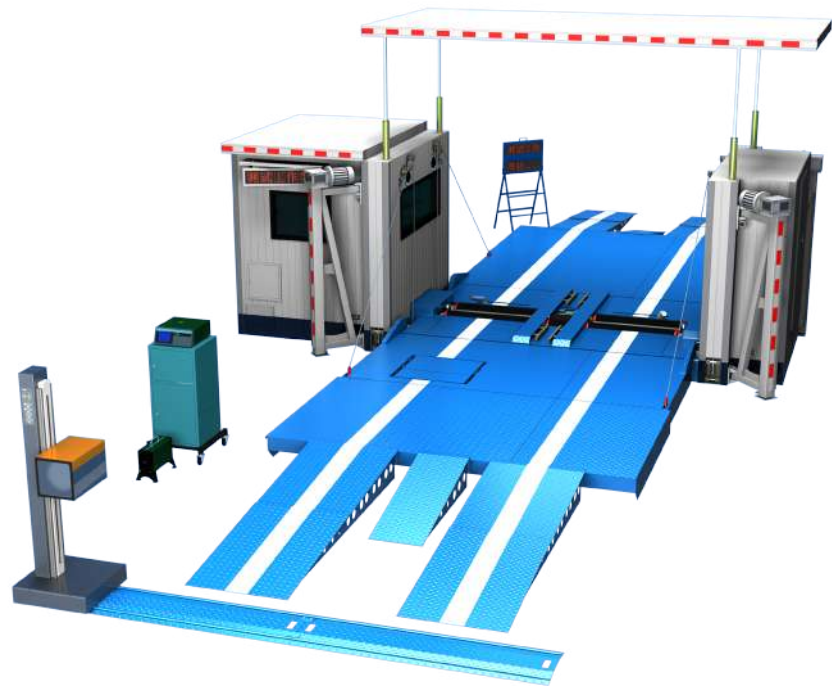


Item	Technical Parameter
Model	HTLJ-C
Test Range, N	1~1000
Precision,°	±2
Sampling Time, ms	5
Handheld Device	3.7V Lithium Battery
Communication Distance, m	20
Receiver Power Consumption, W	10
Receiver Power Supply, V	AC220±10%

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MOBILE STATION (10T)

BQDC100-8 10t Motor Vehicle Inspection Mobile Station



This mobile test system is used to test the safety status of the automobile(axle load ≤10t), the main test items include axle load test, braking force test, speedometer test and emission test. The mechanical part of the detection system adopts the integrated frame type carrier (like a container) and foldable electronic control carrier lifting mechanism. The electrical part adopts strain force sensor, special high precision preamplifier, hall speed sensor. The system has the characteristics of high mobility, widely applicable vehicle models, stable structure, robust & neat appearance and high degree of standardization.

Technical Parameter

ITEM	TECHNICAL PARAMETER
Axle Load, t	10
Track Width, mm	1000~2200
Inspection Lane Width, mm	3300
Inspection Unit(Container) Dimension(LxWxH), mm	5750×2400×2470
Unfolded Dimension In Working Condition (LxWxH), mm	13000×5750×4700
Container Load/Unload Container Unfolding	power drive (motor)
Roller Diameter, mm	245
Roller Distance(center to center), mm	470
Lift Type	Pneumatic
Motor Power(Brake), kW	11×2
Weight, t	9.5

BQDC100-8 Equipment List

No.	Name	Model	Qty.	Specification
1	Brake Test	Multi-Function Vehicle Inspection Platform HYJDT-100.	1	Maximum Brake Force Indication Value: 3000daN
	Axle Load Test			Maximum Weighing Indication Value: Maximum 5000kg
	Speedometer Test			Maximum Speed Indication Value: 80km/h
2	Single Plate Type Sideslip Test	DBCH6-S.	1	±10mm
3	Headlight Tester	MQD-3B	1	Test Range, light intensity 0~120000; Up35cm/dam~Down 52.5cm/dam; L 52.5cm/dam ~R 52.5cm/dam; Height: 250~1400 mm
4	Gas Analyzer (gasoline and diesel)	MQW-511+201	1	Test Range:HC:0~10000 ppm.; CO <sub>2</sub> : 0~20%; CO: 0~15%; O <sub>2</sub> : 0~25%; NO: 0~5000 ppm; Opacity(N) 0~100%; Absorption (k) 0~16.0m <sup>-1</sup> ; Rotate Speed 250~9000rpm; Oil Temperature 0 C ~150 C
5	Sound Level Meter	HY114C	1	Test Range: 35~130dB; Preheat 1min



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MOBIE  
STATION

(MOTOR-CYCLE,  
MOTOR-TRICYCLE)

Functions

It is applicable to the detection of the wheel brake force, wheel resistance and other braking related performance evaluation.

Application

- Motor Vehicle Inspection Institution
- Motor Machinery Manufacturer

Technical Features

- Emery coated roller surface with high adhesion coefficient( $\geq 0.8$ ) ;
- The special circuit design for overvoltage protection and phase dislocation protection makes smooth motor operation;
- High precision and reliable detection;
- Compact design, fast open and pack up.



■ Transport(Container Status)



■ Full Stretched Status(Open and Standby)

Technical Parameter

ITEM		TECHNICAL PARAMETER	
Product		Motorcycle	Two & Three-Wheel Motorcycle
Model		HMLJ-300C	HMLJ-750D
General Parameter	Max Axle Weight, kg	300	750
	Wheel Span(two wheeled),mm	900~1700	880~1700
	Wheel Track Width, mm	-	2700
	Wheel Span(three wheeled),mm	-	500 (Inside) /1300 (Outside)
	Cabin Raising Height, mm	1400	1450
	Power, kw	3	5
	Power Supply	AC220V	AC380V
	Dimension (L x W x H), mm	4300×1720×2370	4800×2500×2300
Wheel Load Test	Weight, t	3.1	4.5
	Test Range, kg	0~300	0~375×2
	Scale Value, kg	1	
Brake Test	Indication Error, %	±2	
	Test Range, N	0~2100	0~2250×2
	Scale Value, daN	1	
	Roller Diameter, mm	180	
	Roller Span(center to center),mm	349	350
	Roller Surface	Spray Painting	
Headlight Tester	Air Pressure, MPa	0.7	
	Model	QD-100	MQD-3C(manual)
	Light Intensity Test Range, cd	0~40000	0~120000
Remark	Indication Error	±15%	±10%
	headlight tester model: MQD-3C, MQD-5A (optional)		



## MAIN PRODUCTS

- » Motor Vehicle Safety Inspection System;
- » Motor Vehicle Comprehensive Performance Inspection System;
- » Motor Vehicle Emission Test System;
- » Motor Vehicle & Engineering Machinery End of Line Inspection System;
- » Intelligent Driver Training & Exam System;
- » Motor Vehicle Remote Inspection and Supervision System;
- » Remote Supervision System for Driver Exam

