CERTUS 3

New generation vehicle test lanes

Certus 3 vehicle test lanes:



premium class solutions

CERTUS 3

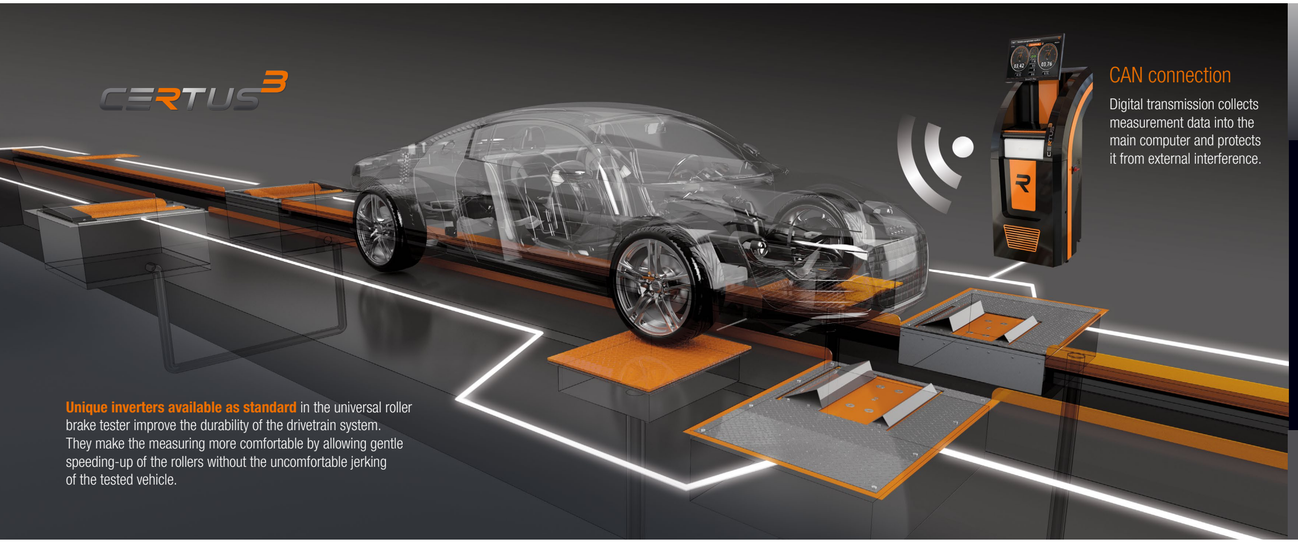
- Accurate measurement results
- Quality
- Work comfort
- Attractive design
- Development

CERTUS 3 ensures

The CERTUS vehicle test lanes are passionate automotive solutions. The third generation – CERTUS 3 – combines modern electronic solutions, durable mechanical elements and an attractive design. Besides the experience of the previous two generations CERTUS 3 makes the most of everything that modern technology has to offer in vehicle diagnostics. CERTUS 3 has got everything to qualify for the status of a premium class device. So get acquainted with CERTUS 3 – you will be surprised.

CERTUS 3 test lanes

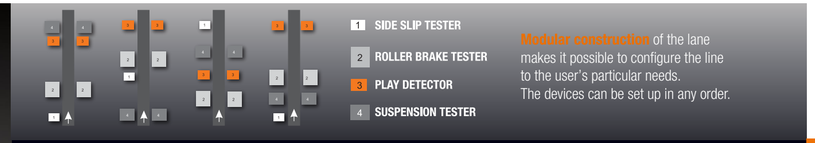
– state-of-the-art electronic solutions and operational stability



Unique inverters available as standard in the universal roller brake tester improve the durability of the drivetrain system. They make the measuring more comfortable by allowing gentle speeding-up of the rollers without the uncomfortable jerking of the tested vehicle.

CAN connection

Digital transmission collects measurement data into the main computer and protects it from external interference.



1. SIDE SLIP TESTER
2. ROLLER BRAKE TESTER
3. PLAY DETECTOR
4. SUSPENSION TESTER

Modular construction of the lane makes it possible to configure the line to the user's particular needs. The devices can be set up in any order.

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The wireless ZigBee® communication is used to send data from the pedal force and pressure sensor to the central control unit. ZigBee® is the latest wireless communication system, whose characteristics include low power consumption, speed of up to 256kbps and a connection range between nodes of up to 100 meters.

CERTUS 3 can guarantee high accuracy of measurements due to frequent collection of the measured values. Software stability is reinforced by using a single concentrator connected with the main board of the control unit rather than sending the data separately from each device of the test lane to the central control unit. High quality electronic components ensure smooth software operation.

The CERTUS remote control unit boasts a simple design and is easy to use. It is compact, ergonomic and has only a few essential buttons making it possible to navigate the screen menu quickly and intuitively. The inspection cycle can be adjusted to the user's needs – to stop or to repeat the test in whole or in part. The remote control unit works from anywhere in the room. The long-life battery lasts a few months without the need to be re-charged.

CERTUS 3 test lanes

– a user friendly solution

The CERTUS lane software has been designed as an intelligent tool which, by interacting with the user, is able to quickly and efficiently make the necessary measurements and tests and present an accurate assessment of the vehicle's condition.

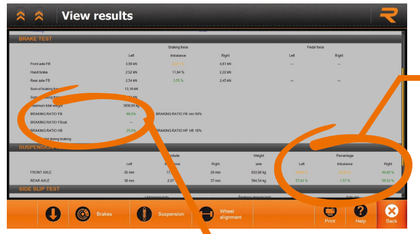
The intuitive software guides the user step by step through the process of vehicle testing.

The „Testing in progress" screen

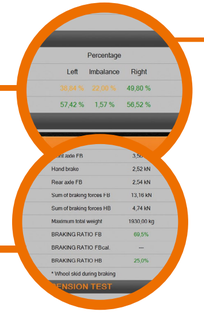
– is a unique solution introduced for the comfort of the user.

During the testing process it informs of the measurements taken so far on specific devices which have been registered and assessed.

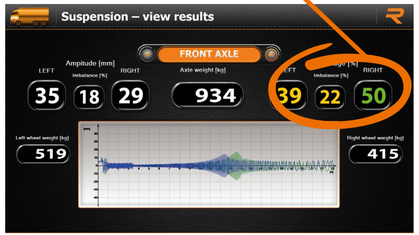
The software does not only measure but also assesses.
The user does not have to refer to external conversion tables or perform calculations based on target values.



The software automatically calculates the vehicle's braking ratio as well as calculated braking ratio and compares the results with boundary values defined by the type of vehicle and its first registration date.



Assessment of left and right wheel damping and the difference between these values.



Ergonomic testing with no limits.
Reinforcing the suspension tester makes it possible for a lorry to pass without the need to put on protective covers.

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CERTUS 3 test lanes – optional extras

Having chosen the CERTUS 3 test lane, the investor will enjoy a wealth of benefits including operational stability, lowering of the costs and possibility of further development. Official technical inspection centers will find CERTUS 3 a modern tool for a speedy and reliable vehicle inspection. Authorized car service stations (OEMs) will enjoy the lane's extensive range of diagnostic possibilities and software adjustments as well as the ability to choose from a wide variety of additional options and colours to suit the needs of a particular make of a car.

4x4 testing

The 4x4 testing option makes it possible to take an accurate measurement of the breaking force in most cars of this type (including lorries) produced nowadays. The 4x4 testing using the CERTUS software eliminates the need to use slow-running rollers or a decelerometer. The function makes it possible to test the breaking force of each wheel separately, which means a more thorough overall inspection of the technical condition of the car.

Extended presentation of test results

CERTUS presents the results of each test in both a basic and an extensive way. This function is particularly useful for authorized car service stations as it allows a very detailed inspection of the technical state of the tested vehicle. The user is presented with a choice of extensive reports from the different devices included in the test lane accompanied by detailed diagrams. These are print-outs from the tests: brakes, suspension and wheel alignment. The extended print-out – in the case of a brake test – includes for instance: rolling resistance, ovality, static and dynamic weight, calculated braking ratio in relation to static/dynamic weight and many others.

Roller exit assist

Many users face the problem of some vehicles' (e.g. truck-tractors) driving axles not being able to exit the roller area after having been tested. In the CERTUS 3 test lane the problem has been solved using a special roller exit assist procedure based on inverters. In the case of passenger cars the effect is achieved by turning on the roller drive automatically, which is particularly useful for testing vehicles with an automatic gear box and delivery vans.

Weight

The weight option facilitates the precise technical state inspection of a vehicle by using the result of the weight measurement for braking ratio. This enables the user to obtain extremely accurate results. The axle weight measurement is also useful in transport bases and other places where vehicles are often weighted to avoid exceeding the axle load limits.

Help in diagnosing knocks and noises

A suspension tester may be used as a handy tool for finding the cause of knocks in the suspension and body of vehicles.
By means of a remote control it is possible to turn on the device for a moment in order to cause wheel vibrations of frequency and amplitude simulating road conditions. This makes it possible to find sources of knocks, squeaks and other undesirable noises generated in the suspension and vehicle body during driving. In a more advanced option the input function may be changed in 2 Hz steps.

Archiving and printing test results

CERTUS makes it possible to archive test results in a comprehensive way. It also allows the user to put in test results from devices external to the test lane (e.g.: opacimeter, exhaust-gas analyzer, tire tread depth meter etc.) by using a keyboard and then archiving and printing them out jointly

Openness to new technical challenges

Due to the modern structure of the CERTUS 3 software it is possible to introduce changes into the system and to adjust the devices to the particular needs of the users. Such a solution also protects them from the risk of high costs should the need to adapt the devices to new legal regulations arise. CERTUS can be easily adjusted to new requirements and periodical updates of the software ensure that its users can easily bring older devices up to date.

CERTUS 3 test lanes

– durability and quality of mechanical solutions

The main aim of the CERTUS 3 test lane designers was to achieve high durability of the devices by a careful choice of construction assumptions, material parameters and quality of the components used. Thus perfectly manufactured mechanical parts compliment state-of-the-art electronic components.

Roller coating

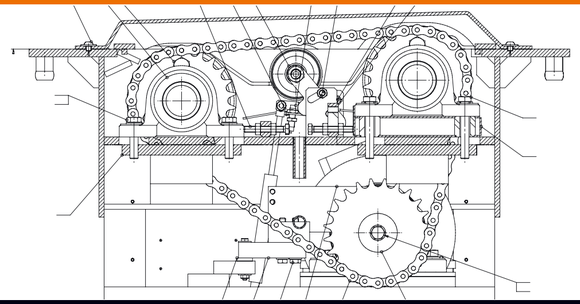
The durability of the roller coating is an important factor in maintaining the accuracy of the tests but it is also important for the aesthetic appeal of the device.
The material used to cover the drums has exceptional mechanical characteristics and ensures high durability.

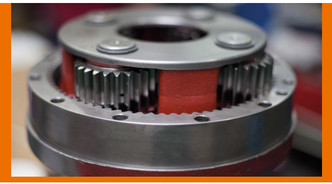
A sturdy construction

At the designing stage of the different devices the very best components were selected from top European manufacturers. Key elements (such as the engine and transmission gear) may be repaired separately rather than being changed as part of a set, which lowers potential post-guarantee service costs.

Components from top manufacturers

CERTUS devices, especially roller brake testers, have a specially reinforced external construction made of high quality steel. A special anticorrosive system based on high quality powder coating paints protects the mechanical parts from degradation of metal.





Engine and transmissions
– stable and quiet operation

The planetary transmissions used as standard in the universal roller device improve the durability of the drive-train system. Due to their high transmission ratio much greater braking forces can be measured as compared to devices using traditional cylindrical transmissions. Carefully selected engines and vibration isolators ensure stable and quiet operation of the device. The roller brake tester engine for passenger cars may be supplied with an electromagnetic brake, which facilitates smooth exit for 4x4 vehicles and delivery vans.

Boge can more

The suspension tester works based on the BOGE method, which offers more extensive diagnostic possibilities than the one based on the Eusama principle which tests road grip only. The BOGE method is also less sensitive to the type and rigidity of the suspension and the tire pressure of the tested vehicle.

Large diameter third roller

The third roller of the universal roller brake tester has got a larger diameter in order to avoid uncontrolled slip of the tested wheel. Thus the device is able to react faster to the wheel slip during a braking force test.

CERTUS 3 test lanes

– technical parameters

Technical parameters of an test lane suitable for passenger vehicle, vans (not exceeding 3,5T of maximum total weight) and motorcycles

Roller brake tester CERTUS 3 CRB 3,5

Steel rollers' box	Powder coated	
Permissable axle load (drive over)	max. 4	T
Wheel track - min. / max.	800 / 2.200	mm
Rollers' diameter	205	mm
Steel rollers with composite surface	Traction – dry/wet	0,9 /0,8
Third roller's diameter	50	mm
Rollers' axle span	410	mm
Testing speed / motors' power	5 km/h	2 x 3 kW
Braking force results	0 - 6	kN
Voltage	3 x 400 V	50 Hz
Wiring / fuse	5 x 2,5 mm²	32 A
Dimensions	(W. x L. x H.) 2.320 x 680 x 240	mm
Weight	450	kg

Suspension tester CERTUS 3 CSA

Testing method	BOGE	
External dimensions WxLxH	2.320 x 800 x 280	mm
Wheel track	800 - 2.200	mm
Permissable axle load (drive over)	4	T
Maximum testing axle weight	2	T
Oscillation frequency	16	Hz
Max. amplitude of testing plate	100	mm
Motors' power	2 x 1,3	kW
Voltage	3 x 400 V	50 Hz

Side slip tester CERTUS 3 CPS 4.0

Powder coated testing plate	Single-part unit	
Self acting testing unit	Based on electronic potentiometer	DMS
Voltage	DC 12	V
Dimensions of testing plate	LxWxH 1000 x 500 x 50	mm

CERTUS Design control unit

CERTUS Design control unit	Mobile, steel, powder coated
Engine control	CPU controller with 2 inverters (only for CRB 13)
Processing	PC set, unit ready to communicate with external devices and networks
Main display / repeater	24 inch / 35-100 inch. Full HD
Graphics	Full HD
Internal communication protocol	CAN network
Wireless communication	Remote control, pressure sensors, pedal force, possibility to add further devices

Technical parameters of an test lane suitable for passenger cars, vans, trucks (not exceeding 13T maximum total weight) and motorcycles

Roller brake tester CERTUS 3 CRB 13

Roller brake tester for pit installation, powder coated	Motors hidden under the roller	
Roller brake tester dimensions (one side- LxWxH).	1.200 x 1.045 x 554	mm
Weight of roller brake tester (one side)	Ca. 450	kg
Roller length	1.000	mm
Roller' diameter	205	mm
Rollers	Steel with composite coating	
Traction – dry/wet	0,9 /0,8	
Third roller diameter	100	mm
Roller axle span	420	mm
Power transmission	High ratio planetary transmission with chain connection to the rollers	
Testing speed	2,6 and 5,2	km/h
Permissable axle load (drive over)	13	T
Motors' power	7,5	kW
Voltage	3 x 400 / 50	V / Hz
Wiring / Fuse	For motors 7,5 kW: 5 x 6 / 50	mm² / A
Measuring system, external forces' sensor	Integrated amplifier	DMS

Suspension tester CERTUS 3 CSA

Testing method	BOGE	
External dimensions LxWxH	2.320 x 800 x 280	mm
Wheel track	800 - 2.200	mm
Permissable axle load (drive over)	13	T
Maximum testing axle weight	2	T
Oscillation frequency	16	Hz
Max. amplitude of testing plate	100	mm
Motors' power	2 x 1,3	kW
Voltage	3 x 400 V	50 Hz
Wiring / Fuse	5 x 2,5 mm²	20 A

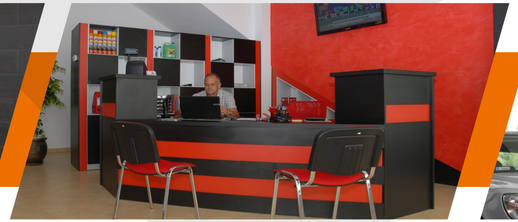
Side slip tester CERTUS 3 CPS 15

Testing plate	Single-part unit, powder coated	
Self-acting testing unit	Based on electronic potentiometer	DMS
Voltage	DC 12	V
Dimensions of testing plate	L. 750 x W. 990 x H. 50	mm

CERTUS at work

CERTUS 3 introduces a new generation of vehicle test lanes into the market. Due to their modern, continuously improved and refined technical solutions as well as an attractive design the devices improve the competitiveness of stations where they are fitted. CERTUS is constantly developed and open to changes. Its users may rest assured that should such a need arise they will be able to obtain new solutions in line with the customers' expectations and with new regulations without bearing enormous costs.

So far over 300 users have put their trust into the current CERTUS make. Why not join them?



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