

*Test lane for cars*  
*Combilline / Videoline*



**Car test lane up to 4 tons axle load  
with analogue display or PC version**

### Test lanes to meet your individual requirements



Unterneukirchen is the centre of excellence for testing technology in the strong and efficient Snap-on Group. For more than 30 years the name of Cartec has been a synonym for engineering and manufacturing of testing and diagnostics technology for cars and trucks.

Our customers benefit from concentrated competence and direct and smooth handling of enquiries and orders.

A qualified team, the well-known product quality, good service and the advantages of the strong global Snap-on Group guarantee testing technology which is constantly optimised in terms of customer requirements.

Our equipment has been approved and recommended by many important car manufacturers.



The optimum test lane for check-in, final inspection, tests in line with government standards, and training classes. The vehicle test in the presence of your customer and the relative print-out make diagnostics much more transparent and improve your customer's confidence.



The test lane is available in different versions:

- Combiline with analogue display
- Videoline in PC version
- Videoline in PC version, combined with analogue display

Owing to the modular design it is possible to buy test lane components step by step:

Basis is the brake tester, whereas suspension tester and side-slip tester can be retrofitted at a later date. Connection to PC can also be made at a later date as requested. All components of Cartec testing equipment can be combined at customer's discretion.



### Customised operation of testing equipment



Brakes and shock absorbers are wear parts and there are numerous possible defects which might occur.

Regular diagnostics with results documented on the test record provide an additional service and profit for your shop. The complete vehicle test can be accomplished with the fully automatic test sequence where all testing units (brake tester, lifting device, suspension tester and slide-slip tester) start automatically.

Short testing times of 2 to 3 minutes only mean an increased vehicle throughput.



The features to be tested are detected by means of well-proven strain-gauge type load cells. This wear-free measuring system ensures reliable and error-free measurement of the forces produced.



The IR remote control unit can be used to control the testing equipment from driver's seat at the entire discretion of the operator, e.g. by starting the brake tester only, or by conducting the tests in the sequence he prefers.



The optional PWA (pocket workshop assistant) is a pocket PC with Cartec testing software and integrated remote control which can replace other display units such as display cabinet or monitor. The entire test sequence is controlled from driver's seat. Only the function keys required for the current test are displayed on the screen. Control is via touch screen. A PC station is necessary for connection of the PWA.

In addition the PWA can be used for visual checks. The optional Checklist Creator allows to issue customised trouble-shooting lists which are obviously far more flexible than given check lists.

### The basis: BDE brake tester



**Combiline 2204** for cars of up to 3 tons axle load, with analogue display 0-6 kN

**Combiline 2304** for cars of up to 4 tons axle load, with analogue display 0-8 kN

**Videoline 2204** for cars of up to 3 tons axle load, PC version

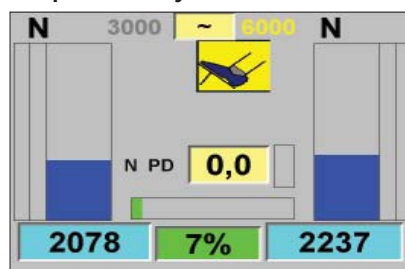
**Videoline 2304** for cars of up to 4 tons axle load, PC version

Standard equipment of the roller sets:

- Mechanics in compact flat design, galvanised and consequently suitable for outdoor installation
- Rollers with long-life ceramics-silicon coating are abrasion-proof and very tyre preserving
- Roller sets are equipped with rust-proof feeler rolls
- Splash-proof motors
- Measurement with wear-free strain-gauge type load cells
- Electric automatic drive-off aid

The brake tester, which forms the basic unit of the test lane, is also available with braking motors and for 4WD vehicles.

#### Graphical analysis of brake



The brake test covers the following quantities:

- rolling resistance
- ovality
- braking force imbalance left/right
- braking force left/right

#### Optional pneumatic lifting device



As the lifting device raises the vehicle to ground level, driving in and off the rollers is considerably facilitated and hence especially advantageous for vehicles with sports chassis, low ground clearance, or small wheel diameters where damage to the underbody is very likely under usual conditions.

Note: suitable foundation must be available. 8 bar compressed-air supply required. Operation only with remote control unit.

**FWT suspension tester**



**FWT 2010 E**

Eusama-based suspension tester

**FWT 2020 R**

Resonance-type suspension tester

Shock absorbers wear slowly so that customers often do not recognise it. In less than a minute the suspension tester enables you to determine the cause of dangerous cornering ability, irregular tyre wear, steering wheel vibrations, insufficient driving stability in case of cross winds, and poor braking performance.

**Graphical analysis of suspension**



Two different measuring systems are available:

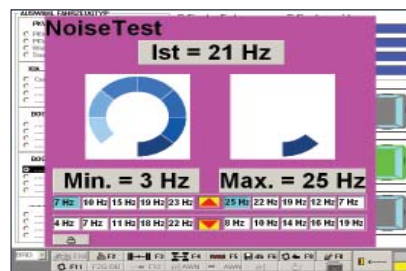
**Eusama-based suspension tester**

Two independent test plates determine vehicle chassis vibrations as they phase out. The forces thus produced, which might adversely affect the vibratory behaviour of the vehicle, are detected and calculated (dynamic analysis).

**Resonance-type suspension tester**

The displacement measurement technique is based on the amplitude measurement and analysed in millimetres.

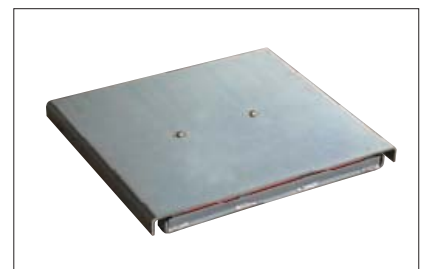
**Screen graphics: noise test**



The suspension testers can be equipped with the optional **noise test module**.

With conventional techniques it is hardly possible to localise any noise on or inside the vehicle. With this noise test module every single wheel can be set into vibrations (between 3 and 25 Hz) with the remote control unit. In the test cycle to follow, which is started either manually, or automatically, the noise is easily localised.

**Side-slip tester SSP 2500**



The side-slip tester is designed to measure toe of the vehicle under test immediately. No additional tests are necessary as the testing plate is positioned directly in front of the suspension tester and the vehicle simply rolls over.

The data automatically detected supplies a sound diagnostics of toe-in and toe-out. The measured value is read out in 0 +/- 20 mm/m.

## Various basic models



### PC cabinet for Videoline

The PC cabinet with integrated electronic unit, offers space for a PC, TFT flat screen, A4 inkjet printer, keyboard and mouse (options).

**Combiline 2204** – Display 0 – 6 kN  
**Combiline 2304** – Display 0 – 8 kN

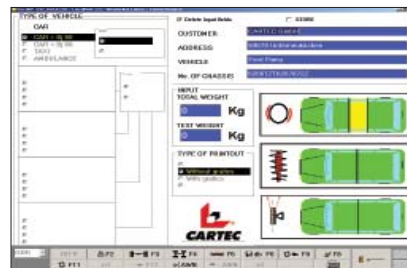


### Display cabinet with integrated electronic unit

- indication of cut-out at wheel lock, left/right
- wheel weight left/right
- permanent determination of braking force imbalance
- side-slip display
- force applied on pedal
- road grip left/right
- PC/printer interface

In addition there is the possibility of simultaneous operation, e.g. with the display cabinet installed in the check-in bay and connected via COM lead to the PC which is for instance located in the shop office.

### Test stand software – Main screen



The main screen offers all essential customer and vehicle data at a single glance.

### Government standards

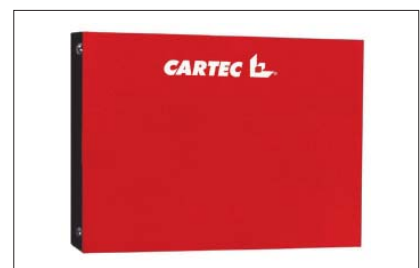
For each vehicle type the relative government standards and physical quantities can be preset on the main screen.

When the vehicle is tested the results are automatically compared with government standards.

### Database

Customer and vehicle data are saved to be available again at once when another test is accomplished with the vehicle.

### E box for Videoline



The E box with integrated electronics can be chosen instead of the PC cabinet.

## Options

### Optional built-in frame

These built-in frames considerably facilitate preparation of foundations.

There is no need to embed in concrete a steel beam with edge guards which is otherwise inevitable.

None the less a built-in frame always ensures the test stand is exactly level with ground.

### Optional roller cover plates



### Optional motorcycle test



Car brake testers and test lanes can be easily retrofitted for motorcycle tests.

Technical data		Combiline 2204	Combiline 2304	Videoline 2204	Videoline 2304
<b>General</b>					
Temperature range	°C	0 up to +70	0 up to +70	0 up to +70	0 up to +70
<b>Power supply</b>					
Mains voltage	V	3/N/PE400 V AC	3/N/PE400 V AC	3/N/PE400 V AC	3/N/PE400 V AC
Frequency	Hz	50	50	50	50
Fusing slow-blow type	A	3 x 25	3 x 25	3 x 25	3 x 25
Supply line	mm <sup>2</sup>	5 x 2.5	5 x 2.5	5 x 2.5	5 x 2.5
<b>Display cabinet</b>					
Height x width x depth	mm	600 x 800 x 200	600 x 800 x 200		
Measuring range	kN	0 – 6	0 – 8		
Weight	kg	35	35		
<b>PC cabinet</b>					
Height x width x depth	mm			1250 x 750 x 530	1250 x 750 x 530
Weight	kg			50	50
<b>E box</b>					
Height x width x depth	mm			600 x 800 x 200	600 x 800 x 200
Weight	kg			30	30

## Car test lane Combiline / Videoline

Modular design – automatic test sequences

Technical data		Combiline 2204	Combiline 2304	Videoline 2204	Videoline 2304
<b>Brake tester</b>					
Max. axle weight	t	3	4	3	4
Roller coefficient dry – wet		0.9 – 0.5	0.9 – 0.5	0.9 – 0.5	0.9 – 0.5
Test width min. / max.	mm	800 / 2200	800 / 2200	800 / 2200	800 / 2200
Idling speed	km/h	3.4	5.4	3.4	5.4
Dimensions of roller set	mm	580 x 2350 x 205	670 x 2350 x 255	580 x 2350 x 205	670 x 2350 x 255
Roller diameter	mm	175	216	175	216
Roller length	mm	700	700	700	700
Motor power	kW	2 x 2.5	2 x 3.7	2 x 2.5	2 x 3.7
Weight	kg	330	370	330	370
<b>Eusama-based suspension tester</b>					
Dynamic wheel load min. / max.	kg	75 / 1000	75 / 1000	75 / 1000	75 / 1000
Static wheel load min. / max.	kg	75 / 1500	75 / 1500	75 / 1500	75 / 1500
Length x width x height	mm	400 x 2350 x 255	400 x 2350 x 255	400 x 2350 x 255	400 x 2350 x 255
Exciter frequency max.	Hz	24	24	24	24
Exciter stroke	mm	6	6	6	6
Motor power	kW	3	3	3	3
Weight	kg	320	320	320	320
<b>Resonance-type suspension tester</b>					
Wheel load min. / max. –					
Test weight at 7 bars	kg	75 / 1000	75 / 1000	75 / 1000	75 / 1000
Length x width x height	mm	400 x 2350 x 255	400 x 2350 x 255	400 x 2350 x 255	400 x 2350 x 255
Test width min. / max.	mm	800 / 2200	800 / 2200	800 / 2200	800 / 2200
Exciter frequency max.	Hz	16	16	16	16
Exciter stroke	mm	8	8	8	8
Motor power	kW	2 x 2.2	2 x 2.2	2 x 2.2	2 x 2.2
Weight	kg	500	500	500	500
<b>Side-slip tester</b>					
Axle weight	t	4	4	4	4
Measuring range	mm/m	0 ± 20	0 ± 20	0 ± 20	0 ± 20
Length x width x height	mm	500 x 570 x 50	500 x 570 x 50	500 x 570 x 50	500 x 570 x 50
Weight	kg	25	25	25	25

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