CARTEC

VIDEOLINE 204-RP

Test lane for cars and vans

Modular system upgradeable into test lane

Test lane for cars and vans

Test lanes to meet your individual requirements

For more than 40 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.

This is the reason why our equipment has been approved and recommended by many important car manufacturers.

The Videoline 204-RP is 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 increase your customers' confidence.

Modular design

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.
All components of Cartec testing equipment can be combined at customer's discretion.

Basic module – brake tester

Additional modules:
- suspension tester
- side-slip tester

Display modules:
- workstation
- alternatively 32" display kit
- alternatively 42" display kit

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, suspension tester and slide-slip tester) start automatically.

Short testing times of 2 to 3 minutes only mean an increased vehicle throughput. A remote control is no longer necessary.

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.

User-friendly remote control

The radio 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.

Basic module – brake tester

Standard equipment of the roller sets:

- Mechanics in compact or split flat design, galvanised and consequently suitable for outdoor installation
- Composite coated rollers, or steel rollers in SmoothGrip design
- 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
- 4WD mode (counter rotation) – operation with radio remote control or auto detection
- Dual direction testing – radio remote control unit required

The brake tester, which forms the basic unit of the test lane, is also available with braking motors (3.7 kW motors only).

The basic brake test covers the following measurements/calculations:

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

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RP box

Latest technology for highest flexibility.

The RP box with integrated electronics is the technological core of the system.
Communication with the workstation or the display kit is wireless, which allows flexible and simple installation.

Additional modules

Suspension testers

FWT 202-E
Eusama-based suspension tester

FWT 202-T
Theta-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 abilities, irregular tyre wear, steering wheel vibrations, insufficient driving stability in case of cross winds, and poor braking performance.

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 effect the vibratory behaviour of the vehicle, are detected and calculated (dynamic analysis).

Theta-type suspension tester

This simple-to-operate suspension tester provides an unmistakable and highly accurate procedure for evaluation of suspension values. The evaluation is based on determination of the damping ratio ϑ according to Lehr, with a limit value being defined where wheel suspension no longer guaranteessufficient vehicle safety.

Noise test module

The suspension tester can be equipped with the noise test module (optional for Eusama, included in the standard delivery for Theta) as conventional techniques hardly allow localising any noise on or inside the vehicle. With this noise test module every single wheel can be set into vibrations 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 204

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 or brake 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.

Display modules

Workstation

The workstation is supplied with control unit, 27" TFT flat screen, A4 inkjet printer, keyboard and mouse and an extended software package.

Portable controller device

In addition to the workstation you may handle the test lane via portable controller device such as a tablet PC.

Virtual analogue display

As an alternative to the workstation one of the following display kits is available:

- 32" display kit
- 42" display kit

with basic software package

The display kit can be mounted on the wall or on the stand.

Software package

	Basic (display kit)	Extended (workstation)
Brake, suspension, side slip test	•	•
Noise detection		•
4WD mode		•
Result evaluation with limit values according to vehicle type		•
Print-out	basic	full
Data input		•
Data base		•
Networking		•
ASA Livestream (or similar)	•	•
For some functionalities the radio remote control is needed		

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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 built-in frames are always exactly level with ground.

Optional roller cover plates

Two version available for drive-over axle load 1 or 1,4 t

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. Lowering/lifting capacity 3 t.

Optional: Lifting device of the roller set
The lifting device of the roller set (only for roller lenght 1000 mm) is the ideal solution to help in performing the right test on vehicles with twin axles.

Technical data

General		Videoline 204-RP K	Videoline 204-RP K 5	Videoline 204-RP G	Videoline 204-RP G 5
Scope of application (with limitation of drive-over load and test weight as specified) (1)		M1, N1	M1, N1	M1, N1	M1, N1
Design of mechanics		compact	compact	split	split
Temperature range (without additional heating system)	°C	0 to +40	0 to +40	0 to +40	0 to +40
Power supply		3/N/PE 400 VAC 50 Hz	3/N/PE 400 VAC 50 Hz	3/N/PE 400 VAC 50 Hz	3/N/PE 400 VAC 50 Hz
Fuse rating – slow blow type	A	3 x 25	3 x 25	3 x 25	3 x 25
RP box – dimensions	mm	500 x 500 x 200	500 x 500 x 200	500 x 500 x 200	500 x 500 x 200
RP box – weight	kg	20	20	20	20
Workstation – dim. (W x H x L)	mm	750 x 1700 x 530	750 x 1700 x 530	750 x 1700 x 530	750 x 1700 x 530
Workstation – weight	kg	63	63	63	63
32" display kit – dim. (W x H x L)	mm	740 x 450 x 250	740 x 450 x 250	740 x 450 x 250	740 x 450 x 250
32" display kit – weight	kg	23	23	23	23
42" display kit – dim. (W x H x L)	mm	1030 x 680 x 330	1030 x 680 x 330	1030 x 680 x 330	1030 x 680 x 330
42" display kit – weight	kg	32	32	32	32

(1) Vehicle categories according to EU standards, M1: Vehicles for the carriage of passengers and comprising not more than eight seats in addition to the driver's seat, N1: Vehicles for the carriage of the goods and having a maximum mass not exceeding 3.5 tonnes

Technical data

Roller brake tester		**Videoline 204-RP K**	**Videoline 204-RP K 5**	**Videoline 204-RP G**	**Videoline 204-RP G 5**
Drive-over load / axle	kg	4000	4000	4000	4000
Test weight / axle (70% efficiency – ISO 21069)	kg	1750	2000	1750	2000
Roller coefficient dry/wet		> 0.7 / > 0.6	> 0.7 / > 0.6	> 0.7 / > 0.6	> 0.7 / > 0.6
Measuring range	kN	0 – 8	0 – 8	0 – 8	0 – 8
Maximum brake force	kN	6	7	6	7
Motor power	kW	2 x 3.7	2 x 5	2 x 3.7	2 x 5
Test width min. – max. – for roller length 700 mm – for roller length 1000 mm	 mm mm	 800 – 2200 800 – 2800	 800 – 2200 800 – 2800	 variable variable	 variable variable
Roller diameter	mm	216	216	216	216
Roller length	mm	700 or 1000	700 or 1000	700 or 1000	700 or 1000
Roller elevation	mm	level	level	level	level
Roller distance	mm	400	400	400	400
Wheel diameter min. – max.	mm	400 – 900	400 – 900	400 – 900	400 – 900
Anti-corrosion finish: galvanisation	DIN	50976-t Zno	50976-t Zno	50976-t Zno	50976-t Zno
Idling speed	km/h	5.4	5.4	5.2	5.2
Dimensions of roller set without options (L x W x H) – for roller length 700 mm – for roller length 1000 mm	 mm mm	 670 x 2305 x 255 670 x 2905 x 255	 670 x 2305 x 255 670 x 2905 x 255	 1040 x 940 x 243 each 1040 x 1240 x 243 each	 1040 x 940 x 243 each 1040 x 1240 x 243 each
Weight of roller set without options – for roller length 700 mm – for roller length 1000 mm	 kg kg	 400 450	 400 450	 250 each 280 each	 250 each 280 each
Eusama-based suspension tester					
Drive-over load / axle	kg	3000	3000	3000	3000
Test weight / wheel for suspension test min. / max.	kg	75/1000	75/1000	75/1000	75/1000
Test weight / wheel for weight measurement min. / max.	kg	75/1500	75/1500	75/1500	75/1500
Measuring range	%	0 – 100	0 – 100	0 – 100	0 – 100
Test width min. – max.	mm	900 – 2100	900 – 2100	variable	variable
Exciter frequency	Hz	24	24	24	24

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Technical data

Eusama-based suspension tester		Videoline 204-RP K	Videoline 204-RP K 5	Videoline 204-RP G	Videoline 204-RP G 5
Exciter stroke	mm	6	6	6	6
Motor power	kW	1 x 3	1 x 3	2 x 3	2 x 3
Mechanics – dim. (L x W x H)	mm	400 x 2350 x 255	400 x 2350 x 255	400 x 1390 x 255 (each)	400 x 1390 x 255 (each)
Mechanics – weight	kg	320	320	175 (each)	175 (each)
Theta-based suspension tester					
Drive-over load / axle	kg	2500	2500		
Test weight / axle	kg	2200	2200		
Measuring range		0 – 0.35	0 – 0.35		
Test width min. – max.	mm	800 – 2200	800 – 2200		
Exciter frequency	Hz	approx. 10	approx. 10		
Exciter stroke	mm	6.5	6.5		
Motor power	kW	2 x 1.1	2 x 1.1		
Mechanics – dim. (L x W x H)	mm	800 x 2350 x 286	800 x 2350 x 286		
Mechanics – weight	kg	500	500		
Side-slip tester					
Drive-over load / axle	kg	4000	4000	4000	4000
Measuring range	mm/m	0 +/– 20	0 +/– 20	0 +/– 20	0 +/– 20
Mechanics – dim. (L x W x H)	mm	500 x 570 x 50	500 x 570 x 50	500 x 570 x 50	500 x 570 x 50
Mechanics – weight	kg	25	25	25	25

EMEA-JA
Snap-on Equipment s.r.l. · Via Prov. Carpi, 33 · 42015 Correggio (RE)
Phone: +39 0522/733-411 · Fax: +39 0522/733-479

Austria
Snap-on Equipment Austria GmbH · Hauptstrasse 24/Top 14 · A-2880 St. Corona/Wechsel (RE)
Phone: +43 1 865 97 84 · Fax: +43 1 865 97 84 29

France
Snap-on Equipment France · ZA du Vert Galant · 15, rue de la Guivernone BP97175
Saint-Ouen-l'Aumône · 95056 Cergy Pontoise Cedex
Phone: +33 (0) 134/48 58-78 · Fax: +33 (0) 134/48 58-70

Germany
Snap-on Equipment GmbH · Konrad-Zuse-Straße 1 · 84579 Unterneukirchen
Phone: +49 (0) 8634 / 622-0 · Fax: +49 (0) 8634 / 5501

Italy
Snap-on Equipment s.r.l. · Via Prov. Carpi, 33 · 42015 Correggio (RE)
Phone: +39 0522/733-411 · Fax: +39 0522/733-410

United Kingdom
Snap-on Equipment Ltd. · Unit 17 Denney Road, King's Lynn · Norfolk PE30 4HG
Phone: +44 118 929-6811 · Fax: +44 118 966-4369

Part of the machines is illustrated with optional extras which are available at extra cost. Technical and visual modifications reserved.

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