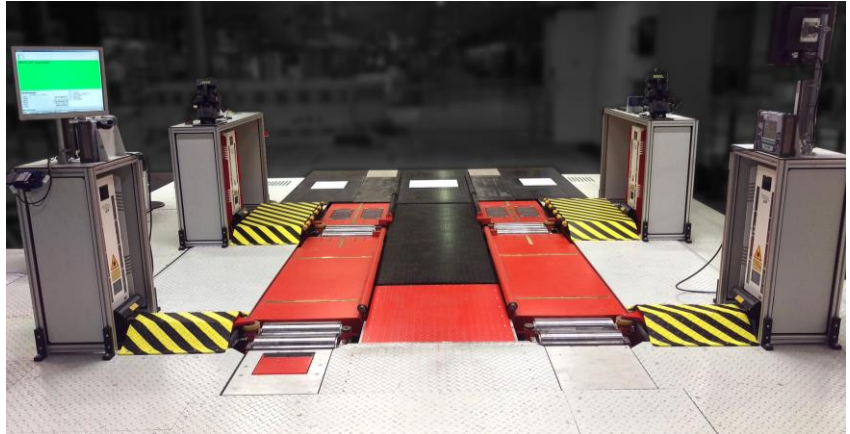## Description

VisiCon wheel alignment systems for passenger cars enable fast and precise measurement of all relevant wheel geometry parameters and reliable wheel alignment across the widest possible vehicle mix. The vehicle is centered either by contact with our electric motor-driven, tire-protecting pushers or contact-free via the floating plates.

Thanks to their flexible and modular design, our systems are ideally tailored to the requirements of our customers and the constant evolution of modern vehicles. Parameters such as the wheelbase range to be covered, the track width, optional wheel or axle load measurement and, if required, special designs such as an integrated lifting and pulling device for measurement of the toe and camber curves via the trim position can be taken into account on a customer-specific basis.

In addition to the pure test stand, VisiCon also offers a wide range of self-developed, non-contact 3D sensors (*dPP*, *dPP*Twin*, Visi*Scan) and the *Visi*Balance steering wheel gauge to create a complete, reliable system from a single source. In combination with the VisiWheAl measurement and analysis software developed in-house, all chassis parameters can be determined quickly and reproducibly, fulfilling our promise of consistently high quality.

Benefits for our customers

- All hardware and software components from a single source.
- Non-contact 3D measurement of all chassis parameters.
- High flexibility thanks to modular design.
- Individual special designs possible.

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Technical Data

	Features, functions etc.
3D measurement sensor	*dPP*32, *dPP*40 or *dPP*48 for standard systems *dPP*Twin for systems with small measuring distances (<500 mm) *Visi*Scan for complex measurement tasks
Laser protection class according to DIN EN 60825-1	2M
Max. illumination height on tire	384-600 mm (depending on the 3D measurement sensor used)
Primary measurands	Single toe, single camber, caster, steering axis inclination, wheel center, runout correction, height of the wheel house edge (*dPP*: with optional illumination unit; *Visi*Scan: built-in), steering angle (with optional steering wheel gauge)
Calculated measurands	Total toe, toe difference, camber difference, height difference, track width, wheel setback, symmetry, run direction, wheel base, body, thrust angle, toe difference angle, max. steering angle
Vehicle centering	Electrical pusher and floating plates
Wheel base width (min. – max.)	Variable, depending on customer requirements Standard 2300-3200 mm
Track width (min. – max.)	Variable, depending on customer requirements Standard version: 1600 mm Maximum covered track difference: ≤ 250 mm
Vehicle data structure	Internal database with editor
Operation modes	Automatic (controlled by host), semi-automatic, manual
Measurement time	Measurement values within 2 seconds
Ambient temperature	0 °C-40 °C
Humidity	Up to 90 %, not condensing

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Available components

***Visi*Scan**: Our latest 3D measurement probe, which uses laser scanner units to dynamically illuminate only the relevant areas of the measurement object. This can be used to determine all important chassis parameters such as toe, camber, caster, steering axis inclination, thrust angle, etc.

***dPP* 3D probe** (with optional **illumination unit** for measurement of the wheel house edge height): Fast and precise measurement of all important chassis parameters, such as toe, camber, caster, steering axis inclination, thrust angle, etc.
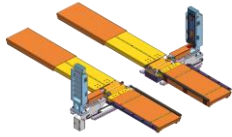

***dPP*Twin**: Alternative design of the dPP 3D probe. Ideally suited for retrofitting in existing chassis stands with small measuring distances or systems with a wide range of tires. The two measurement heads can be mounted at variable distances from each other.
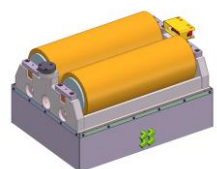
Roll sets: Stainless steel rolls with integrated electromotive drive of the front roll. The rear roll is available with an optional brake. The integrated floating plate on ball caster sets is pneumatically brought to the states "locked", "swiveling" and "floating".

Centralizer: Electromotive positioning of the vehicle in the measurement range of the probes. Retracts the tire preserving pusher rolls during measurement.

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Wheel base traversing unit: Positions the measurement probes, the floating plates and the centering unit of the rear axle in a way that vehicles with different wheel bases can be measured. It can also be traversed when the vehicle is already in the wheel aligner.

Software: Beside our proven measurement and analysis software *Visi*WheAl we also offer an in-house-developed software for process control (VisiMod). The modular design of our software enables the easy integration in the customer specific software structures, if wished.

Pit cover: Pneumatically or electrically retractable cover of the worker pit below the vehicle. The cover can be manufactured traversable on request.

Steering wheel gauge *Visi*Balance (optional): Measurement of the steering angle directly at the steering wheel. With an additional steering angle measurement unit the relation between the steering angle and the wheel turning angle can be determined.
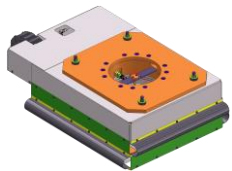
Rotary plate: The front roll sets can be equipped with an additional rotary plate with angle encoder for the measurement of the wheel turning angle.
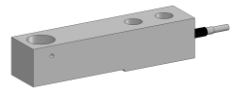
Wheel load scale (optional): Wheel load scales can be integrated into the floating plates (also as retrofit). For this, four industrial-suited load cells (e. g. HBM) are mounted per wheel.

Digital torque wrench (optional): For defined bolting or for testing tightened bolts, e.g. SCS.

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