

## Description

Special tasks require special solutions – the VisiCon wheel aligners for research and development purposes enable the fast and exact measurement of all typical wheel geometry parameters over the widest possible vehicle mix. A high variability of the vehicles can be guaranteed by a parallel wheelbase and track width adjustment as well as a max. load of 4.5 tons. In addition, the systems allow analyses beyond line operation, such as lift-pull measurements to determine track and camber behavior via the trim position. Due to the flexible and modular design, our systems are ideally tailored to the requirements of our customers.

At the same time our proven 3D measurement technology fulfills our promise of consistently high quality: With our family of non-contact 3D measurement sensors and the measurement software *VisiWheAl* developed in-house, all chassis parameters can be determined quickly and precisely with reproducible results.



### Benefits for our customers

- All hardware and software components from one supplier.
- Precise non-contact 3D measurement of all chassis parameters.
- High flexibility due to a maximum vehicle mix.
- Additional functions for chassis analysis.

## Technical Data

	Features, functions etc.
<b>3D measurement sensor</b>	<i>dPP32, dPP40 or dPP48</i> for standard systems <i>dPPTwin</i> for systems with small measuring distances (<500 mm) <i>VisiScan</i> for complex measurement tasks
<b>Laser protection class according to DIN EN 60825-1</b>	2M
<b>Max. illumination height on tire</b>	384-600 mm (depending on the 3D measurement sensor used)
<b>Primary measurands</b>	Single toe, single camber, caster, steering axis inclination, wheel center, runout correction, height of the wheel house edge ( <i>dPP</i> : with optional illumination unit; <i>VisiScan</i> : built-in), steering angle (with optional steering wheel gauge)
<b>Calculated measurands</b>	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
<b>Vehicle centering</b>	Electrical pusher and floating plates
<b>Wheel base width (min. – max.)</b>	2000-4000 mm
<b>Track width (min. – max.)</b>	1300-2000 mm
<b>Vehicle data structure</b>	Internal database with editor
<b>Operation modes</b>	Automatic (controlled by host), manual
<b>Measurement time</b>	Measurement values within 2 seconds
<b>Ambient temperature</b>	0 °C-40 °C
<b>Humidity</b>	Up to 90 %, not condensing

## Available components



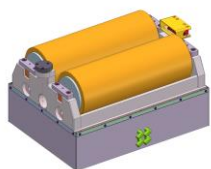
**VisiScan:** Our latest 3D measurement probe, which uses laser scanner units to dynamically illuminate only the relevant areas of the measurement object. This can be used to determine all important chassis parameters such as toe, camber, caster, steering axis inclination, thrust angle, etc.



**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.



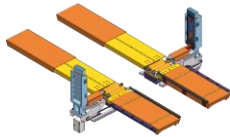
**dPPTwin:** Alternative design of the dPP 3D probe. Ideally suited for retrofitting in existing chassis stands with small measuring distances or systems with a wide range of tires. The two measurement heads can be mounted at variable distances from each other.



**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.



**Wheel base traversing unit:** Positions the measurement probes, the floating plates and the centering unit of the rear axis 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.



**Track width traversing unit:** Positions the measurement probes, the floating plates and the centering units of both axes in a way that a broad vehicle mix with different track width can be measured.



**Software:** Beside our proven measurement and analysis software *VisiWheAI* 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.



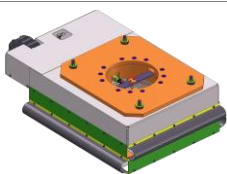
**Pit cover:** Pneumatically or electrically retractable cover of the worker pit below the vehicle. The cover can be manufactured traversable on request.



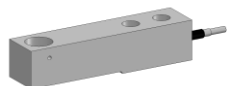
**Lifting/pulling unit:** Enables a defined pulling and lifting of the vehicle while toe and camber curves can be measured via the trim position. With optional wheel load scales this can also be done load driven.



**Steering wheel gauge *VisiBalance*:** 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:** 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:** For defined bolting or for testing tightened bolts, e.g. SCS.