TechnoVector 7

Machine Vision
Wheel Alignment Systems

Precision in Motion

Windows 10 · ASA asanetwork · intel INSIDE · AMD

TechnoVector 7

Machine vision wheel alignment systems

TechnoVector 7 –
Machine vision
wheel alignment systems

TechnoVector wheel aligner has four or two Widescope high-resolution cameras in two separate posts or a single beam. Cameras are installed in front of the car. Targets are attached to the car's wheels using wheel adaptors.

Digital high-resolution cameras with an embedded IR backlight allow the TechnoVector software to track precise spatial positions of each target

TechnoVector wheel adaptors support rim sizes from 12" up to 24"

Easy-to-use and lightweight and compact wheel adaptors and targets

The ultimate innovation in wheel alignment

Unique WideScope technology

- Perform measurement at a wide range of lift heights* without repositioning cameras.
- A more compact installation without any loss of accuracy
- Significantly decreases the time it takes to perform an alignment

* - depends on the installation distance

(See pages 6-7 for more details)

Mobility. Free movement between working areas of the repair shop. *
* - for select Techno Vector models

TechnoVector wheel alignment systems use cameras to observe targets determining wheel's precise position in 3D space

Perform compensation for all 4 wheels simultaneously by rolling the vehicle

Machine Vision System

High-definition cameras capture targets and transfer image data to the TechnoVector software

The software calculates highly precise positions of targets in 3D-space

Cameras

The use of machine vision technologies allows high-precision readings

Firmware promotes a real time display

Targets

Retroreflecting targets without any electronic components with a protective layer coating

Optima series

- Easy to use
- Light and compact targets
- Rubber frame to protect from accidents

PRO series Premium series

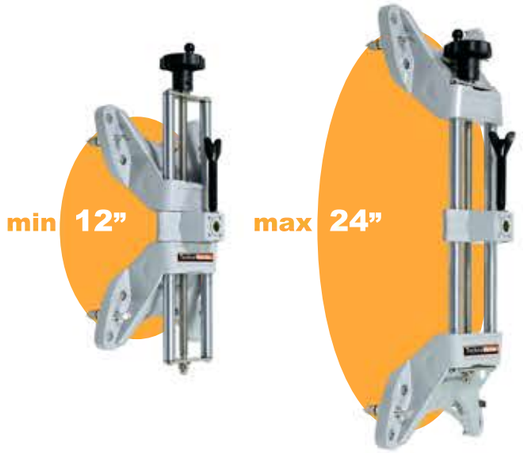
- Easy to use
- Super-light magnesium alloy targets
- Plastic frame to protect from accidents
- Support magnetic and 3-point wheel adaptors

Four-camera wheel aligner's kit

Two-camera wheel aligner's kit

Wheel Adaptors

Self-centering wheel adaptors with the adjustable central mechanism support 12" to 24" wheel rims and are compatible with light duty and middle duty vehicles



Adaptors

Double sided studs make it easy to attach wheel adaptors to both steel and light-alloy rims

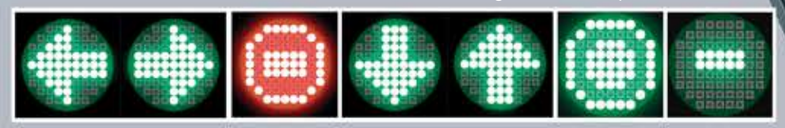
Optional equipment

Set of **magnetic** wheel adaptors

Set of **3-point** wheel adaptors

Two-camera
wheel alignment systems

Additional display with helpful hints. Useful when the technician has no line of sight to the computer's screen.



Caster swings | Stop sign | Rolling compensation direction | System idle | Data processing

Four-camera
wheel alignment systems

Additional display with helpful hints. Useful when the technician has no line of sight to the computer's screen.

Caster swings | Stop sign | Rolling compensation direction

Wide-angle machine vision system

Key advantages of the WideScope technology

- Measure and adjust at any lift height *
- Accommodate to the workplace. Install closer or further away, depending on the space available
- Continue adjustment even if the target's is partially occluded

*depends on the installation distance (see page 7)

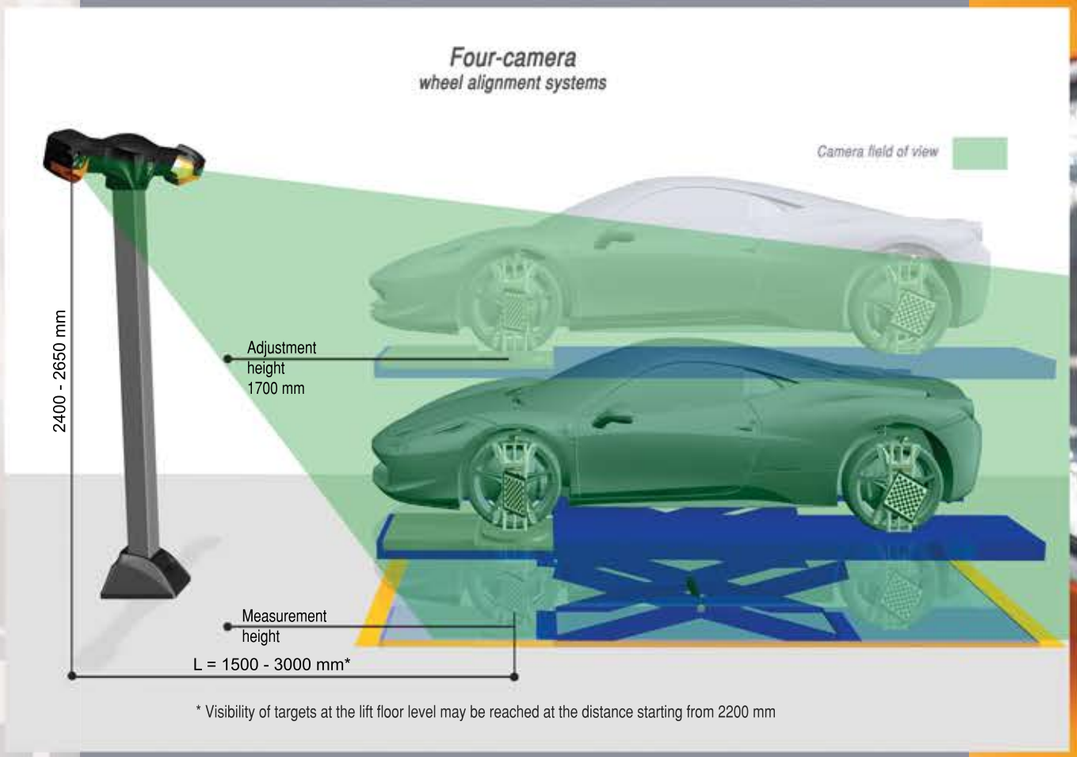
WideScope®

Lift position tracking

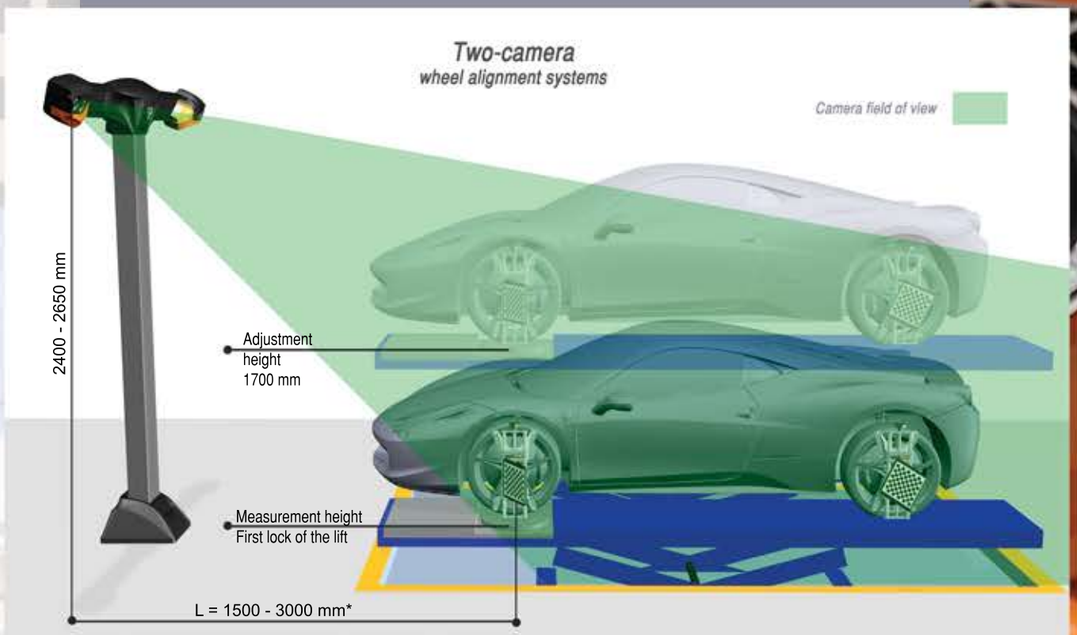
This feature can be useful if the lift can't stay level at different heights.

The software automatically detects lift movement and compensates the difference.

Camera field of view diagrams with WideScope technology



* Visibility of targets at the lift floor level may be reached at the distance starting from 2200 mm



* For the first stop of the lift targets fit into the field of view at approximately 2600 mm

Computer Cabinets

P series

V series

T series

S series

Computer cabinet includes

- PC with an Intel/AMD processor and a Windows 10 operating system
- 21.5"+ widescreen monitor
- VESA bracket for the monitor
- Printer
- Remote control (2.4Ghz connection)
- Four brackets to store wheel adaptors

Available **colours**

RAL 7011 RAL 5010 RAL 3002

Universal telescopic **monitor bracket** (for V- series and T- series)

Specifications

2 YEAR warranty

Parameter	TechnoVector 7 Measurement Range	Maximum Error	Average Error
Front axle			
Camber	±8°	±3'	±2'
Front Total Toe	±5°	±3'	±2'
Caster	±19°	±8′	±5′
SAI / KPI	±19°	±8′	±5′
Lock Angle	±45°	±10′	±5′
Rear axle			
Camber	±8°	±3'	±2'
Rear Total Toe	±5°	±3'	±2'
Rear Individual Toe	±2,5°	±3′	±2′
Symmetry angles			
Front SetBack	±2,5°	±3'	±2'
Rear SetBack	±2,5°	±3′	±2′
Thrust Angle	±2,5°	±3′	±2′
Geometrical Driving Axis	±2,5°	±3'	±2'

Marking

V 7 2 0 4 T 5 A D

1 2 3 4 5 6 7 8 9

1 Computer cabinet series (P, V, T, S)
2 Wheel aligner's model generation (7 for TechnoVector 7 series)
3 The amount of axles measured simultaneously
4 1 – mobile, 0 – stationary
5 Total camera count
6 Housing type: T, H, M, K
7 Maximum camera resolution: 1 – 1.3Mp, 5 – 5Mp
8 Wheel aligner's series. Premium, Pro, Optima
9 Optional symbol for a beam inclination drive

Delivery Set

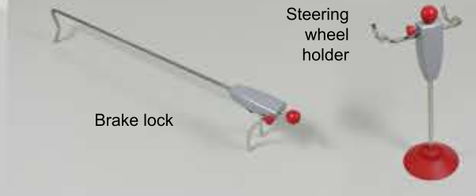
Set of turn tables

Personal computer

TechnoVector 7 (Standard accessories)

1. Machine vision system	1
2. Computer cabinet	1
3. Personal computer	1
4. Set of targets	4
5. Set of wheel adaptors	4
6. Steering wheel holder	1
7. Brake lock	1
8. Set of turn tables	2
9. Remote control receiver	1
10. Remote control	1
11. Manual	1

Set of targets & clamps



Steering wheel holder

Brake lock

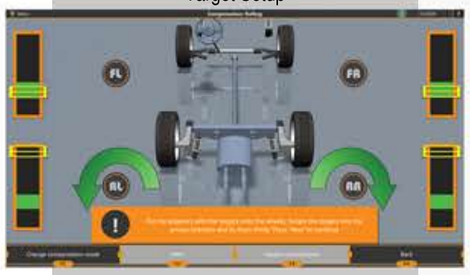
Remote control

TechnoVector Software

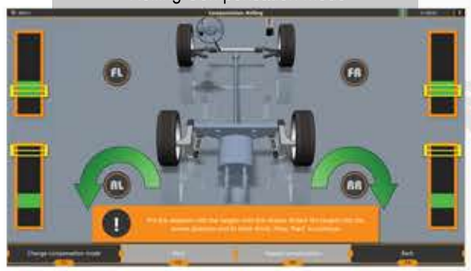
The **TechnoVector software** is a powerful and modern application with all the tools necessary for fast and easy wheel alignment

Database Image View

Target Setup



Rolling Compensation Mode



Continuously tracks wheel positions and updates the information on screen

Measured values are always compared to the vehicle's specs

Big font and coloured value state indication help you adjust the vehicle from afar

Multiple various visualization modes to pick from

Windows 10

The TechnoVector software runs on a PC and uses the **Windows 10** operating system

Measurement Mode

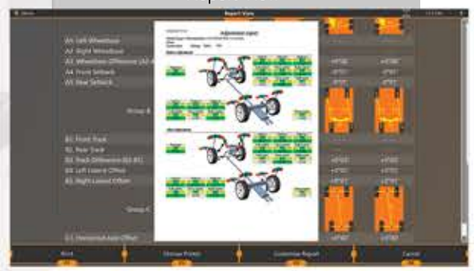
3D Adjustment Mode

3D visualization, 7 Modes

2D Adjustment Mode

2D visualization, 2 Modes

Report View



Database

includes **data for more than 60000 vehicle model**:
- wheel alignment specifications
- tire pressure specifications
- 3D animation
- adjustment diagrams and images

The TechnoVector software supports ASA Network (a car workshop IT framework). ASA Network supports centralised order creation and data sharing across all the devices in the workshop network.

asanetwork

Free database updates
on the TechnoVector website! Send reports to your customers via TechnoVector mobile app, e-mail or text messaging to reduce the paperwork and improve customer service

3D Animation

Configurations

Pick a configuration that fits best to your workshop needs

Up-to-date wheel aligners for modern car shops

Optima series

Light version of the TechnoVector wheel alignment system

- 2 cameras

T-type

K-type

M-type

PRO series

Wheel aligners with colourful, appealing, expressive, and dynamic design

- 2 or 4 cameras

T-type

K-type

M-type

H-type

PRO Mobile series based on PRO

Move the entire wheel aligner to the place you need it to be at

Premium series

The flagship of the TechnoVector 7 series

- 4 cameras

- Premium machine vision component
- Highly performant PC with an Intel i7 processor
- Embedded camera detecting car presence and recognising its license plate

T-type

Initial installation of the device

The initial installation of the equipment is performed by the manufacturer's service technicians.
The device works with a 4 post wheel alignment lift or a repair pit, compliance with the horizontality requirements is strongly recommended.

Available **colours**

RAL 7011 | RAL 5010 | RAL 3002

Mobile App

TechnoVector Report Viewer

- Customers can use this smartphone app to gain access to the wheel alignment reports of their cars. Works on Android and iOS.
- The TechnoVector software can send the report data to the app at any time you need. The customer is identified by an e-mail address or a phone number. The wheel aligner must have an internet connection.
- If the internet connection is unavailable customers can obtain an alignment report using a QR code on the screen or in the printout.
- Reports can be viewed in the mobile app and exported as an HTML or PDF file.

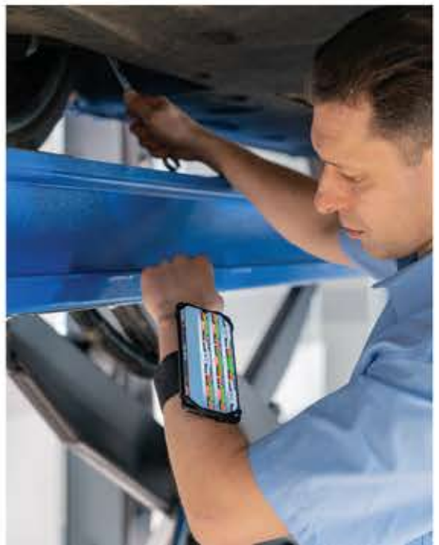
TechnoVector Assistant

- Take photos and perform license plate recognition, automatically filling the order data (if such data available)*.
- Take photos and attach them to the current order.
- View current wheel alignment data to the mobile device's screen. Pick one of the several modes to best fit your workflow.
- Control the wheel aligner. TechnoVector Assistant app can be used as a remote control.

* - requires an AutoFill package

Optional equipment

Additional camera
- Provides drive-in assistance
- Provides license plate recognition
- Provides vehicle presence tracking
- Allows to attach photos to the order



Online reports

*A full adjustment report can be viewed on a mobile device in the browser even without installing the TechnoVector assistant by scanning a **QR-code** on the screen or in the print-out. Internet connection is not required.*

The TechnoVector software can send a report link to the customer via e-mail or text messaging

A print-out or a report on the tablet's screen is useful when explaining details about the alignment procedure to the customer

Order AutoCompletion packages

AutoFill package* features:
- License plate recognition
- If the vehicle is present in the customer's local database (returning customer), the vehicle model and the customer information is filled automatically

* - internet connection is required

AutoFill Plus package* features:
- License plate recognition*
- If the vehicle is present in the customer's local database (returning customer), the vehicle model and the customer information is filled automatically
- Uses TechnoVector online services** to determine the vehicle's make model and other information about the vehicle based on its license plate number***

* - internet connection is required
** - per-country availability can be checked on technovector.com
*** - information details vary depending on the country

www.technovector.com

Precision in Motion

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