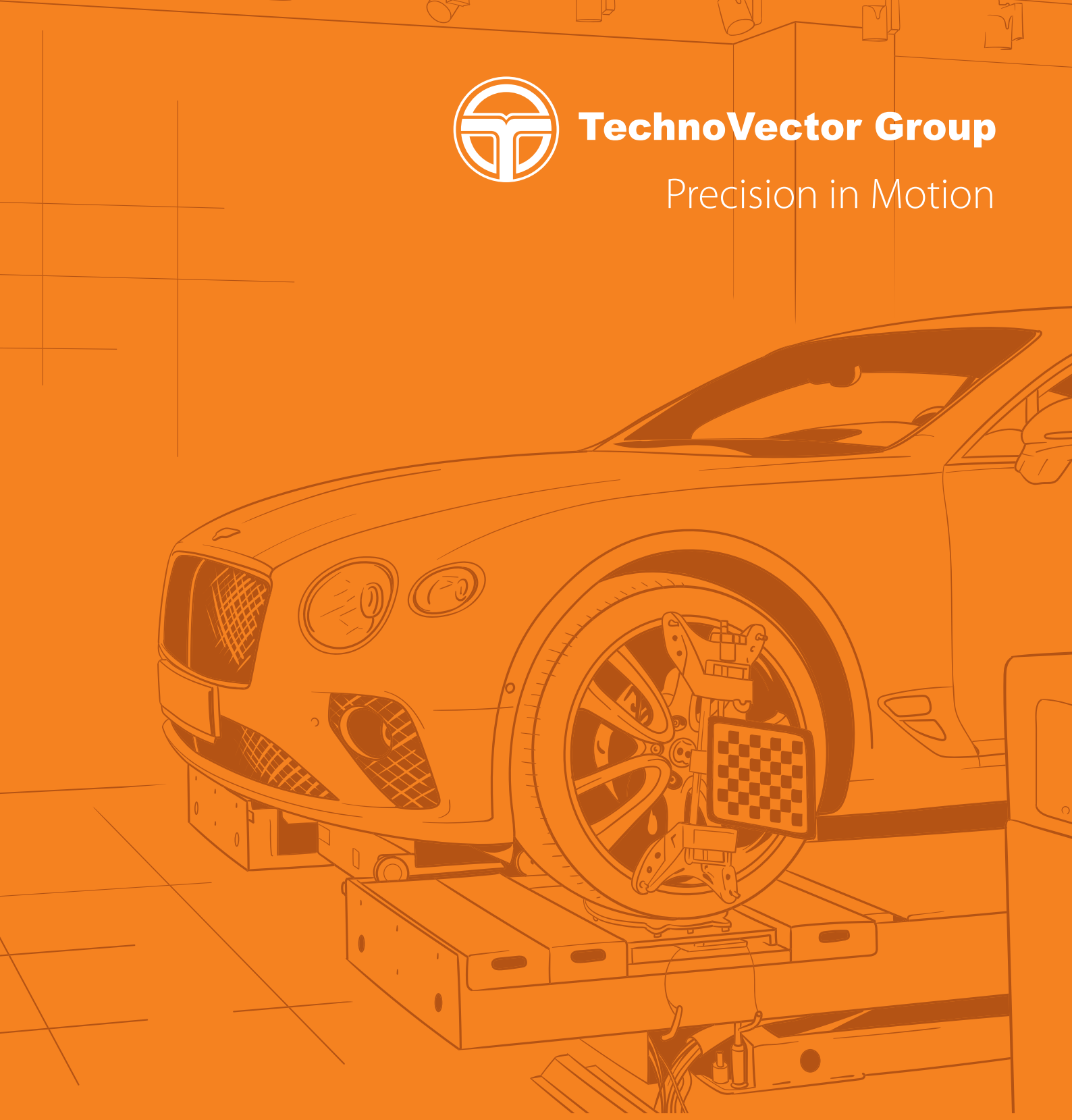
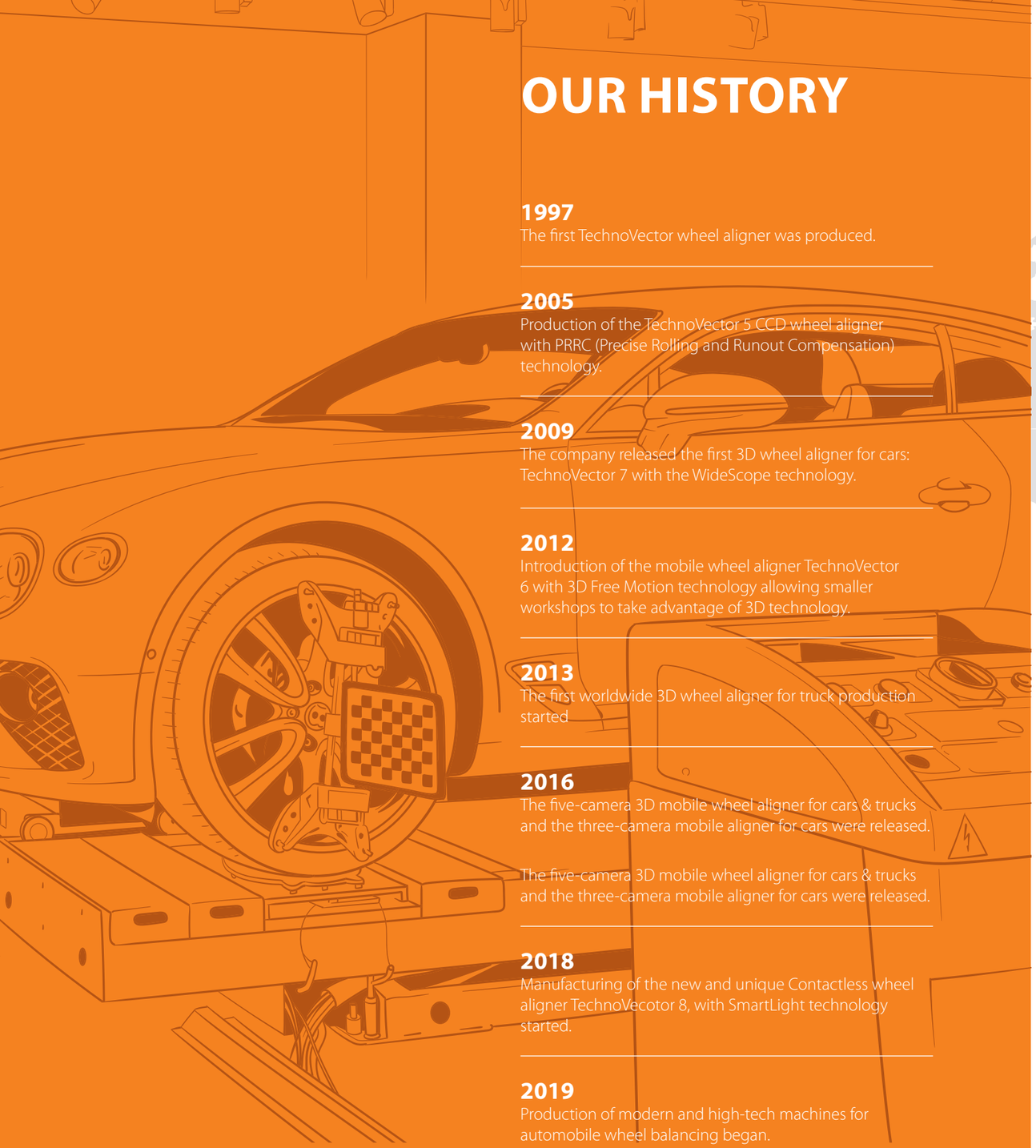
TechnoVector Group

Precision in Motion



TechnoVector 7

Wheel Alignment Systems



OUR HISTORY

1997
The first TechnoVector wheel aligner was produced.

2005
Production of the TechnoVector 5 CCD wheel aligner with PRRC (Precise Rolling and Runout Compensation) technology.

2009
The company released the first 3D wheel aligner for cars: TechnoVector 7 with the WideScope technology.

2012
Introduction of the mobile wheel aligner TechnoVector 6 with 3D Free Motion technology allowing smaller workshops to take advantage of 3D technology.

2013
The first worldwide 3D wheel aligner for truck production started

2016
The five-camera 3D mobile wheel aligner for cars & trucks and the three-camera mobile aligner for cars were released.

The five-camera 3D mobile wheel aligner for cars & trucks and the three-camera mobile aligner for cars were released.

2018
Manufacturing of the new and unique Contactless wheel aligner TechnoVecotor 8, with SmartLight technology started.

2019
Production of modern and high-tech machines for automobile wheel balancing began.

2021
The world premiere of a contactless solution for heavy-duty truck alignment and express angles check.

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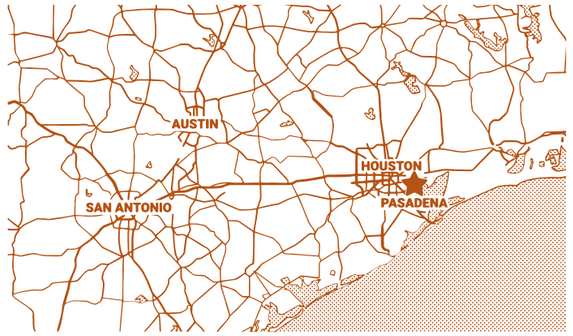
GLOBAL PRESENCE



TECHNOVECTOR INC.

Address: 10565 Red Bluff Rd. Pasadena, TX 77507 USA
Status: Official representation in the USA
technovector.us

TECHNOCAR LLC.

Address: 55 Zheleznodorozhnaya St. Tula, Tula Region 300020 Russia
Status: Headquarters and main production
technovector.ru

TECHNO VECTOR BULGARIA LLC.

Address: 21 Oborishte St. Sofia, 1504 Bulgaria
Status: Official representation in Europe
technovector.com

WHAT WE PRODUCE

MANUFACTURING

- Technovector is an ISO 9001:2015 certified production with facilities of 8,000 m^2 spread across a campus of 20,000 m^2.
- All the main components of Technovector wheel aligners, such as cameras, consoles, measuring blocks, metal parts, etc., are designed by TechnoVector Group and manufactured at the company's production facilities.
- The Equipment made in Russia or the EU.
- There is an extended three-year warranty on most products.

INNOVATIONS

Continuous improvement of existing technologies and research into new principles for measuring wheel alignment has put us among the industry leaders for a decade. Ground-breaking technologies such as PRRC, WideScope, and SmartLight have become unrivaled worldwide. Technovector produces all types of wheel alignment systems: 3D, CCD, and Touchless.

TECHNOVECTOR 7

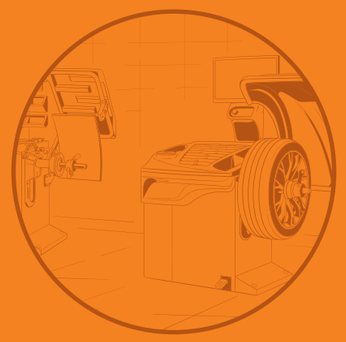
7202 / 7204 – TWO–/ FOUR–CAMERA MACHINE VISION WHEEL ALIGNMENT SYSTEMS WITH WIDESCOPE TECHNOLOGY

Angle readings at any rack height and distance up to 385" / 9.75 m. *
7204 - four-camera model.
Two-camera model within an effective range of working heights along with the system cost-efficiency.
Real-time accurate readings.
Ultra-compact installation without loss of accuracy and process reliability.
Automatic rack incline correction.

TECHNOVECTOR IPRO BM

WHEEL BALANCING MACHINES IPRO BM SERIES

Short measurement cycle and high accuracy readings.
Automatic ultrasound width detection for steel-rim wheels for all models.
High degree of automation of measuring and balancing processes.
A wide range of wheel and rim imbalance and geometry determining tools.
Ergonomic design and system reliability.



Precision in Motion

TECHNOVECTOR 7 TRUCK&BUS

7204HTS AND 7204HTMC FOUR-CAMERA MACHINE VISION WHEEL ALIGNMENT SYSTEMS WITH WIDESCOPE TECHNOLOGY FOR HEAVY-DUTY VEHICLES

Most effective and convenient 3D wheel aligner for heavy-duty trucks on the market.
For all heavy-duty vehicles with wheelbases of up to 630 inches / 16.00 m.
Up to four-axle simultaneous rolling compensation and live readings.
TechnoVector 7 Truck&Bus Mobile, which is the first in the industry 3D mobile solution for heavy-duty vehicles.

SMARTLIGHT

CONTACTLESS WHEEL ALIGNMENT MACHINES FOR PIT OR LIFT INSTALLATIONS

No wheel adaptors or targets on wheels.
Automatic readings in seconds. Express alignment inspection or full vehicle adjustment.
More room in front and back of the vehicle.
Complete and accurate full alignment check and adjustment process. Wheel Bases from 79"/ 2.00 m up to 154"/ 3.90 m. Automatic rear-measuring-tower aiming.
Several alignment bay configurations available.

SMARTLIGHT TRUCK&BUS

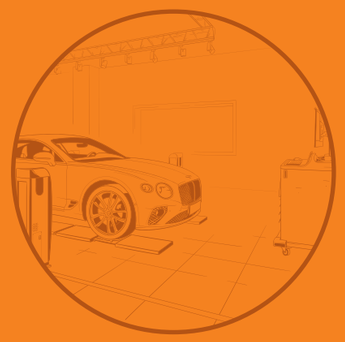
CONTACTLESS WHEEL ALIGNMENT SOLUTION FOR HEAVY-DUTY VEHICLES

The first in the industry contactless solution for heavy-duty trucks.
All the benefits of SMARTLIGHT technology for express alignment inspection and total adjustment of heavy vehicles.
Rear automatic movable columns for multi-axle measurement and adjustment.

VELOX

CONTACTLESS WHEEL ALIGNMENT EXPRESS CHECK MACHINES

Contactless technology for an express alignment inspection.
Automatic and accurate readings in seconds.
Four-column configuration for a full alignment check and two-column system for tire-wearing angles inspection.



NEW

MACHINE VISION SYSTEMS INTRODUCTION

TECHNOLOGY

Up to date, top-selling traditional 3D Technovector alignment system. Decades of proven machine vision technology combined with affordable pricing.
The implementation of the system the system technology measures car wheels' angular parameters using cameras that analyze reflected images from attached-to-wheel targets. Video cameras are built using CMOS technology. Reflected radiation processing (wheel images) allows for calculating the relative position of vehicle wheels with high accuracy. Measurement results obtained with video cameras are processed using a Windows-operated computer..

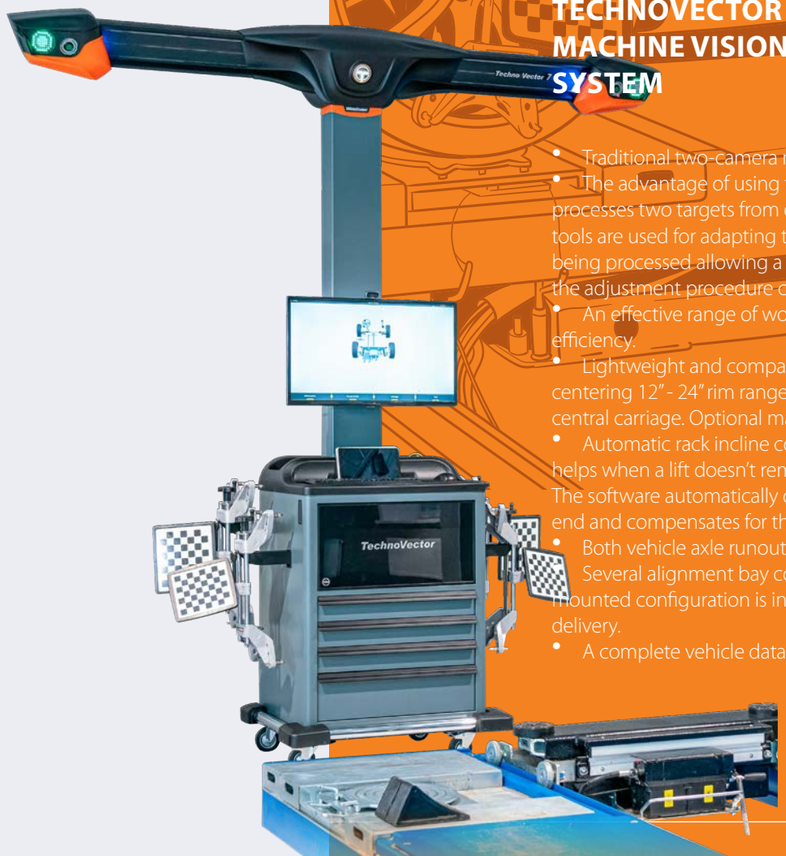
TECHNOVECTOR 7 ALIGNERS

Measuring Systems with Four or Two WideScope high-resolution industrial-grade cameras fixed on a system beam, installed in front of a vehicle with high-accuracy image targets attached to the car wheels.
Digital high-resolution cameras with embedded IR backlight enable the TechnoVector™ software to track targets' accurate spatial positions.
The WideScope technology allows angles reading and adjusting in an extensive range of lift heights without moving the cameras' beam, allowing for a more compact installation without loss of accuracy.

7204

TECHNOVECTOR 7 SERIES 4-CAMERA MACHINE VISION WHEEL ALIGNMENT SYSTEM

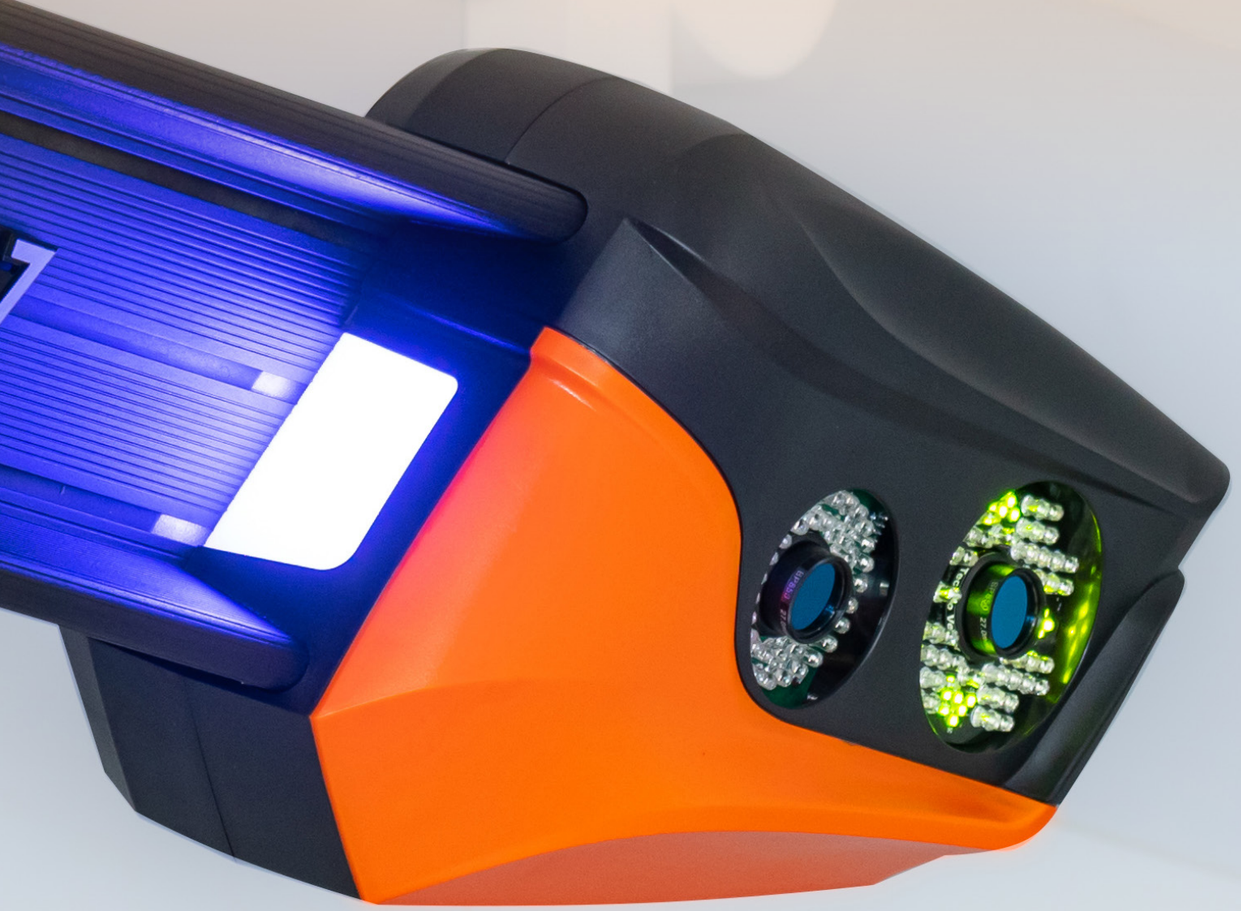
- Traditional four-camera machine vision wheel aligner.
- The advantage of using four cameras: each camera constantly processes its target, allowing for reliable and credible live-data readings.
- Wheel angle readings at any rack height.
- Lightweight and compact design of adaptors and targets. Self-centering 12" - 24" rim range wheel adaptors with an adjustable central carriage. Optional magnetic wheel adaptors can be ordered.
- Automatic rack incline correction. This branded software feature helps when a lift doesn't remain horizontal during its movement. The software automatically detects the lift movement's start and end and compensates for the angle values changes.
- Both vehicle axle runout compensation for just one forward roll.
- Several alignment bay configurations are available. Cabinet-mounted configuration is included in the standard scope of delivery.
- A complete vehicle database of the US market.



7202

TECHNOVECTOR 7 SERIES 2-CAMERA MACHINE VISION WHEEL ALIGNMENT SYSTEM

- Traditional two-camera machine vision wheel aligner.
- The advantage of using two cameras: each camera alternately processes two targets from one side of the vehicle. Special software tools are used for adapting the focus and exposure of the target being processed allowing a reduction in data time and providing the adjustment procedure close to real-time.
- An effective range of working heights along with system cost-efficiency.
- Lightweight and compact design of adaptors and targets. Self-centering 12" - 24" rim range wheel adaptors with an adjustable central carriage. Optional magnetic wheel adaptors can be ordered.
- Automatic rack incline correction. This branded software feature helps when a lift doesn't remain horizontal during its movement. The software automatically detects the lift movement's start and end and compensates for the angle values changes.
- Both vehicle axle runout compensation for just one forward roll.
- Several alignment bay configurations are available. Cabinet-mounted configuration is included in the standard scope of delivery.
- A complete vehicle database of the US market.



WIDESCOPE

Unique WideScope technology allows readings and angles adjustment in a wide range of rack heights without adapting the measuring system, enabling compact system placement without loss of accuracy and significantly increasing the productivity of a wheel alignment bay.
The operational range of the visible heights of the lift is twice as wide as that of similar competitors. The four-camera system allows taking readings and performing alignments on the rack from the floor level to the adjustment height of 67″ / 1.70 m* without camera beam movement. The two-camera system allows for taking readings and performing adjustments on the rack in the range of 24″ / 0.6 m. up to 67″ / 1.70 m.

* Depends on the installation distance of system cameras.

CAMERAS

High-definition cameras for immediate and stable target capture and a high-speed image transfer over TCP/IP. The system software carries out the wheels' spatial-position-definition based on the reflection of target images. Colored backlight for 7204 or backlight board indication for 7202 model with a convenient indication for the duplication of the screen directions to facilitate measurement and adjustment procedures.

WHEEL ADAPTORS

Lightweight and compact design of adaptors and targets. Self-centering 12″ - 24″ rim range wheel adaptors with an adjustable central carriage. Optional magnetic wheel adaptors can be ordered.
Double-sided studs for easy attachment to both steel and light-

TARGETS

High definition targets are coated with a protective layer and contain no electronic components. A super-light magnesium alloy target base and protective plastic frame are used.

AUTOMATIC RACK INCLINE CORRECTION

This branded software feature helps when a lift doesn't remain horizontal while moving. The software automatically detects lift movements and compensates for the angular difference.

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THE SOFTWARE / THE POWERFUL AND RELIABLE ALIGNER CONTROL TOOL *

* Runs under Windows 10

MOTOR DRIVEN

- Continuous data processing and live-reading displaying. Automatic step transition during measurement and adjustment procedures.
- Readings are automatically compared with OEM vehicle specifications.

- Quick program modes access:Database View; Target Setup & Rolling Compensation Mode; Reading Mode; 3D Adjustment; 3D Visualization; 2D Adjustment; 2D visualization; Report View.

- An OEM specification database for more than 60,000 vehicles, including primary angles values, tire pressure specifications, 3D animation, adjustment diagrams & drawings.

- The comprehensive electronic help system contains quick workflow navigation or equipment reference: alignment workflow video, software tuition video, specific vehicle adjustment information, diagrams, drawings, video and 3D animation.

Extremely fast readings refresh. The software keeps up with the cameras' live data speed of 40 frames per second. Multiple target detection passes allow operation in extremely bright bays. The multithreaded architecture utilizes all the capabilities of modern multi-core processors. Scales correctly on every modern display, including 4K monitors. All the screens are preloaded to eliminate possible pauses while reading & adjusting.

- Animated 3D model of a generic car chassis. Wheel positions are pictured according to measured values of the toe, camber & caster. The adjustment mode has several views: each wheel, each axle, a general view, a geometry view, and a 2D-mode.

- The software utilizes the latest version of the complete US local market vehicle MOTOR Driven™ database. The choice of a vehicle model by its VIN eliminates operator error when choosing a specification. Adjustment procedures in illustrated OEM manuals. Regular database updates are available through direct download. The software allows for adding an unlimited amount of custom specifications and exporting/importing them.

- The software employs all the modern techniques to improve the accuracy of calculating targets positions in 3-dimensional space. Multiframe smoothing reduces data instability due to vibrations and lighting conditions yet swiftly reacts to any significant changes

- The software automatically detects lift movement during adjustment and corrects the live values if the lift skews. Two readings coordinated systems are supported: calibrated horizon and vehicle plane. Additional jacking wheels mode for adjustment or runout compensation.

- 3D gauges during the procedures allow better visualization of measured wheel alignment values. Live 3D performed data. Software-generated print-outs can include 3D rendered drawings illustrating positions of wheels before and after the adjustment.

- An intuitive workflow that uses only four navigation buttons at the bottom of the screen. Helpful drawings and OEM illustrations to remind the technician of procedural actions that have to be performed. The orders data is stored and can be recalled at any time. All the navigation throughout most of the program workflow can be completed using hotkeys on the remote control or the keyboard.

- Built-in webcam support helps in positioning the vehicle on a rack and can be set up for automatic car license plate recognition. The final print-out has a selection of one of the multiple templates and customization of advertisement massages, a company logo, etc. The application has a feature for sending automatic reports by email or text. Barcode or QR-code reader support for automatic vehicle specification recall upon VIN reading.

- Specific settings set automatic step transition during measurement and adjustment procedures, reducing time and facilitating the whole process.

- An operator can select default modes for compensation, measurement, or adjustment and several other fine-tuning workflow settings. A statistics screen with wheel aligner productivity data is available, displaying quantity of adjustments over a given time frame, average adjustment time, etc. Tire pressure tables for most of the in-database models.

- A detailed, user-friendly printout with an opportunity for automatically sending reports to a customer's phone or email address.

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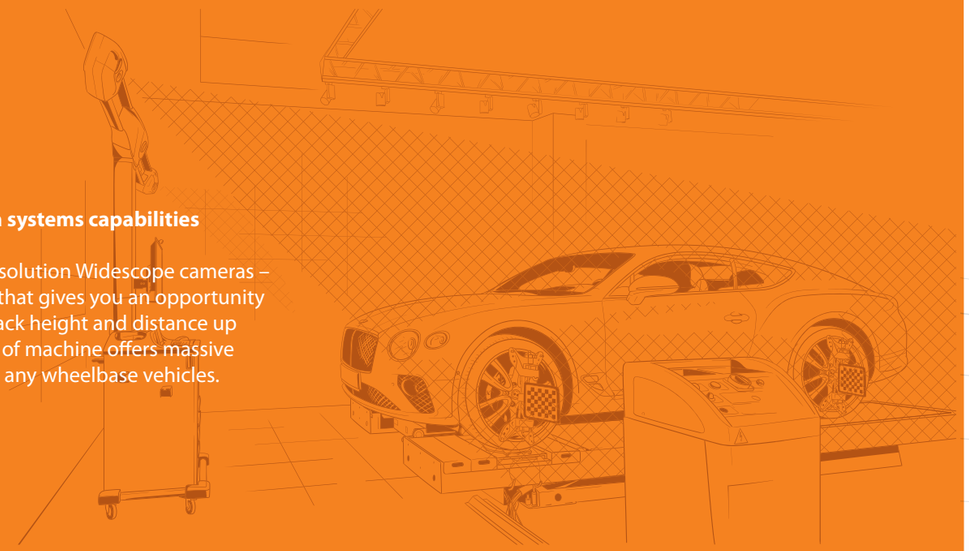
7202 OR 7204:
MODELS' VISION RANGE CHART



Unmatched four-camera systems capabilities

Aligners with four high-resolution Widescope cameras – the best choice for shops that gives you an opportunity of angle readings at any rack height and distance up to 384″ / 9.75 m. This type of machine offers massive opportunities to maintain any wheelbase vehicles.

Two-camera wheel alignment system with much of the capabilities of a four-camera

Wheel alignment system, using two Widescope cameras and action indicators to make the measurement easier. The cost-saving solution perfectly fits small shops and allows readings from the comfortable lift heights from 14″/0.35 m. to 67″/1,70 m. and distance up to 276″/7.00 m.

The wall mount bracket allows you to mount the horizontal camera beam to the wall. This type of mounting may be best to save space if the wall is in front of the work bay, and the distance between cameras and front turnplates is between 60″/1.50 m and 100″/2.55 m.

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WHAT`S IN THE BOX

OPTIONAL

- Magnetic wheel adapters for faster targets on wheel installation. This type of clamp allows for improved target attachment convenience and enhanced alignment bay operation speed. Usage increases the efficiency of the wheel aligner, makes work simpler and provides no adaptor rim contact.
- The 32″ monitor can be supplied instead of the standard one and can be mounted on a regular bracket.
- Adaptor extensions to increase the upper working range from 24″ to 28″. The kit of sixteen pieces.
- Barcode & QR-code reader for automatic vehicle specification recall upon VIN reading.

MOBILE DEVICE SUPPORT

- Mobile Apps are available for free downloading from Android Google Play or iOS App Store.
- Live readings on the aligner's mobile device screen. Main Mobile Apps features are: supporting a device as a remote control; saving and displaying aligner readings and/or adjustment results in a customer's device, viewing and exporting of reports as an HTML or PDF.
- Offline mobile features: obtaining an alignment report using a QR code on the aligner screen or printout; viewing of a complete adjustment report in a mobile device browser upon QR-code scanning without an additional application on the device or internet connection.

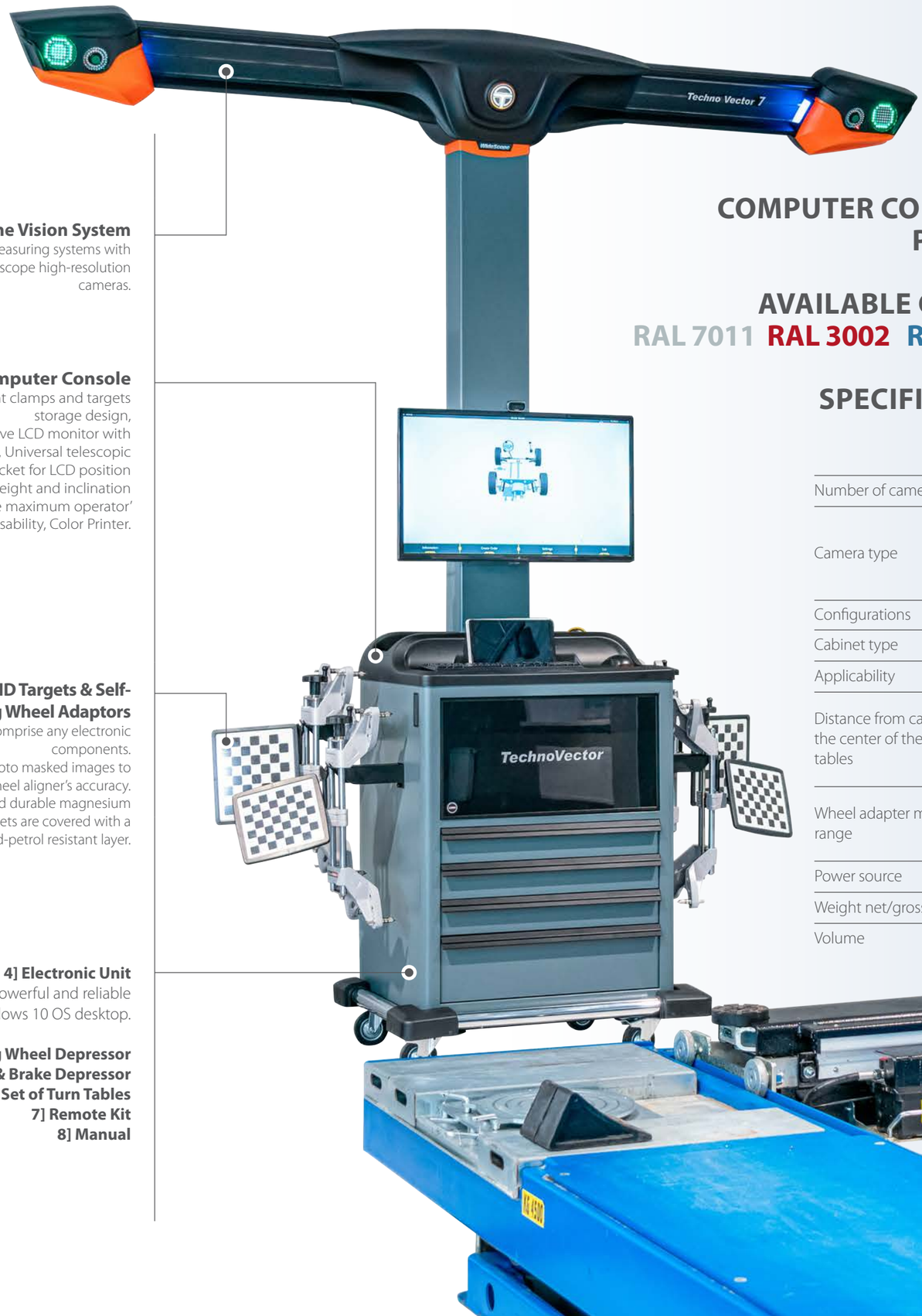
1] Machine Vision System
Measuring systems with Four or Two Widescope high-resolution cameras.

2] Computer Console
Convenient clamps and targets storage design, 21,5″ or above LCD monitor with monitor bracket, Universal telescopic monitor bracket for LCD position adjusting (height and inclination angle) to provide maximum operator' usability, Color Printer.

3] Set four HD Targets & Self-centering Wheel Adaptors
Don't comprise any electronic components. High-quality photo masked images to maximize the wheel aligner's accuracy. Lightweight and durable magnesium alloy targets are covered with a protective oil-and-petrol resistant layer.

4] Electronic Unit
Powerful and reliable Windows 10 OS desktop.

5] Steering Wheel Depressor & Brake Depressor
6] Set of Turn Tables
7] Remote Kit
8] Manual



COMPUTER CONSOLES P-SERIES

AVAILABLE COLORS

RAL 7011 **RAL 3002** **RAL 5010**

SPECIFICATION

	7204	7202
Number of camera	4	2
Camera type	2x1.3MPix and 2x5MPix machine vision industrial cameras, RAW	2x5MPix machine vision industrial cameras, RAW
Configurations	Cabinet-mounted or Wall-mount	
Cabinet type	P-series	
Applicability	Lift or Pit	
Distance from cameras to the center of the front turn tables	min 60″, max 120″, recommended 87″	min 60″, max 120″, recommended 99″
Wheel adapter mounting range	12 – 24 in	
Power source	115 VAC single-phase 50/60 Hz	
Weight net/gross	530/750 lbs	
Volume	70 ft3