



**TechnoVector Group**

# TechnoVector 7 Truck&Bus

Wheel Alignment Systems

*Precision in Motion*

# OUR HISTORY



1997

First wheel aligner had been produced



2005

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



2009

Introduced our first 3D wheel aligner for cars: TechnoVector 7 with WideScope technology.



2012

The mobile wheel aligner TechnoVector 6 with 3D Free Motion technology allowing smaller workshops to use the benefits of 3D technology.



2013

The first worldwide 3D wheel aligner for trucks had been introduced.

2016

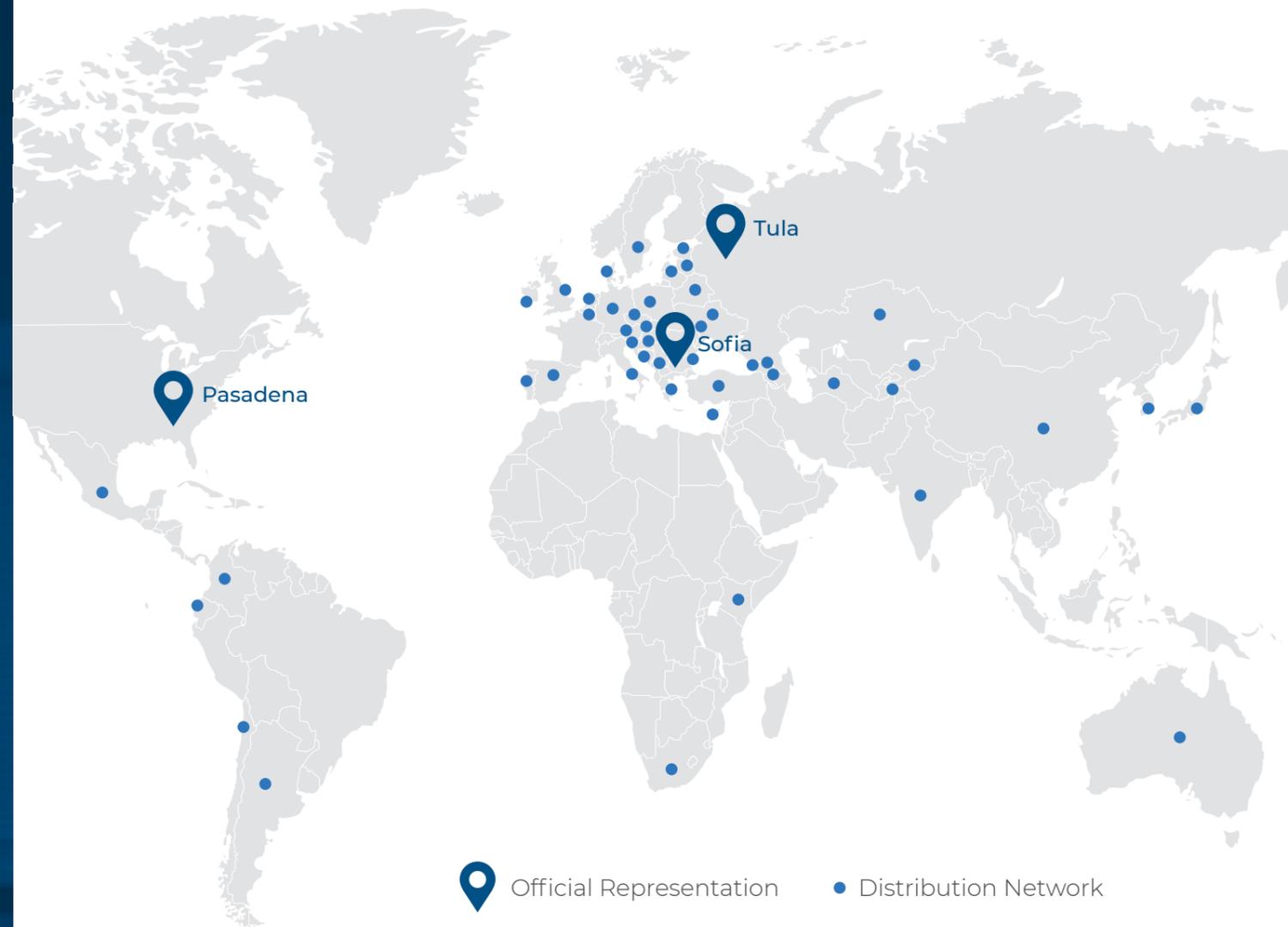
Released the 5-camera 3D mobile wheel aligner for cars and trucks and the 3-camera cars mobile aligner.

2018

New unique Contactless wheel aligner TechnoVector 8 with SmartLight technology.

*Precision in Motion*

# GLOBAL PRESENCE



## TECHNOVECTOR INC.

USA 10535, Red Bluff Rd, Pasadena, TX, 77507.  
Status: Official representation in the USA  
[technovector.us](http://technovector.us)

## TECHNOCAR LLC

300020 Russia, Tula,  
Zheleznodorozhnaya st., 55.  
Status: Headquarter  
and main production  
[technovector.ru](http://technovector.ru)

## TECHNOVECTOR EUROPE

21, Oborishte str.,  
1504 Sofia, Bulgaria.  
Status: Official representation  
in Europe  
[technovector.com](http://technovector.com)

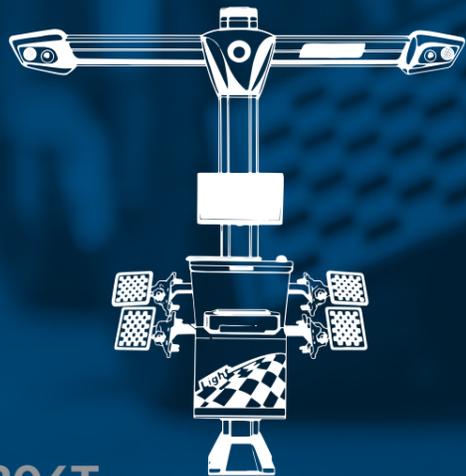
# WHAT WE PRODUCE

## MANUFACTURING

- Technovector is ISO 9001:2015 certified with production facilities of 86000 sq.ft. (8000 sq.m.) located in the area of 215000 sq.ft. (20000, sq.m.).
- All main components of Technovector wheel aligners such as cameras, consoles, measuring blocks, metal parts, etc., are designed by TechnoVector Group and manufactured at own production plant.
- All products are the origin of Russia and the EU.

## INNOVATIONS

Groundbreaking technologies such as PRRC, WideScope, and SmartLight have become worldwide unrivaled. The only industry manufacturer who produces all types of wheel alignment systems: 3D, CCD, Touchless. Company is the only producer of Heavy Duty vehicle reliable Machine Vision System.



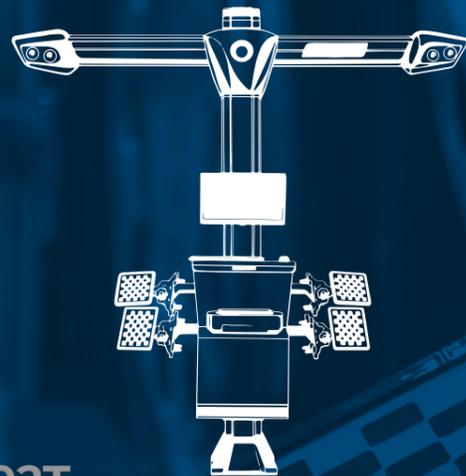
### 7204T TECHNOVECTOR 7 SERIES 4-CAMERA MACHINE VISION WHEEL ALIGNER SYSTEM WITH WIDESCOP TECHNOLOGY

Angle readings at any rack height and distance up to 384".

Fast and accurate readings.

Compact installation without loss of accuracy and significantly.

Automatic rack incline correction.



### 7202T TECHNOVECTOR 7 SERIES 2-CAMERA MACHINE VISION WHEEL ALIGNER SYSTEM WITH WIDESCOP TECHNOLOGY

#### AFFORDABLE PRICE

Fast and accurate readings.

Compact installation without loss of accuracy and significantly.

Automatic rack incline correction.

## 7404HTS

### TECHNOVECTOR 7 SERIES HD 4-CAMERA MACHINE VISION WHEEL ALIGNER SYSTEM WITH WIDESCOP TECHNOLOGY

Only Heavy Duty vehicle reliable Machine Vision System on the market.

All heavy-duty vehicles wheelbases of up to 630 inches.

Up to four axles simultaneous rolling compensation and adjusting.



### SMARTLIGHT UNIQUE, CLAMPLESS WHEEL ALIGNMENT MACHINES FOR PIT OR RACK FULL RISE INSTALLATIONS

No wheel adapters or targets on wheels.

Readings in seconds.

More space in front and back of the vehicle.

Express full alignment check. Wheel Bases from 79" up to 154". Auto rear measuring posts aiming. Several alignment bay configurations are available.

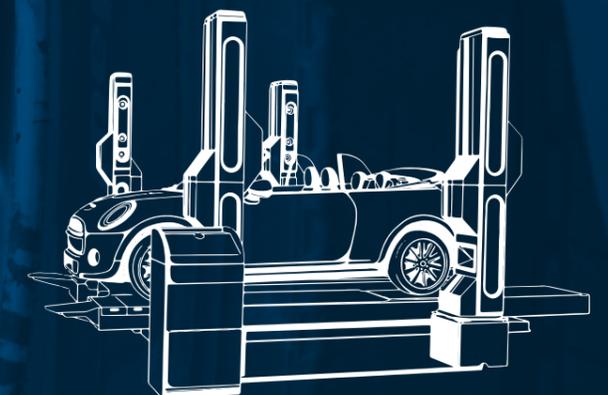
## VELOX

### CLAMPLESS WHEEL ALIGNMENT EXPRESS CHECK MACHINES

No wheel adapters or targets on wheels.

Auto Readings in seconds.

Express full alignment check.



# MACHINE VISION SYSTEMS INTRODUCTION

## TECHNOLOGY

Readings are taken by processing measured data obtained with flash light emitters on special targets placed on the wheels of the vehicle and reading radiation pulses reflected from targets with video cameras. Video cameras and emitters are built using CMOS technology. Measurement results obtained with video cameras are processed using the microprocessor system.

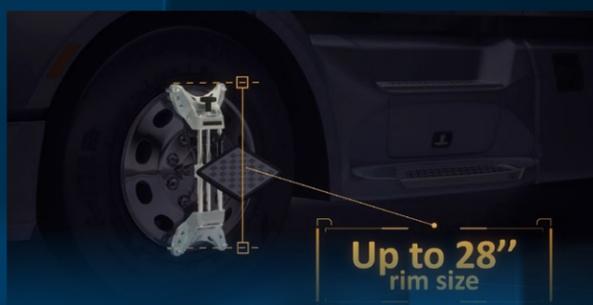
## 7404HTS

### TECHNOVECTOR 7 SERIES TRUCK&BUS MACHINE VISION WHEEL ALIGNER SYSTEM

- One of a kind 4 camera machine vision wheel aligner for Heavy Duty vehicles alignment purposes;
- Trucks, Semi-trailers & Buses fast and accurate measurement;
- Unique WideScope technology allows readings and adjusts angles on Truck and Bus wheelbases of up to 630 inches;
- Self-centering wheel adaptors with the adjustable central mechanism fit 15" - 28" wheel rims and are compatible with most Heavy Duty vehicles;
- Fast and accurate multi-axle readings for just one forward roll (Faster compensation), measurement relatively the frame or the rear axle, availability of drive through or backward running measuring procedures;
- Wheel adaptors and targets could be mounted onto wheels on all desired axles at the same time;
- The laser probe for quick and accurate vehicle frame reference line measurement;
- Several alignment bay configurations give an opportunity to consider individual features of a certain alignment bay. Dead end or Drive-through forward and backward running bay composition are allowed;
- Complete US market vehicles database.

## OUR MACHINES

- Measuring systems with Four Widescope high-resolution cameras which are securely located in special housing patterns to be installed in front or back of the vehicle with high-precision image targets clamped on the Truck, Trailer or Bus wheels;
- Cameras are used to obtain the spatial position of the image targets with a high-precision, real-time target video processing allows getting all the necessary live wheel angles parameters readings;
- Allows all wheels simultaneous rolling compensation and adjustment.



### MACHINE VISION BENEFITS FOR HEAVY DUTY WHEEL ALIGNMENT

- Contains no electrical components on adapters and targets installed on moving parts of a vehicle;
- Does not require constant recharging of system components;
- All sensitive electronics are located away from moving parts of vehicles and out of the mechanic's reach;
- Requires no complex calibrations during operation and in the event of a target falling;
- Absolute system accuracy and reliability.



## WIDE SCOPE

- The unique WideScope technology allows the system to read and adjust angles over an extensive range of lengths without adjusting the gauge system's height, which allows you to work with an extended range of wheelbases without loss of accuracy and significantly increase the performance of the wheel alignment bay.
- Wheelbases up to 630"\* can be measured starting from 115"\* from the system towers. Combined with a shortened just 30 inches rolling distance for runout compensation, these specifications create an optimal bay for Heavy Duty wheel alignment.

\*Depends on the installation distance of camera housings



## CAMERAS ASSEMBLY BLOCK

Two high-resolution WideScope cameras from each assembly are combined into a common calibrated high-accuracy measurement system, quick and reliable target capture, and a high-speed image transfer over TCP/IP. Each block comprises RGB auxiliary indicators of alignment procedure status.

## WHEEL ADAPTORS & TARGETS

- Self-centering wheel adaptors with the adjustable central mechanism fit 15" - 28" wheel rims and are compatible with most Heavy Duty vehicles;
- Double Extended Heavy Duty sided studs for easy installation on both steel and light-alloy rims;
- Additional range adjustment is carried out by inserting studs into outer or inner adapter holes;
- Quick and reliable target mounting in a wheel adaptors housing with a shaft lock
- Lightweight and durable magnesium alloy targets are covered with a protective oil-and-petrol resistant layer;
- Don't comprise any electronic components;
- Target corners feature double-thick silicone for outstanding protection against drops and other impacts. Constructed from impact-resistant polycarbonate and double-enforced with a shock absorbing silicone inner-sleeve;
- High-quality photo-masked images to maximize the wheel aligner's accuracy.



# SOFTWARE /POWERFUL AND RELIABLE ALIGNER CONTROL TOOL\*

\*Runs under Windows 10

- Live data processing and readings display. Easy remotely operated using system color indicators.
- Readings are automatically compared with OEM vehicle specifications.
- Quick program modes Access: Database View; Target Setup & Rolling compensation Mode; Vehicle wheel formula and baseline adjustment selections Mode; Reading Mode; Live Adjustment; Each axle live adjustment mode; Report View.
- Rear axle reference or frame reference measurement Modes.
- 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 at 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 ensure that there are no pauses during readings & adjusting.

- Aligner program database for 55000+ includes OEM cars and heavy duty vehicles wheel alignment specifications, tire pressure specifications, animation, adjustment diagrams & images.
- The Electronic Help system contains thorough data on working with the wheel alignment machine and software: video manuals for working with equipment and program, adjustments data, diagrams, images, video and animation.



- Animated model of a generic truck chassis. The live wheels positions are illustrated according to measured values of toe, camber, thrust & scrub angles. The adjustment mode has several views: for each axle, a general view, and a tabular view.
- Comprises over 55000+ Heavy Duty and Light Duty vehicles. Totally compliant US market. Vehicle entries contain angles data specifications, images, and videos on identification and preparatory procedures, and OEM illustrated instructions of adjustment. Consistently database updates are available. The software allows adding an unlimited amount of custom specifications and export/import 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, lighting conditions yet swiftly react to any bigger changes. The software automatically detects vehicle movement during adjustment and corrects the live values. Two adjustment baseline are supported: references to the frame or rear axle. Additional jacking wheels mode for adjustment or runout compensation.
- Program gauges during the adjustment procedures allow a better visualization of measured wheel alignment values. Live performed data. Software generated Print-outs can include rendered images illustrating positions of wheels before and after the adjustment.



- The intuitive workflow that utilizes only four navigation buttons at the bottom of the screen. Helpful images and OEM illustrations to remind the technician of procedure actions to need to be performed. All orders data are stored and can be reviewed at any time. All the navigation through most of the program can be done using hotkeys on the remote control or the keyboard.
- Web-camera program support to assist driver to position the vehicle on the workplace. The print-out setup allows to select one of the multiple templates and set up ads texts and logos as well as several other useful options.
- Automatic screen transitions could be setted up. For example, the software automatically detects when the runout comp starts and proceeds to the next step.

- Default modes for compensation, measurement, or adjustment could be selected as well as several other fine-tuning for adjustment, compensation and measurement modes. Statistics screen with valuable information about wheel aligners productivity: how many adjustments were made over a given period, what was the average adjustment time, etc. Tire pressure tables for most of the models in the database.





# WHAT IN THE BOX

## 1] Machine Vision System

Measuring system with Four Widescope high-resolution cameras that are securely located in two towers.

## 2] Computer Console

Convenient clamps and targets storage design, Electronic PC based unit with Windows 10 operating system; 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.

## 4] Set eight 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.

## 5] Storage racks (two) for wheel adapters and targets assemblies



## 6] Steering Wheel Depressor & Brake Depressor

## 7] Set of Turn Tables

## 8] Remote Kit

## 9] Manual



## OPTIONAL

- Electronic laser probe provides accurate calculations of the frame to axle position of vehicles, trailers, or semi-trailers.
- Magnetic wheel adapters are designed for faster targets on wheels mount. This type of clamps allows to improve adjustment quality and to enhance alignment bay operation speed. Usage increases the efficiency of the wheel aligner, makes work easier, and provides high measurement accuracy. No adaptor rim contact.
- 10" tablet for aligner remote control. Helps to carry out the adjustment procedure in cases the main system aligner display is not visible to the technician.

## 3] Electronic Unit

- The 32" monitor is supplied instead of the standard one, could be mounted on a standard bracket.
- Monitor bracket. For 40"-50" monitors fixation to the machine vision systems crossbar. Can also be used as an auxiliary in order to duplicate the main screen of an aligner.
- Movable machine vision system platform for easy system movement around shop workplaces.
- Machine vision system and T-console mobile platform for easy system movement around shop workplaces.



# SPECIFICATION

	7404HTS
Number of cameras	4 fixed cameras
Cameras type	4x5MPix machine vision industrial cameras, RAW
Mounting type	Floor-mount
Cabinet type	T-series / Y-series / S-series
Applicability	Pit or Flush
Distance from cameras to the center of the front turn tables	From 118"
Wheel adapter mounting range	15 - 28 in
Power source	115 VAC single-phase 50/60 Hz
Weight net/gross	1,040/1,190 lbs
Volume	85 ft <sup>3</sup>

# COMPUTER CONSOLES

S-series



Y-series



T-series



# AVAILABLE COLORS



**TechnoVector Group**



[technovector.us](http://technovector.us)

**Your local distributor:**

Blank white box for local distributor information.