

QUICK GUIDE

TECHNICAL ADVANTAGES for laser steering wheel alignment



The major advantages of the product into Geometry field

- **Quick installation** (less than 10 real seconds), shorter than all existing systems. Tool used with or without Spacer, with or without extension bar (THEB). The calibration of the product is initial and remains valid regardless of the vehicle , this is one of the most advantage of the tool .

- **Reliability** : exact steering wheel position regardless of the load distribution in the vehicle, general condition of the vehicle or whatever the operator .. or again, whatever the condition of the lifting system. The steering wheel positioning can be easily and accurately done, in any circumstances and by anyone due to system is clamped on vehicle frame – this is the only way to proceed correctly – then the system is unique

- **Steering wheel position accuracy** : developed to correctly and fully exploit the latest technologies used in geometry machines, completely in line with 3D technology.

- **Reduce the intervention steps** : no need to connect a diag tool for reading the value of the steering angle sensor to adjust the steering wheel to 0 (especially since this value can be wrong in some cases (a power steering system replaced but incorrectly re-calibrated)

- **Saving money / profitability / RIO inc.** : For the geometry, in addition to save time for typical operation, system provides an absolute 0 error steering wheel in straight position therefore 0 return to workshop / re-intervention. After road tests, 1 geometry feedback out of 4 is affected by a bad initial position of the steering wheel (unless of course the vehicle also has another problem not detectable in static position)

- **Manipulation error tolerance** : It's almost impossible to place the tool bar incorrectly in the vehicle. Beyond this, even in the event of an error in the placement of the main bar between the vehicle openings, the steering wheel angle incidence remains less than 0.4° (some diag tools when reading the ECU angle sensor value doesn't display so much decimals , i.e. in steps of 0.5°) or , to give an idea , 50cm/km drift error .

- **“safe vehicle tool”**: At the end of the workshop intervention, concerning the latest generation vehicles, several geometry procedures propose to "reset" the value of the steering angle sensor. If the steering wheel is not positioned correctly from the start, this "reset" has the direct consequence of re-calibrating the electronic angle sensor of the vehicle's ECU to 0° but which is no longer correlated with the actual position of the steering wheel. Inevitably, from an entry into the workshop, however valid at this level, the vehicle is finally returned with an erroneous calibration, the consequences of which, depending on the strategies used as well as the tolerance left by the car manufacturers, can introduce bad force feed back feeling on the steering assistance, passing by an indicator of malfunction of the ESP light until having an impact on the ADAS devices ... this inducing an unexpected vehicle behavior in case of emergency

- **Versatile tool:** it can be used to calibrate an angle sensor that has just been replaced - Sporadic, in the context of ADAS, even if the diag must be connected, no need to acquire manufacturer gateways to interrogate the value of the angle sensor: the calibration procedure will start automatically thanks to perfect steering wheel positioning.

- **Self-checking tool :** 100% of workers who had to place a perfectly straight steering wheel will no longer check the steering wheel position after the intervention, before uninstalling the equipment, while the steering wheel may have moved despite the use of steering wheel clamp .

.Only 1 second is necessary to carry out this check, recommending the continuous ignition of the tool during the adjustment operation. This second makes it possible at best not to waste the time of reinstalling the equipment if the steering wheel position is no longer exact and to start the adjustment operation again immediately, at worst, not to suffer customer dissatisfaction (think of the NPS scores to which garages are all subject). A dashboard photo capture is not to be excluded for the end customer (especially if in addition you can see the mileage on the odometer)

- **Extended and increased compatibility:** 100% coverage of the rolling stock: thanks to the Spacer accessories (<https://pype-industry.fr/spacers/>) and THEB bar extension contained in the kit (<https://pype-industry.fr/THEB/>), the tool can be used on vehicles with extremely narrow roofs up to trucks. IMPORTANT: In the case of convertible-type vehicles (without roof frame when the hood is open), as in the case of vehicles equipped with air deflectors, the tool can be used "upside down" still without re-calibration by pinching the contour / window sill flush with the door: see image below . The product is particularly adapted for racing cars.



- **Customer feeling :** Reassured and reinforced on the intervening brand image. Indeed, it is much more serious to prove to the customer that the garage has used specific equipment as a prerequisite than a steering wheel alignment "by eye" or .. nothing. It is also possible to insert a photo of the dashboard captured during the geometry check/adjustment procedure.

- **A tool adapted to modern time :** for the demands of modern vehicles: Laser flywheel alignment is what the torque wrench is to the traditional torque wrench



Up to date tool

<https://youtu.be/PWFGAloi5YM>

Essential videos :



Typical use

<https://youtu.be/kUj87TDBt40>



Quick placement

<https://youtu.be/Gil3fNO80Oo>



Technical overview

<https://youtube.com/shorts/50DsIam5UAQ>



Precision

<https://youtu.be/ub4jAce-Cs>



T-ORG tool support

<https://youtu.be/SL8qj0Ejn28>