

# WORKSHOP EQUIPMENT



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EQUIPMENT

Recommended by Volkswagen AG



**Snap-on**  
EQUIPMENT

# BALANCING TECHNOLOGY AT ITS FINEST



## VAS 6307

### Entry-level balancer with LC display

3D technology features automatic input of distance rim / machine, rim diameter and rim width. The patented virtual plane measurement technique (VPM) ensures accurate results and is insensitive to ambient conditions.

- User-friendly LC display for intuitive and optimised operator guidance.
- Easy and accurate relocation of weight position and fitting of adhesive weights inside the rim owing to the weight positioning system with wheel weight clamp.
- The split-weight mode automatically determines the number of spokes and wheel weights can be easily hidden behind adjacent spokes upon a simple key stroke.
- The wheel can be safely retained in position with the spindle lock.
- Optimisation not only reduces the need for wheel weights (matching), but also ensures smooth ride of the car.
- Automatic pre-selection of weight locations with the easyALU mode.
- 6 balancing modes, 5 of which for alloy rims, 4 user profiles, PAX mode
- MZV-4 cone adaptor with quick-clamping nut
- Cones with dia. 42–77 mm, 72–99 mm, 96–116 mm
- Spacer, rim width callipers, universal weight pliers, and adhesive weight removing tool.



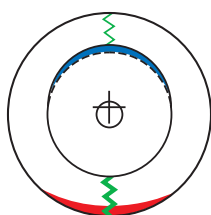
## VAS 6823

### High performance in compact size

Professional video balancer for car, light-truck and motorcycle wheels which combines high accuracy with minimum footprint. Equipped with the 3D Smart Sonar for automatic non-contact acquisition of rim width.

- The QuickBal feature reduces the number of revolutions required to balance the wheel. Overall cycle time of 6 seconds only.
- The patented virtual plane measurement technique (VPM) ensures accurate results and is insensitive to ambient conditions.
- 19" monitor and user-friendly graphical human interface.
- The split-weight mode facilitates positioning of wheel weights behind adjacent wheel spokes.
- The wheel can be safely retained in position with the spindle lock, either to clamp the wheel, or to fit weights.
- Quick-clamping nut
- 3 Cones (dia. 42–77 mm, 72–99 mm, 96–116 mm), spacer, drum and protection
- Smart Sonar
- Mechanical spindle lock
- Wheel guard for wheel diameters up to 1050 mm

Highest spot of rim



Heavy hard spot of tyre

#### Optimisation mode

Handles ride issues and improves driving comfort.



#### Smart Sonar

The optional 3D Smart Sonar device detects rim width automatically.



## VAS 6309

### The unfailing solution for everyday use

In addition to the benefits of VAS 6307 this balancer features:

- Easy and accurate positioning of adhesive wheel weights with the patented geodata gauge arm
- Quick and especially user-friendly
- 9 User profiles
- Also available with electro-mechanical power clamp device



## VAS 6420

### Laser technology for the discriminating requirements of the professional workshop

Clamp the wheel, close the guard, all wheel data is detected automatically and measurement begins. That's how quick and convenient professional wheel balancing can be.

- Electro-mechanical power clamp device
- Special scanner for automatic non-contact input of all wheel data
- Attractive TFT wide-screen monitor
- Easy and accurate positioning of adhesive wheel weights with the patented geodata gauge arm
- The split-weight mode automatically determines the number of spokes and wheel weights can be easily hidden behind adjacent spokes upon a simple key stroke.
- The patented virtual plane measurement technique (VPM) ensures accurate results and is insensitive to ambient conditions.
- In optimisation mode possible rim run-out is opposed to the heavy spot of the tyre.
- Automatic selection of balancing mode
- Asanetwork capability



#### Power Clamp

The wheel is accurately clamped, an important pre-requisite for every balancing operation.



#### geodata gauge arm

Patented technique for accurate positioning of adhesive wheel weights.



# BALANCING TECHNOLOGY AT ITS FINEST

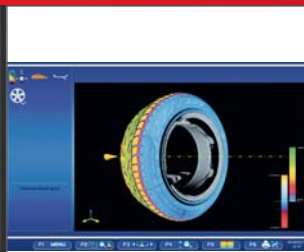


## VAS 6311A Wheel balancer with diagnostic features

Automatic diagnostics and highly accurate balance results based on 3D laser scans.

Exact detection of tyre and rim defects.

- Stripe-of-light technology and SAF&GO offer features which contribute to avoid the risk of damage to the wheel, or wrong operation of the balancer.
- The optima technology and Smart Profile make it easy to understand and use VAS 6311A.
- The diagnostic results are viewed in 3D colour maps on a 19" TFT wide-screen monitor.
- Tyre pull index, tread depth analysis, sidewall and tread analysis, alignment pre-checking, and tyre wear-out prediction
- Geometric matching technique to diagnose and improve smooth ride
- Patented virtual plane measurement technique (VPM)
- All data such as wheel dimensions, type and position of balance weights, lateral and radial run-out, number and position of spokes as well as wheel imbalance is detected automatically by non-contact laser cameras.
- The entire wheel is scanned with high precision. Externally visible scratches, cuts, bulges, blisters, flat spots, and uneven wear-out of the tyre are detected on sidewall and tread.
- Measures and corrects tyre and rim imbalance and run-out.
- Automatic selection of balancing program including relative alloy mode
- geodata gauge arm with adhesive wheel weight clamp
- Relocation of weight position via geodata gauge arm with AutoStopSystem, or via laser pointer in 5 h position
- Automatic detection of number and position of spokes for split-weight mode
- Electro-mechanical power clamp device
- asanetwork capability with optional software client



### 3D display

The result of the analysis is viewed in form of 3D colour maps.



### Report

A report including all details of the condition of the tyre/wheel assembly, or of a set of wheels can be printed and handed to the customer.

# OPTIONS

## 30344

Centring ring for cone adaptor, dia.1 = 57 mm, dia.2 = 71,6 mm for VW, Audi, Porsche



## 4029029

Stud-hole flange FP VAG for Volkswagen, Audi, Seat and Skoda with pitch circle diameters 5 x 100 / 112 / 120 / 130 mm; 5 x bolts 80 mm long



## EAK0279G32A

Stud-hole flange FP Quick 5 P



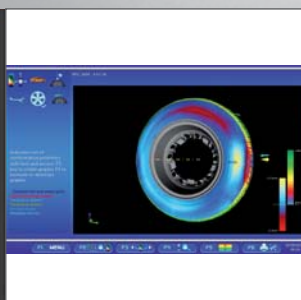
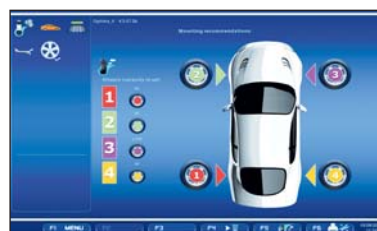
## RFV vectoring

With RFV vectoring radial force variations are minimised to optimise smooth ride



## Tyre pull index (TPI) und OptiLine®

If the wheels have been balanced, but the car tends to pull to the side, conicity measurement can reveal the cause and visualise the defect so that remedial action can be taken. The image on the screen will show to the user how to position the wheels on the car in the best possible way to eliminate the tyre pull effect.



## Laser-supported detection of radial run-out

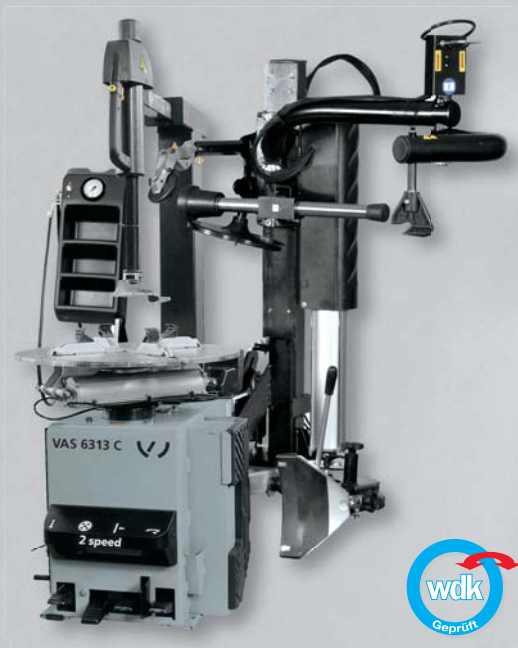
Geometric measurement supplies results quickly and simply owing to the unique 3D camera technology.



## Stripe-of-light® technology

Five CCD cameras scan tyre and rim in different directions with special 3D laser stripes so that all data can be detected quickly and accurately and possible defects in tyre or rim can be accurately diagnosed and documented.

# TYRE CHANGERS CUSTOM-TAILORED TO SUIT INDIVIDUAL NEEDS



## VAS 6313C The sound all-rounder

Ideally suited to mount and demount all car and light-truck tyres in the market – hence flexible in use

- The mounting post can be pneumatically tilted forwards and backwards and locked in working position
- Mounting head is vertically and laterally adjustable in spaced-apart position relative to the rim
- Self-centring four-jaw turntable for an outer clamping range of 10" to 24"
- Two-speed turntable: 7 and 13 rpm
- Double-acting bead breaker cylinder for gentle operation
- Large bead breaker blade supported in 3 points for accurate bead breaking, anti-skid rubber pad to prevent the wheel from slipping
- Quick-inflating valve and pedal-controlled inflator ensure quick and safe inflation of the tyre
- Five ergonomic pedals allow easy handling
- Servicing unit with pressure-relief valve and oiler
- Plastic rim protector



## VAS 6314C The ergonomic tyre changer

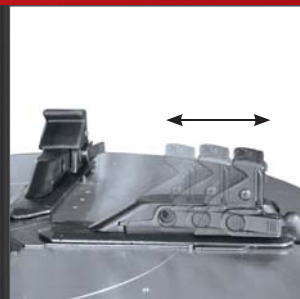
Additional features of the VAS 6314-C:

- The mounting head is pneumatically approached to the rim and adjusted in spaced-apart position both vertically and horizontally. The mounting arm is guided horizontally on rollers.
- For rims up to 14" wide.
- Optimum ergonomics owing to the low racing-type cabinet
- Bead breaker blade infinitely adjustable in 2 positions



### Top-side inflator

The top-side inflator is an efficient means for bead seating and inflation of the tyres.



### Extremely gentle

VAS 6313C, 6314C and 6674 are equipped with special jaws with screw-type plastic caps.





## VAS 6674

### Leverless tyre changer

VAS 6674 is equipped with a mounting head with integrated demounting finger which mounts and demounts tyres without the use of a tyre lever. The integrated demounting finger is infinitely variable and hence extremely gentle to tyre and rim. The mounting head is provided with a plastic protector to avoid any damage to the rim.

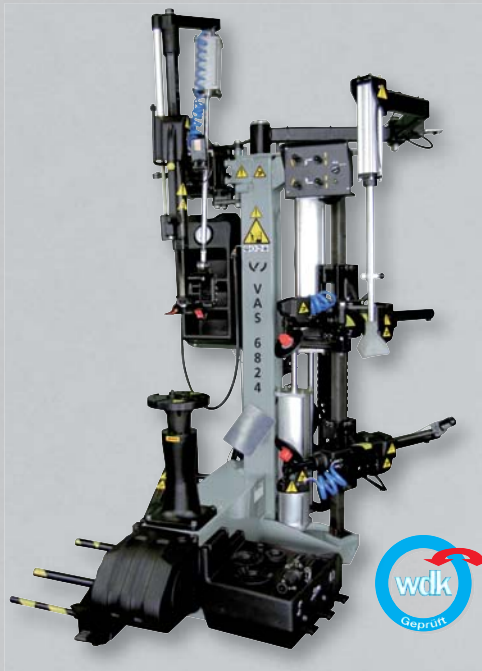
- The triangular bead pusher prevents the tyre from being damaged. It retains the tyre bead in optimum position in the drop centre of the rim.
- The bead breaker disc helps to demount the tyre in an especially gentle way.
- Maximum outer clamping capability of up to 24"
- Double-acting bead breaker cylinder and large bead breaker blade to avoid any damage to tyre and rim.
- User-friendliness is ensured thanks to the pneumatic tilt-back post and the four ergonomic pedals.
- The self-centring four-jaw chuck is controlled by two cylinders. This ensures quick and accurate clamping.
- Also available with an external top-side bead seating and inflating device.



#### Demounting finger

The integrated demounting finger supersedes the conventional tyre lever.

# TYRE CHANGERS CUSTOM-TAILORED TO SUIT INDIVIDUAL NEEDS



## VAS 6824

### Roller-type tyre changer with semi-automatic demounting

Designed for mounting and demounting of car and light-truck tyres including low-profile, UHP and run-flat tyres, the machine is especially suited for shops with a high throughput.

- The integrated demounting finger supersedes the conventional tyre lever. It pulls the bead over the rim edge, being gentle to the tyre and reducing the effort for the operator, hence increasing productivity as it works fast with standard and hard sidewall tyres.
- ESDB™ – Electronically synchronised dual-disc bead breaker with servo drive. Bead breaking in an upright position: faster, easier, ergonomic and effortless. The bead roller is applied to detach both soft and stiff beads. A mirror facilitates control of operations on the lower bead such as demounting and lubrication.
- Centre-type quick-fit wheel clamping flange for fast, safe and precise clamping of the wheel. The pneumatic bead press arm is gentle to the rim, while the sidewall press arm facilitates demounting of hard sidewall tyres.
- The ergonomic lift reduces operator effort in case of large and heavy wheels.
- The inverter-controlled motor with two speeds and high torque at low speed ensures best mounting and demounting results.
- The tyre is inflated via a pedal-operated inflator, or tubeless tyres alternatively by an additional top-side bead seating and inflating device.
- Centring cones of 64mm, 78 mm, 120 mm, 145 mm dia.
- Bead clamp, Smart Bead Spacer Tail
- Pneumatic bead press arm and sidewall press arm
- Laser pointer for positioning of the mounting head
- Plastic tyre protector, plastic rim protectors



#### Wheel lift

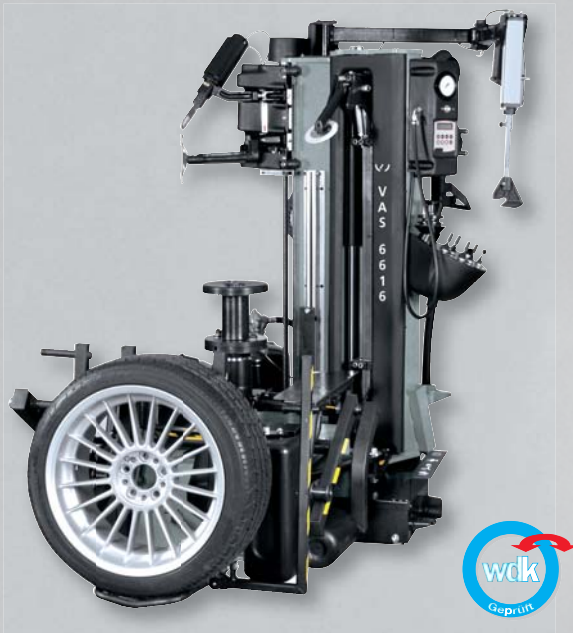
Fast and ergonomic. Reduces operator effort in case of large and heavy wheels.



#### Dual-disc bead breaker

The unique dual-disc bead breaker facilitates bead breaking, making it faster and more ergonomic and reducing the risk of damaging tyre and rim.





## VAS 6616

### The true pro for automatic tyre changing

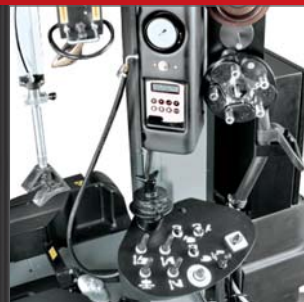
The new automatic tyre changer comes with outstanding dynamic procedures, controlled power and accuracy and consequently guarantees optimum results because all operations are accomplished efficiently while preserving both tyres and rims and reducing the effort for the operator.

- Non-contact detection of rim contour by a laser scanner.
- Rims up to a diameter of 12" – 30" and wheels up to a diameter of 47"
- Automatic control of mounting and demounting tools by the operator from the control console.
- Owing to the lift the wheels are positioned on the clamping flange automatically, accurately and without effort for the operator.
- Hydraulic clamping of wheel on the clamping flange via quick-clamping nut
- Rotating bead breaker discs gently follow the rim contour when breaking tyre beads.
- Tools specially designed for gentle handling of tyre and rim.
- The control console is located at an ideal level for convenient control and monitoring of the individual work steps.



#### Lift

The potentiometer automatically measures wheel diameter as soon as the wheel has been loaded onto the lift.



#### Control console

Despite of the automatic operation the operator is always in control of the individual work processes.

# 3D WHEEL ALIGNERS – MEASUREMENT IN THE THREE-DIMENSIONAL SPACE



**MADE BY THE INVENTOR OF  
3D WHEEL ALIGNMENT**

Offering faster alignment combined with increased accuracy and stability – VAS 6331 and VAS 6421 stand for reliable wheel alignment and premium design quality. Not only do they add to the professional appearance of your workshop, but they also improve productivity and performance levels. And last but not least the 3D wheel aligners are easy to operate, particularly convenient and flexible in use.

## **VAS 6331**

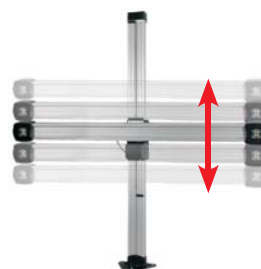
### **Wheel alignment at highest standards**

- The 3D imaging technology delivers absolutely accurate data, avoiding possible error sources. Only a few manual inputs are required, then the program proceeds automatically. This facilitates operation and helps to minimise the risk of input errors.
- The VAS 6331 aligns a car quicker than conventional alignment systems, this saves time and increases productivity of your shop. The operator only has to enter some basic data, mount the four targets to the wheels, and gets complete alignment readings within a few minutes.
- Live graphic displays immediately show the results when adjustments are made on the vehicle. In particular on vehicles with adjustable A arms there is no need for switching back and fro between screens.
- The aligner comes standard with a movable camera beam so that it fits flexibly into nearly every workshop. Installation of the camera beam can be customised to the conditions at site.
- VAS 6331 does not require conventional run-out compensation, therefore no jacking of the vehicle is required. Instead a simple time saving operation called vehicle positioning is performed where the vehicle is rolled a short distance backward and then forward. The VAS 6331 has the most flexible and shortest positioning distance among aligners world-wide, which increases its flexibility and reduces investment into sophisticated, expensive lifts.
- The wide-spread service network and our professional training centre guarantee technical know-how from the initial training to hot-line support.
- VAS 6331 complies with VAG workshop standards. It can be easily integrated into garage network systems and vehicle specs can be updated on-line.



#### **Sophisticated camera technology**

Uncomplicated, time-saving, accurate and quick.



#### **Movable camera beam**

Is flexibly adjusted to conditions at site.

# OPTIONS



## VAS 6421

### Ideal for direct check-in

#### Additional features of the VAS 6421:

- The aligner is self-calibrating, always supplying accurate readings.
- The VAS 6421 is available with independent camera towers, hence presents the ideal drive-through solution for check-in
- The high-resolution cameras automatically follow the car during lifting and lowering

### Kit 6331-1 30958

ADR / ACC calibration with a single camera. The targets remain on the wheel, avoiding time-consuming dismounting and mounting. You save expensive working time.



### Kit VAS 6421-1 4030929

Mechanical turntables (pair), 50 mm high, front end, consisting of:

- 2 turntables
- 2 paddles
- 1 base unit



### Kit VAS 6421-2 TIP 4028515

Additional target for ride height measurement



### Kit VAS 6421-3 31668

Increased mobility of VAS 6421 with the mobile kit



VOLKSWAGEN 1200 1200 70-87									
		Min.	Prod.	Max.	Min.	Prod.	Max.		
Front									
Caster	2°20'	2°20'	4°20'	2°20'	3°20'	4°20'			
Camber	0°10'	0°30'	0°50'	0°10'	0°30'	0°50'			
SAI	—	—	—	—	—	—			
Individual Toe	0°08'	0°15'	0°23'	0°08'	0°15'	0°23'			
Total Toe		0°19'	0°39'		0°43'				
Rear									
Camber	-1°00'	0°00'	1°00'	-1°00'	0°00'	1°00'			
Individual Toe	-0°01'	-0°02'	0°02'	-0°01'	-0°02'	0°02'			
Total Toe			-0°13'		0°00'				
Max Thrust Angle									

#### Up-to-date vehicle specs

Complete up-to-date vehicle specs support alignment even of less conventional vehicle types.



#### User friendly

The system guides the user through all operations.



# TECHNICAL DATA

Tyre changers		VAS 6313-C	VAS 6314-C	VAS 6674	VAS 6824	VAS 6616
Inner clamping range	inch	12 – 24	12 – 24	12 – 24	–	12 – 30
Outer clamping range	inch	10 – 24	10 – 24	10 – 24	–	–
Max. rim width	inch	12	14	14	13	17
Max. wheel weight	kg	70	70	70	70	70
Max. tyre width	inch	12	15	15	15	17
Max. wheel diameter	mm	1000	1000	1000	1200	1200
Max. bead breaking width	mm	340	440	440	717	–
Dimensions (W x D x H)	mm	1230 x 1340 x 1610	1230 x 1310 x 1610	1350 x 1650 x 1950	1700 x 1500 x 2260	1290/1350 x 2240 x 1850
Weight	kg	300	310	363	430	820
Compressed air supply	bar	8 – 12	8 – 12	8 – 12	8 – 10	8 – 12
Power supply		400 VAC 3ph 50 Hz			230 V 1ph 50/60 Hz	
Turntable speed	rpm	7 / 13	7 / 13	7 / 13	7 / 14	7 / 14

Wheel balancers		VAS 6307	VAS 6823	VAS 6309	VAS 6420	VAS 6311A
Rim centre bore diameter	mm	43 – 116	43 – 116	43 – 116	43 – 116	43 – 116
Measuring speed	rpm	200	200	200	200	200
Rim width	inch	1 – 20	1 – 20	1 – 20	1 – 20	3 – 20
Rim diameter auto.	inch	8 – 25	14 – 26	8 – 25	14 – 26	15 – 30
Rim diameter man.	inch	8 – 30	8 – 30	8 – 30	8 – 30	8 – 30
Max. wheel width	mm	530	508	530	530	508
Max. wheel diameter	mm	950	1050	950	950	950
Max. wheel weight	kg	70	70	70	70	70
Dimensions (W x D x H)	mm	1285 x 1130 x 1765	1012 x 781 x 1834	1365 x 910 x 1375	1320 x 915 x 700	1450 x 990 x 1710
Weight	kg	130	82	148	160	210
Power supply	V	230 VAC 1ph 50 / 60 Hz				

Wheel aligners VAS 6331 and VAS 6421	Measuring range	Resolution
Single wheel toe – front / rear end	± 35°	1'
Total toe – front / rear end	± 60°/40°	1'
Max. steering angle	50°	1'
Camber – front / rear end	± 55°	1'
Caster – front end	± 30°	1'
Steering axis inclination	± 30°	1'
Thrust angle	± 35°	1'
Power supply	230 V	
Mains frequency	50/60 Hz	
Operating temperature	0 – +45°C	

The wide-spread service network and our professional training centre guarantee technical know-how from the initial training to hot-line support.



#### EMEA-JA

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