

WHEEL BALANCERS



DIAGNOSTIC WHEEL BALANCER

With Touch Screen and 3D Imaging Technology

B2000P

JohnBean

MODERN VEHICLE TECHNOLOGY

The continuous evolution in automotive technology has taken car performance to its limits. High speed and extreme road and weather conditions have a major impact on driving.

The B2000P provides perfect balancing fixing the vibrations due to imperfect wheel shape (run-out), and an accurate and uncompromising diagnostics. 3D diagnostic check detects cuts, bulges, scratches, blisters and flat spots, even if not always visible to the technician.

TYRE AND RIM DIAGNOSTICS

The challenges of the market and the requirements from customers' end were the decisive factors for the development of an automatic, non-contact B2000P: a car wheel balancer with diagnostic functions which combines unique 3D imaging technology and most accurate balancing techniques:

◉ Ease of use

The optima® technology and Smart Profile make it easy to understand and use the professional diagnostic wheel balancer.

◉ Reliability

Non-contact measurement and analysis of the wheel data reduce mistakes and misinterpretations.

◉ Productivity

Features like power clamp, 3D imaging and optima technologies achieve high productivity for the garage.

◉ Customer satisfaction

Accurate wheel balancing with enhanced diagnostics is the key to proper diagnostics and customer satisfaction.





TOUCH SCREEN

Intuitive use and enhanced overview.

PLATINUM USER INTERFACE

It offers easy menu guidance, a clear overview of information and quicker operation. Intuitive and user-friendly graphics lead the user through the functions.

3D IMAGING AND OPTIMA[®] TECHNOLOGIES

Five high-resolution cameras scan tyre and rim and detect all the wheel data, a unique technology.

USER FRIENDLY

The machine comes standard with a gauge arm and a laser pointer for accurate placement of adhesive weights.

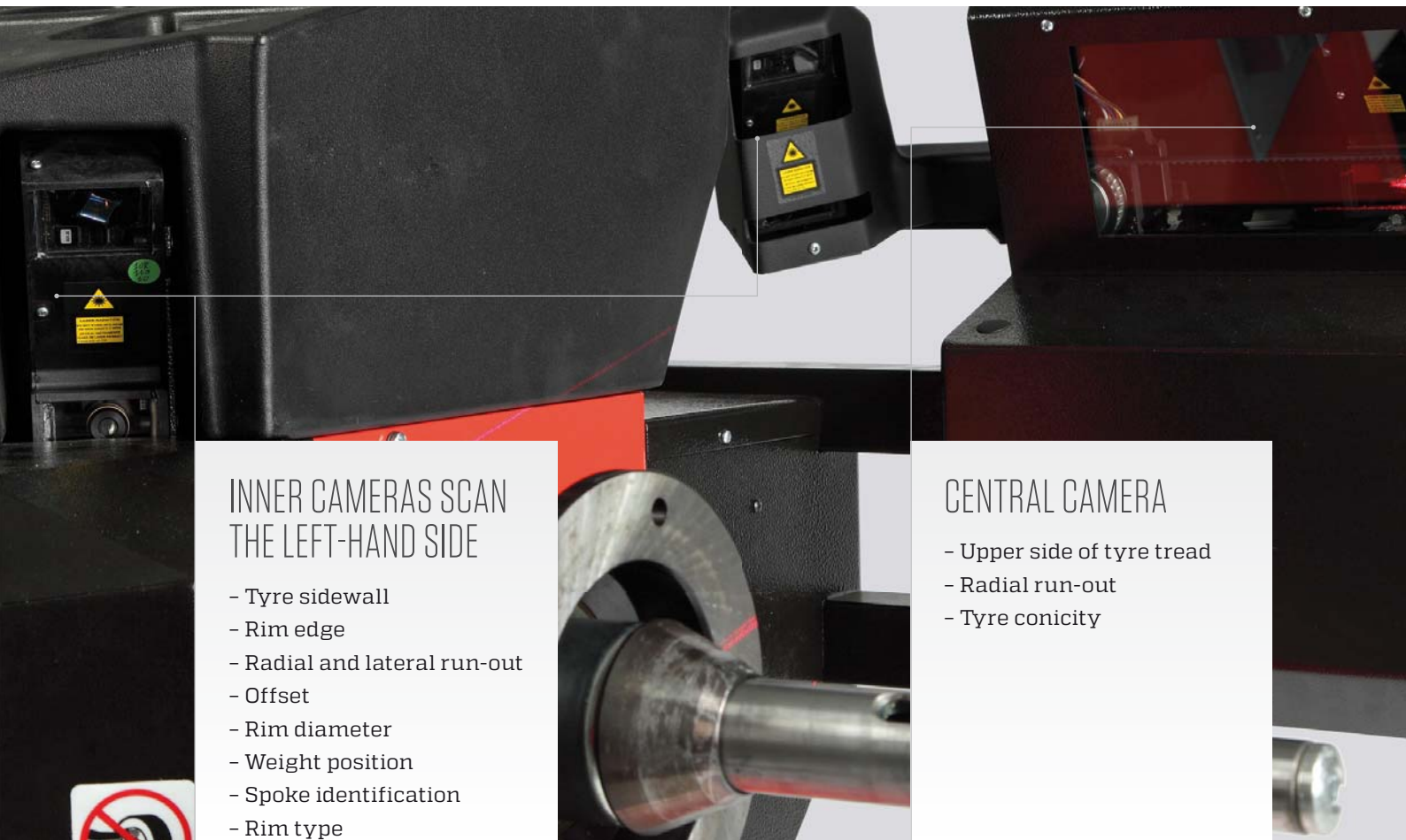
POWER CLAMP[™]

The wheel is precisely clamped with this patented electromagnetic clamping device - an essential prerequisite for perfect measurement results.

VPI TECHNIQUE[®] INSIDE

The patented virtual plane imaging technique ensures most accurate balance results and is insensitive to ambient conditions.

HIGH RESOLUTION LASER CAMERAS



INNER CAMERAS SCAN THE LEFT-HAND SIDE

- Tyre sidewall
- Rim edge
- Radial and lateral run-out
- Offset
- Rim diameter
- Weight position
- Spoke identification
- Rim type

CENTRAL CAMERA

- Upper side of tyre tread
- Radial run-out
- Tyre conicity

UNIQUE 3D IMAGING TECHNOLOGY

Five high-resolution laser cameras, one of which is displaceable, scan tyre and rim in different directions with special 3D laser stripes, providing non-contact diagnostics not available from any other diagnostic balancer.





OUTER CAMERAS SCAN THE RIGHT-HAND SIDE

- Tyre sidewall
- Rim edge
- Radial and lateral run-out
- Rim width
- Weight position

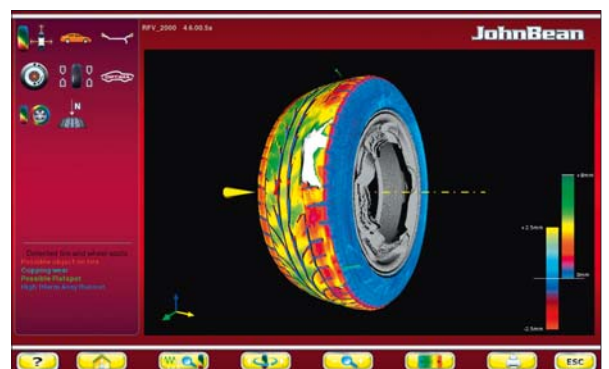
3D IMAGING DIAGNOSTICS

The type, size and position of a defect in the tyre are identified, measured and visualised by non-contact 3D imaging technology.

The B2000P with 3D imaging technology not only detects radial and lateral run-out of the wheel, but also flat spots on the tyre tread surface or deformations in the tyre sidewall.

Advanced diagnostics includes

- Tyre pull index (TPI)
- Tread depth analysis (TDA)
- Tread depth and wear analysis (STA)
- Alignment pre-checking (APC)
- Tyre wear-out prediction (TWOP)
- Optional run-out force vectoring (RFV)



INNOVATIVE FEATURES

OPTIMA® TECHNOLOGY

The non-contact laser imaging technology automatically detects data such as wheel dimensions, amount and position of the balance weights, lateral and radial run-out, number and position of spokes and wheel imbalance – quickly and easily.

The 3D imaging and optima® technologies are unique features that are implemented in this wheel balancer.



OPTIONAL RUN-OUT FORCE VECTORING (RFV)

Combined with absolutely accurate balancing, run-out force vectoring fixes ride issues caused by wheel non-uniformities. During radial run-out measurement RFV detects the radial force variations caused by non-uniformities in the tyre/wheel assembly and reads out the results on the touch-screen monitor. Based on these results ride is optimised.



TREAD DEPTH AND WEAR ANALYSIS (STA)®

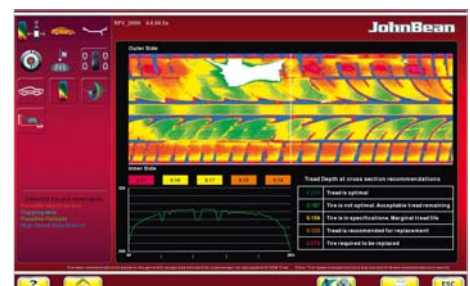
The entire wheel is scanned with high precision. Cuts, bulges, flat spots, and uneven wear-out of tyre are detected.

The result of this analysis is shown using 3D colour scales that highlight the hazard level so that action can be taken.



ALIGNMENT PRE-CHECKING (APC)

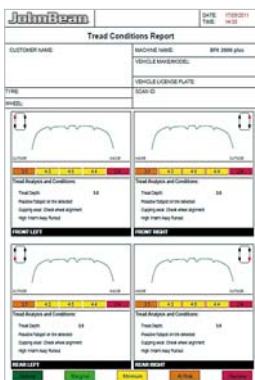
Tread wear identification opens unprecedented dimensions to tyre diagnostics: wheel alignment is suggested if need arises, and a residual tyre mileage forecast is given – essential factors for customer satisfaction and customer/car safety.





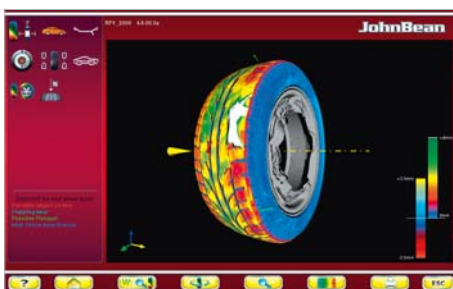
TYRE PULL INDEX (TPI) AND OPTIONAL OPTILINE®

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 discussed with the customer. The image on the screen will show to the expert how to position the wheels on the car in the best possible way to eliminate the tyre pull effect.



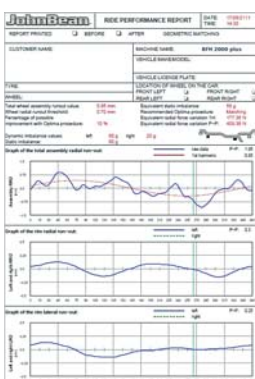
TREAD DEPTH ANALYSIS

The patented TreadView tread depth measurement technique measures the tread pattern. The overall tread pattern image shows the tread depth of the entire tyre and one-sided wear. With this visual aid it is possible to show to the customer if maintenance is enough, or if the tyre needs to be replaced.



VISUALISATION

But there is even more than that in the special 3D laser technology: the defects diagnosed are viewed in form of easy-to-read 3D colour maps on a conspicuous screen, and tables and colour codes clearly indicate the type and importance of the defect. This diagnostic result can be presented to the customer to define and discuss the action required to remedy the defect.



REPORT

A report including all details of the condition of the tyre/wheel assembly can be printed on the optional printer. This report is an essential part of the quality documentation.

TECHNICAL SPECIFICATIONS AND TECHNICAL DATA

TECHNICAL SPECIFICATIONS

Data entry - offset	Automatic, non-contact
Data entry - wheel diameter	Automatic, non-contact
Data entry - wheel width	Automatic, non-contact
Balancing program selection	Automatic, non-contact profiling of the rim
Spoke detection	Automatic, non-contact profiling of the rim
Wheel clamping	Automatic, with Power Clamp™
Wheel braking after measurement	Automatic
Main shaft lock	Pedal, electromagnetic
Balancing position search	Automatic
ALU modes	5 ALU + 2 ALUP
Split weight mode	Automatic, non-contact spoke detection
Radial / lateral run-out detection	Automatic, 3D imaging or optima® mode
Run-out matching programm	•
Optimisation program	•
Rim diagnostics & balancing	Bead seat run-out
Side-wall & tread diagnostics	Automatic, 3D imaging mode
Tyre pull measurement	Automatic, non-contact
Tread depth measurement	Automatic, non-contact
OptiLine®	Optional
asanetwork	Needs optional network kit
Self calibration	•
On-line help	•

TECHNICAL DATA

Max. wheel width	20" (508 mm)
Max. wheel diameter	44" (1118 mm)
Max. wheel weight	70 kg
Power supply (V)	230 Volts, single phase, 50/60 Hz
Dimensions W x D x H	1540 mm x 1220 mm x 1630 mm
Machine weight	190 kg
Rim diameter (auto./man.)	15" - 30" / 8" - 30"
Rim width (dynamic balancing)	3" - 20"
Diameter of shaft	1.57" (40 mm)
Length of shaft	225 mm / 8.86"
Measuring speed	200 rpm
Balancing accuracy	0.035 oz (1 g)
Scanner accuracy	0.0039" (0.1 mm)

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