



BFH 1000

Total Ride Performance System





Cutting Edge Technology for Wheel Service

John Bean, a division of Snap-on Equipment, pioneered imaging technology in alignment systems to provide a significant reduction in time to alignment readings. The BFH 1000 builds on this heritage to introduce imaging technology to wheel service. Put your shop in a leadership position with the most advanced ride performance system on the market.

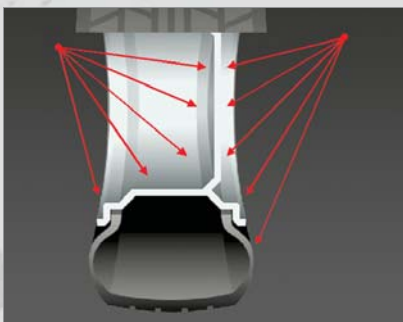
Recent years have brought sweeping changes to the tire and wheel business. What used to be a low-profit section of your shop can now be a premier profit center. The reason is twofold. First, tire and wheel options are much more diverse now than in the past. They also represent a larger portion of a vehicle investment—both purchase price and maintenance.

With the larger investment comes increased attention to performance and ride quality. Secondly, technological advancements, like the introduction of V3D imaging to the wheel balancing category, have dramatically increased the precision and speed of wheel service procedures. The John Bean BFH 1000 is the culmination of these advancements.

The BFH 1000 is a no-compromise solution for ride performance issues. Make no mistake - this is more than a wheel balancer. The BFH 1000 solves tire and wheel related drivability issues. It accomplishes this by diagnosing out-of-specification measurements in a single spin cycle, then automatically providing the most appropriate and precise correction procedure, removing the chance for error allowed by other systems. The result is a ride performance fit to satisfy even the most discriminating driver.

Adding to the wheel service value of BFH 1000, the system provides a printout which documents readings before and after the procedure. Your customers will be able to see the value.

Due to the level of automation, it is the fastest floor-to-floor balancer available today; there is no wheel balancer as fast in the industry. You do not have to compromise wheel balancer productivity for added ride performance diagnostics.



Automatic Profiling

Readings are compared to internal specifications. In-specification results are indicated by an unmistakable "OK". Out-of-specification readings prompt diagnostic messages for accurate and fast diagnostics and corrective procedures.

Automatic Spoke Function

Cosmetic appearance is very important on today's expensive wheel styles. During the single spin cycle, spokes are automatically counted. The technician is directed by screen prompts and a laser pointer to apply tape weights behind the spoke(s) for optimum cosmetic appearance.

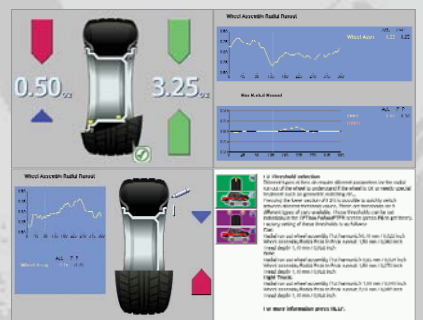


Tread Depth Detection

To alert your customer of potential danger, the tread depth of every tire is checked automatically. A warning indicator is displayed on the balance screen. Green=GOOD / Yellow=CAUTION / Red=ALERT. A diagnostic message in the on-board HELP text indicates if further diagnostic procedures are recommended.

Automatic Diagnostics

For optimum tire and rim performance, graphic displays, diagnostic messages, and on board HELP functions all combine to provide precise instructions to any skill level technician.



The Easiest To Use Wheel Balancer Available



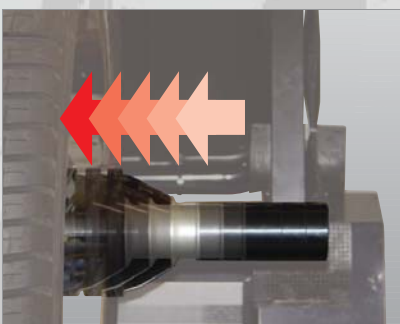
The BFH 1000 stands out because it is so easy to use. Why? It has an advanced computer and software package that virtually eliminates human error. Besides placing the wheel on the shaft and placing weights to finalize, this is a completely hands-free system. You don't have to position rollers, tighten wing nuts, move data set arms or clamp the wheel. Data entry is even automatic. This start-to-finish precision means that it is **right the first time, every time**.

Balance in Three Easy Steps

Not only does the BFH 1000 remove operator error; it cuts down on the time required to perform a full balance. It boasts the fastest floor-to-floor time in the industry.

- 1. Place the Wheel on the Shaft.** The BFH 1000 automatically and consistently clamps the wheel to the shaft.
- 2. Lower the Safety Hood.** The BFH 1000 automatically captures a real time 3D image of the tire/wheel assembly using 3 separate laser imaging devices to obtain wheel and tire parameters, in addition to recording and analyzing all static and dynamic force measurements.
- 3. Apply the Weights to the Rim with Pinpoint Guidance.** The BFH 1000 uses a laser dot to indicate the precise weight application point. The operator applies the specified type of weight and lowers the safety hood for a final check spin.

Hands free, and nothing touches the wheel or the tire. It's that simple.

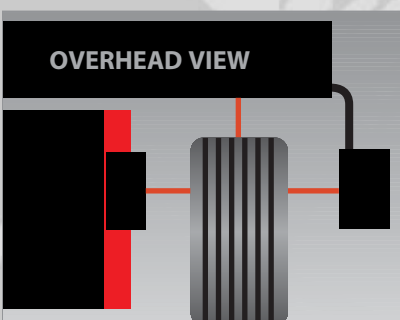


Power Clamp

Precise clamping is required for super accurate results. The BFH 1000 power clamp automatically locks the tire and rim assembly in place. Clamping pressure is automatically monitored for consistent pressure for repeatable results. No additional checking procedures are required.

Automatic Weight Identification

For clip-on weight, the rim edge is automatically measured and the correct clip-on weight style is recommended from the on board profiles. No guessing by the technician, faster productivity, and the best cosmetic results for high customer satisfaction.



Obtains all 3 data parameters

Lower the hood and the BFH 1000 uses laser technology to measure radial runout with the rear camera, and lateral runout with left and right cameras.

Right the first time, every time

Weight Placement is critical for proper wheel balance and flawless cosmetic appearance. The BFH 1000 can automatically calculate all wheel weight combinations without re-spin.

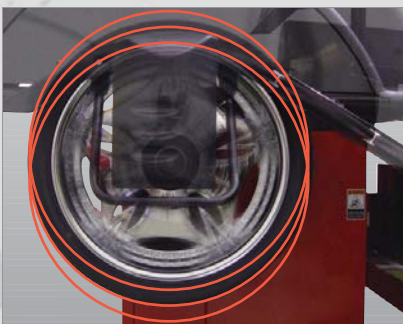




Wheel Service Equipment With A Brain

The BFH 1000 is an intelligent machine. It captures a 3-dimensional image of the tire/wheel assembly. That image information is matched to a stored database of rim profiles. In mere seconds, it diagnoses nonconformity issues with the entire tire/wheel assembly as well as with the tire and wheel independently. A simple-to-navigate graphics-driven user interface guides the operator through the process and indicates the best action based on wheel types and diagnostic readings. The BFH 1000's non-contact measurement system improves confidence by eliminating error potential and improving accuracy. This bridges the gap between technician knowledge and vehicle technology—saving you the expense of frequent and costly training.

You may think the BFH 1000 is more than you need. Think again. Vehicles and their technologies are becoming more complicated. Tires and wheels are moving further from typical specs. And finally, customers are investing heavily in style and ride quality. The BFH 1000 will solve these issues and create revenue for your shop.

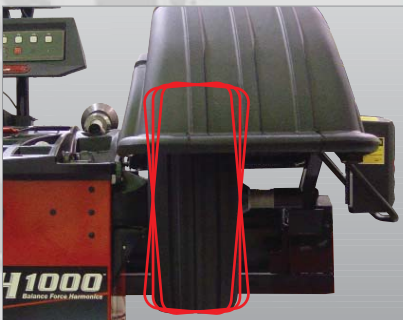
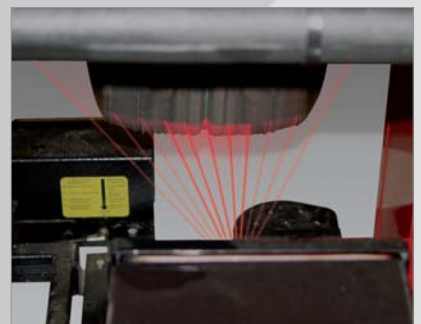


Radial Runout of Wheel

During the single spin cycle the inside laser scanner and outer laser scanner automatically measure the radial runout of the rim. This process is assisted by CCD Optic technology for unsurpassed accuracy. This value, when compared to on-board specifications, speeds the diagnostic process.

Radial Runout of Wheel/Tire Assembly

During the single spin cycle the rear laser scanner automatically measures the radial runout of the wheel assembly with both a laser and CCD Optic technology.

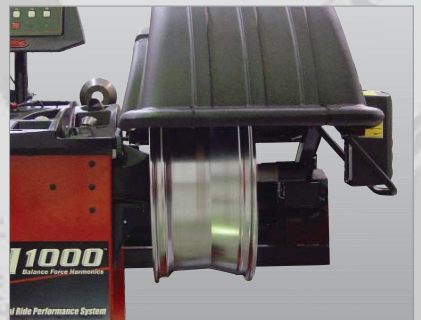


Lateral Runout of Wheel

During the single spin cycle the inside laser scanner and outer laser scanner automatically measure the lateral runout of the rim. This process is assisted by CCD Optic technology for unsurpassed accuracy. This value, when compared to on-board specifications, speeds the diagnostic process.

Rim-Only Runout

The BFH 1000 is perfect for wheel shops that offer custom wheels. Many of today's alloy wheels have no flat surface suitable for using a mechanical gauge to measure runout. Wheels with styled outer flanges also present a problem when attaching weights. With a push of the button, the BFH 1000 will show the values of the rim runout at the bead seat compared to on-board specification limits.

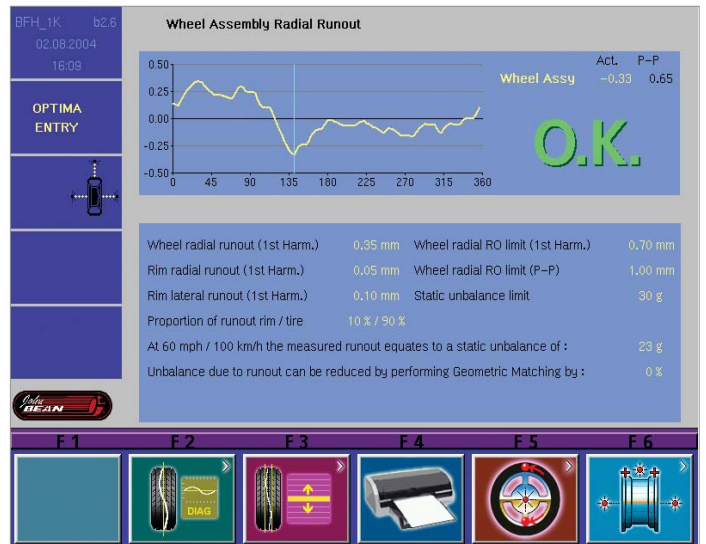


Optimize For A Smoother And Safer Ride

For maximum ride performance, the BFH 1000 performs both wheel balance and tire/wheel diagnostics. In just a few seconds, the BFH 1000 will diagnose the entire wheel assembly and show you any non-conformity issues which might exist. The easy-to-read display states what percentage of any problem can be attributed to the wheel or the tire, as well as suggestions for tire and wheel compatibility.

Instant Tire And Wheel Diagnostics

The BFH 1000 features a graphics-driven user interface, supplying all information required for the tire and wheel. A percentage-based indication of reduction of the unbalance force due to runout tells clearly if the tire and wheel needs to be matched. It also displays a proposed matching solution. In addition to being a convenient feature, this can alert you to any potential tire damage. Amazingly, this information is provided in a virtual instant, easily making the BFH 1000 the fastest diagnostic ride performance system on the market.



Graphic Displays

Graphic displays supported by digital readouts provide all the information necessary to pinpoint tire and rim out-of-specification conditions and guide the technician to a fast and foolproof one-time solution.

Match Procedure

A single key press displays the matching screen. Index the valve stem, rotate the tire and mark it for a single break and turn matching step. Remount the wheel assembly on the BFH 1000 for a final precision balance step.



Match Recommendation

Percentage of tire and rim contribution helps pinpoint when further diagnostics may be required. Extensive fault-free diagnostics provide on-board support to help any skill level technician quickly make the correct diagnostic decision.

Help Menu

Extensive on-board help menus appear at every phase of the BFH 1000 process. In English and several optional languages to aid any technician.



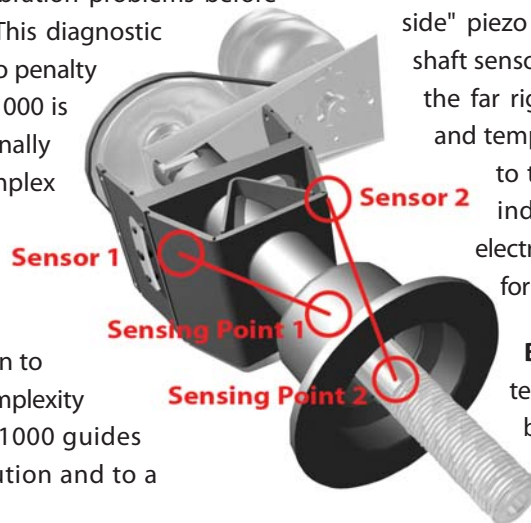


Proven VPI Balancing

The BFH 1000 incorporates advanced Virtual Plane Imaging (VPI) technology to assure unparalleled speed, accuracy, durability and ease of use in diagnosing and solving even the most difficult tire/wheel vibration problems. Patented VPI technology assists you in solving vibration problems before they cause a customer complaint. This diagnostic capability comes to your shop with no penalty in technician productivity. The BFH 1000 is fast, easy to operate, and exceptionally accurate for both simple and complex balancing jobs.

Hands Down Easiest To Use:

On-screen prompts and intuitive programming elevates the technician to the expert level. Regardless of the complexity of the vibration problem, the BFH 1000 guides the technician to the absolute solution and to a satisfied customer.



Unmatched Speed: Fastest floor-to-floor time in the industry. Perform a complete diagnostic check on every balance without a productivity loss.

Unparalleled Accuracy: Unique front-mounted "side-by-side" piezo system. Competitive balancers use two shaft sensors placed on the left side with the wheel at the far right, putting sensors under different stress and temperatures (since one sensor is always closer to the motor, etc). As done in high-precision, industrial applications, VPI places the tire electronically between the sensor piezo assemblies for unparalleled accuracy.

Best-In-Class Durability: Designed by a team that has a history of producing the best balancers in the industry. VPI technology adds durability to a balancing system with a proven track record of long service.

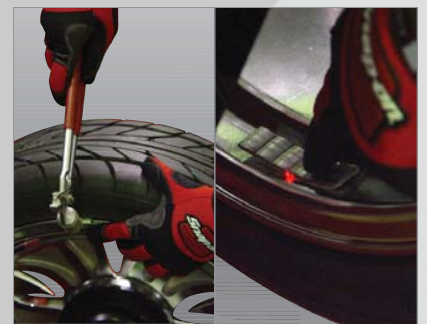


Mount Wheel

Select the proper mounting cone, place the wheel on the balancer mainshaft, and install the power clamping nut. A simple tap of the locking petal and the shaft automatically draws the clamp to center the wheel with precise clamping pressure.

Add Weight(s)

A color graphic display indicates accurate weight placement. For specialty tape weight a single keystroke followed by precise laser dot indication directs weight placement behind the spokes for the best combination of accurate balance and cosmetic weight placement.



Lower Wheel Guard

Just lower the wheel guard. The spin cycle is automatic. Lasers and CCD optics obtain all wheel parameters, determine the wheel style for optimum weight location, count spokes, and if required, perform all matching measurements. All this occurs in one spin cycle.

Print Verification

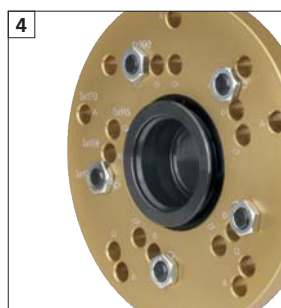
The optional printer provides a full color printout with digital and graphic displays. Before-service printouts help sell required balancing to your customer, after-service printouts verify accurate results and provide a permanent record of the work performed.



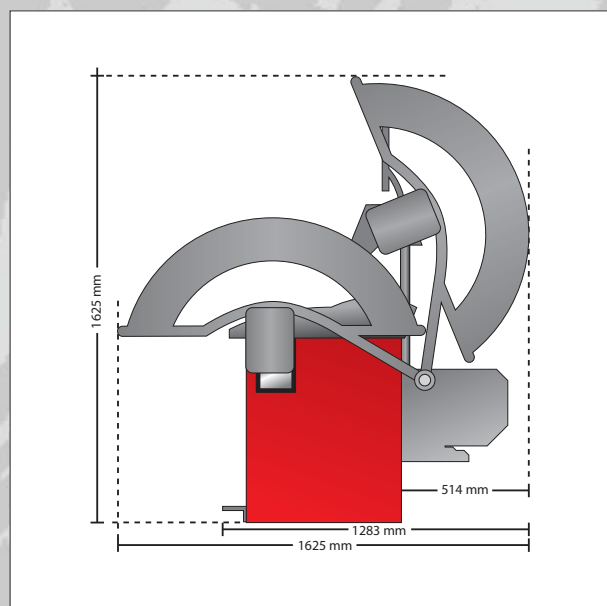
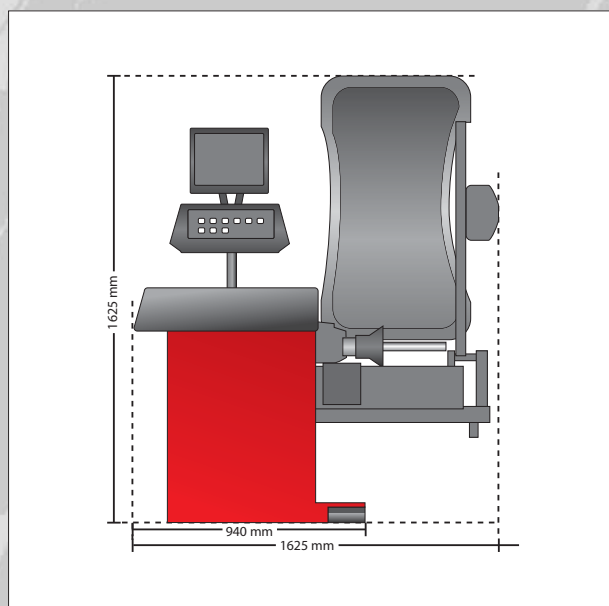
Available Models

OPTIONAL ACCESSORIES

- 1 Printer including shelf**
Ink-jet colour printer featuring 4800 dpi
- 2 Wheel lift**
Capacity up to 60 kg, for use between wheel balancer and tyre changer
- 3 Trolley**
for 8 stud-hole flanges, including shelves for bolts
- 4 Stud-hole flanges**
Aluminium, 30% less weight, bolts 80 mm long, plug-in and threaded types. Various special bolts available as optional extras.
- 5 Tapered centring rings**
with 5 deg. taper for perfect centring of the wheel
- 6 Vehicle-specific centring rings**
- 7 Clamping plate for alloy rims**



SPACE REQUIREMENTS





BFH 1000

SPECIFICATIONS

Power supply:	230 Volts, single phase / 50 / 60 Hz
Range of diameter centering cone:	3 cones: 43–116 mm
Length of shaft:	190 mm
Diameter of shaft:	40 mm
Measuring speed:	200 rpm
Balancing accuracy:	1g
Scanner accuracy:	0.1 mm
Rim width (dynamic balancing):	3 - 20"
Rim diameter:	8 - 30"
Max. wheel width:	530 mm
Max. wheel diameter:	1117 mm
Max. wheel weight:	75 kg
Kind of data entry for DISTANCE:	Automatic, non-touch
Kind of data entry for DIAMETER:	Automatic, non-touch
Kind of data entry for WIDTH:	Automatic, non-touch
Dimensions H x W x D (Machine only wheel hood open):	1625 mm x 1625 mm x 1625 mm
Weight:	250 kg

Snap-on® Equipment

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