HOFMANN®

geodyna® OPTIMA

The Fully Automatic Wheel Balancer
with 3D Laser Technology

Optional studhole flange

geodyna optima

Optimum Use of Laser Technology

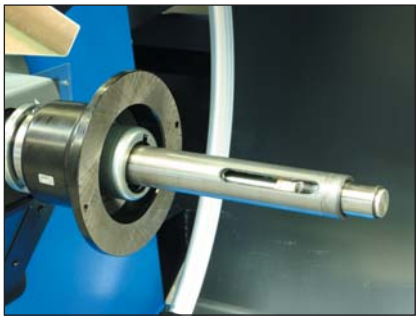
What is geodyna optima?

- The geodyna optima is a diagnostic wheel balancer using a patented non-contact laser technology. The optima has automatic features that allow the operator to clamp the wheel, close the wheel guard and have all the data (wheel data, radial and lateral run-out, number and location of spokes, unbalance) measured without need for the operator to touch the wheel.

- geodyna optima solves the ride performance issues of the wheel thanks to an enhanced geometric matching feature.

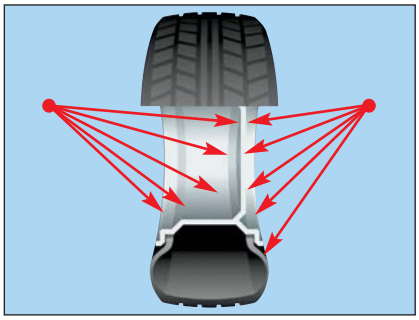
Technical features of geodyna optima

- AUTOMATIC clamping of the wheel
  The wheel is clamped automatically with the patented electro-mechanical power clamp system. This ensures the wheel is always correctly centerd and clamped and the balancer detects if a wheel is clamped, or not.



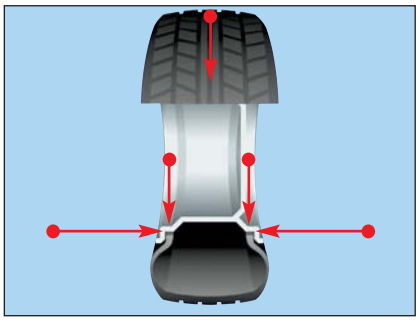
- NON contact data entry
  All wheel data (distance / diameter / width) are measured by non contact devices so that NO manual operation is required for the entry.

- NON contact run-out measurement
  - Radial and lateral rim run-out for the left side
  - Radial and lateral rim run-out for the right side
  - Radial run-out of tyre/wheel assembly
  - Radial run-out of bead seat on the rim (if rim only is measured)



- AUTOMATIC wheel weight placement selection
  Automatic selection of the wheel weight placement mode including the appropriate ALU mode to avoid wrong input by the operator.

- AUTOMATIC selection of correction planes
  Wheel weight location for stick-on weights (ALU program) are taken from the internal data base. Relocation to the correction plane to attach stick-on weights is either by the geodata gauge arm, or by the laser pointer (needs to be set by the operator)



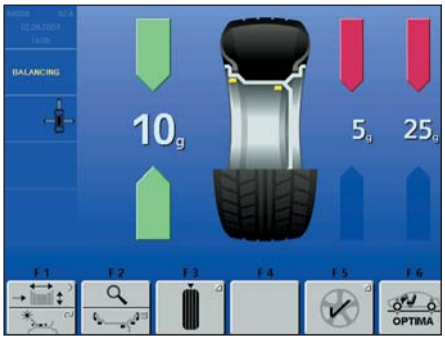
- geodata gauge arm with wheel weight clamp to position stick-on weights.

geodyna optima

Features and Advantages

- The laser pointer signals exactly where to place the stick-on weight.

- AUTOMATIC spoke function
  Automatic counting of number of spokes and location of spoke position make the Hidden Spoke Placement mode (HSP) a user-friendly feature. Simply press a function key - and offer the additional HSP service: a profit for your workshop.



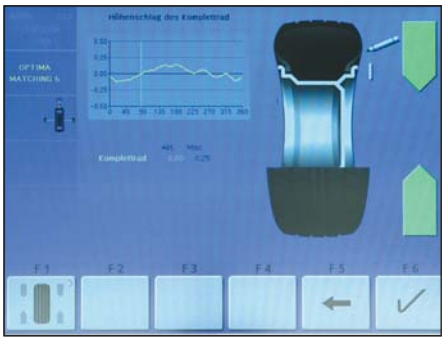
- If the values measured by the scanners and the sensors of geodyna optima exceed the threshold values, the OPTIMA diagnostic screen comes up automatically.

- This screen shows the percentage of possible reduction of the unbalance caused by run-out, and indicates if the wheel needs to be matched. The proposed matching procedure is clearly highlighted in this screen.

- Geometric matching
  The input is fairly simple:
  - Enter valve position.
  - Provide a mark on the tyre as indicated by the balancer.
  - Match tyre and rim accordingly on the tyre changer.

- All data required for balancing the wheel plus radial and lateral run-out are detected in a single measuring run.

- AUTOMATIC detection if a complete tyre/wheel assembly or only a rim is clamped on the balancer and start of the relevant balancing procedure.

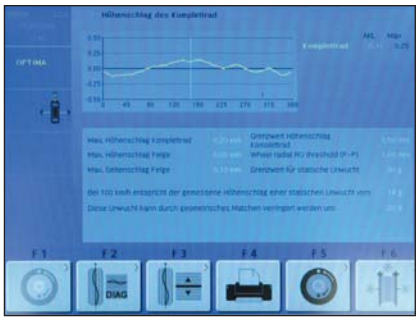


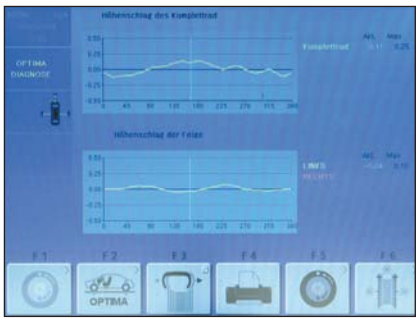
geodyna optima

Features, Advantages and Optional Extras

Comprehensive diagnostic functions

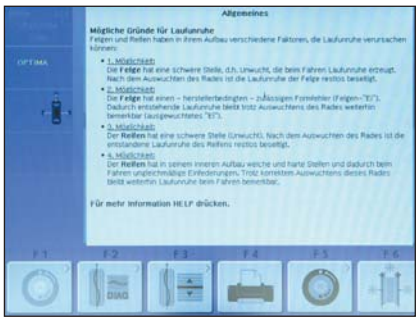
- Graphic illustration of radial run-out of complete tyre/wheel assembly
- Graphic illustration of radial run-out of both sides of the rim
- Graphic illustration of lateral run-out of both sides of the rim
- Reading of preset threshold values
- Reading of radial run-out of the complete tyre/wheel assembly (first harmonic)
- Reading of radial run-out of rim (first harmonic)
- Reading of lateral run-out of the complete tyre/wheel assembly (first harmonic)





Comprehensive on-line help to facilitate operation of the machine and to provide help for critical wheels

- Brief instructions into operation
- Meaning of keys
- Information on causes of ride performance issues of the wheel
- Warnings
- Solutions to critical conditions



- Print-out on ink-jet colour printer integrated in the wheel balancer (optional extra)

geodyna optima

Three Laser Units with CCD Cameras

Technology

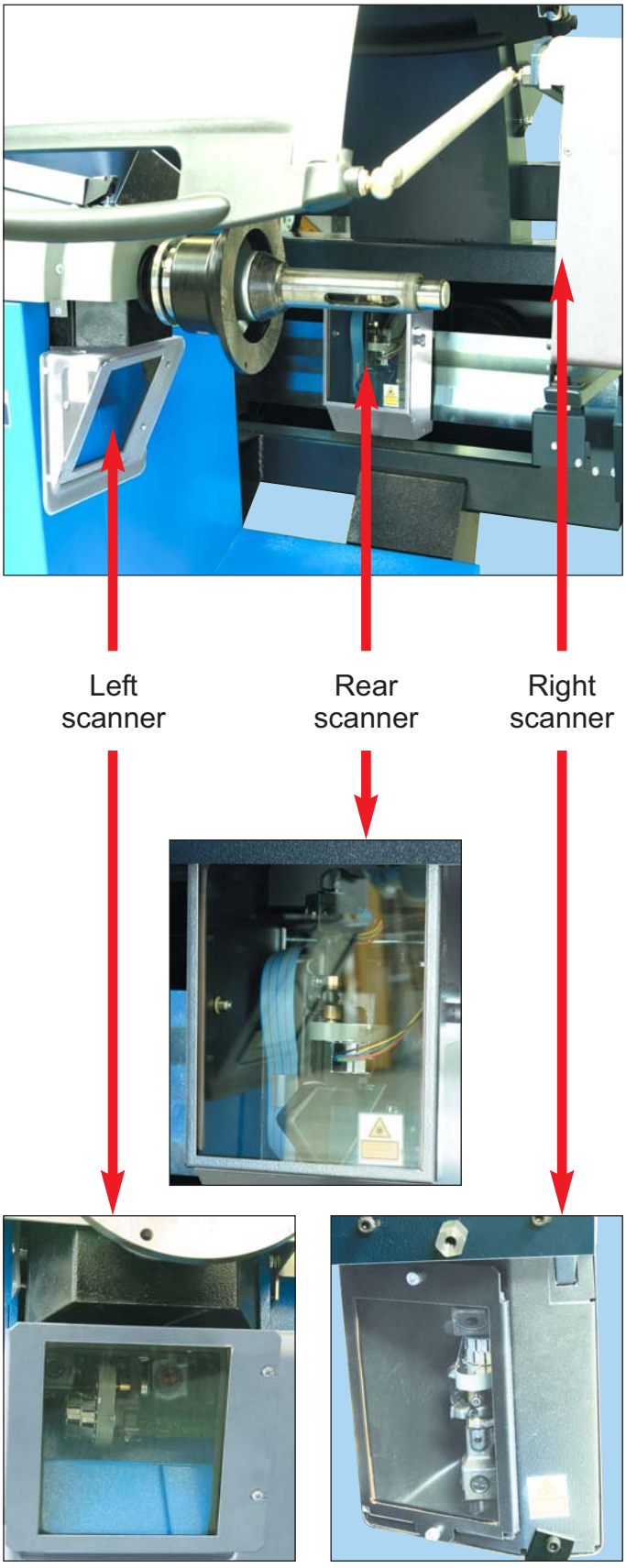
- The geodyna optima uses three integrated laser units with CCD cameras.
  Combining laser technology with CCD technology known from wheel aligners is perfectly suited to clearly identify the surface of rims currently in the market, which varies from dark, dirty, black to shining chrome.
- The 3 laser units with integrated CCD cameras for measurement of run-out and rim data are used as follows:
- Laser device 1 integrated in the measuring head
  - Inner rim shape to detect the correct weight position on the left side or inside the rim
  - Distance and diameter of the rim
  - Radial and lateral run-out on the left side of the rim
  - Number and location of spokes
- Laser device 2 on the rear underneath the wheel guard
  - Outer tyre radial run-out
  - Run-out of bead seat on rim when a measuring run is performed with the rim only (necessity is detected automatically)

- Laser device 3 integrated to the right side of the wheel guard
  - Radial and lateral run-out on the right side of the rim
  - Rim width

- The geodyna optima can be operated in 2 working modes. Default setting is the OPTIMA mode. It can easily be set to STANDARD mode upon key operation if OPTIMA functionality is not required or wanted.

- The STANDARD mode includes:
  - Rim profiling to get rim data including ALU wheel weight position
  - Spoke count when ALU mode is detected
  - Balancing

- The OPTIMA mode includes:
  - Rim profiling to get rim data including ALU wheel weight position
  - Spoke count when ALU mode is detected
  - Balancing
  - Radial tyre run-out measurement
  - Left radial rim run-out measurement
  - Left lateral rim run-out measurement
  - Right lateral rim run-out measurement
  - Right radial rim run-out measurement



geodyna optima

At a Single Glance

Standard features

- Virtual plane measurement technology VPM*
- Automatic non contact entry of distance*
- Automatic non contact entry of diameter*
- Automatic non contact entry of width*
- Non contact measurement of radial and lateral run-out*
- Automatic selection of weight placement mode*
- Automatic selection of correction planes
- geodata gauge arm* or Laser pointer
- ASS AutoStopSystem for geodata gauge arm*
- Split weight mode HSP
- Geometric matching*
- Automatic braking of wheel after measurement
- Automatic orientation of wheel into correction positiones after measurement
- Pedal operated main shaft lock
- V-belt motor drive for constant speed
- Elektro-mechanical power clamp device*
- Embedded PC technology
- Printer interface
- TFT colour screen
- Compatible to ASA network
- Full wheel guard
- Installation is possible directly near a wall

* patented / patent pending

Technical data		
Centering Cone range	inch	1 5/8 - 4 1/2
Shaft diameter	mm	40
Measuring speed	rpm	200
Rim width	inch	1 – 20
Rim diameter	inch	8 – 30
Max. wheel width	inch	21
Max. wheel diameter	inch	38
Max. wheel weight	lbs.	150
Dimensions WxHxD	inch	48 x 68 x 54
Weight	lbs.	400
Power supply	V	200 – 240, 1 ph / 50 / 60 Hz

TFT flat screen for accurate display of all measured data

The drum cushion required to clamp the wheel - within easy reach and properly stored

For further information please see www.optima-balancer.com

HOFMANN® USA

309 Exchange Avenue • Conway, AR 72032
(800) 251-4500 • (501) 450-1581
Fax (501) 450-2085 • www.hofmann-usa.com

HOFMANN® Canada

6500 Millcreek Drive • Mississauga, ONT L5N 4G4
(800) 267-2185 • (866) 812-5316
Fax (905) 821-2073 • www.hofmann.ca
E-mail: info@hofmann.ca

9/05 Form SS2602