

## MONOLITH + LOT

### MONOLITH+LOT configuration:

- Automatic protection hood
- LOT-System (axis for weight positions " at 12 o'clock")
- Pneumatic quick clamp
- Pneumatic brake at unbalance position
- Calibration
- Voice synthesizer
- Laser adjuster
- Alu programmes
- Automatic positioning lock
- Contactless wheel parameters measurement
- Optimization
- USG rim width measurement
- Programme 3P - "hidden weight"
- Touchscreen LED monitor
- Print to file
- Operator's memory
- Automatic diameter, width and offset measurement
- Unbalance recalculating



### Technical Data

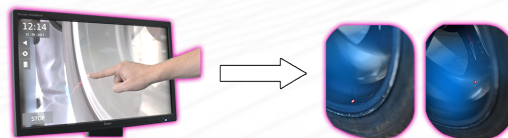
|                                       |               |
|---------------------------------------|---------------|
| Rim diameter range:                   | 10" - 30"     |
| Rim width range:                      | 2" - 15"      |
| Maximum wheel weight                  | 80 kg         |
| Balancing accuracy                    | 1 g           |
| Imbalance position indicator accuracy | 0.45°         |
| Measuring speed                       | 140 obr/min   |
| Power of the drive engine             | 80 W          |
| Electric supply                       | 230V / 50 Hz  |
| Pneumatic power supply                | 8 - 10 bar    |
| Dimensions                            | 980/1250/1990 |
| Weight                                | 120 kg        |



## Distinctive features:

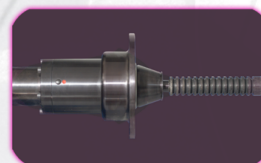
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The balancer is equipped with a patented system of automatic wheel parameters input based on real camera image. The laser pointer defines more precisely the correction point and shows the exact position for adhesive weights application.



**MONOLITH with LOT-System (Laser On Top)** is an ultra-modern balancing machine with even more accurate indication of the correction place. The laser beam sets axis "at 12 o'clock" eliminating the risk of mistakes in placing clip-on weights.

Modern pneumatic quick-clamp significantly shortens the wheel mounting time and eliminates the risk of eccentric wheel mounting. Clamp mechanism is controlled by ergonomic pedal.





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(12) **United States Patent**  
Roguski et al.

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(45) **Date of Patent:** May 7, 2019

(54) **METHOD AND SYSTEM FOR THE OPTICAL DETERMINATION OF CORRECTION PLANES IN ROTATING ELEMENTS**

FOREIGN PATENT DOCUMENTS

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EP 0724144 7/1996  
EP 1398611 3/2004  
WO 98/10261 3/1998

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OTHER PUBLICATIONS

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PPO Search Report for P413757, completed Sep. 5, 2016.

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(\*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 279 days.

(57) **ABSTRACT**

The subject matter of the present invention relates to a system for the optical determination of correction planes in rotating elements, used in the process of balancing, in particular in diagnostic devices equipped with a system which has at least one video camera (K), at least one line projector (RL), a monitor screen (M), and a computer (P) which controls individual component elements of the system, wherein the video camera (K) cooperates with the line projector (RL) while projecting a view of the rotating element (EW) on the monitor screen (M) together with an image of a line (L) projected by means of the line projector (RL).

The subject matter of the present invention also relates to a method for determining correction planes which consists in defining an area of measurement space; is defined on the basis of a virtual rotating element (EW) by placing a rotating element (EW) on the shaft of a diagnostic device (PM) onto which line (L) is projected by means of a line projector (RL), and subsequently a view of the rotating element (EW) is transmitted by means of the video camera (K) to the monitor screen (M) together with an image of the projected line (L), and thus the radius of the line is obtained which forms a change in the value of the radius from the axis of the shaft of the diagnostic device (PM) and the radius of the rotating element (EW) from the diagnostic device (PM) in the defined area of measurement space.

(21) Appl. No.: 15/242,957

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(51) **Int. Cl.**  
**G01M 1/28** (2006.01)  
**G01M 1/16** (2006.01)

(Continued)

(52) **U.S. Cl.**  
CPC ..... **G01M 1/16** (2013.01); **G01M 1/225** (2013.01); **G01M 1/28** (2013.01); **G01M 1/381** (2013.01); **G01M 1/381** (2013.01); **G01M 1/381** (2013.01)

(58) **Field of Classification Search**  
CPC ..... **G01M 1/16**

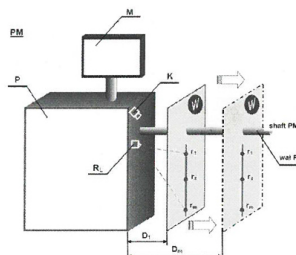
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(Continued)

6 Claims, 6 Drawing Sheets



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## Available Colors



Basic Colors

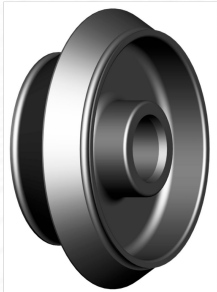
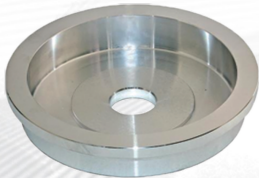


Custom Colors

## Additional Equipment

| Index        | Description          | Photo                                                                                 |
|--------------|----------------------|---------------------------------------------------------------------------------------|
| DO-5P        | Flange plate 5-bolts |    |
| 06.04.017.40 | Cone 110-125 mm Ø40  |   |
| 04.04.008.40 | Cone 125-145 mm Ø40  |  |
| 06.04.009.40 | Cone 145-165 mm Ø40  |  |



| Index     | Description                               | Photo                                                                                 |
|-----------|-------------------------------------------|---------------------------------------------------------------------------------------|
| 150400043 | Cone 122-174 mm Ø40                       |    |
| 190400018 | Distance spacer for shaft Ø40             |   |
| PPK-1     | Wheel lift PPK-1 for wheel balancer       |  |
| T-CĘG-001 | Wheel Balancing Weight Plier& Hammer Tool |  |

| Index     | Description               | Photo                                                                               |
|-----------|---------------------------|-------------------------------------------------------------------------------------|
| WT-2065-1 | Wheel Weight Scraper Tool |  |