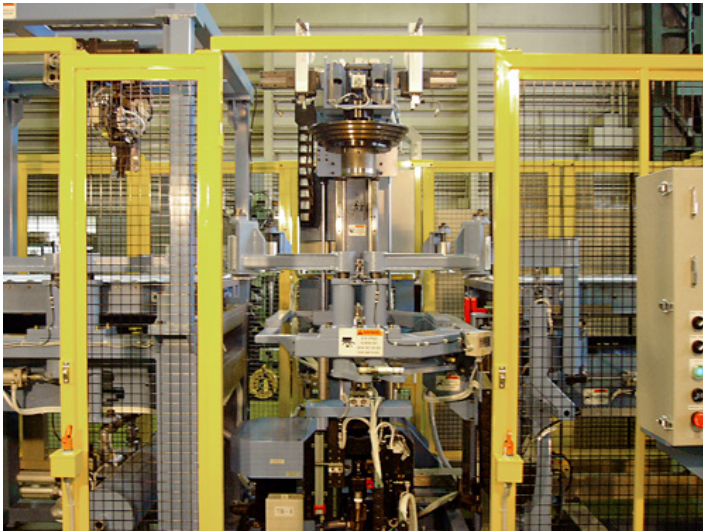


310 SBBV Balancing Machines for Automotive Tires



- Fast quality control
- Unbalance measurement in one or two planes (static or dynamic balancing)
- High measurement accuracy and reproducibility with inflated tires
- Short cycle times with more stations

Range of application

Measurement of the unbalance in passenger vehicle tires of various sizes in one or two planes. Classification of the measured unbalance and marking. Use of the machine in series production with a mixed operation for quality control or development. The machine can be linked with other plant equipment by suitable conveying system.

Design

Multi-station machine with automatic operating sequence. Vertical balancing unit with subcritical suspension system, precision spindle, vibration sensor and angle encoder; drive by AC servo-motor.

Mounting of the tires in variable tire clamping chuck or a stepped adapter that can be inflated.

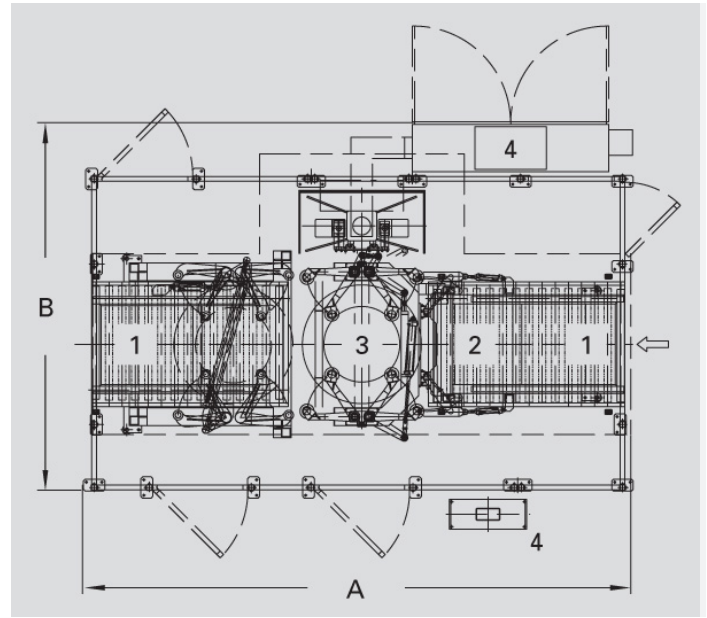
Measured data processing by microcomputer measuring unit CAB 850, classification, and if required, marking of the tire.

Loading and unloading of the machine automatically by integrated transporter.

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For checking static unbalance within the framework of quality control it is not necessary to inflate the tire. The unbalance measurement is done in one plane only. A tire clamping chuck that is spring-activated and pneumatically unclamped is used for mounting the tire. This chuck covers a wide diameter and height range and does not have to be changed. Especially in the case of high-performance or wide tires the couple unbalance can result in undesirable vibrations. This is an important quality criteria and should be corrected in addition to the static unbalance. To do this it is necessary that the tire be checked in its correct shape and position. Stepped and split adapters that can be inflated are the correct solution for this application. To ensure a perfect seating, after the adapter is locked in position the lubricated tire is first of all inflated to over-pressure and then deflated to its



1 Transport 2 Separator / stopper 3 Centring, balancing, marking 4 Measuring and operating unit 5 Switch cabinet

Plan view (non-binding example)

310 SBBV Balancing Machines for Automotive Tires

| Technical data at a glance | | 310 SBBV |
|-------------------------------------|----------------------|-------------|
| Measuring unit | | CAB 850 |
| Static unbalance measurement | | |
| Dynamic unbalance measurement | | • |
| Measurement with inflated tire | | • |
| Manual loading and unloading | | |
| Automatic integrated transporter | | • |
| Automatic color marker | | • |
| Tires | | |
| Weight, max. | [kg] | 25 |
| Outside diameter | [mm] | 500 - 1000 |
| Inner diameter | [Zoll] | 13 - 20 |
| Tire width | [mm] | 100 - 400 |
| Bead width | [Zoll] | 4 - 12 |
| Tire pressure | [kPa] | 200 |
| Machine | | |
| Width A | [mm] | 4420 |
| Depth B | [mm] | 2595 |
| Height C | [mm] | 3500 |
| Balancing speed | [min ⁻¹] | 530 |
| Measurement uncertainty | [g] | 0,03 |
| Cycle time, approx. | [s] | 20 |
| Air pressure | [kPa] | 700 |
| Air consumption | [m ³ /h] | 150 |
| Power consumption | [kVA] | 15 |
| | Order No. | R0430400.01 |
| | Order No. | |
| Automatic, color marker | Order No. | R0430402.01 |
| Lubricating station | Order No. | R0430403.01 |
| Identification station | Order No. | R0430404.01 |

A photograph of a Schenck 310 SBBV balancing machine. The machine is white and blue, with a large, complex rotating assembly in the center. The background is a clean, industrial setting.

310 SBBV Balancing Machines for Automotive Tires

- 2) Dependent on tire weight and skill of the operator
- 3) Data non-binding, dependent on the respective equipment supplied