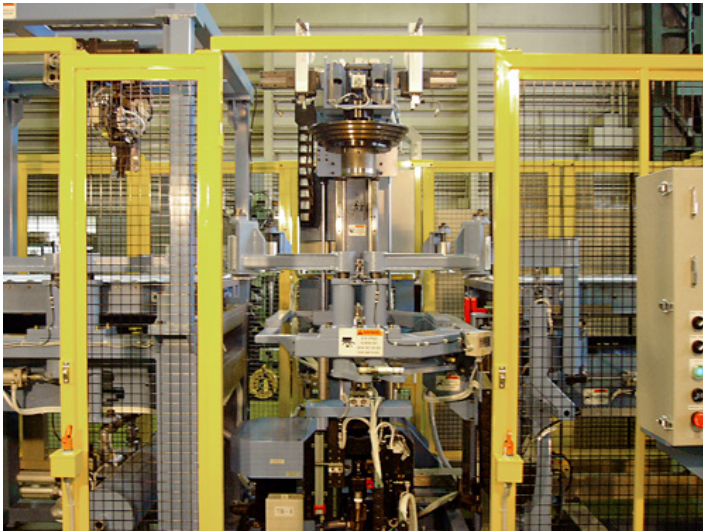


310 SBBV Balancing Machines for Automotive Tires



- 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.

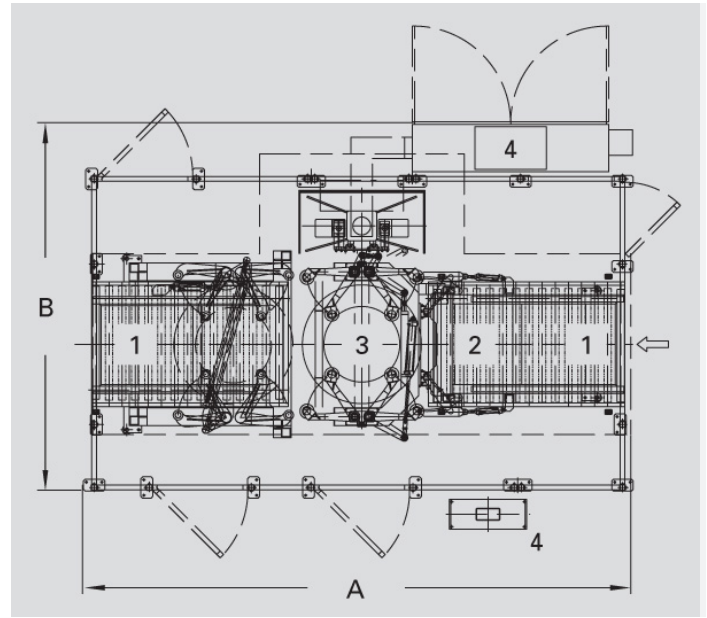
Measured data processing by microcomputer measuring unit CAB 850, classification, and if required, marking of the tire.

Loading and unloading of the machine automatically by integrated transporter.

310 SBBV Balancing Machines for Automotive Tires



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 large industrial balancing machine, model 310 SBBV, in a factory setting. The machine is white and blue, with a large rotating drum in the center. The background is slightly blurred, showing other parts of the factory.

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