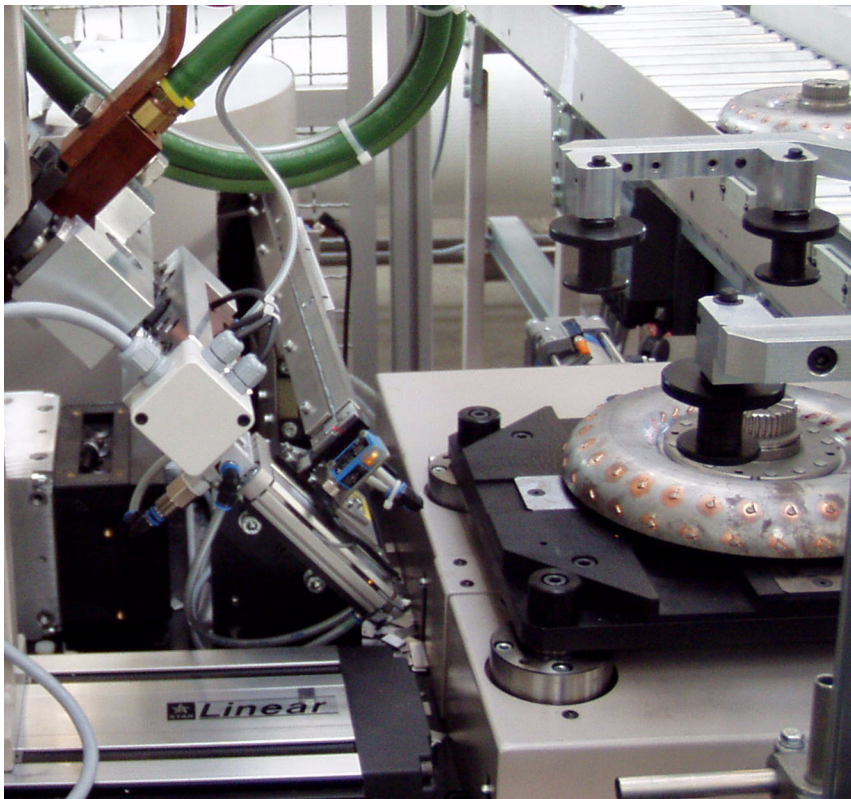


Balancing Machine for Turbine Wheels

CVW-S



Advantages

- Integration into production line.
- Fully automatic operation.
- Adaptor parts for simple and trouble free retooling.



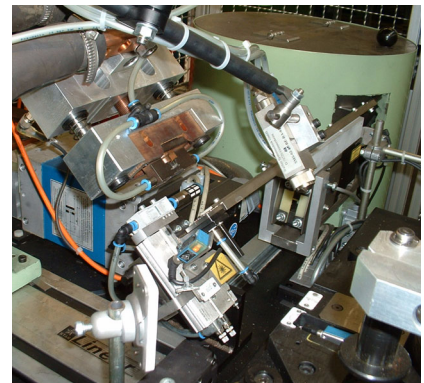
General view

Applications

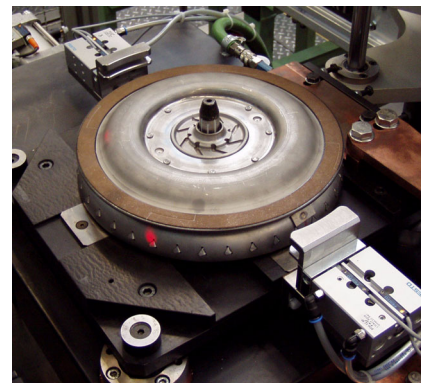
- Balancing of turbine wheels in fully automatic production lines in the automotive and supplier industries.
- Unbalance correction by spot welding of compensation strips of constant size.
- Loading as required by
 - Combination rotary actuator
 - Gantry loader
 - Robot.

Description

- Soft-bearing vertical balancing machine for measuring and correcting unbalance of disc shaped rotors in one plane.
- The workpieces are clamped on the measuring spindle with zero-backlash by an expanding sleeve mandrel.
- The strips are fed by a vibratory conveyor and transferred to the welding station.
- Once the workpieces have been indexed to the compensation position, the spot welding device advances to the welding location using a servo sliding unit.
- The changeover to other workpiece types is achieved by exchanging type-specific adaptor parts.

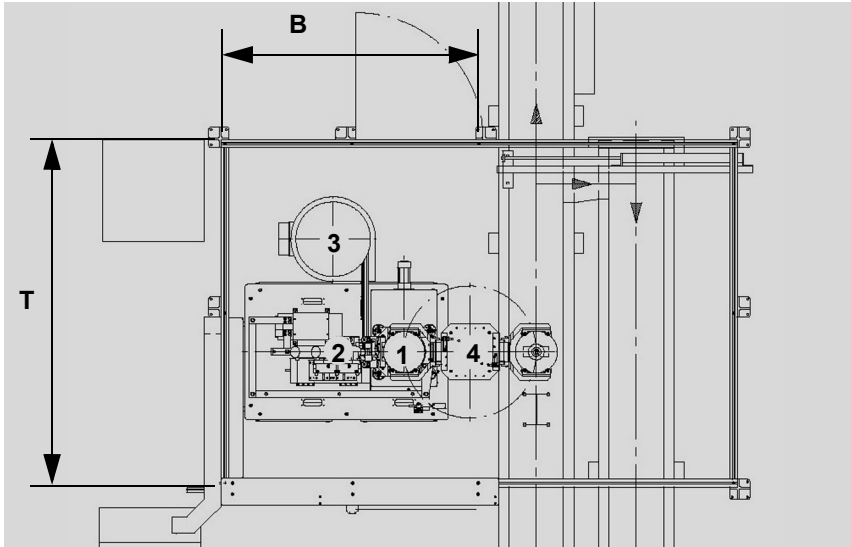


Welding device, vibratory conveyor and marker unit

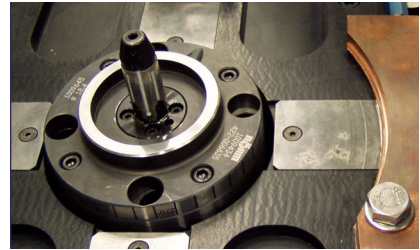


Workpiece holder

All information without obligation, subject to change without notice



1 Measuring unbalance, 2 Welding device, 3 Vibratory conveyor, 4 Loading



Expanding sleeve mandrel and pressure pad



Loading system

Technical data

Rotor

Weight, max.	kg	10
Outside diameter, max.	mm	290

Machine

Width x depth x height	mm	1500 x 2100 x 2650
Balancing speed, approx.	min ⁻¹	650
Measurement uncertainty ¹⁾	gmm	2.5 - 5
Cycle time ²⁾ , approx.	sec.	29

1) Depending on workpiece

2) With one unbalance correction and incl. check run

Options

- Welding cylinder with servo-driven swing centreline
- Loading gantry
- Loading robot
- Combination rotary actuator, with vertical servo axis, if required
- Marker unit
- Workpiece holder
- Test rotor with calibration weights
- Report printer
- Interfacing with host computer

Scope of supply

- Unbalance measuring system with expanding sleeve mandrel
- Welding station
- Feed of compensation strips by vibratory conveyor
- Transfer and holding unit for compensation strips
- Medium frequency spot welding unit with cooling system
- Measuring unit with keyboard and monitor
- Machine control
- Protective equipment Class B as per ISO 7475
- Hydraulic unit