



**Integrated overhead rotary transfer machine**

**Fully automatic function**

**NC axes for all movements**

**Linkage with production lines**

**Powerful measuring unit CAB 850 based on industrial PC**

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## Fully automatic balancing machine for electric armatures

**Type 440 KBTU**

### Field of application

Measuring and correction of unbalance of wound armatures of various sizes and of rotors which permit milling correction. Main Application for fully automatic production lines with high production rate. Unbalance correction by milling in one or two planes.

### Correction procedure

#### Slot milling in components

Vectorial distribution of the measured unbalance to the respective pole heads

#### Profile milling

Polar unbalance correction directly in the determined angular position.

#### Polar slot milling

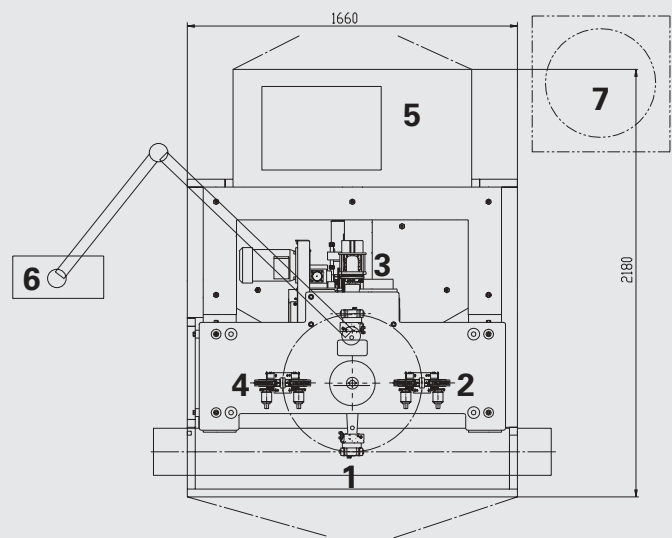
By axial adjusting of the milling spindle equipped with double slot milling cutters.

## Special features

- High speed rotor transfer with overhead rotary transfer at small operating radius; shock-free transfer of the rotors due to sinusoidal movement. Grippers equipped with damage protection device.
  - Correction station with digitally controlled milling and positioning device as well as with cutters touchpoint signal.
  - Milling procedure can be selected without modification of control; swarf extraction from below.
  - Flexible use, easy retooling and fast troubleshooting.
  - Powerful measuring unit CAB 850 on the basis of an industrial PC: 15" touchscreen, digital signal processing,
- software module for the calculation of various correction procedures, automatic calibration of the correction curve, large memory for data storage, operator support, retooling supported by photo sequence, diagnosis programs, statistics software, external interface.

## Set-up (example)

4-station machine with fully automatic functions. Linking of stations and of the peripherals by an integrated overhead rotary transfer. Rotors can be conveyed to the machine on belt conveyors or pallets.



- 1 Transfer
- 2 Measuring station
- 3 Correction station
- 4 Checking station
- 5 Control cabinet
- 6 Measuring system, positioning control
- 7 Swarf extractor

## Important data at a glance

Machine type	441 KBTU	442 KBTU	443 KBTU
Unbalance correction	Polar profile milling	Slot milling in components	Polar slot milling
Cycle time	Correct. in 1 plane	4,3 s - 4,5 s	6 s
	Correct. in 2 planes	7 s	10 s
Retooling time: rotor specific	5 - 15 min		
Achievable residual unbalance	depending on the rotor < 3 gmm/kg (µm)		



### Balancing and Diagnostic Systems

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