

Epoxy Resin Unbalance Correction System

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- Additive unbalance compensation with UV-hardened, single-component material
- Automation of the additive unbalance compensation
- High balancing accuracy and process security with additive unbalance compensation
- Ease of integration into semi- and full-automatic systems
- Environmentally friendly and conforms to the standards of safety at the workplace

Range of application

Additive balance correction system for small armatures, blowers and other rotors, where it is not possible to compensate for unbalance by removing some material or where the additive compensation (metal clips, two-component balancing plasticine) is only possible manually. A UV hardened epoxy resin, single-component is used that is applied to the rotor to be balanced, using metering equipment.

Sequence of operations

The unbalance measuring unit transfers the position and the size of the unbalance to the correction station. After indexing to the correction position, the resin that has been newly developed for this process is applied to the rotor by a metering unit, exact to the last millimeter.

With pinpoint accuracy, UV light is applied to the resin through a fiber optic, which hardens it. The rotor can then be turned to the second correction position or it can be removed from the next process step.

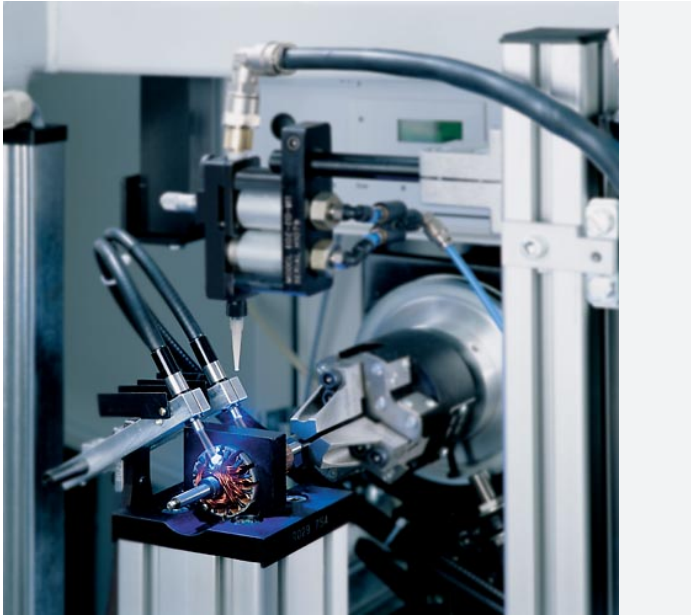
Principle design

Epoxy resin balancing correction system, consisting of material specially designed for balancing, the high-accuracy pneumatic metering unit and a UVA emitter.

- Single-component material with properties specially designed for balancing, (flow characteristics, thickness, weight, adhesiveness, etc). Through the use of a single-component material, no component mixing is required and therefore no rinsing. There are no pot-life restrictions.
- The material is applied using a pneumatic metering unit that applies the material with extreme accuracy to the part that is to be balanced. The metering unit has a low-maintenance design.
- There is a compact-construction metering head that is operated separately from the material container. Thus, the epoxy resin correction unit can be integrated where there are fairly tight space restrictions.
- UV lighting unit with a wavelength tuned to the requirements of the material. Light emission is done using a fiber optic to reduce the incidence of scattered light, which is positioned immediately above the metered material. The correction material hardens in 3 seconds.

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Data at a glance	Epoxy resin unbalance correction system
Dosing accuracy	1 mg (depending on the application)
Dosing time / level	2 - 4 s
Curing time	
Material thickness	1.8 g/cm ³ at T = 20 °C
Temperature resistance	-40 °C to + 150 °C
Material resistance	Oil, water, coolant, petrol, bio-diesel
Storage conditions	6 months at room temperature in closed original container, frost-free and dry storage