

EEJH Balancing and Diagnostics System for Complete Cooling Fans



- Performance measurement
- Signal analysis of the motor current
- Vibro-acoustic diagnosis
- Automatic unbalance measurement
- Automatic unbalance correction
- Automatic test sequence

Range of application

Performance and objective noise tests in the production of complete cooling fans. Measurement of dynamic and static unbalance in the fan plane for optimum unbalance correction.

Design

- Machine frame with unbalance measurement and test equipment
- Protective housing with wide loading doors
- Integrated measurement and control cabinet with test computer and power unit for the test object
- Two-station machine with manual loading, automatic test sequence and automatic unbalance correction.

Possible test procedures

- Signals analysis of the motor current and frequency range for the identification of commutation errors
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- VAD procedure (Vibro-acoustic diagnosis) for objective noise checking through analysis of the structure-borne noise signal in the time and frequency range.
- Measurement of current, speed and direction of rotation

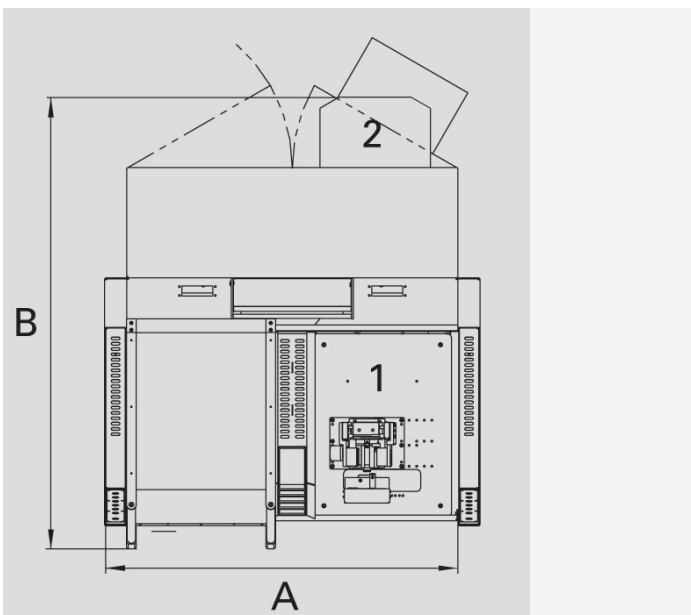
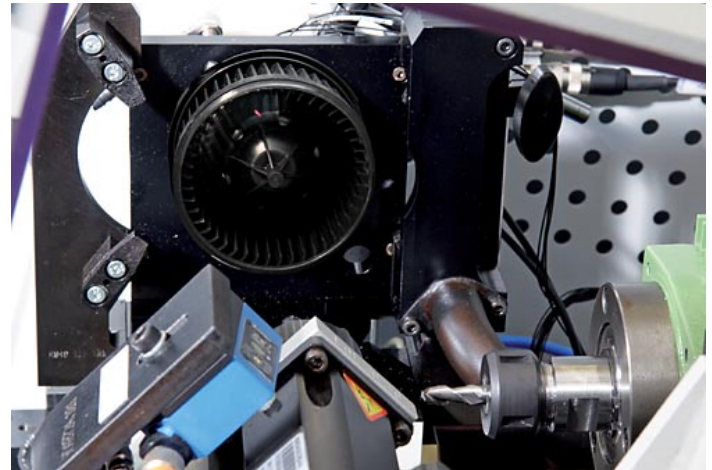
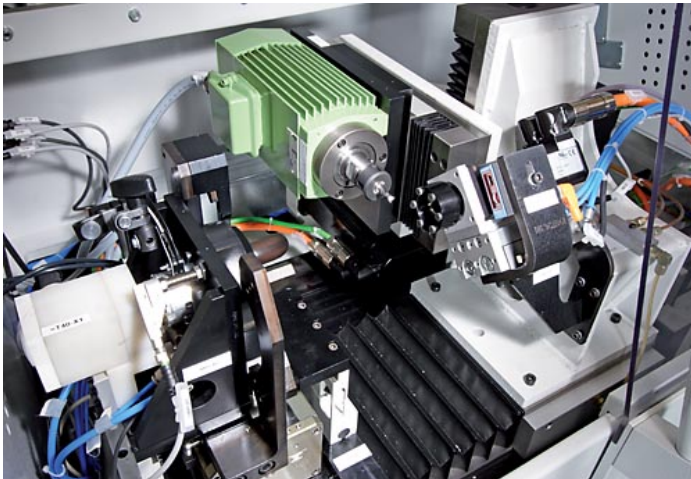
- Determining the static and dynamic unbalance with automatic unbalance correction

Special features

- Single or multiple-channel noise checking with integrated unbalance recognition, optional structure-borne noise checking
- Powerful industrial PC for control of the test sequence
- Software module for measurement of performance parameters and VAD procedure and measurement of static unbalance; large rotor type data memory, operator prompting, diagnostic program, statistics, process control, external interfaces
- Control of brushless motors
- Correction methods such as nibbling, drilling, coating or milling

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1 Testing table with sliding protective hood 2 Switch cabinet

Plan view (non-binding example: dimensions of the switch cabinet depend on the relevant application)

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Data at a glance	EEJH
Measuring device	PC with signal processor
Test specimen	Complete blowers with built-in motors
Test method	VAD, signal analysis, unbalance
Unbalance correction	Automatically through milling or other methods
Cycle time	approx. 30 secs, depending on blower type, per station
Machine	
Width A2	1850
Depth B2	1850
Height C	2040