

Balancing of general rotors

Horizontal Hard-Bearing Balancing Machine UHK 8.1



Advantages

- High productivity by fast change over
- Hofmann-force-measuring principle for high-precision unbalance measuring and high machine availability
- Protractor Posiquick C for exact transfer of the unbalance position to the rotor
- Compact and space saving design

Application

- Balancing of any kind of very small rotors
 - with own bearing journals
 - on an auxiliary shaft
 - as complete assembly in an adapter plate
- Applicable in
 - manufacturing (single or series)
 - maintenance
 - design and development
- Balancing of rotors like
 - electric armatures
 - turbochargers
 - small turbines

Just a few maneuvers are necessary to adapt the pedestals and the belt drive to another rotor type. The hard-bearing machine is permanently calibrated. For a new rotor type the unbalance measuring system has to simply be set to the specific locations of the unbalance correction planes and the correction radii, only. Then the balancing process may instantly start. Time consuming calibration runs are being omitted.

The pedestals comprising the Hofmann-force-measuring principle provide a high stiffness. The integrated piezo-electric force sensors are measuring the centrifugal force generated by the rotor unbalance on a direct way and with a very high sensitivity. As a benefit those sensors are not sensitive to temperature fluctuations and external electro-magnetic fields. As a result unbalances may be measured already at low speeds with a very high preciseness.

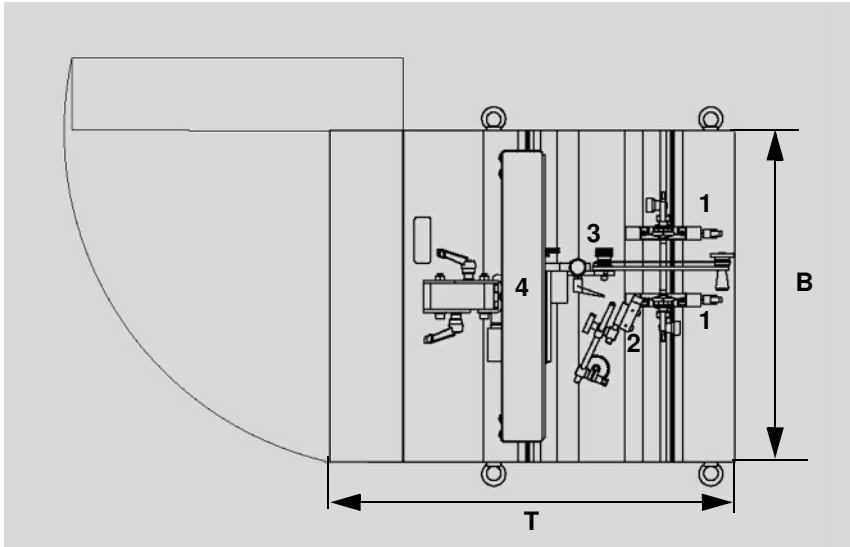
The unbalance measuring system MC 10 H provides a digital processing of the measuring data with a high selectivity for precision unbalance measurement. The Windows® operating system guarantees an intuitive, simple and reliable operation. The unbalance correction is being displayed in terms of mass-, unbalance- or correction-units.

Description

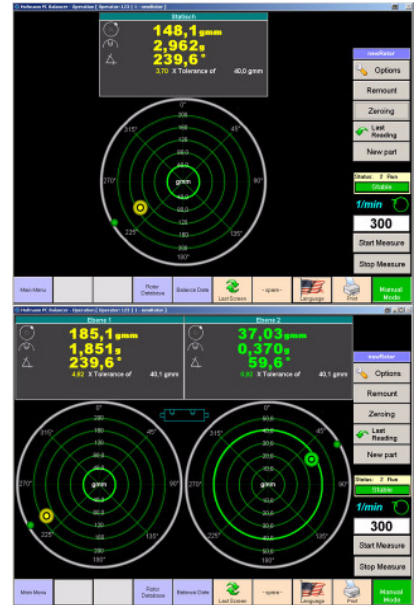
The Hofmann balancing machine UHK 8.1 is particularly designed for the requirements of balancing any kind of rotors in the weight range up to 5 kg.



Typical rotors



Machine top view : B = 500 mm, T = 644 mm



Technical Data

Max. rotor weight	kg	5
Max. weight per pedestal	kg	2.5
Max. rotor diameter above machine bed	mm	230
Bearing distance min. / max.	mm	32 / 450
Journal diameter	mm	3.5 - 14.4 / 14.4 - 30
Driving power	W	100
Balancing speed at driving diameter Ø 25 mm	1/min	300 - 2,400
Minimum achievable residual unbalance	gmm/kg	0.1
Max. unbalance reduction ratio	%	95
Power supply	V	230

Options

- Additional roller bearings
- Prism bearings
- Adapting tooling for complete assemblies
- Safety device according to ISO 7475
- Test rotor with test weights
- Unbalance measuring system MC 10 H (see separate data sheet)
- Protocol printer

Scope of supply

- 1 Machine bed
- 2 Pedestals with force measuring sensors and roller bearings
- 1 Belt drive
- 2 Axial counter bearings
- 1 Speed sensor with stand
- 1 Unbalance measuring system MC 10 H
- 1 Protractor Posiquick C

All information without obligation, subject to change without notice!