

Balancing of general rotors

Horizontal Hard-Bearing Balancing Machine UHK 11.1 / 12.1



Advantages

- High productivity by fast changeover
- 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 small up to medium 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
 - electro armatures
 - textile spindles
 - turbochargers
 - small turbines
 - tool spindles

Just a few maneuvers are necessary to adapt the pedestals and the belt drive to another rotor type. The hard-bearing machines are 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 precision.

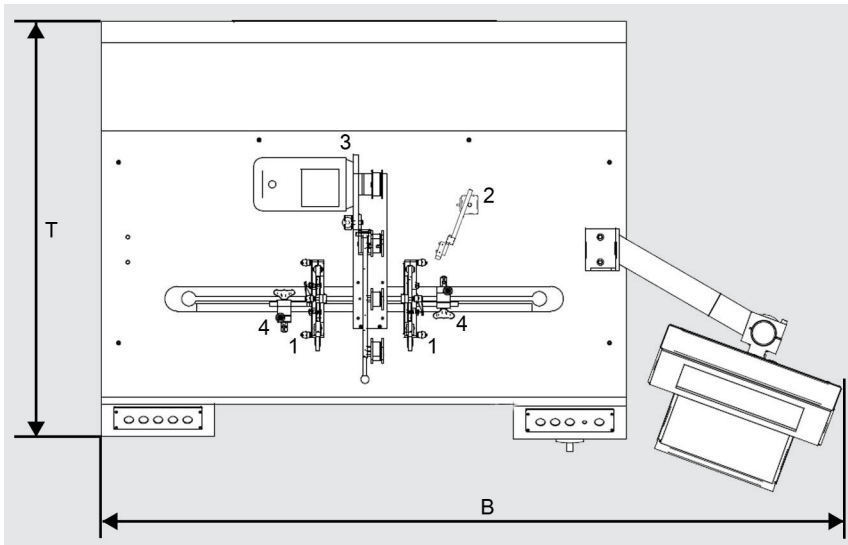
The unbalance measuring system MC 10 H provides a digital processing of the measuring data with a high selectivity for precision unbalance measurement. The Windows® operating system guarantees an intuitive, simple and reliable operation. The unbalance correction is being displayed in terms of mass-,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

Description

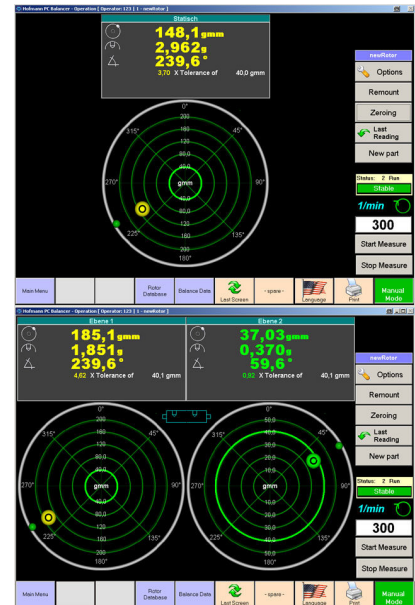
The Hofmann balancing machines UHK 11.1 and UHK 12.1 are particularly designed for the requirements of balancing any kind of rotors in the weight range up to 20 kg or 50 kg.



Typical rotors



Machine top view : B = 1.800 mm, T = 700 mm



Technical Data

		UHK11.1	UHK12.1
Max. rotor weight	kg	20	50
Max. weight per pedestal	kg	10	25
Max. rotor diameter above machine bed	mm	440	440
Max. rotor diameter above belt drive	mm	250	250
Bearing distance min. / max.	mm	60 - 840	60 - 840
Journal diameter	mm	6 - 40 / 40 - 90	8 - 45 / 45 - 100
Driving power	W	400	400
Balancing speed at driving diameter 50 mm	1/min	324 - 3,240	324 - 3,240
Minimum achievable residual unbalance	gmm/kg	0.1	0.1
Max. unbalance reduction ratio	%	95	95
Power supply	V	230	230

Options

- Additional roller bearings
- Prism bearings
- Negative load roller for rotors in overhung positions
- Adapting tooling for complete assemblies
- Safety device according to DIN ISO 21940-23
- Test rotor with test weights
- Unbalance measuring system MC 10 H (see separate data sheet)
- Protocol printer

Scope of supply

- 1 Machine table
- 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!