SCHENCK

# MBBS
## Balancing Machine for Turbocharger Impellers

- Patented air bearing rotor support for extreme measurement accuracy
- Short run-up and braking times through air-drive
- Measuring equipment with digital measurement and direct unbalance or correction display
- Easy change over to other rotor types

**Range of application**
Determining the unbalance in machined turbocharger rotors. Use of the machine in the production of small- and mid-volumes, for quality control and research and development. Unbalance measurement in two planes, programmable conversion of the unbalance to the most suitable correction planes. Unbalance correction by an optional correction unit in multiple correction steps. Loading and unloading manually or by hand-operated device.

**Design**
Machine with vertical axis, between one and three balancing units and an automatic operating cycle.
Vibration-optimized machine frame of aluminium profile.
Type-dependent, exchangeable precision air bearings. Drive with automatic speed control and special drive-plate with air jet adapted to the rotor diameter.
Automatically operating pneumatic lifting device to facilitate loading.
Measured data processed by measuring unit CAB 750.

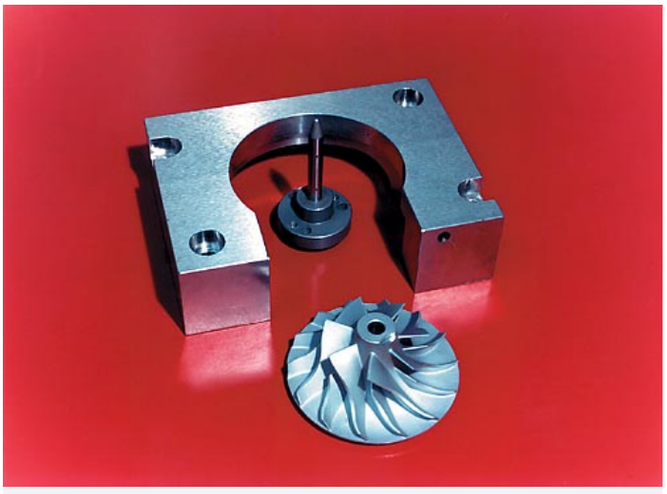
SCHENCK

Schenck RoTec GmbH
Landwehrstrasse 55
D-64293 Darmstadt

Telefon (0 61 51) 32 23 11
Telefax (0 61 51) 32 23 15

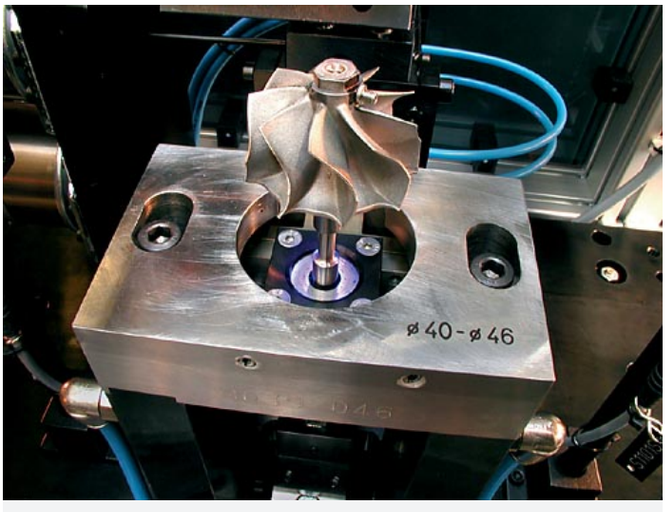
http://www.schenck-rotec.de
E-Mail rotec@schenck.net

# MBBS
## Balancing Machine for Turbocharger Impellers

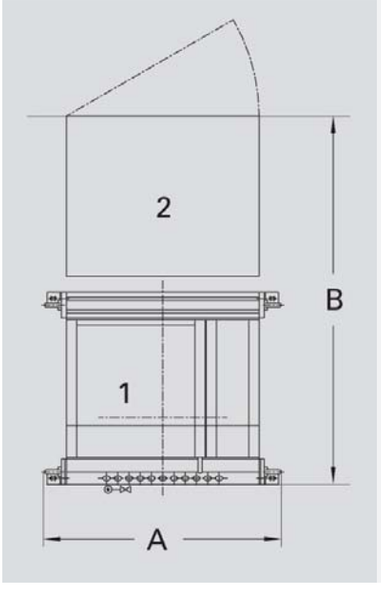


Precision air bearings – such as the version for a compressor rotor shown here - take care of clearance and offer wear-free support of the rotor. The drive by air-jet is fast and prevents measurement errors.


Various balancing units (up to 3) can be combined for fast balancing of a wide range of turbocharger rotors without requiring costly change over.




The balancing unit is provided with a device for gentle loading and unloading on the air-bearings.




1 Measuring station
2 Switch cabinet and measuring device

Plan view (non-binding example of 050 MBBS)

SCHENCK

Schenck RoTec GmbH
Landwehrstrasse 55
D-64293 Darmstadt

Telefon (0 61 51) 32 23 11
Telefax (0 61 51) 32 23 15

http://www.schenck-rotec.de
E-Mail rotec@schenck.net

SCHENCK

# MBBS
## Balancing Machine for Turbocharger Impellers

| Technical data at a glance | | 050 MBBS | 200 MBBS | 400 MBBS | 600 MBBS | 100 MBBS | 300 MBBS | 500 MBBS |
|---|---|---|---|---|---|---|---|---|
| Measuring unit | | CAB 750 | CAB 750 | CAB 750 | CAB 750 | CAB 750 | CAB 750 | CAB 750 |
| Automatic unbalance measurement | | • | • | • | • | • | • | • |
| **Unbalance correction** | | | | | | | | |
| Turbine rotor | | • | • | • | • | | | |
| Compressor rotor | | | | | | • | • | • |
| **Rotor** | | | | | | | | |
| Weight | [g] | 50 - 200 | 100 - 600 | 400 - 1600 | 1400 - 5400 | 10 - 150 | 60 - 400 | 100 - 1500 |
| Diameter | [mm] | 30 - 65 | 45 - 95 | 65 - 125 | 120 - 180 | 30 - 95 | 65 - 125 | 120 - 180 |
| **Machine** | | | | | | | | |
| Width A | [mm] | 720 | 720 | 720 | 720 | 720 | 720 | 720 |
| Depth B | [mm] | 1150 | 1150 | 1150 | 1150 | 1150 | 1150 | 1150 |
| Height C | [mm] | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Balancing speed, max. | [min -1] | 3200 | 2200 | 2200 | 2200 | 3200 | 2200 | 2200 |
| Measurement uncertainty | [gmm] | 0,002 - 0,02 | 0,01 - 0,1 | 0,05 - 0,3 | 0,15 - 0,4 | 0,003 - 0,03 | 0,015 - 0,1 | 0,05 - 0,4 |
| Measuring time | [s] | 6 - 10 | 8 - 12 | 10 - 30 | 20 - 50 | 6 - 10 | 8 - 15 | 8 - 30 |
| Air pressure | [kPa] | 450 - 600 | 450 - 600 | 450 - 600 | 450 - 600 | 450 - 600 | 450 - 600 | 450 - 600 |
| Air consumption | [m3/h] | 8 | 8 | 8 | 8 | 8 | 8 | 8 |
| | Bestell-Nr. | R0350100.01 | R0350300.01 | R0350500.01 | R0350800.01 | R0350200.01 | R0350400.01 | R0350600.01 |
| | Bestell-Nr. | o.r. | o.r. | o.r. | o.r. | o.r. | o.r. | o.r. |
| Correction station | Bestell-Nr. | o.r. | o.r. | o.r. | o.r. | o.r. | o.r. | o.r. |
| Hydrostatic bearings for drill free compressor wheels without central hole | Bestell-Nr. | o.r. | o.r. | o.r. | o.r. | o.r. | o.r. | o.r. |
| Interface to the correction station | Bestell-Nr. | o.r. | o.r. | o.r. | o.r. | o.r. | o.r. | o.r. |
| Control cabinet cooling device | Bestell-Nr. | R0350102.01 | R0350302.01 | R0350502.01 | R0350802.01 | R0350202.01 | R0350402.01 | R0350602.01 |
| Printer | Bestell-Nr. | R0350101.01 | R0350301.01 | R0350501.01 | R0350801.01 | R0350201.01 | R0350401.01 | R0350601.01 |

2) Acc. To DIN 1319, 95% probability, work-piece dependent

3) Incl. run-up and braking time

4) Data non-binding, dependent on the equipment supp ied

o.r. On request

SCHENCK

Schenck RoTec GmbH
Landwehrstrasse 55
D-64293 Darmstadt

Telefon (0 61 51) 32 23 11
Telefax (0 61 51) 32 23 15

http://www.schenck-rotec.de
E-Mail rotec@schenck.net