

## 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

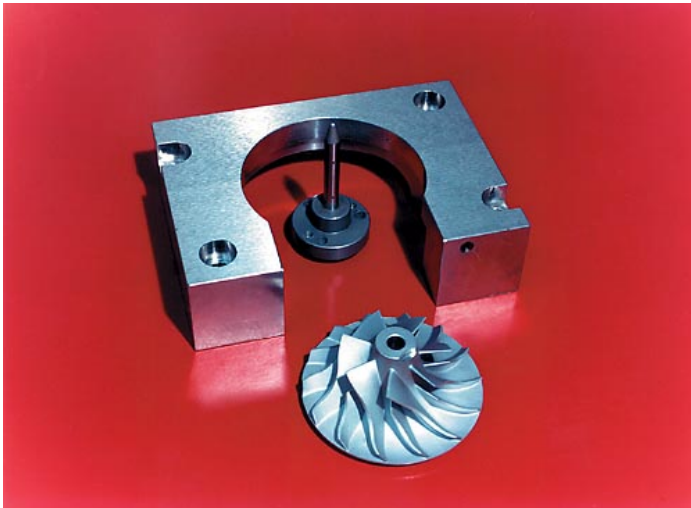
Determining the unbalance in machined turbocharger rotors. Use of the machine in the production of small- and mid-volumes, for quality control and research and development. Unbalance measurement in two planes, programmable conversion of the unbalance to the most suitable correction planes. Unbalance 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.

# MBBS

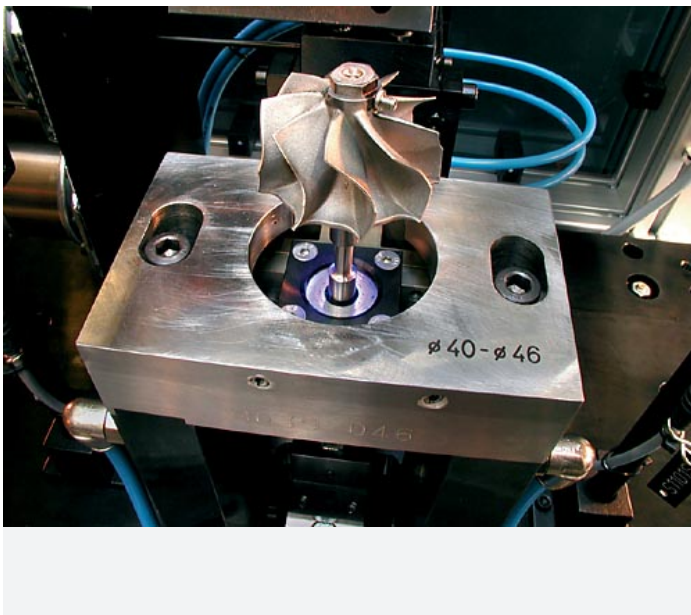
## Balancing Machine for Turbocharger Impellers



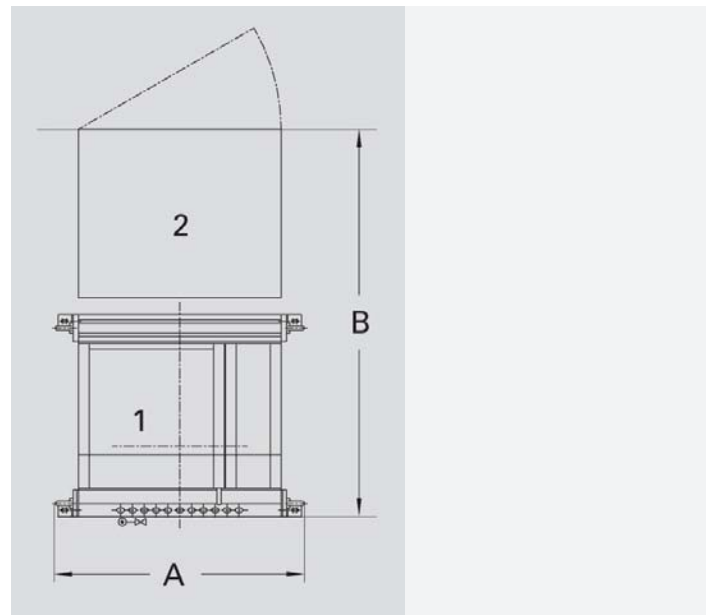
Precision air bearings – such as the version for a compressor rotor shown here - take care of clearance and offer wear-free support of the rotor. The drive by air-jet is fast and prevents measurement errors.



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)

# 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		•	•	•	•	•	•	•
<b>Unbalance correction</b>								
Turbine rotor		•	•	•	•			
Compressor rotor						•	•	•
<b>Rotor</b>								
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
<b>Machine</b>								
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 <sup>-1</sup> ]	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	[m <sup>3</sup> /h]	8	8	8	8	8	8	8

Bestell-Nr.	R0350100.01	R0350300.01	R0350500.01	R0350800.01	R0350200.01	R0350400.01	R0350600.01
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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.	
Hydrostatic bearings for drill free compressor wheels without central hole	Bestell-Nr.	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.	
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 supplied
- o.r. On request