

Balancing machine for crankshafts

KHK 12-B1



Applications

- Balancing of heavy passenger car and truck crankshafts, symmetric and asymmetric design
- automatic loading by gantry or robot; manual loading is also possible
- Unbalance compensation by drilling with one-spindle drill unit

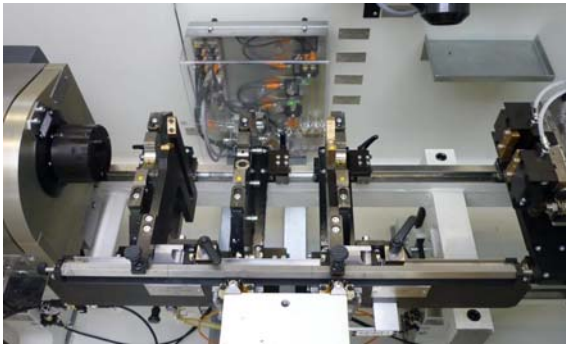
Description

- One-station balancing machine with entire housing with two-part front door
- Measuring system with NC-drive and maintenance-free sensors. Measuring frame lockable in drill and measuring position. Oil lubricated and lineary adjustable bearing sleeves. Pre-storage area is lineary adjustable with end thrust
- Measuring drive as pin or hook drive, weights for compensation of asymmetric shafts can be mounted on discs
- Unbalance compensation by sloped NC-drill spindle with NC-infeed slide and NC-cross slide for positioning to the correction planes
- Chip removal by suction unit
- Control cabinet with all electric components
- Operation via 19" touch screen (manual operations WIN CC and operation of measuring electronic (Windows®))

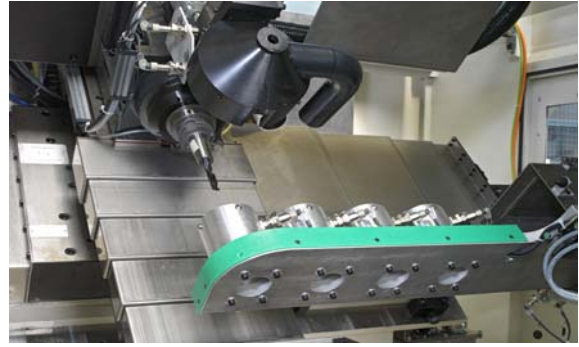
Advantages

- Easy and quick changeover
- Maintenance-free and wearless vibration sensors
- Cut indication ensures exact drilling depths
- Monitoring for drill breakage and drill wearing
- Minimal Quantity Lubrication
- Chip removal by suction mask and chip suction directly at tool
- High-quality German drill spindle
- Tool management for 99 tools
- Integrated control cabinet
- Integrated statistics software
- Automatic MFU

All information without obligation, subject to change without notice!



Measuring station with pre-storage area



Automatic tool changer with 4 positions

Technical Specifications

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Rotor:		
Weight	kg	30 - 160
Overall length	mm	350 - 1250
Main bearing diameter	mm	65 - 125
Journal distance, min.	mm	100 (85)
Fly circle radius crankpin, max.	mm	160
Compensation		Drilling with MQL
Compensation radius	mm	60 - 160
Machine:		
Measuring planes		2
Measuring system		displacement measuring w/ maintenance-free sensors
Cycle time	min.	cycle time chart for each shaft will be supplied
Unbalance reduction ratio	%	95
Measuring drive		slide bearing shells with hook or pin drive
Machine Data:		
Width x Depth x Height	mm	4300 x 2600 x 2500
Balancing speed	rpm	200 - 650
Measurement uncertainty ¹⁾	gmm/kg	1

Options

- Loading gantry with gripper
- Automatic tool change (6 positions)
- Detection of flange center for correction of drilling position
- Master parts with calibration weights
- Operation by OP12 and Transline 2000

Scope of supply

- Measuring and correction station with hook or pin drive (NC-drive)
- Drilling unit on NC-cross slide
- Machine housing with front door and maintenance door
- Welded machine base
- Suction unit
- MC10 measuring computer
- Control cabinet
- Mounting elements