

## **Balancing Machine for Pump Impellers**

# **NVW-B**



### **Applications**

- Balancing of pump impellers in the serial production
- Unbalance correction according to customer's specification, for example by axial milling in the cover disc
- Alternatively: Axial milling or drilling on cover disc
- Can be designed as single machine (Audit) or in combination with correction station
- Loading possibilities:
  - manually
  - automatically with internal lifting table
  - automatically with external gantry or robot

### **Description**

- Force measuring, vertical balancing machine for measuring and correction of unbalance in 1 or 2 planes
- Centring and clamping of work piece in axial centre bore with expanding sleeve clamping adapter
- Work piece clamping for milling by parallel collet chuck
- Clamping concept for easy changeover
- Additional correction and clamping concepts are possible
- Chip suction by vacuum exhauster and work piece specific suction mask available as option

#### **Advantages**

- Fully-automatic operation cycle
- Possibility of unbalance detection and correction in 1 station
- No external handling units necessary
- Compact and robust design
- Rotor type specific calibration
- Free selection of location
- Highly flexible and easy changeover
- High accuracy



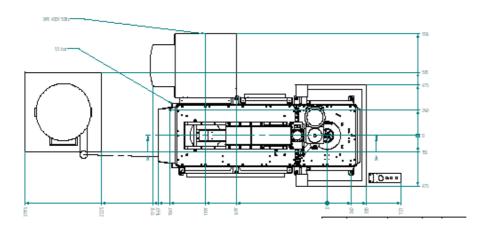
Overall view



Option: Rotatable chuck

Subject to change without notice!!







Chip suction



Work piece

#### **Technical Data**

		NVW11-BM1	NVW12-BM1
Rotor			
Weight	kg	30	100
Diameter	mm	100 - 500	100 - 500
Height	mm	10 - 300	10 - 300
Machine			
Width x Depth x Height	mm	1500x2400x3000	1500x2400x3000
Balancing speed, approx.	rpm	300 - 600	300 - 600
Accuracy	(DIN1940)	Q 2,5/6,3	Q 2,5/6,3
Repeatability <sup>1)</sup>	μm	3 - 5	3 - 5
Cycle time <sup>2)</sup>	min	0,5 - 1	0,5 - 2

- 1) Dependent on clamping medium, concentricity and roundness of the inner bore
- 2) Dependent on mass inertia or work piece, initial unbalance, method and value of unbalance correction

### **Options**

- Automatic calibration device
- Milling angle adjustment for vertical milling in cover disc
- Chain-linking device
- Marking device
- Loading by robot or gantry
- Hole pattern and feather key groove scanning
- Variable spindle speed (correction spindle)
- Unbalance correction by drilling
- First cut detection
- Diameter scanning for plausibility control
- Test rotor with calibration weights

- Programming language in Graph 7
- Attachment bracket clamping system
- CAQ interface
- Printer
- Statistic package
- Swivel-mounted operator panel

### **Scope of Supply**

- Vertical measuring station with expanding sleeve clamping adapter
- Correction unit
- Clamping and indexing unit
- Chip suction
- Measuring unit with keyboard and monitor
- Machine control
- Safety guard according class B and ISO 7475