

## Balancing Machine for Pump Impellers

### NVW-B



#### 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

#### Applications

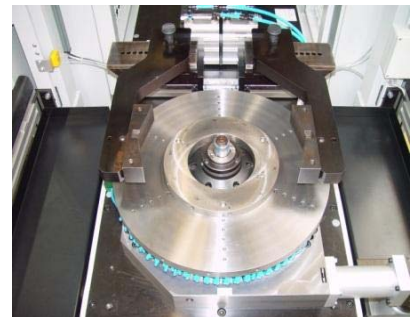
- Balancing of pump impellers in the serial production
- Unbalance correction according to customer's specification, for example by axial milling in the cover disc
- Alternatively:  
Axial milling or drilling on cover disc
- Can be designed as single machine (Audit) or in combination with correction 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 exhaustor and work piece specific suction mask available as option

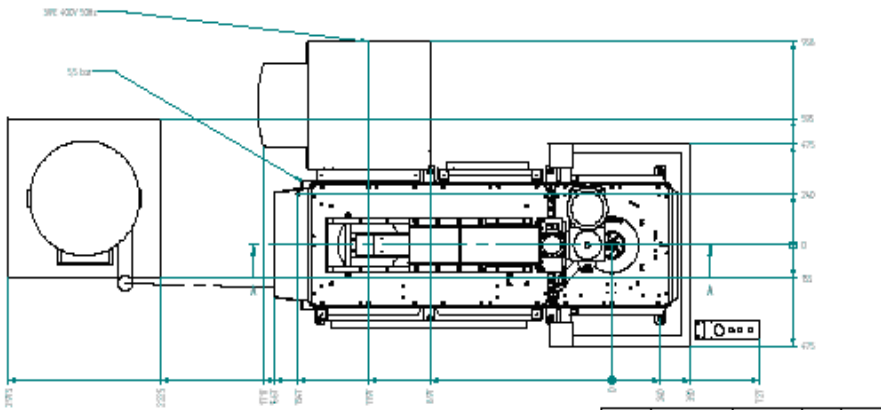


Overall view



Option: Rotatable chuck

Subject to change without notice!!



Chip suction



Work piece

## Technical Data

		NVW11-BM1	NVW12-BM1
<b>Rotor</b>			
Weight	kg	30	100
Diameter	mm	100 - 500	100 - 500
Height	mm	10 - 300	10 - 300
<b>Machine</b>			
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

## 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