



 **SCHENCK**

**Virio**

**VIRIO – the right turn for new challenges**

The new, flexible generation of vertical balancing machines





## VIRIO

*A further generation*

*Modern technology is developing at a tremendous pace: Extreme precision coupled with ease of operation, higher speeds with lower weights, reduced energy consumption – these are just some of the current trends which we have combined with our 100 years of experience in balancing in order to lay the foundation for the next generation of vertical balancing machines. The objective was to meet the demands of the market with new characteristics, and to integrate into the VIRIO the advantages of innovative, modern solutions. The result is a vertical balancing machine which is easier to operate, delivers even more accuracy and offers the user even more flexibility. All this combined with better value for money.*



# VIRIO

*The right turn for disc shaped rotors*

## Jack of all trades

With the VIRIO, you are investing in an ultra-modern, flexible balancing system which stands out for its great reliability and effectiveness in day to day workshop and production tasks. Many features ensure that you produce a perfectly balanced rotor quickly and economically. With its flexible design concept, the VIRIO can be easily adapted to all your balancing tasks: the VIRIO covers the complete range from the purely manual solution for the workshop and repair area through to fully integrated use in mass production.

## Flexible investment in the future

With the VIRIO, you achieve investment security over the complete life cycle of the machine. Retro-fitting with a correction module, updating to a second measurement plane – or simply a larger protective hood? With the flexible design of the VIRIO, everything is possible.



*Clear and precise dialogues assist the user when balancing.*



*Simply inspired – a small mimic display shows the results directly in the field of view.*

## VIRIO

### *Design for people*

*In the design of the "VIRIO workstation", we have taken a close look at the ergonomic requirements of the operating personnel and the special working procedures during balancing. The result: All functions can be operated easily and logically. The measurement values are displayed in clear text and the machine can be quickly re-equipped for different rotors, thereby improving productivity without making any concessions in quality.*



### **It couldn't be simpler**

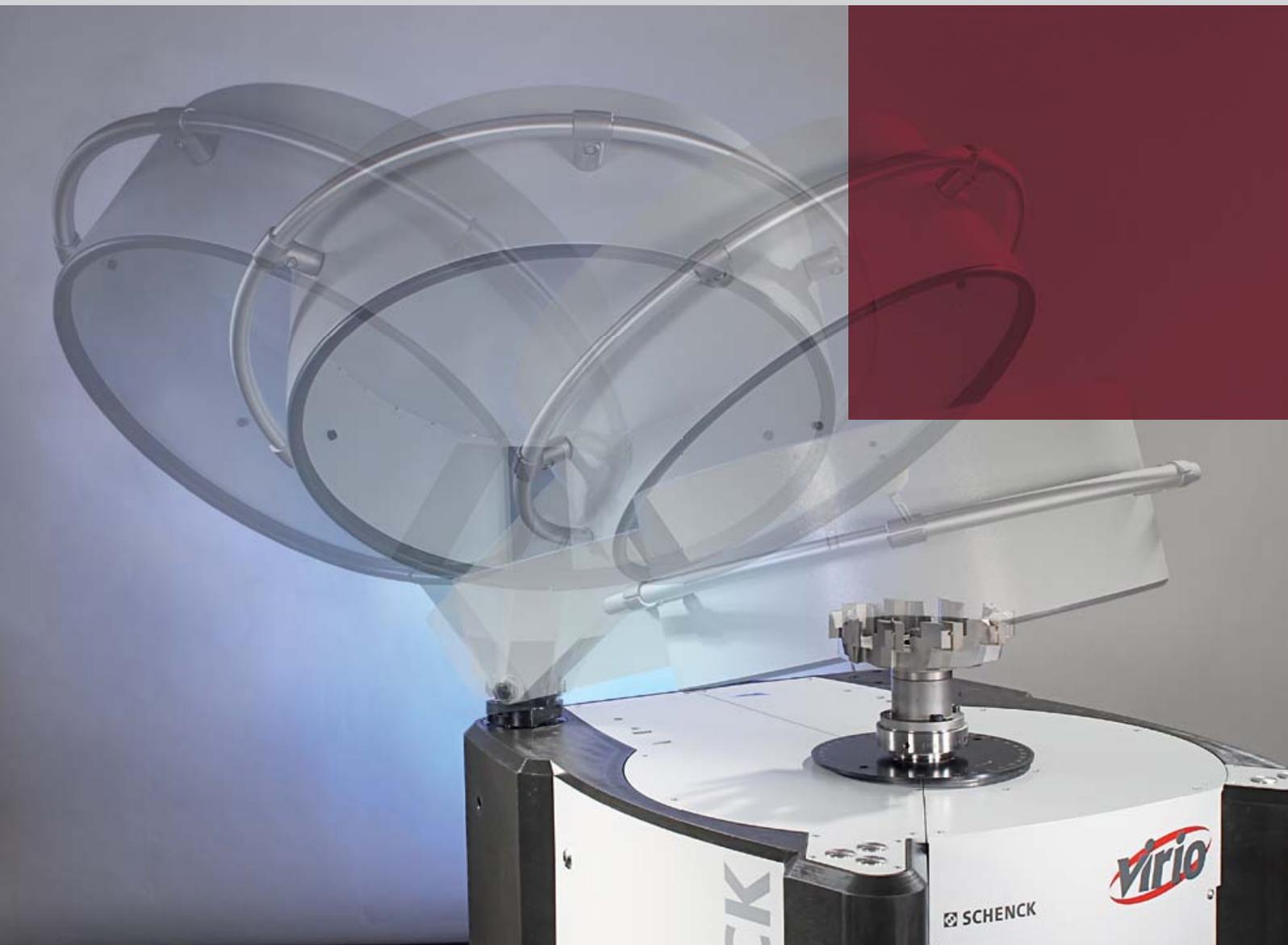
Insert the rotor, enter the geometric data, start the measuring run and then make the correction. After the first measuring run, the unbalance for one or both correction planes will be displayed. This reliably ensures perfectly balanced rotors, with a lower number of correction steps.

### **Familiar operation**

In the design of our balancing machines we use a consistent operating philosophy, which is continually under review for further development and improvement. With operating controls located directly on the machine, clear input procedures and easily understandable dialogues, the user is guided through even the most complex balancing processes, all in the user's language. The ease of operation is particularly worthwhile if the machine is used by several operators: the potential for error is significantly reduced by logical procedures and simple operating procedures, which saves both time and costs.

### **Maximum safety without restrictions**

We have taken a completely new approach with the protective hood of the VIRIO: we have combined two functions – flipping and swivelling – into one 3 dimensional movement. This makes it possible to balance even larger rotors. The new protective hood naturally meets all requirements of European safety directives. It also complies with ISO 21940-23 and is designed to the strict safety class C 600.



*Flip and swivel: The new protective hood enables easy loading combined with complete accessibility.*



**VIRIO**  
*Everything considered*

The machine housing of the VIRIO is made from a mineral casting. This material not only ensures good damping properties thanks to its outstanding mechanical properties. It also suppresses undesired interference effects and offers high thermal stability for consistent measuring conditions.

The new measuring system of the VIRIO has been specially matched to these positive properties of the machine base in terms of vibration: combined with the proven, almost legendary electro-dynamic vibration pick up from Schenck, this produces a high precision measuring system with many benefits. Insensitive to external effects such as vibrations or temperature variations, it is extremely robust. The extremes encountered in workshop operation are no problem for the VIRIO.

#### **No limits**

The high precision of the measuring system coupled with the full speed regulation enable the perfect balancing of rotors over a wide weight range. This means that no quality compromises have to be made, even when balancing light rotors.

#### **Space saving**

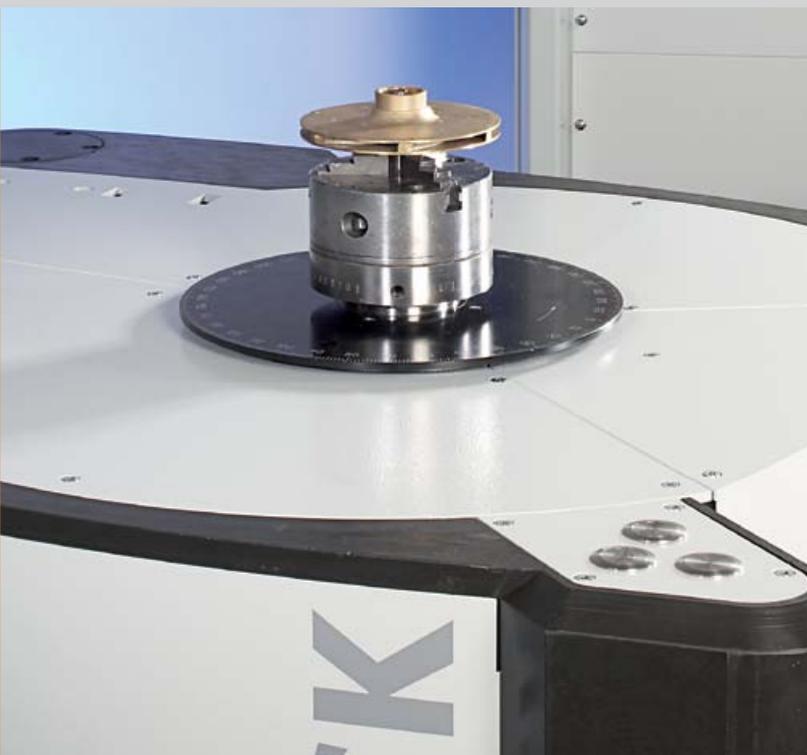
The new and very compact clamping concept of the VIRIO is integrated into the spindle. This creates more space in the working area, and therefore much more efficient clamping elements.

The plane separation distance is further improved by the low installation height of the clamping adaptor. This optimised plane separation guarantees greater accuracy.

#### **Versatile balancing**

Correcting unbalance by drilling has proven itself in many applications. Unbalance however can be corrected by means of other procedures such as milling, punching, riveting or welding, either manually or automatically. The choice of the best correction procedure depends on the rotor type and the material.

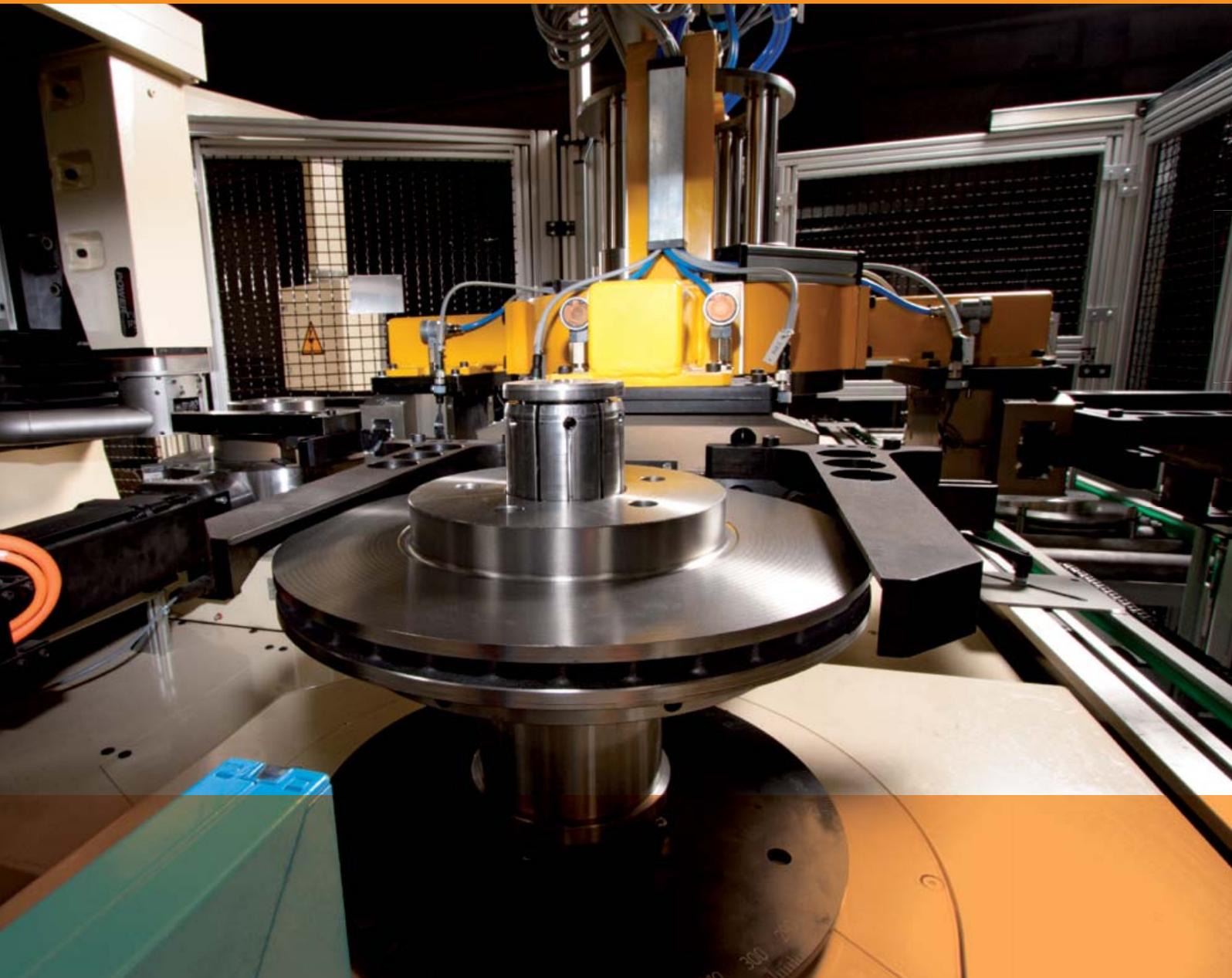
The horizontally and vertically integrated correction modules of the VIRIO enable convenient and precise unbalance correction using any correction method directly in the machine, dispensing with time consuming mounting and removal.



*Even small, light rotors can be balanced with high precision.*

# VIRIO

*Technical data*



# Proven measuring technology

This machine series includes measuring technology in the accustomed Schenck top quality in two levels:

The **CAB 920 SmartTouch** combines maximum precision with simplest operation: the CAB 920 offers an ingeniously simple operating concept, whose logical relationships are clearly apparent at the first glance. The result is totally convincing: rapid and safe working with the minimum learning requirement – for every conceivable technical rotor variant.

The **CAB 820** is the basic measuring unit, which sets the standards for its class. It offers absolute peak performance combined with every operating convenience, all at outstanding value for money.

This measuring unit is always the right solution when you want to achieve the balancing objective in your business quickly and without major effort.



Measuring unit CAB 920



Measuring unit CAB 820

## Basic machine modules

Base machine consisting of mineral casting housing, measuring system, precision spindle with interface to rotor adaptor, drive system, CE compliant safety device.

## Protective device

Basic version fitted as standard with CE compliant flipping and swivelling hood, protection class C 600 to ISO 21940-23.

Individual protective devices are used for semi-automatic or fully automatic operation. A protective guard can also be fitted for large rotor diameters.

## Correction modules

- Manual vertical or horizontal drill correction modules with floating counter pressure support and depth feedback to measuring unit.
- Semi-automatic correction module for small to medium series production.
- Fully automatic drill correction module with short cycle time for large series production.
- Manual, semi-automatic or fully automatic correction modules for milling, punching, riveting or welding correction can be fitted vertically or horizontally.

**Balancing in**

Max. weight of rotor incl.

adaptor tooling [kg]

Max. rotor diameter [mm]

Drive performance [kW]

Measuring speed up to [rpm]

Minimum plane distance [mm]

Measuring accuracy [gmm]

**1 plane****VIRIO 10/1****VIRIO 50/1****VIRIO 100/1****VIRIO 300/1**

10	50	100	300
810	810	810	810
1100*	1100*	1400*	1400*
1,5	2,2	4	4
1200	900	600	600
-	-	-	-
1-2	2-5	4-10	10-25

\*) with modified protective device

**Balancing in**

Max. weight of rotor incl.

adaptor tooling [kg]

Max. rotor diameter [mm]

Drive performance [kW]

Measuring speed up to [rpm]

Minimum plane distance [mm]

Measuring accuracy [gmm]

**2 planes****VIRIO 10/2****VIRIO 50/2****VIRIO 100/2****VIRIO 300/2**

10	50	100	300
810	810	810	810
1100*	1100*	1400*	1400*
1,5	2,2	4	4
1200	900	600	600
60	90	120	180
2-4	4-10	6-15	20-50

\*) with modified protective device

**Balancing and  
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