

PRESSURE CALIBRATION



Betz micromanometer

**FACTORY STANDARD
FOR PRESSURE CALIBRATION**



The Betz micromanometer is an instrument to measure low air or gas pressures or pressure differences with high accuracy and unparalleled long-term stability. This primary instrument is used for the calibration of pressure measurement instruments.

ACIN instrumenten bv

made to measure

Betz

MICROMANOMETER

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The Betz micromanometer is an instrument to measure low air or gas pressures or pressure differences with high accuracy and unparalleled long-term stability.

The Betz micromanometer is essentially a J-tube manometer in which the fluid level is measured by means of a floating glass scale. A pressure change will result in a change of the fluid level. An image of the glass scale (magnified 25x) is projected on the display screen. This screen is provided with a vernier graduation to make accurate interpolation possible. The optical system is illuminated by the external cold light source model KL 200.

APPLICATIONS

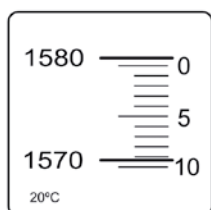
- As factory standard for the calibration of pressure measurement instruments
- Precise and reliable measurement of extremely small pressure differences
- Continuous display of (extremely small) pressure differences

EXAMPLES

- Pitot tubes
- orifices
- wind tunnels
- air measurement trajectories
- chimney stacks

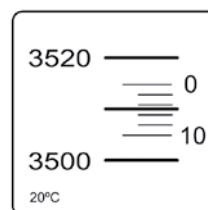
Standard calibration and scale unit is Pascal (Pa). The Betz micromanometer is available in two ranges: 2500 and 5000 Pa.

EXAMPLES OF READ OUT



Betz type 2500

The glass scale is subdivided in 10 Pa, the projection screen nonius in 1 Pa. Example shows the value of 1579.3 Pa



Betz type 5000

The glass scale is subdivided in 10 Pa, with figures every 20 Pa. The projection screen nonius is subdivided in 2 Pa. Example shows the value of 3514.8 Pa

RVA CALIBRATION

The Betz micromanometer comes with a primary certificate, taking into account the strength of the gravity field (g -value) for the location of use.

The ACIN laboratory complies with quality standard ISO/IEC 17025 and is acknowledged by the Dutch Council for Accreditation (Raad voor Accreditatie, RvA). The RvA accreditation number is K111.



HISTORY

C. van Essen founded his instrument factory in 1938. In 1949 Van Essen built his first “skeleton type” manometer according to Prof. Betz. Since then over 1500 Betz instruments have been manufactured and are in use as factory standard for pressure in factories and laboratories throughout the world.

In 1996 the primary standard for pressure, the production of Betz micromanometers, J- and U-type manometers, S-type and Prandtl-Pitot tubes etc. were transferred to ACIN instrumenten bv.

ACIN has been manufacturer of instruments for measurement and control of pressure, flow and air condition since 1965. One of the successful ACIN instruments is the FlowFinder which measures air flow by means of the “zero pressure method”.

Betz

MICROMANOMETER

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SPECIFICATIONS	BETZ TYPE 2500	BETZ TYPE 5000
range (in Pascal)	-50 to 2500 Pa	-100 to 5000 Pa
accuracy of the read-out	0.04% FS	0.04% FS
resolution	0.1 Pa	0.2 Pa
max. static pressure	100 kPa	100 kPa
calibration temperature	20 °C	20 °C
dimensions (l x w x h)	390 x 204 x 650 mm	390 x 204 x 675 mm
weight	approx. 13 kg	approx. 16 kg
measuring liquid	demineralized water with wetting agent	
power supply	220/240 VAC, 50/60 Hz	
material		
critical measuring parts	stainless steel and glass	
other internal parts	stainless steel and nickel-plated brass	
housing	aluminium plate with gray coating	
pressure connections	conical, nickel-plated brass suitable for flexible tubing with inner diameter of ø4 .. ø8 mm	

OPTIONS

panel mount version
 additional unit (tabletop or panel mount) with pressure transmitter, LED read-out and various output signals (see below)

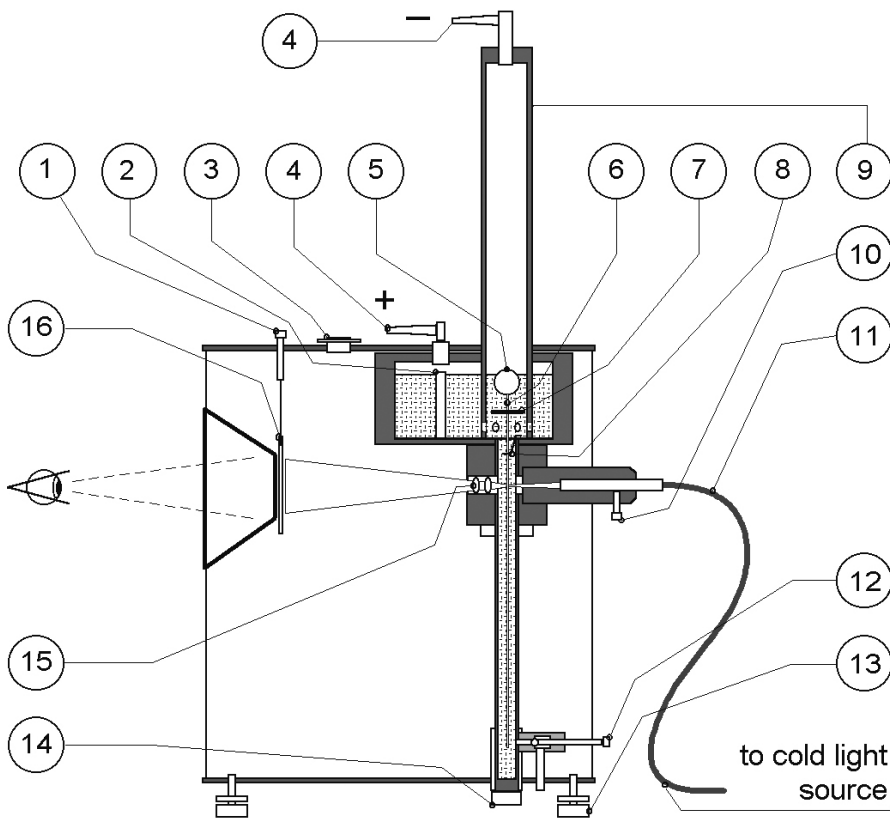
Please specify the following when ordering:

Betz

- desired range
- table top or panel mount version
- g-value on location of measurement in N/kg

add.unit:

- desired range
- table top or panel mount version
- desired output: mA or VDC
- extra output: RS232



1. zero adjuster
2. calibration rod
3. spirit level
4. + and - pressure connections
5. glass float
6. glass scale
7. float support
8. scale guide
9. riser tube
10. knurled screw
11. light guide
12. fluid level adjuster
13. levelling screw
14. drain plug
15. objective
16. projection screen with vernier graduation



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