

Measurement of basic constants: length, weight and time 1.1.01-00



What you can learn about ...

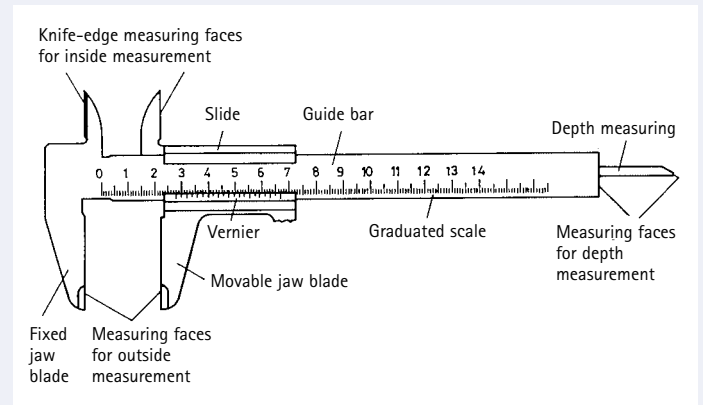
- Length
- Diameter
- Inside diameter thickness
- Curvature
- Vernier
- Weight resolution
- Time measurement

Principle:

Caliper gauges, micrometers and spherometers are used for the accurate measurement of lengths, thicknesses, diameters and curvatures. A mechanical balance is used for weight determinations, a decade counter is used for accurate time measurements. Measuring procedures, accuracy of measurement and reading accuracy are demonstrated.

What you need:

Vernier caliper	03010.00	1
Micrometer	03012.00	1
Spherometer	03017.00	1
Light barrier	11207.20	1
Digital counter, 4 decades	13600.93	1
Alternative to 13600.93:		
Digital counter, 6-decade	13603.93	1
Precision balance, 2 pans, 500 g	44011.50	1
Set of precision weights, 1 mg–200 g	44070.20	1
Iron column	03913.00	1
Iron cylinder	03914.00	1
Iron wire, $d = 1.0 \text{ mm}$ , $l = 10 \text{ m}$	06104.01	1
Aluminium foil, set of 4 sheets	06270.00	1
Glass plate, $100 \times 85 \times 1 \text{ mm}$	08203.00	1
Watch glass, dia. 80 mm	34572.00	1
Watch glass, dia. 100 mm	34574.00	1
Watch glass, dia. 125 mm	34575.00	1
Glass tubes, straight, 80 mm, 10	36701.65	1
Glass tube, $d = 24/21 \text{ mm}$ , $l = 120 \text{ mm}$	45158.00	1
Cubes, set of 8	02214.00	1
Fish line, $l = 100 \text{ m}$	02090.00	1
Steel ball with eyelet, $d = 32 \text{ mm}$	02466.01	1
Rod with hook	02051.00	1
Support rod -PASS-, square, $l = 630 \text{ mm}$	02027.55	1
Tripod base -PASS-	02002.55	1
Right angle clamp -PASS-	02040.55	2
Measuring tape, $l = 2 \text{ m}$	09936.00	1
Connecting cord, $l = 500 \text{ mm}$ , red	07361.01	2
Connecting cord, $l = 500 \text{ mm}$ , blue	07361.04	2



Vernier caliper

Tasks:

1. Determination of the volume of tubes with the caliper gauge.
2. Determination of the thickness of wires, cubes and plates with the micrometer.
3. Determination of the thickness of plates and the radius of curvature of watch glasses with the spherometer.

Complete Equipment Set, Manual on CD-ROM included  
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