

Engineers' Level

The Moore & Wright Engineers' spirit level is mainly used for checking the flatness machine guideways, and for leveling machines tools or equipment.



Type:

Sensitivity: mm/m

0.02	0.05	0.10	0.15
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Unit: mm

Frame type	150x150	200x200	250x250	300x300
Shaft type	150	200	250	300

Features:

- Four ground measuring faces
- Zero-point adjustment
- Prismatic base allows the leveling of flat and rounded surfaces
- Made of cast iron, solid and rigid construction
- Sub-level tube

Operation:

- Readings should only be taken when the bubble has stopped moving
- The value indicated on the level is the slope based on 1 meter length
- If it is necessary to measure the real slope value of the levels base length (L), it can be calculated by the following formula.

$$\text{Real slope value} = \text{Scale} \times L \times \text{Reading value}$$

For example, scale value = 0.02mm/m, L=200mm, reading value (bubble movement) = 2 divisions, then

$$\text{Real slope value} = 0.02/1000 \times 200 \times 2 = 0.008\text{mm}$$



Zero Adjustment:

Place the instrument on a steady, smooth and even surface. Once the bubble is static, the reading should be "a", rotate the level 180 degrees, place it again on the original position and take the second reading "b". If the two readings are NOT the same, the level should be adjust as following:

1. Loosen the screw on one side of the spirit with hex wrench and start the zero-setting by turning the adjuster.
2. If the instrument is found incline to the rear. It's necessary to make adjustment by turning the two adjusters on both sides of the level until the bubble stops moving towards to the tilting side of the instrument.
3. Check whether the zero-point deviates. If it no longer deviates, then lock the fastening screw, thus completing the cycle of the zero-setting.

Notices:

- Before using the level, clean the working surface by apply cleaning fluid on absorbent cotton
- Temperature changes may cause measuring error. It should be kept away from heat source during measurement
- Reading must only be taken after the bubble stops moving
- Attention must be paid to the zero adjustment and the parallelism of the working surface of the level in order to avoid any errors in leveling, inspection and adjustment may be necessary before measuring