

Calibrate Engineers Level Instructions

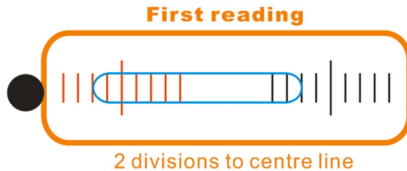
- If the level and the surface are set level, then the bubble will be central on both readings.
- If the level is set level, but the bearing surface is out of level, then the bubble will move in the same direction off-center when the level is turned through 180°. The surface can then be adjusted by this amount.
- If the bearing surface is set level, and the level is out of level, then the bubble will move in different direction off-center when the level is turned through 180°. The level can then be adjusted to read level.
- If the readings are different, then both the level and the surface need to be adjusted.

An adjustable flat surface is required to calibrate an engineer's level. It must be within the range of the level you are calibrating, but not need to be perfectly level. Pls following steps:

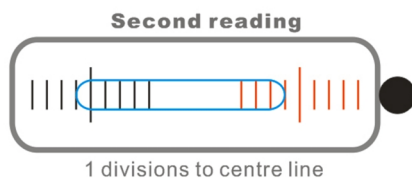
- Clean the bearing surface, remove any dirt or dust. Then place the level onto the bearing surface ready for inspection.
- Note the position of the bubble after it has settled, wait time can be up to 10 seconds and then turn the level by 180°, keeping place back onto the surface in the same position as before.
- Note again the position of the bubble after it has settled.

2 Example as following for reference:

- If the first bubble reading was 2 divisions to the Centre line, and the second reading when rotated through 180° was 1 divisions to the Centre line:

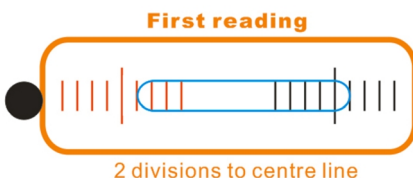


The error in the level is half of the total error = $(1+2)/2 = 1.5$ divisions.,

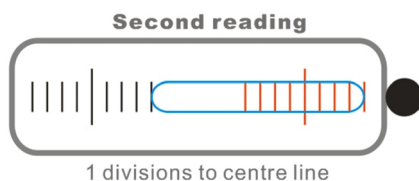


The error in the surface is half of the difference = $(2-1)/2 = 0.5$ divisions.

- If the first bubble reading was 1 divisions to the Centre line, and the second reading when rotated through 180° was 4 divisions to the Centre line:



The error in the level is half of the total error = $(1+4)/2 = 2.5$ divisions.,



The error in the surface is half of the difference = $(4-1)/2 = 1.5$ divisions.