



SUUNTO® Clinometers

Height, slope and vertical angle measurements made easy!

These versatile instruments can be used to measure heights of trees, towers, buildings, etc.; to measure slopes for grading or preliminary

surveying; and to measure vertical angles for cellular and satellite installations and more.

Suunto Clinometers feature two scales in five configurations: Percent and Degrees, Percent and Topographic, Degree and Topographic, 15m and 20m, and Percent and Secant.

Graduations - Degree: 0-90° in 1° units. **Percent:** 0 to 70% in 1% units, 72 to 150% in 2% units. **Topo:** 0 to ±200' with a 66' baseline. Scale readings can be estimated to 10 minutes or 1/5%, when readings are made around the zero level.

All Suunto Clinometers feature: Solid aluminum housing with jeweled bearing assembly. Damped scale for smooth accurate readings. Parallax-free lens. 1/4" x 20 threaded tripod socket. Includes lanyard and black nylon case. **Dimensions:** 2-3/4" x 2" x 5/8". **Weight:** 4.2 oz.



Which Scale to Use:

Scale	Baseline Distance	Reads In
Topo	66 feet	Feet
15m	15 meters	Meters
20m	20 meters	Meters
Percent	Any distance in feet, yards, or meters	% of baseline distance you select

Suunto® Clinometers

SN	Model	Description	Wt.	Qty.	\$	Cases		
						Rubber	Cordura	Leather
43830	PM5/360PC	Percent and degree scales. ±150%, ±90°. Cosines to 45° on back.	6 oz.	1-2	\$126.95	37002	37004	37011
				3+	\$116.95			
43840	PM5/SPC*	Percent and secant scales. ±150% secant values x 100 - 100 to ±500. Percent/degree conversions on back.	6 oz.		\$128.50	37002	37004	37011
43895	PM5/66PC	Percent and topographic scales. ±150%, ±200' @ 66' baseline. Percent/degree conversions on back.	6 oz.	1-2	\$127.95	37002	37004	37011
				3+	\$117.50			
43896	PM5/66	Degree and topographic scales. ±90°, ±200' @ 66' Baseline. Cosines to 45° on back.	6 oz.		\$128.50	37002	37004	37011
43897	PM5/1520	±35m @ 15m baseline, ±50m @ 20m baseline, respectively. 20m scale/degree conversions on back.	6 oz.		\$128.50	37002	37004	37011

Suunto Clinometer Accessories

Model	Description	Wt.	Qty.	\$	Case
37002	Rubber Protective Cover	2 oz.		\$11.95	Rubber Cover
37011	Leather Case (Fits all except clinometers with rubber covers)	3 oz.		\$8.85	Leather Case
37004	Cordura Case for all clinometers	2 oz.		\$10.60	Cordura Case

*Secant scale clinometer 43840 allows you to determine correct horizontal distances and compensate for slope when using the percent scale for height measurements. You can also eliminate prism rotation in point sampling.

Note: Since 43840 secant scale clinometer expresses secant of a slope times 100, you should initially divide the clinometer reading by 100 to get the correct secant value. For example, a clinometer reading of 110 has a correct secant value of 1.10.

M Metric

How to hold and read a clinometer.

Keep both eyes open when using a clinometer. Use one eye to look through the lens at the scales while the other sights alongside the clinometer housing. An optical illusion is created and the horizontal sighting line will appear to project to the side of the clinometer housing. Place this sighting line on your target and read the scale.



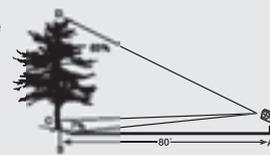
Measuring slopes.

To measure slope, sight parallel with the ground (upslope or downslope) to a target, aiming at a point on the target that is equal to the height of your eye above the ground.

Using Percent Scale Clinometers to Determine:

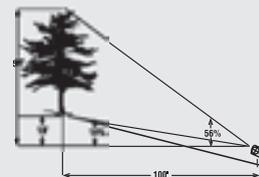
Height measurements on level ground.

Using the percent scale and 80' baseline (or other baseline convenient to you), follow these simple procedures. For this example, use the % scale. Back away from the tree the proper baseline distance. In this case, 80'. Sight the top of the tree (D) and read the % scale (ex. +63%). Sight the bottom of the tree (B) and read the % scale (ex. -7%). The total reading is 70% (63 + 7). To obtain tree height, simply multiply this percentage times your baseline distance. 70% x 80' = 56' (tree height).



Height measurements on sloping ground.

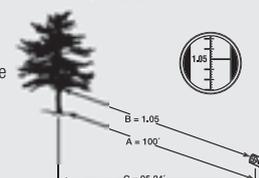
Using the percent scale and 80' baseline (or other baseline convenient to you), follow these simple procedures. When the base of the tree is ABOVE eye level, sight the top then sight the base. Subtract the two readings. This example: 52% - 12% = 40%. Then multiply 40% x 80' = 32' (tree height). When the base of the tree is BELOW eye level, sight the top then sight the base. Add the two readings. Then multiply by 80' (baseline).



Using Secant Scale Clinometers to Determine:

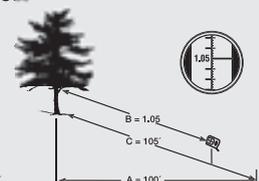
Horizontal distance on sloping ground.

To find an unknown horizontal distance (C), simply divide the measured slope distance (A) by the secant value of the slope (B). This example: 100 ft. ÷ 1.05 = 95.24 ft. (horizontal distance). Use the percent scale to figure height.



Correct slope distance for a desired horizontal distance.

Correct slope distance (C) is determined by multiplying the required horizontal baseline distance (A) times the secant value of the slope (B). This example: 100 ft. x 1.05 = 105 ft. (correct slope distance).



For information on the use of the Secant Scale Clinometer with prisms, see page 82.

Forestry Suppliers' In-House Clinometer Repair Service

We can repair any compass/clinometer combination unit on this page - regardless of condition - for only \$73.90 plus shipping. Our factory certified reconditioning includes cleaning, calibration and a new capsule. Call us at 800-752-8460.

