

**AngleStar® Protractor System / Field Calibration Procedure**



**STANDARD MODEL ±45°**

**p/n 02160001-000 and 02160021-000**

*NOTE: Performing this procedure invalidates the factory calibration!!*

1. Mount clinometer with mounting holes in a vertical position, and the long slot at the bottom. If necessary, use slot to level the clinometer. If the zero thumbwheel is installed, remove it.
2. Attach the cable to the clinometer and readout. Turn the readout on by pressing the round power button located on the right side of the display.
3. Using a small slotted screw driver, adjust the readout to read 00.0 (zero), by inserting it through the center of the zero hole (or through center of the calibration sticker if present), and turning the adjustment potentiometer.
4. Rotate the clinometer in a clockwise direction to +45°. Adjust the scaling potentiometer (small hole next to zero adjustment) until the display reads 45.0.
5. Return clinometer to the zero degree position. Adjust zero potentiometer if necessary. Repeat steps 4 and 5 until no adjustment is necessary.
6. Check system calibration per the following table.

Angle	Minimum	Nominal	Maximum
+ 45	+ 44.5	+ 45.0	+ 45.5
+ 30	+ 29.7	+ 30.0	+ 30.3
+ 20	+ 19.8	+ 20.0	+ 20.2
+ 10	+ 9.9	+ 10.0	+ 10.1
+ 5	+ 4.9	+ 5.0	+ 5.1
- 0	-0.1	0.0	+ 0.1
- 5	-5.1	- 5.0	- 4.9
- 10	-10.1	- 10.0	- 9.9
- 20	-20.2	- 20.0	- 19.8
- 30	-30.3	- 30.0	- 29.7
- 45	-45.5	- 45.0	- 44.5

7. Carefully reinstall zero thumbwheel if desired.

**AngleStar® Protractor System / Field Calibration Procedure**

**HIGH RESOLUTION MODEL ±19.99°**

**p/n 02160003-000 and 02160023-000**

*NOTE: Performing this procedure invalidates the factory calibration!*

1. Mount clinometer with mounting holes in a vertical position, and the long slot at the bottom. If necessary, use slot to level the clinometer. If the zero thumbwheel is installed, remove it.
2. Attach the cable to the clinometer and readout. Turn the readout on by pressing the round power button located on the right side of the display.
3. Using a small slotted screw driver, adjust the readout to read zero (0.00) by inserting it through the center of the zero hole (or through center of the calibration sticker if present), and turning the adjustment potentiometer.
4. Rotate the clinometer in a clockwise direction to +15°. Adjust the scaling potentiometer (small hole next to zero adjustment) until the display reads +15.00.
5. Return clinometer to the zero degree position. Adjust zero potentiometer if necessary. Repeat steps 4 and 5 until no adjustment is necessary.
6. Check system calibration per the following table.

Angle	Minimum	Nominal	Maximum
+ 19	+ 18.81	+ 19.00	+ 19.19
+ 10	+ 9.90	+ 10.00	+ 10.10
+ 5	+ 4.90	+ 5.00	+ 5.10
+ 2	+ 1.96	+ 2.00	+ 2.04
+ 1	+ 0.98	+ 1.00	+ 1.02
- 0	-0.02	0.0	+ 0.02
- 1	-1.02	- 1.00	- 0.98
- 2	-2.04	- 2.00	- 1.96
- 5	-5.10	- 5.00	- 4.90
- 10	-10.10	- 10.00	- 9.90
- 19	-19.19	- 19.00	- 18.81

7. Carefully reinstall zero thumbwheel if desired.

**AngleStar® Protractor System / Field Calibration Procedure**

**90 DEGREE MODEL 0 to +90°**

**p/n 02160005-000 and 02160025-000**

*NOTE: Performing this procedure invalidates the factory calibration!*

1. Mount clinometer with mounting holes in a vertical position, and the long slot at the bottom. If necessary, use slot to level the clinometer. If the zero thumbwheel is installed, remove it.
2. Attach the cable to the clinometer and readout. Turn the readout on by pressing the round power button located on the right side of the display.
3. Rotate the clinometer -45° in a counter-clockwise direction (NOTE: this is the system zero degree point). Using a small slotted screw driver, adjust the readout to read 00.0 by inserting it through the center of the zero hole (or through center of the calibration sticker if present), and turning the zero adjustment potentiometer.
4. Rotate the clinometer +45° in a clockwise direction. Adjust the scaling potentiometer (small hole next to zero adjustment) until the display reads 45.0.
5. Return clinometer to the zero degree position. Adjust zero potentiometer to read 00.0 if necessary. Repeat steps 4 and 5 until no adjustment is necessary.
6. Check system calibration per the following table.

Angle	Minimum	Nominal	Maximum
+ 45	+ 89.5	+ 90.0	+ 90.5
+ 30	+ 74.7	+ 75.0	+ 75.3
+ 20	+ 64.8	+ 65.0	+ 65.2
+ 10	+ 54.9	+ 55.0	+ 55.1
- 0	+ 44.9	+ 45.0	+ 45.1
- 10	+ 34.9	+ 35.0	+ 35.1
- 20	+ 24.8	+ 25.0	+ 25.2
- 30	+ 14.7	+ 15.0	+ 15.3
- 45	-0.5	0.0	+ 0.5

7. Carefully reinstall zero thumbwheel if desired.

**AngleStar® Protractor System / Field Calibration Procedure**

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