

**PENTAX**

## ETH-500 Series Electronic Theodolites

FOR BUILDING AND CONSTRUCTION

ETH-502 | ETH-505 | ETH-510 | ETH-520

### QUICK! CLEAR! EASY!

- Compact and portable electronic theodolites with Easy-to-Read display.
- Built for the construction site

### BUILDING THE FUTURE

There are 4 models in the range providing a choice of 2" (ETH-502), 5" (ETH-505), 10" (ETH-510) or 20" (ETH-520) accuracy.

Geodesical



**STANDARD CONFIGURATION**

- 2x Battery case (one is attached to each instrument)
- 4x Dry cell battery, type AA (pre-installed in battery case)
- A set of tools
- 1x Plumb bob
- 1x Carrying case
- Instruction manual



**APPLICATIONS**

- Setting out right angles and checking plumb
- Alignment measurements
- Anchor bolt layout
- 90° layout

**KEY FEATURES INCLUDE**

- Easy to read-display
- Zero set and reverse angle display
- Powered by Alkaline batteries

**EASY TO READ-DISPLAY**

A large display (LCD) is incorporated on both sides of the instrument. Both vertical and horizontal angles are displayed in degrees or gon.

**EASY KEY OPERATION**

A row of soft keys allows simple and fast operation.

**EASY TO USE**

- Lightweight and compact
- The basic instrument weighs only 4.5 kg

**AUTOMATIC POWER-OFF FUNCTION**

Automatic power-off prevents unnecessary battery drainage. The remaining battery capacity is indicated on the display.

**ANGLE MEASUREMENT AND ANGLE CONTROL**

- Clockwise and counter-clockwise angle measurement
- Conversion of the vertical angle to a percentage grade
- Zero setting of the horizontal angle at any position
- Horizontal angle 'Hold key function

**BRIGHT OPTICS**

All the models have a bright 30x magnification telescope which ensures sharp and clear images even in poor light conditions.

**ELECTRONIC THEODOLITES ETH-500 SERIES SPECIFICATIONS**

| Model                              |                                | ETH-502                                 | ETH-505 | ETH-510  | ETH-520 |
|------------------------------------|--------------------------------|---|---------|----------|---------|
| <b>Telescope</b>                   | Imaging                        | Erect image                             |         |          |         |
|                                    | Objective aperture             | 45 mm                                   |         |          |         |
|                                    | Magnification                  | 30 x                                    |         |          |         |
|                                    | Resolution                     | ≤ 3"                                    |         |          |         |
|                                    | Field of view                  | 1° 20'                                  |         |          |         |
|                                    | Shortest focusing distance     | 1.35 m                                  |         |          |         |
|                                    | Stadia multiplication constant | 100                                     |         |          |         |
|                                    | Stadia addition constant       | 0                                       |         |          |         |
| <b>Angle measurement</b>           | Angle measuring mode           | Absolute encoder                        |         |          |         |
|                                    | Angle measuring accuracy       | 2"                                      | 5"      | 10"      | 20"     |
|                                    | Angle display                  | 1°/5"                                   |         | 5°/10"   |         |
|                                    | Angle unit                     | 360°/400G                               |         |          |         |
| <b>Compensator</b>                 | Tilt sensor                    | Automatic vertical compensation         |         |          |         |
|                                    | Tilt compensator               | Yes                                     | Yes     | No       | No      |
|                                    | Soft switch                    | ON/OFF                                  | ON/OFF  | -        | -       |
|                                    | Compensation range             | ± 3'                                    |         |          |         |
| <b>Display unit</b>                | Two-sided                      |   |         |          |         |
| <b>Optical plummet</b>             | Image                          | Erect                                   |         |          |         |
|                                    | Magnification                  | 3 x                                     |         |          |         |
|                                    | Angle of vision                | 3°                                      |         |          |         |
|                                    | Focusing range                 | 0.5 m ~ ∞                               |         |          |         |
|                                    | Sensitivity of tubular vial    | 30"/2 mm                                |         | 40"/2 mm |         |
|                                    | Sensitivity of circular vial   | 8'/2 mm                                 |         |          |         |
| <b>Dust &amp; Water Protection</b> | IP44                           |   |         |          |         |
| <b>Type of base</b>                | Detachable                     |   |         |          |         |
| <b>Power supply</b>                | Battery                        | 4 x single three (AAA) type dry battery |         |          |         |
| <b>Ambient temperature</b>         | For operation                  | -20°C - +50°C                           |         |          |         |
| <b>Weight</b>                      | Instrument                     | 4.5 kg                                  |         |          |         |
|                                    | Carrying case                  | 1.9 kg                                  |         |          |         |
| <b>Measurements</b>                | Instrument                     | W 175 mm x L 170 mm x H 334 mm          |         |          |         |
|                                    | Carrying case                  | W 330 mm x L 450 mm x H 220 mm          |         |          |         |

Specifications are subject to change without notice

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