Nothing else measures up!

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FET 500 Construction Theodolite

Code: 75205

Operating Instructions

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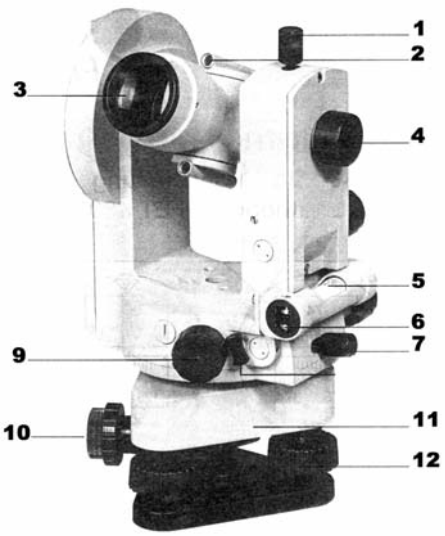
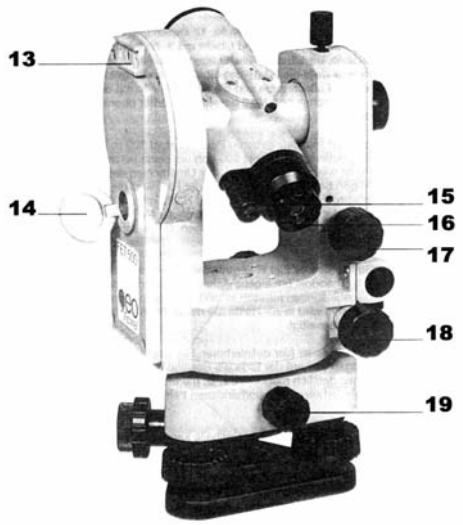
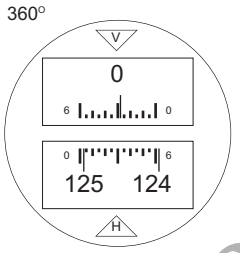




Name of Parts

1. Vertical Clamp
2. Optical Sight
3. Objective Lens
4. Focussing Device
5. Tubular Level
6. Adjustment Screws
7. Horizontal Clamp
9. Hz-Circle Turn Handle
10. Optical Plummet
11. Tribrach
12. Foot Screw
13. Mount of Tubular Compass
14. Mirror
15. Eyepiece of Reading Telescope
16. Eyepiece of Telescope
17. Vertical Tangent Screw
18. Horizontal Tangent Screw
19. Clamp of Tribrach



Sample Reading

360°

V 0° 26'
H 125° 05.5'

FET 500 Theodolite

Instruction Manual

1. Fix the instrument on tripod. Turn theodolite around it's vertical axis so that tubular level no. 5 is situated parallel to 2 footscrews no. 12. Centre tubular level no. 5. Turn instrument by 90° and centre tubular level by means of 3rd footscrew. Repeat procedure until tubular level is coming back to centre in all directions. If not remove half of deviation by opposite footscrew and other half by adjustment screws no. 6 of tubular level.

2. Horizontal circle. Direct telescope to well visible mark at distance of approx. 100m and at about eye level. Take reading. Turn theodolite around it's vertical axis and transit telescope. Take second reading of same mark with telescope in reverse position. Difference between two readings should be 180°. If this is not the case half of the collimation error is to be removed by turning tangent screw no. 18 and the remaining half by means of two reticule adjustment screws which become accessible unscrewing cap next to eyepiece part no. 16.

3. Vertical circle. Proceed as described in aforementioned paragraph (2.) and check vertical circle accordingly The sum of both vertical circle readings must be exactly 360°. Any deviations to be removed by means of vertical tangent screw no. 17 and two reticule adjustment screws.

4. Tilting axis. Set up theodolite in front of wall. Direct telescope to clearly visible mark at steep angle. Transit telescope to ground mark. Fix ground mark for example by means of a little stone. Turn theodolite round it's vertical axis and repeat procedure in reverse telescope position. Cross hair should hit the ground mark when transitting telescope. Otherwise theodolite should be sent to service station for adjustment because of tilting axis error.

5. Inside the container you will find a telescope bubble which can be mounted instead of one of the two optical sights. After mounting bubble it has to be adjusted parallel to telescope: move vertical circle to 90° and adjust telescope bubble by means of two adjustment screws no. 6.

Technical Data

Magnification: 20x
Objective Aperture: 30mm
Shortest Focussing Distance: 1,2m
Circles: 360°
Direct Reading: 0,5'
Estimation: 0,5'
Tubular Level: 45"
Telescope Bubble: 20"
Temperature Range: -40° to +50°C
Dimensions: 140 x 130 x 230mm
Weight: 2kg