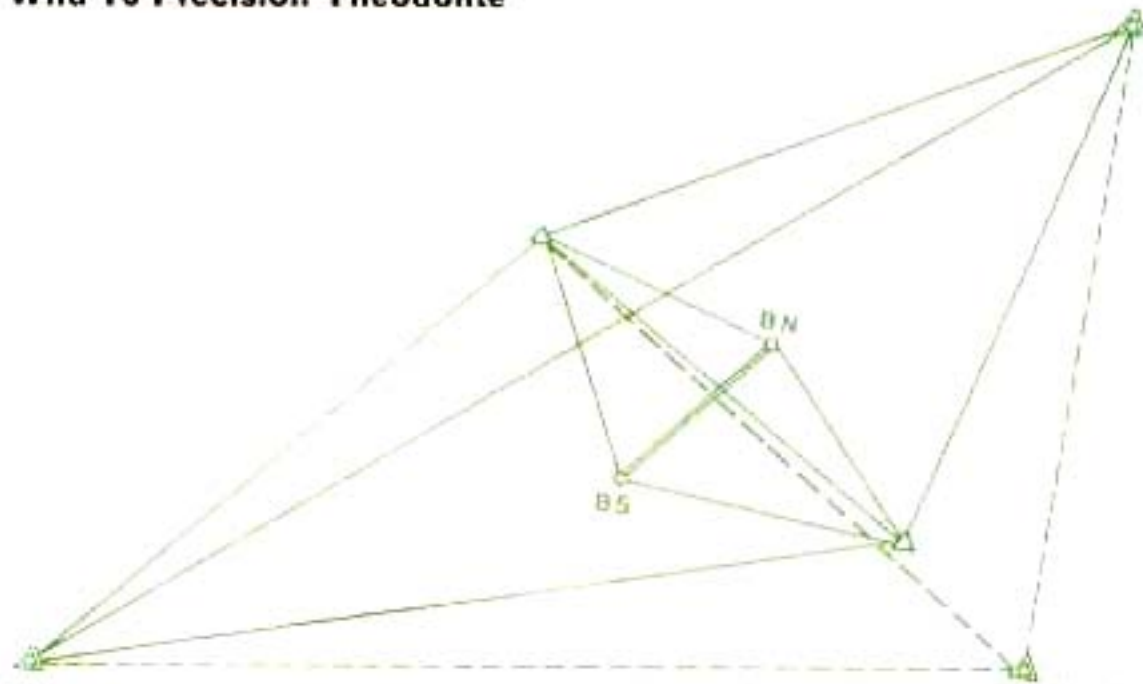


Wild T3 Precision Theodolite



Wherever there is talk of 1st and 2nd order **Triangulation**, mention will be made of the Wild T3 – an instrument of world-wide repute and famous for its precision and astonishing resistance against blows and falls. In this connection the term "stability of adjustment" is frequently used; with the Wild T3 this is a foregone conclusion and need not be discussed further. Because of its high precision the T3 is also being used increasingly in industry for measurements of high accuracy.

The instrument's stability is due to its favourable design and to the use of steel components. The telescope is made from a solid steel shaft and the major mechanical components all have the same coefficient of expansion so that the instrument is not influenced by extremes of temperature.

The circles are made of optical glass and are read at diametrically opposite points – an essential feature for a precision theodolite. The optics for the illumination and imaging of these circle points are arranged symmetrically. Only in this way can the observer see in the reading microscope two exactly equal images which can be observed without error and which give the well-known high accuracy of Wild precision theodolites. A single optical micrometer of extremely stable construction, produces immediately the arithmetic mean of the diametrically opposite readings of both the horizontal and vertical circles. By simply turning a change-over knob, either circle can be seen in the

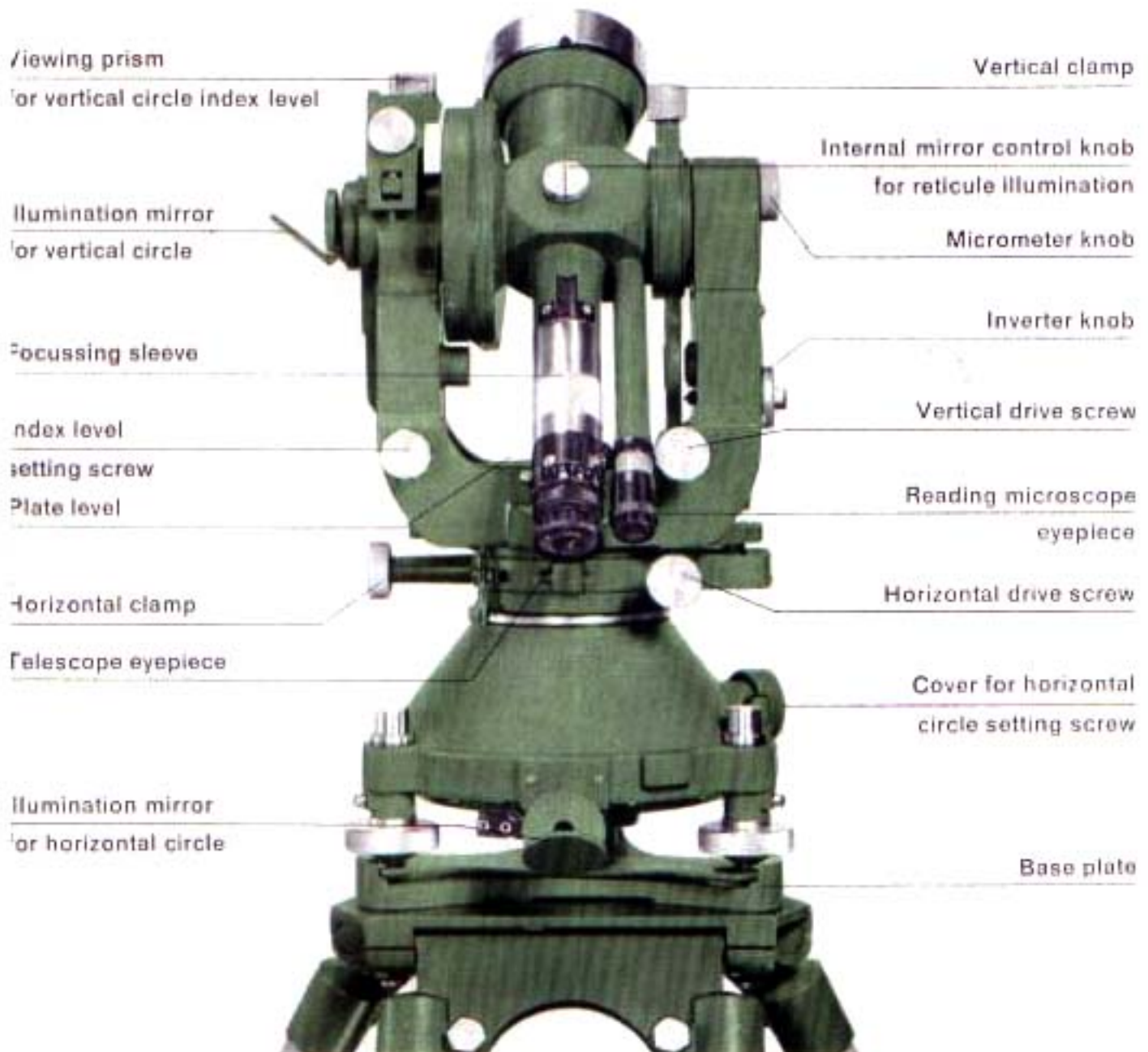
reading microscope as required. The microscope eyepiece is parallel to the telescope eyepiece so that no loss of time nor eye accommodation results from pointing to circle reading.

The lens telescope has a clear objective aperture of 2.4 in. and is equipped with three interchangeable eyepieces giving magnifications of 24, 30 and 40 \times , respectively. Even with 40 \times magnification, the eyepiece still has an exit pupil diameter of 0.06 in. which, together with the antireflection coated lenses, produces an exceptionally bright image. This excellent luminosity is normally attainable only with mirror-type telescopes, but the mirror telescope has the disadvantage that its line of sight is less stable.

Each circle is illuminated by a movable mirror, but the instrument is also wired internally for electrical illumination. For this, the mirrors are pulled out of their sockets and replaced by plug-in lamps. A cable and plug connect the battery box, which is fastened to a tripod leg, to the socket of the instrument. A control knob on the battery box serves as a combined switch and rheostat, by means of which the illumination of the circles and the telescope reticule-plate may be regulated.

The vertical circle is so numbered that one obtains immediately the mean vertical angle β from the difference of the face left and face

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For steep pointings, up to 60° above the horizon, **eyepiece prisms** may be attached to the telescope and reading microscope eyepieces. For sun observations a dark sun-glass may be placed over the telescope eyepiece.

The **collimator**, which is a T3 telescope mounted on a stand, is a most valuable accessory for angle measurement in the laboratory and in industry. It provides a very exact reference pointing over extremely short distances.



Sun observations for astronomical determinations are simplified greatly by using the objective accessory, the **Wild-Roelofs Solar Prism** (details in Pamphlet G1 402e).

Technical Data

Telescope:			Glass circles	360° or 400°
Magnification	24, 30, 40×		Graduation interval,	
Clear objective aperture	2.4 in (60 mm)		horizontal circle	4' or 10°
Diameter of field of view			Graduation interval,	
at 1000 ft (m)	28.5 ft (m)		vertical circle	8' or 20°
Shortest focussing distance	13.1 ft (4.0 m)		Micrometer scale interval	0.2" or 1 ^{cc}
Sensitivity (per 2 mm run) of			Reading by estimation to	0.1" or 0.5 ^{cc}
Plate level	7"		Diameter of horizontal	
Index level (split bubble)	13"		circle graduation	5.3 in (135 mm)
Setting accuracy of index level	± 0.4"		Diameter of vertical	
			circle graduation	3.5 in (90 mm)

Order No.	Standard Equipment T3	lb	kg
214010	1 Wild T3 Precision Theodolite, 360°, in metal container or	24.6	11.2
		8.1	3.7
214022	Wild T3 Precision Theodolite, 400°, in metal container	24.6	11.2
	Accessories in metal container:	8.1	3.7
	1 screwdriver with 2 blades and 2 adjusting pins,		
	2 plug-in lamps		

Order No.		lb	kg
214062	1 Carrying frame	4.0	1.8
303500	1 GST30 Tripod with rigid legs	12.5	5.7
	Accessories in tripod pouch:		
	1 plumb bob with bayonet plug, 1 hexagonal key		