

10.028

AUTO LEVEL

Approval Date: 6th October, 1999

Reviewed on : 23 October 2007

Version: 2

Purpose

The auto level will be used for general topographic levelling applications, in particular to connect staff gauges to established benchmarks or GTS levels.

Conditions & Requirements

- The instrument shall be of reliable and simple design, adequate for the application.
- The tripod shall generally comply with IS 8330-1997
- The levelling instrument shall generally comply with IS 4590-1980.
- An operator's manual shall be part of the delivery

Specifications

image	erect
magnification	≥ 25 x
aperture of objective	≥ 30 mm
field of view	1°20' to 1°30'
shortest focussing distance	maximum 1.5 m
max distance for mm	100 m
resolving power	1.5 mm @ 60 m
stadia multiplying constant	100
stadia additive constant	0
centring plumb bob with adopter	one
sensitivity of level plate	20 sec / 2 mm run
tribarch circular bubble	8 min / 2 mm run
compensation range	12 to 16 seconds
compensation accuracy	0.3 second
accuracy for levelling the line of sight	± 0.8 second
levelling accuracy in 1 km of double levelling tripod with clamping screw – one unit	± 2 mm in 1 km 1600 mm well seasoned wood or light & strong alloy telescopic with mounting for battery, illumination unit & clamping arrangement for the instrument
centring provision	30 – 50 mm
carrying case – one unit	light metallic or plastic (unbreakable type) or well seasoned wood with padded inserts and receptacles for holding accessories with lock, handle, carrying shoulder strap etc.,
instrument life time	>5 years of continuous operation
temperature range	0 to 50 °C
housing	splash waterproof

Accessories

cleaning brush	one unit
tool-set	spanner, tommy pins, screw driver, etc. – one set
lens cover set	one set
oil bottle	one unit
chamois leather	one
plumb bob with adopter	
plug	one
waterproof cover	made of durable plastic material - one
silica gel - re-usable	one packet 200 g
telescopic levelling staffs	
and accessories	2 nos., complying with IS 11961-1986
measuring tape 30 m	
(fibre glass)	two nos

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