Kern SWISS

Automatic
Engineer's Level

GK1A
THE UNIQUE ONE

http://swisstek.com

SwissTek

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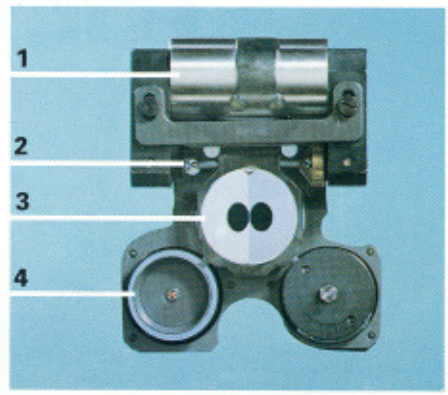
Unique

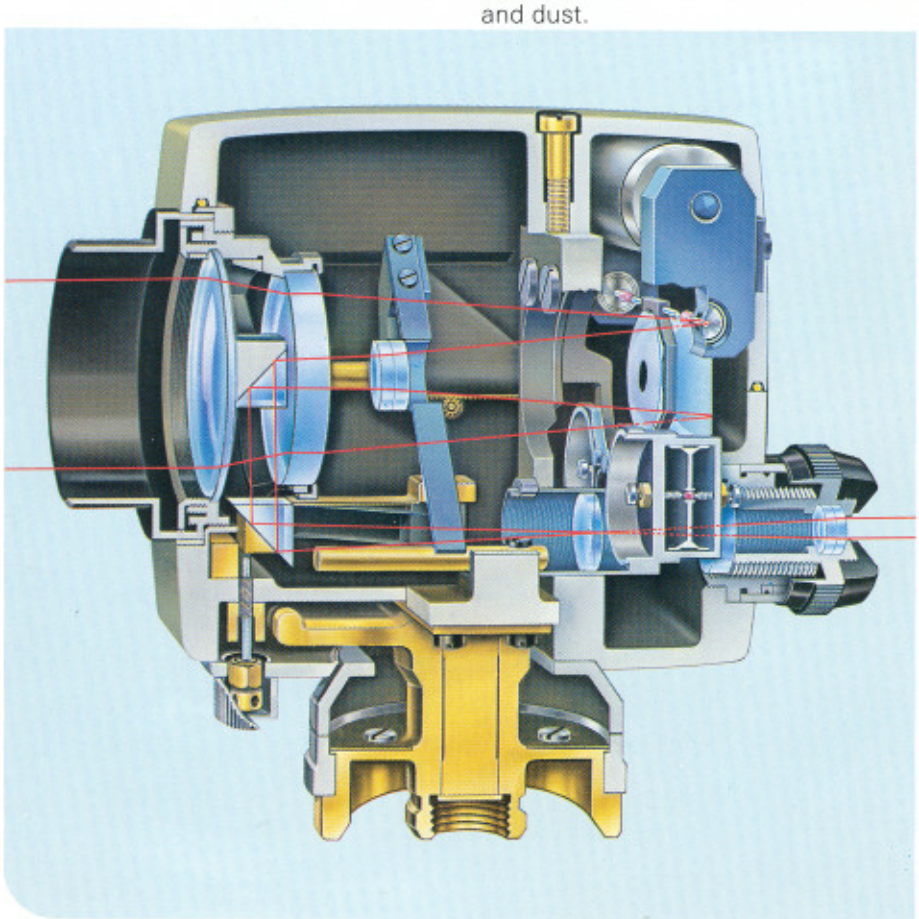
The magnetic compensator suspension of the GK1-A is in a class of its own. The instrument is furthermore exceptionally elegant, handy and accurate.

Magnetic Suspension of the Pendulum Compensator
The pendulum compensator is suspended not from sensitive metal strips or wires, but in the field of force of a permanent magnet. The conical ends of the pendulum axis are centered between the equally conical shaped poles of the magnet. In consequence virtually no friction is produced, thus imparting to the compensator an exceptionally high balancing accuracy.



1 Magnetic system
2 Magnetic pole and pendulum axis (shock absorber removed)
3 Pendulum with roof-edge prism
4 Damper piston (housing removed)

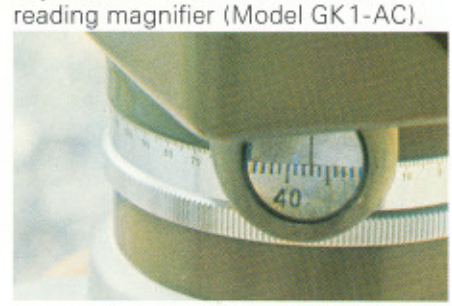
Compact Design, Attractive Housing
The folded ray path of the telescope makes possible the small dimensions of the instrument and its pleasing, functional shape. The housing, which consists of only two parts, is carefully sealed and affords an effective protection against moisture and dust.



Versatile in Application

The GK1-A meets virtually all the needs of engineering and construction survey. Anyone who values the robust and convenient GK levels and prefers the automatic version to the spirit level type will choose the GK1-A.

Horizontal Circle
For measurement and lay out of angles the GK1-A is optionally available with a 360° or 400 gon adjustable horizontal circle and a reading magnifier (Model GK1-AC).



Adapter Plate Available for Use on Kern Centering Tripod

Range of Application
Bench mark leveling
Transfer of elevations from bench marks in work above and below ground, on streets and waterways and on drainage works
Profile leveling and cross-sectioning for site planning and earthwork computations
Simple tacheometric studies in flat terrain
Grading work
Simple layout work

Accurate and Convenient

The decisive argument for its economical use in the field is its problem-free handling and its reliable accuracy even under extreme conditions. The GK1-A is able to meet these requirements as a result of the following characteristics:

Automatic Leveling of the Line of Sight
With the GK1-A there is no need for the time-consuming centering of a sensitive telescope bubble. The compensator takes care automatically of the leveling of the line of sight to a constant accuracy of ±1". The oscillation of the pendulum is effectively braked by a pneumatic damping system. The pendulum is symmetrically designed, so that its center of gravity does not vary with changes in temperature and its adjustment is to a large extent held constant. The compensator (magnetic system, pendulum and damping) forms a single structural unit, which can be rapidly and economically replaced at any Kern service center.

Protected Objective
The extensive projection of the objective hood protects the lens in case of a fall and allows unimpeded sighting even in sunshine and rain.

Protected Bull's-eye Level, Incorporated in the Housing

Jointed-head Principle without Footscrews
This construction feature is common to all Kern levels. It provides a very stable setup and is unexcelled in the simplicity and rapidity of the preliminary leveling of the instrument.

1. Place instrument on the tripod head and secure with the fastening screw

2. Shift the instrument over the spherical surface of the tripod head until the bull's-eye level is centered

3. Tighten the fastening screw.

Friction Coupling and Horizontal Slow-motion Screw
The usual clamping screw is replaced by a friction coupling. The horizontal slow-motion screw provides for convenient and exact pointing of the telescope on the rod.

Upright Telescope Image
The unusually high-powered telescope is exceptionally achromatic and produces and a sharp, high-contrast image. All optical components have an antireflection coating on both sides.

High-strength Carrying Case
Constructed of specially tough Makrolon plastic, in orange warning colour.

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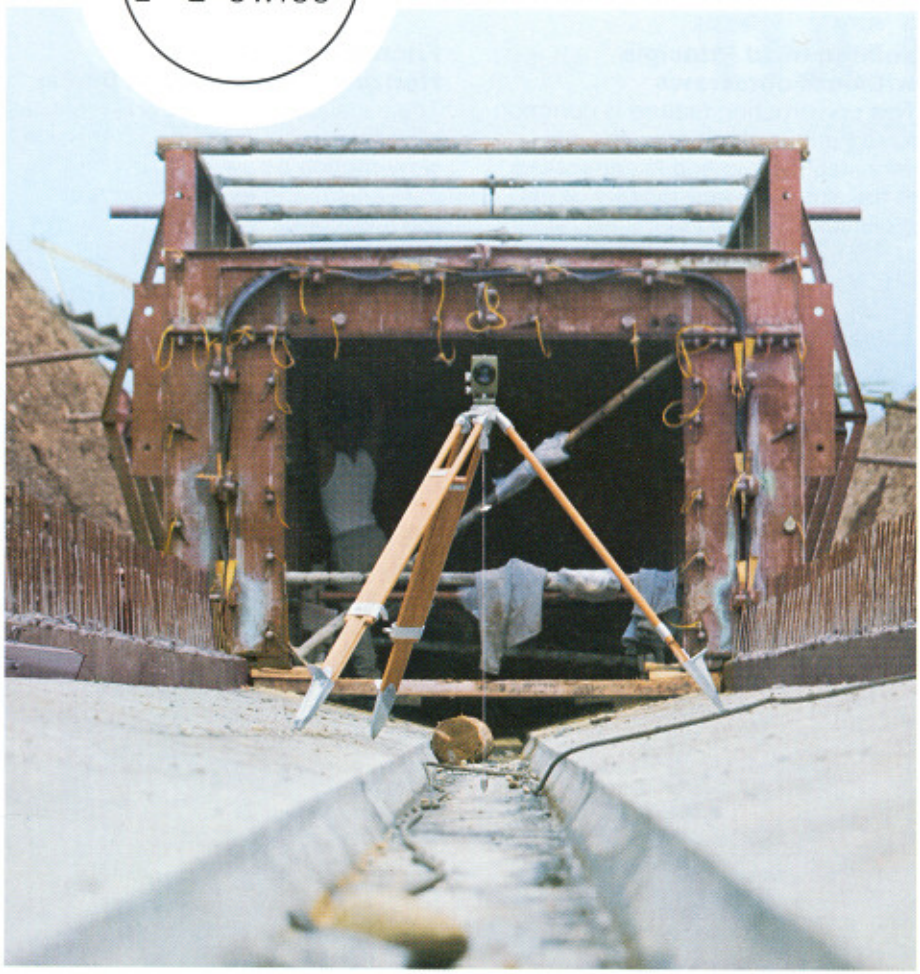

Use of the GK1-A in the construction of a waste-water collector channel

Leveling instruments are indispensable for layout of garden and park projects.

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Specifications

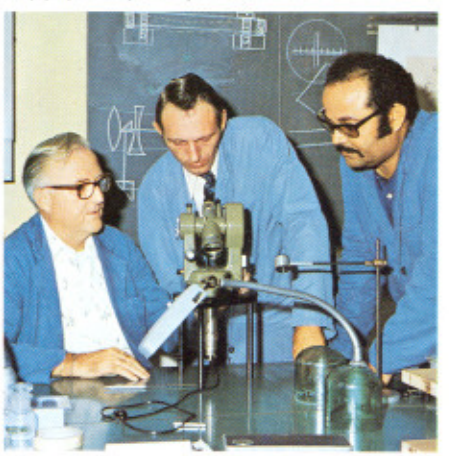
Mean error in 1 km
(double run) ±0.005 ft./±1.5 mm
Telescope magnification 25×
Objective aperture 1.8 in./45 mm
Shortest focusing
distance 7.5 ft./2.3 m
Diameter of field
of view at 1000 ft. 25 ft.
Stadia multiplication constant 100
Stadia addition constant 0
Sensitivity of
bull's-eye level 12′ to 15′ per 2 mm
Compensator working range ±10′
Compensator
centering accuracy ±0.5″ to 1.5″
Diameter of horizontal circle 60 mm
Circle reading with magnifier,
estimation to 0.1 gon/0.1°
Weight of instrument 3.5 lbs./1.6 kg
Weight of carrying case 2.5 lbs./1.1 kg
Complete equipment
with tripod B 14.7 lbs./6.6 kg
Dimensions of carrying case
11×5.1×6.7 in./28×13×17 cm

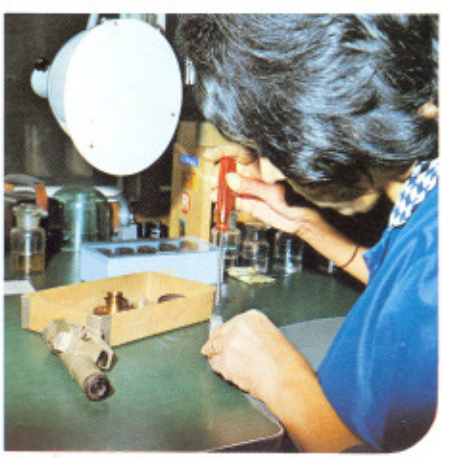
Details for Ordering

Level GK1-A in plastic carrying case with tool set
Level GK1-AC with 360° or 400 gon horizontal circle in plastic carrying case with tool set
Tripod 150B with telescopic wooden legs in orange warning colour
Tripod 150A with fixed wooden legs in orange warning colour
Adapter plate No. 112.290.4001 for setting the GK1-A on all Kern centering tripods
Setting and leveling rod No. 1, length 3 m, 4 m and 5 m
Leveling and stadia rod No. 5E, folding, length 3 m and 4 m
The complete range of leveling rods is described in Prospectus No. 106e

Worldwide Kern Service

The proverbial reliability of Kern instruments is ensured by the dependable service offered by our foreign representatives. They maintain efficient repair facilities, staffed with factory-trained personnel and backed-up by an adequate supply of spare parts.





Manufacturing Program

For more than 160 years Kern has manufactured surveying instruments and drawing equipment that have an outstanding reputation in all parts of the world. The present manufacturing program includes:
Levels
Optical-mechanical
and electronic theodolites
Reduction tachymeters
Electro-optical distance meters
Industrial measuring systems
Computer-aided systems
for surveying and photogrammetry
Photogrammetric equipment
Compasses
Technical pens Prontograph
Lettering and drawing templates
Lenses for motion pictures
and still cameras
Binoculars
Optical instruments for military use
Special optical equipment

We reserve the right
to make changes in keeping with
technical developments.
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