

# NIKON ENGINEERING THEODOLITES AND AUTO-LEVELS



**RUGGED RELIABILITY IN ENGINEERING  
CONSTRUCTION APPLICATIONS**

PRECISE  
RELIABLE  
RUGGED

***Nikon***

# PRECISE PERFORMANCE IN ANY ENVIRONMENT

## A COMBINED FORCE DESIGNED FOR YOUR JOBSITE CHALLENGES

The construction engineering industry demands stable products that hold their calibration and provide reliable and accurate long-term performance. Using Nikon engineering theodolites and auto-levels, engineering contractors and surveyors are assured a high level of control and durability through many years of hard use.

### NIKON ENGINEERING THEODOLITES

#### Aligning Strength and Accuracy

The Nikon NE-102 and NE-103 engineering theodolites are an ideal choice for a wide range of construction engineering alignment applications, including alignment control, tilt-up walls, curtain walling and steel column erection. And, with an IPX6 waterproof rating, these ruggedly designed instruments maintain their performance year after year, even in the harshest of jobsite conditions.



SPECIFICATIONS	NE-102	NE-103
<b>TELESCOPE</b>		
Magnification	30×	
Aperture	45 mm	
Shortest focusing distance	0.7 m	
<b>ANGLE MEASUREMENT</b>		
Minimum digital reading	5"/10" (selectable)	
Accuracy	5" (DIN 18723)	
<b>COMPENSATOR (NE-203 only)</b>		
Type	—	liquid-electric detection
Working range	—	± 3' (warning if out of range)
<b>KEYBOARD/DISPLAY</b>		
Display type	dot-matrix LCD with 20 characters × 2 lines	
Display Illumination	backlight	
Keyboard	both sides	
<b>OPTICAL PLUMMET</b>		
Magnification	3×	
Focus Range	0.5 m to ∞	
<b>LEVEL SENSITIVITY</b>		
Plate level	30"/2 mm	
<b>LEVELING BASE</b>		
Type	detachable	
<b>POWER</b>		
Continuous operating time (alkaline batteries)	48 hours	47 hours
<b>OPERATING TEMPERATURE RANGE</b>		
-20 °C to +50 °C		

PRODUCT	PART NUMBER
NE-102	HRA73010
NE-103	HRA73000

**1 Compensator (NE-103) and Minimum 5-second Reading**

Allows more precise angle measurements.

**2 IPX6 Waterproofing**

Performance maintained in wet or humid environments.

**3 Large Display**

Easy to read and use on the job.

**4 One-button Operation**

Fast and easy direct access to key functions such as angle zeroing.

**5 Alkaline Batteries**

Long battery life of 47 hours for all day operation.





## NIKON ENGINEERING AUTO-LEVELS

### Automatic Precision for Superior Control

The Nikon AS-2 and AE-7 engineering auto-levels provide a high degree of control for leveling and monitoring applications. They are ideal for jobsite elevation control as well as bringing in elevations from a remote location to the jobsite. They can also be used to monitor built structures to measure small elevation changes over time.

PRODUCT	PART NUMBER
AS-2 (no circle graduations)	HGA24111
AS-2C (360 Degree circle)	HGA24211
AS-2C (400 Gons circle)	HGA24311
AE-7 (no circle graduations)	HGA23111
AE-7C (360 Degree circle)	HGA23211
AE-7C (400 Gons circle)	HGA23311

SPECIFICATIONS	AE-7	AS-2
<b>TELESCOPE</b>		
Magnification	30×	34×
Aperture	40 mm	45 mm
Shortest focusing distance	0.3 m	1.0 m
<b>ACCURACY (standard deviation in 1 km double run leveling)</b>		
Without micrometer	±1.0 mm	±0.8 mm
With micrometer	±0.45 mm	±0.40 mm
<b>COMPENSATOR (NE-203 only)</b>		
Type	wire hung, air dampened	wire hung, air dampened
Working range	±16'	±12'
<b>LEVEL SENSITIVITY</b>		
Circular level	10"/2 mm	
<b>HORIZONTAL CIRCLE</b>		
Diameter	118 mm	80 mm
Direct scale reading	1°/1 gon	10'/0.1 gon
Best reading	0.1°(6')/0.1 gon	1'/0.01 gon



AS-2

AE-7

**1 Nitrogen-filled Airtight Telescope**

Reliable and clear optics in wet or humid conditions.

**2 Built-In Sights**

Quick alignment to the grade rod.

**3 Air-dampened Compensator**

Minimizes errors due to electromagnetic fields.

**4 Optional Angle Circle—AS-2C and AE-7C**

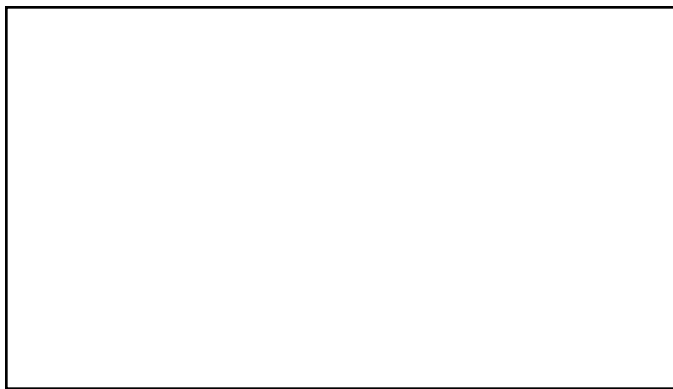
Turn angles and check basic alignments with no additional equipment.

**5 Options:**

Optical Micrometer, Right-angle Eyepiece, Lens Magnification.

The construction industry demands high productivity, precision and reliability in a tough environment. Nikon is a brand known for delivering superior optical quality, accuracy and reliability, backed by a global service and support network.

The Nikon portfolio of construction auto-levels, theodolites and total stations for positioning, leveling and aligning deliver high value, high accuracy and a high degree of reliability to meet the daily challenges of the construction industry—allowing you to get on with the job.



YOUR LOCAL NIKON OFFICE OR REPRESENTATIVE

TRIMBLE IS DISTRIBUTING NIKON AUTO-LEVELS, THEODOLITES AND TOTAL STATIONS FOR CONSTRUCTION APPLICATIONS AS PART OF A JOINT VENTURE AGREEMENT WITH NIKON CORPORATION.

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