

# Nikon NE-102 and NE-103 Theodolites



Datasheet



Nikon Quality You Can Trust

## Key Features

- 5" angle accuracies
  - Compensator on NE-103
- Large display and keyboard
- Alkaline (standard AA) batteries with battery life indicator
- IPX6 waterproofing
- Illuminated display and telescope
- Superior Nikon optics

## Nikon NE-102 and NE-103 Engineering Theodolites

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

The ergonomic keypad and display provide easy access to the powerful and accurate measurement capabilities of the Nikon NE-102 and NE-103 theodolites. Large, easy-to-identify buttons provide one-button operation for key functions. A large text display area makes information easy to read and use on the job. This design provides for a very short learning curve and utilization within a matter of minutes.

### 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.

Nikon engineering theodolites are precise, reliable and rugged.

# Nikon NE-102 and NE-103 Theodolites

## NE -102

## NE -103

### Angle Measurement

Reading system	photoelectric incremental encoder	photoelectric incremental encoder
Circle diameter	79 mm (3.1 in)	79 mm (3.1 in)
Unit of reading	degree/gon/mil	degree/gon/mil
Minimum digital reading	5/10", 1/2 mgon, 0.02/0.05 mil	5/10", 1/2 mgon, 0.02/0.05 mil
Accuracy (DIN 18723)	5"/1 mgon	5"/1 mgon

### Telescope

Effective diameter of objective	45 mm (1.8 in)	45 mm (1.8 in)
Magnification	30x	30x
Image	erect	erect
Field of view (at 100m/100ft)	1°20' (2.3 m/2.3 ft)	1°20' (2.3 m/2.3 ft)
Minimum focusing distance	0.7 m (2.3 ft)	0.7 m (2.3 ft)
Stadia multiplier constant	100	100
Stadia additive constant	0	0
Reticle illuminator	Yes	Yes

### Automatic Vertical Compensator

Type	-	liquid-electric detection
Working range	-	±3' (out-of-range warning provided)

### Display / Keypad

<b>Front</b>		
Type	dot-matrix LCD (20 characters x 2 lines)	dot-matrix LCD (20 characters x 2 lines)
Backlight	1-level illumination	1-level illumination
Keypad	5 buttons	5 buttons
<b>Rear</b>		
Type	dot-matrix LCD (20 characters x 2 lines)	dot-matrix LCD (20 characters x 2 lines)
Backlight	1-level illumination	1-level illumination
Keypad	5 buttons	5 buttons

### Optical Plummet

Magnification	3x	3x
Field of view	5°	5°
Focus range	0.5 m (1.6 ft) to infinity	0.5 m (1.6 ft) to infinity

### Level Sensitivity

Plate level	30"/2 mm	30"/2 mm
Circular level	10"/2 mm	10"/2 mm

### Leveling Base

Type	detachable	detachable
------	------------	------------

### Ambient Temperature Range

-20 to 50 C (-4 TO 122 °F)	-20 to 50 C (-4 TO 122 °F)
----------------------------	----------------------------

### Environmental Rating

IP56	IP56
------	------

### Dimensions

Instrument	153.5 x 172 x 334 mm (6.0 x 6.8 x 13.1 in)	153.5 x 172 x 334 mm (6.0 x 6.8 x 13.1 in)
------------	--	--

### Weight

Instrument	4.5 kg (9.9 lb)	4.6 kg (10.1 lb)
Carrying case	3.9 kg (8.6 lb)	2.5 kg (5.4 lb)

### Power Supply

Battery type	1.5 V AA x 6	1.5 V AA x 6
Continuous operating time (at 68 °F/20 °C)	48 hours	48 hours



**PRECISE • RELIABLE • RUGGED**

### Contact Information:

#### AMERICAS

**Spectra Precision Division**  
10368 Westmoor Drive  
Westminster, CO 80021, USA  
+1-720-587-4700 Phone  
888-477-7516 (Toll Free in USA)

#### EUROPE, MIDDLE EAST AND AFRICA

**Spectra Precision Division**  
Rue Thomas Edison  
ZAC de la Fleuriaye - CS 60433  
44474 Carquefou (Nantes), France  
+33 (0)2 28 09 38 00 Phone

#### ASIA-PACIFIC

**Spectra Precision Division**  
80 Marine Parade Road  
#22-06, Parkway Parade  
Singapore 449269, Singapore  
+65-6348-2212 Phone



[www.spectraprecision.com](http://www.spectraprecision.com)

Specifications subject to change without notice.

©2015, Trimble Navigation Limited. All rights reserved. Nikon is a registered trademark of Nikon Corporation. All other trademarks are the property of their respective owners. (2015/08)