

# NEDO ECO 600 H OPERATING INSTRUCTIONS MANUAL



## Available languages



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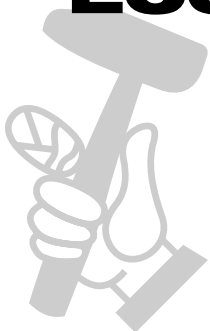
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## **ECO 600 H**



- DE** Bedienungsanleitung
- EN** Operating Instructions
- FR** Mode d'emploi
- NL** Gebruiksaanwijzing
- PL** Instrukcja obsługi
- IT** Istruzioni d'uso
- ES** Manual de instrucciones
- CZ** Návod k použití
- SE** Bruksanvisning
- DK** Brugsvejledning

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## For your safety

### Documentation



Please familiarise yourself with these operating instructions and the safety information it contains before you start to work with the **ECO 600 H**. These are based on the current EN 60825-1:2007 and IEC/TR 60825-14:2004 standards. Observing these instructions and this information ensures safe working. The laser may only be used by trained personnel!

### Laser radiation

Laser radiation **ECO 600 H** laser class 3R according to DIN EN 60825-1:2007 (VDE 087 part 1).



**LASER RADIATION**  
AVOID DIRECT EYE  
EXPOSURE!  
CLASS 3R LASER PRODUCT

**DIN EN 60825-1:2007**  
 $P \leq 5\text{mW}$   
 $\lambda: 630\text{-}680\text{ nm}$   
 $\varphi \leq 1,5\text{ mrad}$



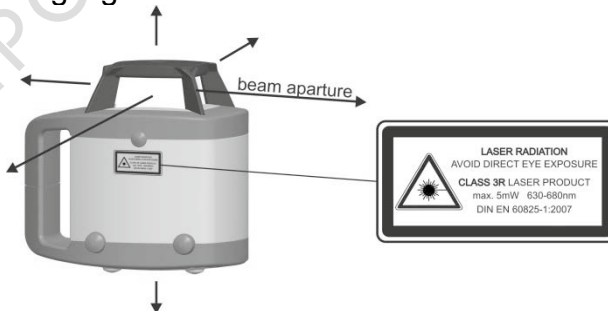
General safety instructions for handling laser radiation:

- Prevent direct eye exposure to the beam!
- Do not direct the beam at other people or into public areas!
- To prevent reflections, do not point the laser at reflective surfaces.
- If possible, do not operate the laser at eye level!
- The housing of the laser may be opened by trained service technicians only!
- The emitted laser radiation has the following properties:
  - Power  $P \leq 5\text{mW}$
  - Wavelength  $\lambda$ : 630-680 nm
  - Beam divergence  $\varphi \leq 1.5\text{ mrad}$
  - Stationary laser dot: CW laser
  - Rotating laser dot: Laser pulse with f: 1Hz ... 10Hz



### Warning signs

Never remove the warning signs on the unit.



### For users in Germany:

Please note and following the guidelines of the professional/trade association with liability for industrial safety and insurance (Berufsgenossenschaftliche Richtlinie) BGI832 on the operation of laser equipment: It is recommended that operation of a class 3R laser be registered with the responsible professional/trade association (Berufsgenossenschaft) (BGI 832, Section 2.5).

## Intended use

### Use

The **ECO 600 H** is suitable for the marking of heights, levelling and for carrying out similar work. The unit can be used indoors and outdoors.

### Repair

Repairs may only be carried out by NEDO or an authorised customer service agent. Never open the unit yourself; doing so cancels the warranty.

### Careful handling

The **ECO 600 H** is a sensitive, high-precision instrument and should therefore be handled with appropriate care. Never store the unit in the case if it is wet.

## The environment

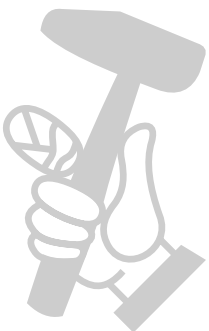


### Disposal

Dispose of the unit in accordance with the applicable materials recycling regulations.

### Batteries/rechargeable batteries

Batteries/rechargeable batteries are hazardous waste and may not be put into domestic waste. They must be properly disposed of according to the respective national guidelines.





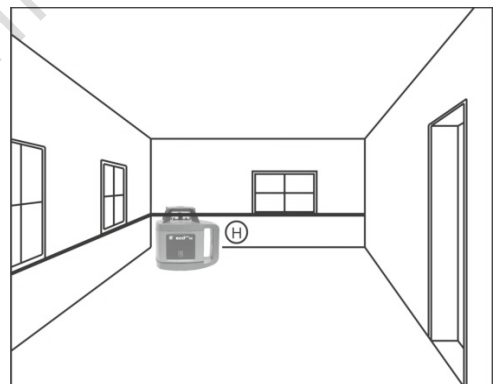
- 1 ECO 600 H
- 2 Receiver + Receiver holder
- 3 Charger, 100 – 240 V

- 4 Operating instruction
- 5 Transportation case

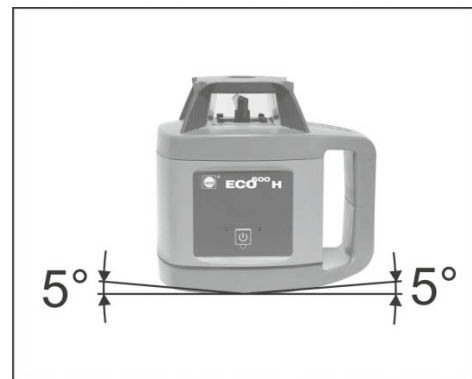
## Technical Features

### Function - how the ECO 600 H works

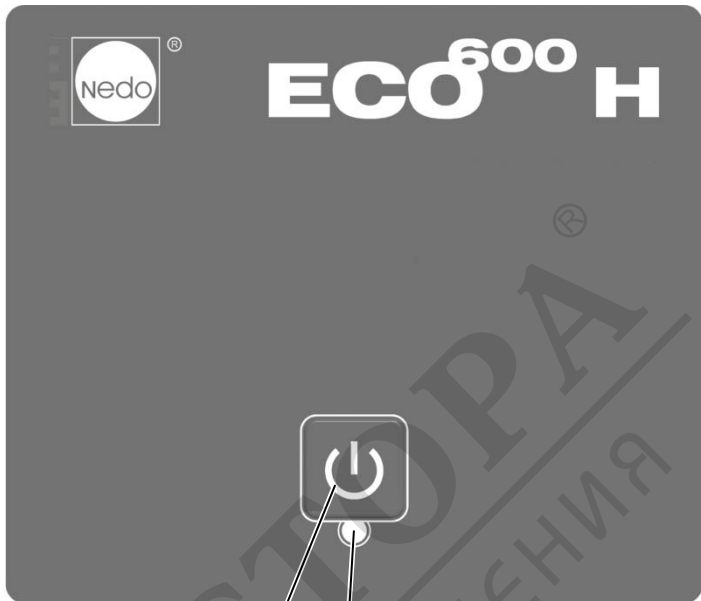
The **ECO 600 H** is set up horizontally and projects a horizontal laser line (H).



The **ECO 600 H** is equipped with a self-levelling feature and levels out tilted positioning of the unit by up to 5° in each direction.



## ECO 600 H control panel

1	<p><b>ON/OFF button</b> Switches the unit on and off.</p>	
2	<p><b>"Equipment On" LED display</b> Lights up red if the unit is switched on.</p>	

## Initial Startup

## ECO 600 H

When starting the **ECO 600 H** rotating laser up for the first time, charge the integrated set of rechargeable batteries (4.8 V) using the charger supplied. The charger socket is located below the handle, behind a rubber cap. The set of batteries is fully charged when the green LED on the charger lights up.

**Important!**

**Only use the charger supplied.**

**Receiver**

Insert the battery supplied (type 9V) in the receiver.  
Ensure pole direction is correct!

**Starting up the unit**

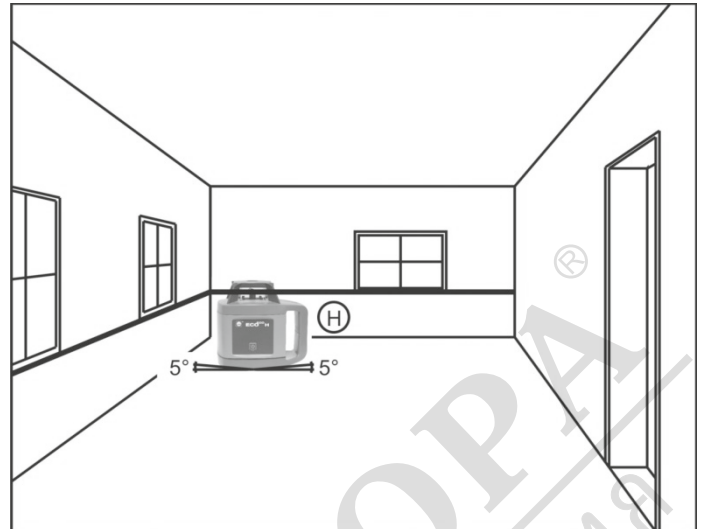
When using on site, set up the ECO 600 H horizontally.

The **ECO 600 H** has a self-levelling feature.

Self-levelling is switched on by pressing the ON/OFF button. The horizontal beam (H) begins to rotate.

If the unit is placed in a slanted position of up to 5° in any direction, the laser beams are horizontal.

If the range of 5° is exceeded, the horizontal beam stops rotating and begins to flash.



## Automatic level monitoring

The **ECO 600 H** has an automatic level (height) monitoring feature. This becomes active as soon as the laser is horizontally aligned and the laser beam rotates. In the event of large vibrations the level monitoring stops rotation of the laser beam, which then begins to flash (tilt alarm). Minor vibrations are automatically taken into account by the integrated automatic "horizontalisation" adjustment (plumb alignment of the unit), which keeps the laser plane horizontal.

## Specifications

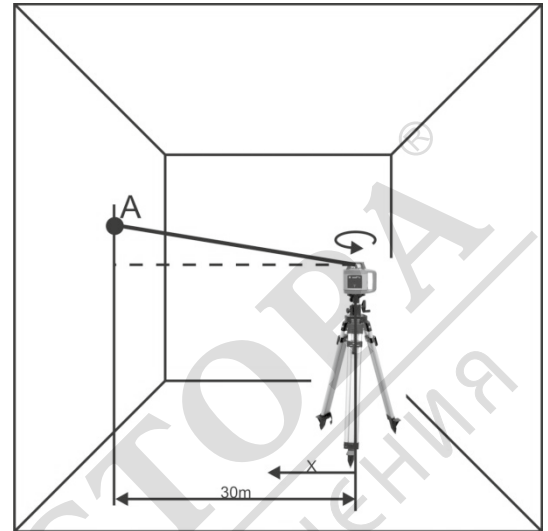
<b>Model</b>	<b>ECO 600 H</b>
<b>Ref. No.</b>	<b>471905-613</b>
Laser configuration	1 laser line due to rotating laser dot
Rotational speed	600 rpm
Levelling accuracy	± 0.1 mm/m
Levelling time	< 30 sec.
Thread	BSW 5/8" on unit
Working range	400 m (diameter) with receiver
Wavelength	635 nm
Laser class	3R
Output	< 5 mW
Self-levelling range	±5° to the horizontal axis, motorised
Power supply	Set of NiMH 4.8 V rechargeable batteries, including charger Battery capacity approx. 3800 mAh
Battery life	approx 30 h
Operating temperature	-20 °C to +50 °C
Class of protection	IP 54
Dimensions	B 150 mm / D 200 mm / H 190mm
Weight	2.1 kg

We reserve the right to make technical changes without notice.

The accuracy of the laser beam should be checked regularly. This requires a free measuring length of 30 m. The check is carried out in two steps.

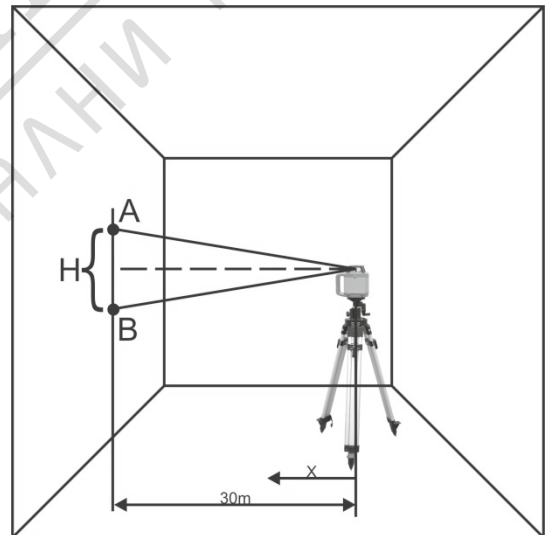
## Step 1 – x-axis

- Position the **ECO 600 H** as shown on the right, along the x-axis marked on the housing and switch on the rotating laser. The laser beam starts to rotate.
- The position of the laser beam is now determined with the help of the receiver.
- Mark position **A** of the laser beam.



## Step 2 – x-axis

- Rotate the **ECO 600 H** through 180°.
- Repeat the preceding steps again and mark the position **B** of the laser beam.
- Measure the plumb vertical distance **H** between marking **A** and marking **B**, this can be above or below mark **A**.
- If the measured distance **H** between marking **A** and marking **B** < 6 mm, the **ECO 600 H** is within the tolerance range.



Note: If the plumb measured distance **H** between marking **A** and marking **B** is outside the tolerance range, the **ECO 600 H** must be checked by an authorised customer service or by NEDO.

