



# Laser Scanning and Measuring

## Tool Safety

### Tool Box Talk



Laser scanning and measuring tools are designed for professional users. It is recommended that only trained, authorized personnel are permitted to operate, service and maintain the products. This personnel must be specifically informed about the possible hazards. The product and its ancillary equipment can present hazards if used incorrectly by untrained personnel or if used not in accordance with the intended use.

#### Tool and work preparation

- Do not render safety devices ineffective and do not remove information and warning notices.
- View the tool at an angle when setting it up with the aid of the circular bubble level.
- Do not point the product toward the sun or other powerful light sources.
- Do not use the product as a level.
- When the product is brought into a warm environment from very cold conditions, or vice-versa, allow it to become acclimated before use.
- Observe the accident prevention regulations applicable in your country.
- Use the product only within its specified limits.
- Observe the information printed in the operating instructions concerning operation, care and maintenance.

#### Tool usage safety

##### Laser class 2/II

There are no special safety measures for safety class 2/II; however, looking directly into the laser beam should be avoided. Laser measuring tools in laser class 2/II are generally labeled with the following warning signs:



## Tool usage safety

### Laser class 3R/IIIa

For Class 3R/IIIa, protection of the eyes is normally provided by aversion response (blinking reflex). Nevertheless, eye exposure to the laser beam should always be avoided. Hilti laser measuring tools in laser class 3R/IIIa are labeled with the following warning signs:



### Laser visibility glasses

Laser visibility glasses help technicians see the laser line more clearly during indoor layout tasks. Laser visibility glasses should not be worn while driving. They can affect your ability to see roadway street lights. Laser visibility glasses are not anti-laser protective glasses.



When using measuring tools in laser class 3R, a clear zoning and labeling of the laser usage area is required. Zoning means that unauthorized persons cannot access the laser area unsupervised. Therefore, Hilti provides a respective laser warning sign to mark the jobsite entrance.

## The following measures are recommended to improve safety during laser tool usage:

- Check that product functions correctly before each use.
- Precautions must be taken to ensure that the laser beam does not unintentionally strike highly reflective surfaces.
- Secure the site at which you are taking measurements and take care to avoid directing the laser beam toward other persons or toward yourself.
- Precautions must be taken to ensure that persons do not stare directly into the beam.
- The laser beam must not be allowed to project beyond the controlled area.
- When switching distance measurement from prism measurement to reflector less measurement, make sure that you do not look at the objective lens of the tool.
- Laser beams should not be projected at eye height.
- Proper eye protection devices have to be provided to those within areas where a class 3R/IIIa laser is operating, if technical or organizational safety measures are not possible.
- If the stated safety measures cannot be taken, laser safety goggles must be worn.
- Measurements taken through panes of glass or other objects may be inaccurate.
- The measurement may be incorrect if the conditions under which the measurement is taken change rapidly, e.g. due to people walking through the path of the laser beam.
- Switch the laser tool off when it is not in use.

## Tool care and maintenance

### The following care and maintenance safety measures are recommended:

- Although the product is designed for the tough conditions of construction site use, as with other measuring instruments it should be treated with care.
- Keep the laser exit window clean in order to avoid measurement errors.
- Do not open the housing of any part of the tool. Only the battery compartment cover should be opened when replacing the batteries. Opening the tool voids the warranty and can cause dangerous mis-operation of the tool.
- If the product is opened improperly, laser radiation in excess of Class 2 may be emitted. Have the product repaired by Hilti Service only.
- The specified operating and storage temperatures must be observed.