

STABILA®



...sets standards

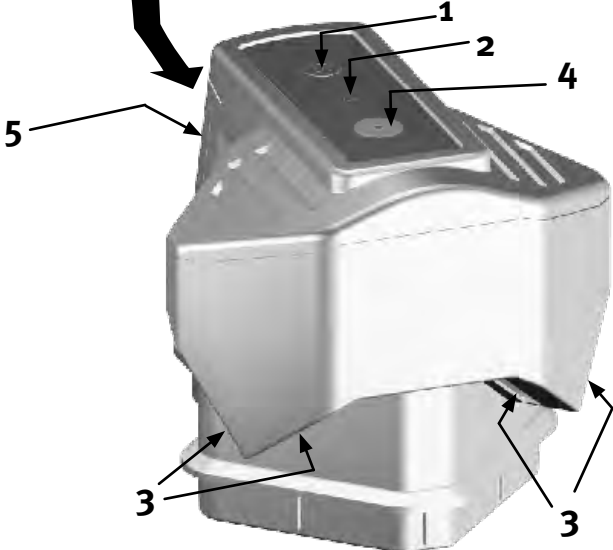


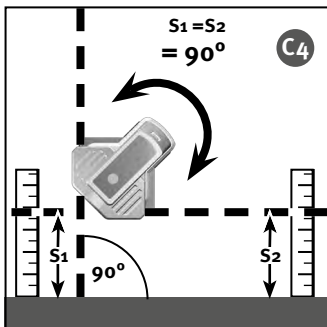
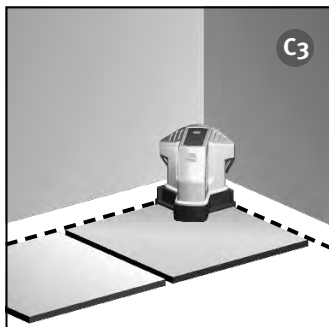
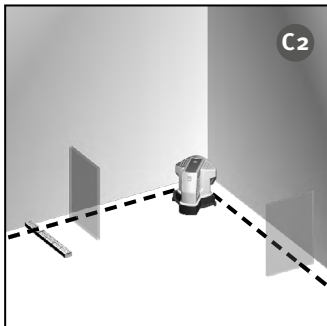
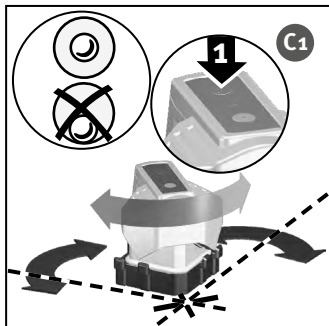
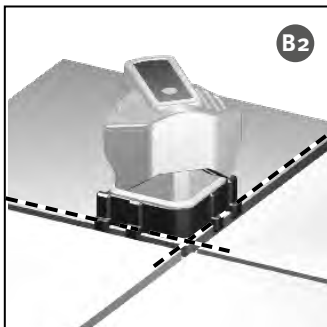
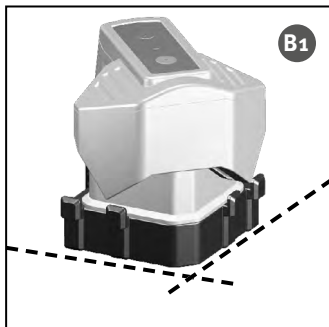
## Laser FLS 90

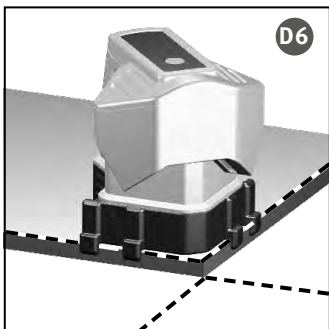
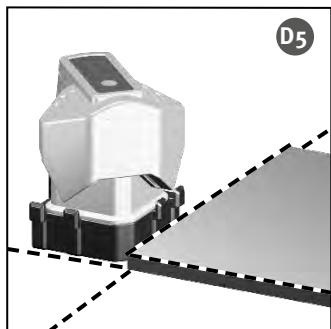
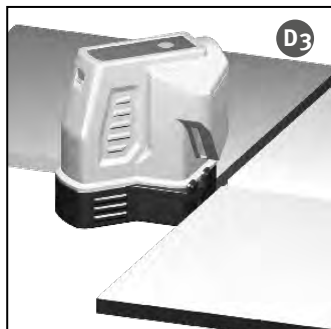
en Operating instructions

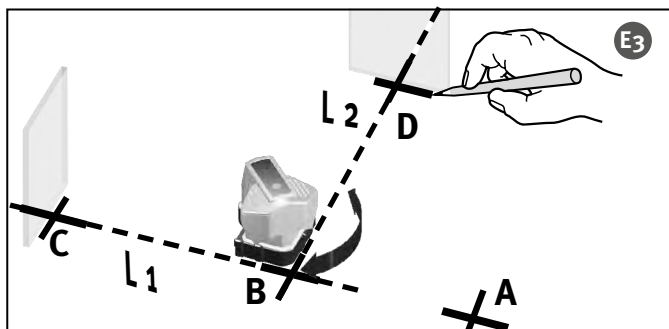
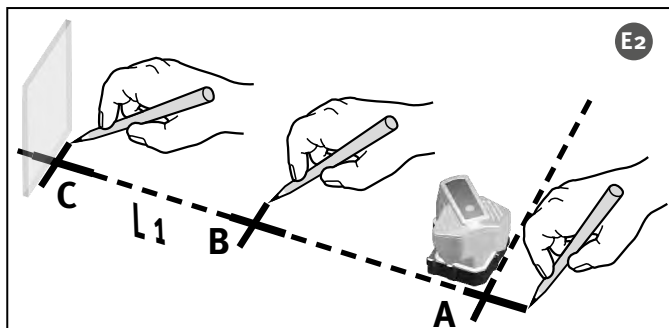
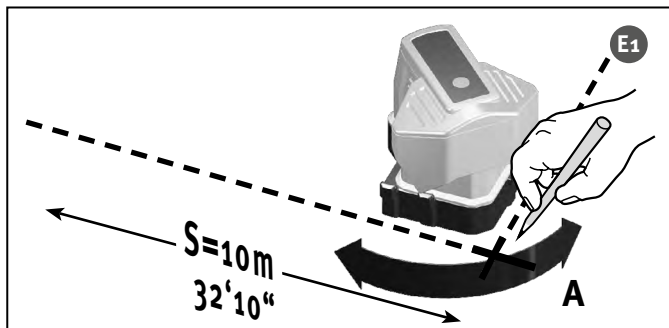
**LASER RADIATION  
DO NOT STARE INTO BEAM  
LASER CLASS 2**

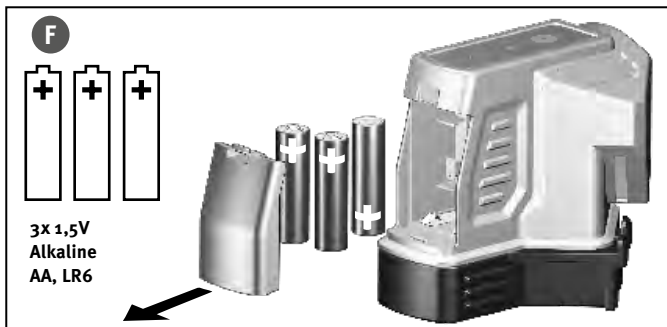
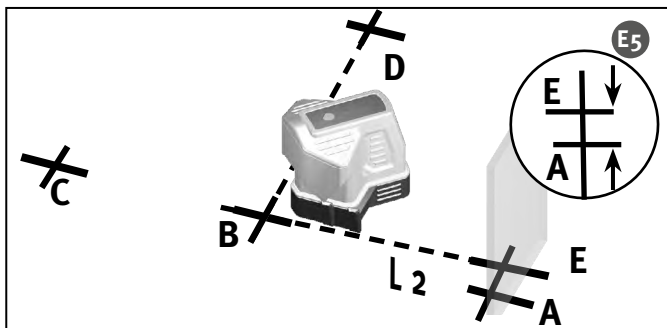
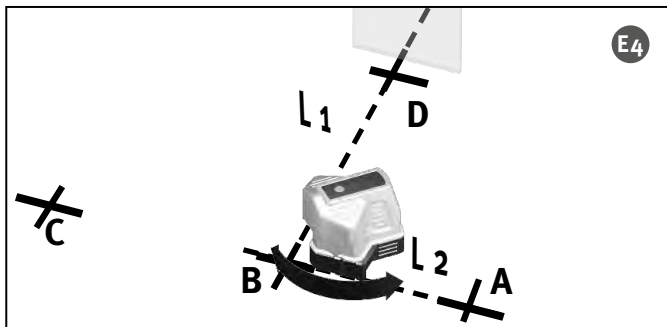
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## Operating instructions

The STABILA FLS 90 is an easy-to-use floor line laser. It enables rapid yet precise alignment of elements (especially tiles) on the floor. The laser lines projected vertically onto the floor at an angle of 90° make sure your work is totally precise.

The pulsed laser line allows work over large distances with an optionally available STABILA line receiver (-> Instructions for use of line receiver) .



Read the User Manual along with the illustrated portion. Follow the general instructions on the handling, care and maintenance of the instrument.

Observe the safety instructions on laser beams.

We have endeavoured to explain the unit's handling and functioning in as clear and comprehensible manner as possible. If, however, you still have any unanswered questions, we should be pleased to provide advice over the telephone at any time on the following telephone number : 0049 / 63 46 / 3 09 - 0



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### Main components

- (1) On/off button
- (2) LEDs for displaying
  - (2a) LED green : Operating mode ON or READY
  - (2b) LED red : battery voltage
- (3) Outlet openings for laser lines
- (4) Vial
- (5) Battery compartment cover
- (6) Interchangeable base
- (7) Locating teeth for positioning at or on tiles / slabs

### Before initial start-up :

The warning notice in your language must be clearly affixed on the laser instrument at the position indicated. The appropriate stickers are enclosed.

**LA S E R  R A D I A T I O N**  
**D O  N O T  S T A R E  I N T O  B E A M**  
**LA S E R  C L A S S  2**

This sticker with the warning notice written in the usual language must be affixed here in place of the English text !

Batteries must be inserted -> changing batteries

## Main applications:

### Operating modes

The FLS 90 can be used in 2 operating modes:

1. As easy-setup floor line laser for layout work
2. As tile laser combined with special base enabling exact positioning for edge-precise alignment of tile layouts

B1

B2

### Commissioning

The instrument is switched on with the on/off switch (1). Laser lines appear after switching on. An angle of  $90^\circ$  is thus projected on the floor. The intersection of the laser lines enables easy alignment and measuring. The FLS 90 can be set up very close in a corner. The locating edges for the base correspond to the position of the laser lines. Measuring tools and, if required, a target plate make a fully accurate alignment to the surroundings (corner, wall etc.) possible. The FLS 90 can therefore be aligned to a reference plane.

C1

C2

C3

C4

### Operating mode as floor line laser

The base is positioned with its locating teeth upwards below the laser device. The FLS 90 is easily set up and aligned at a mark.

D1

C1

### Operating mode as tile laser

The interchangeable base enables exact positioning at the edges of tiles/slabs. The FLS 90 can be positioned to the side of a tile / within several tiles. Changing over the base with the locating teeth downwards allows the FLS 90 to be positioned on a tile as well.

D1

D2

D3

The laser lines are therefore aligned accurately with the tile edges, while projecting extension lines precisely onto the floor.

D4

D5

D6

### Checking the calibration

The floor line laser FLS 90 is designed for use on construction sites and left our factory perfectly adjusted. As with any precision instrument, however, its calibration must be regularly checked. The unit should be checked before starting any new tasks, particularly when the unit has been exposed to strong vibrations.



## Checking the angular accuracy to 90° :

The check is carried out using the target plate ZP !

- E1 1. Select a measuring section with a minimum length of 10 m / 32'10".  
Mark point A on the floor at one end of the section.
  - E2 2. Align the intersection of the laser lines over point A.
  - E3 3. Mark point B on the floor roughly in the middle of the section and point C at the end.
  4. Move the FLS 90 to point B and realign laser line 1 ( L1 ) on point „C“.
  5. Mark position „D“ of the right-angle laser line 2 ( L2 ) on the floor.
- Note:**  
For a precise check, the distances from A to B, B to C and B to D should be approximately the same.
- E4 6. Rotate the FLS-90 through 90° so that laser line 1 ( L1 ) is aligned with point „D“.
  7. Mark the position E of the right-angled laser line 2 ( L2 ) at the shortest distance to point A on the floor.
  - E5 8. Measure the distance between points „A“ and „E“.

Section between  
points A and C

S

Each of the 90° angles are accurately calibrated if the distance between points „A“ and „E“ is as follows:

10 m	≤ 3,0 mm
20 m	≤ 6,0 mm
32'10"	≤ 1/8"
65' 8"	≤ 1/4"

## F Replacing the batteries

Slide the battery cover (4) in the direction of the arrow and insert new batteries in accordance with the symbols in the battery compartment. Suitable batteries can also be used.

## Technical data

Laser type:	Red diode laser, pulsed line-laser, wavelength 635 nm
Output:	< 1 mW, Laser Class 2 to IEC 60825-1:2007 This product compl. with the appl. requ. of 21CFR, parts 1040.10 and 1040.11.
Line straightness :	± 0,3 mm/m 3/16" over 50 ft
Accuracy 90° angle :	± 0,3 mm/m 3/16" over 50 ft
Batteries:	3 x 1,5 V mignoncells Alkaline, Size AA, LR6
Operating life:	Approx. 20 hours (Alkaline)
Operating temperature range :	-10 °C to +50 °C / 14°F to +122°F
Storage temperature range:	-25 °C to +70 °C / -13°F to +158°F

Subject to technical modifications.

\* When operated within specified temperature range