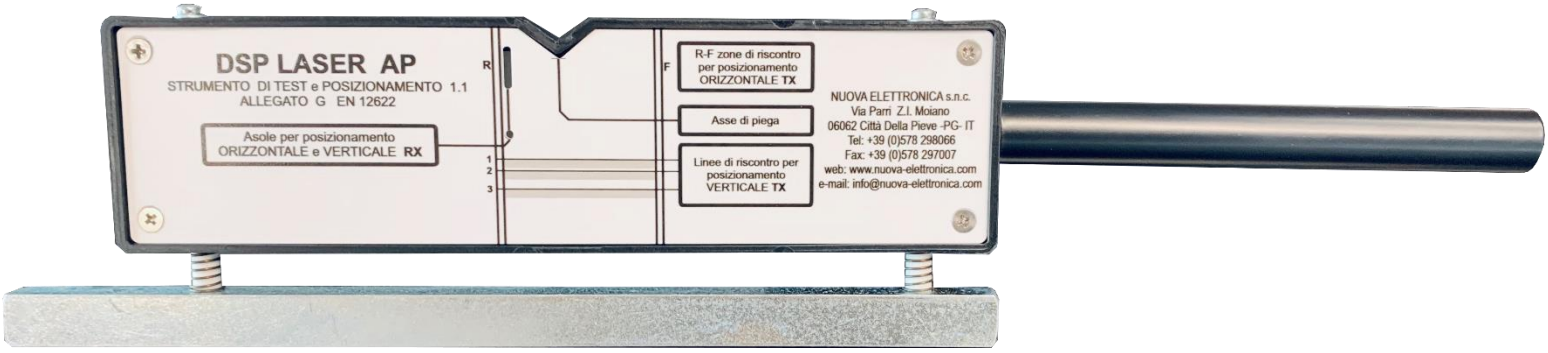
Test Hand for DSP AP

COD. 002 P

Test Hand for DSP Laser AP



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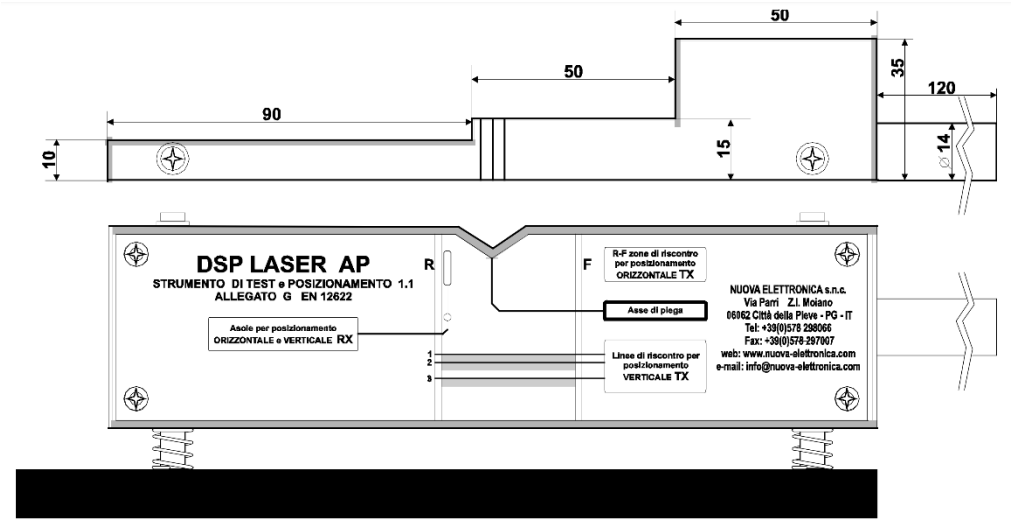
FIRST TX AND RX ADJUSTMENT AFTER INSTALLATION

For the first installation of the DSP Laser AP photocells, **it is necessary to optically align the DSP LASER AP TX and RX devices to the upper tool of the machine and to each other**, therefore the special test hand must be used to carry out this adjustment and test.



The horizontal protection plane must be positioned from the apex of the tool at a safety distance equal to the maximum stopping space allowed by DSP LASER AP + 5mm.
The maximum allowed values, as described below, are three: 14mm, 18mm and 24mm.
To position the system in one of the three positions, it is necessary to align the laser beam in zone 1 for a maximum SA of 14 mm, in zone 2 for a maximum SA of 18 mm, in zone 3 for a maximum SA of 24 mm.

The following description describes the positioning in zone 1, to position in the other zones the procedure is the same, obviously only the zone changes.

PROCEDURE:

The first adjustment of the DSP Laser AP photocells to be made is to position the laser beam parallel to the tip of the upper tool of the press brake for its entire length.

To do this, proceed as follows:

1. Set a reduced closing speed, less than or equal to 10 mm / sec.

2. Place the test and positioning tool on the lower tool in the "point A" position on the lower tool near TX (Figure 53).

3. Lower the upper tool until its tip touches the vertex of the notch recess in the upper part of the tool (Figure 54).

4. Adjust the height of TX by moving the support vertically (arrow 1 in Figure 53), so that the LOWER EDGE OF THE LASER EMISSION coincides with the upper line of the gray area 1, 2 or 3.
In the example it is line 1 of the Test and Positioning tool (Figure 54).

5. Then adjust TX along the transverse axis to the bending axis (arrow 2 in Figure 53), so that the lateral edges of the laser emission are symmetrically contained within the two surfaces delimited by the two vertical lines and marked one with R and one with F (Figure 54).

6. Lock, without tightening, TX in this position.

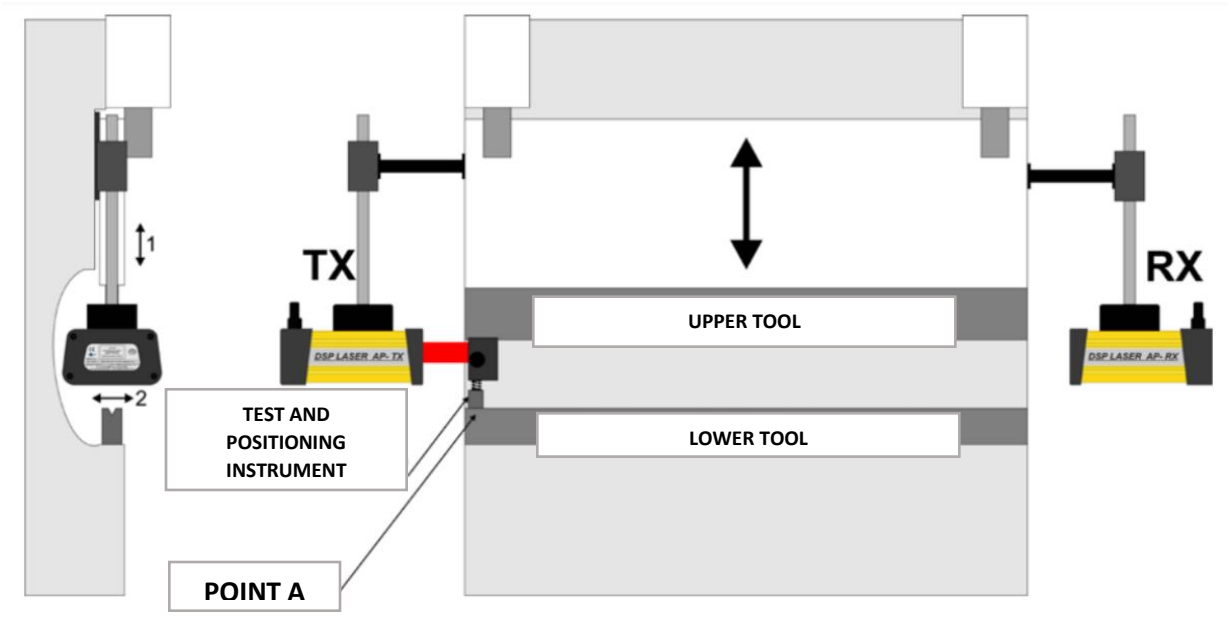
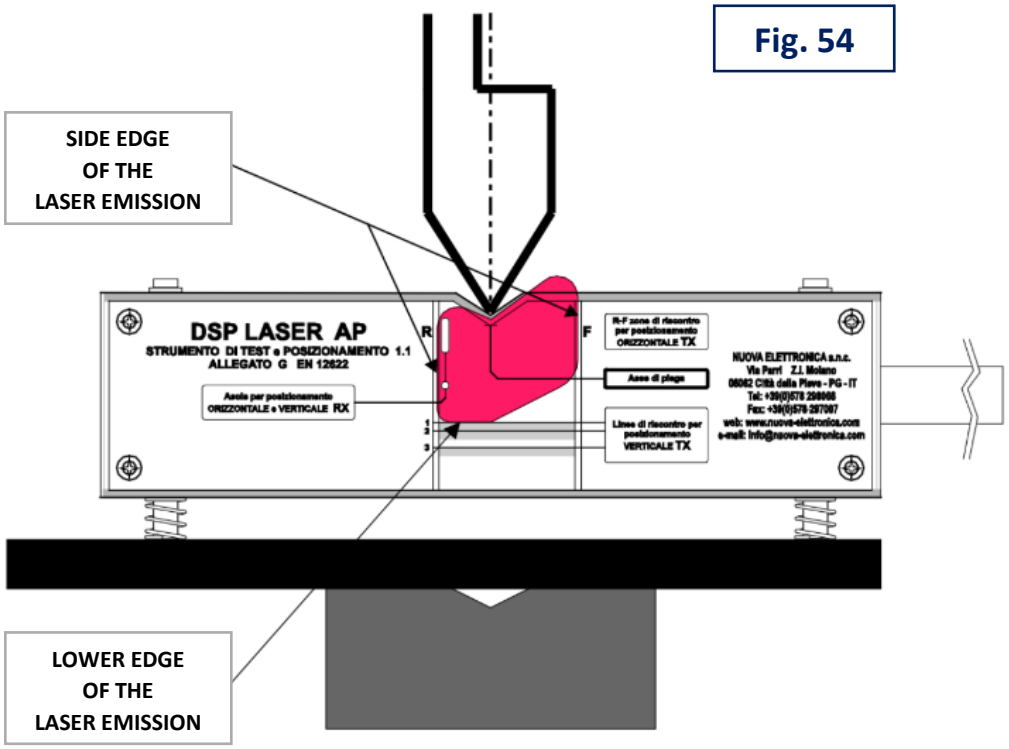


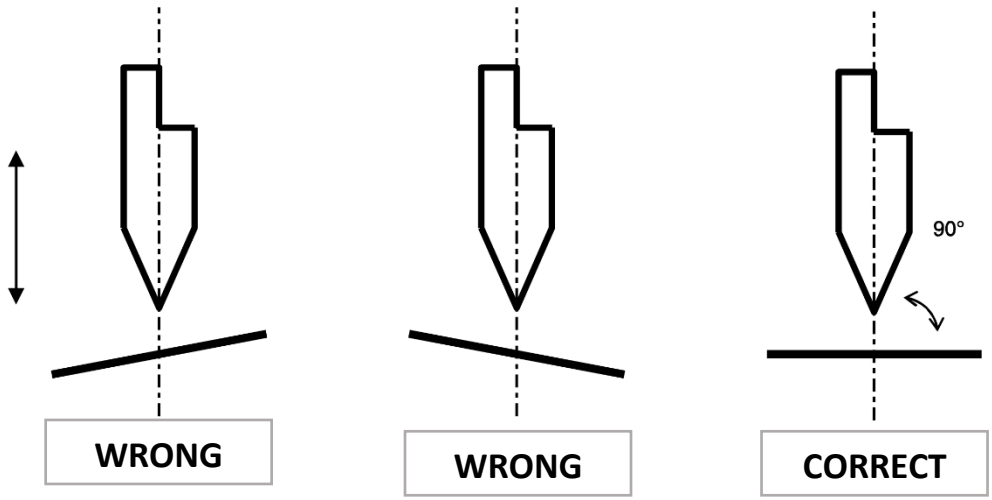
Fig. 53

Fig. 54



7. The lower edge of the laser emission must be parallel to the reference line for vertical TX positioning, as in Figure 55.

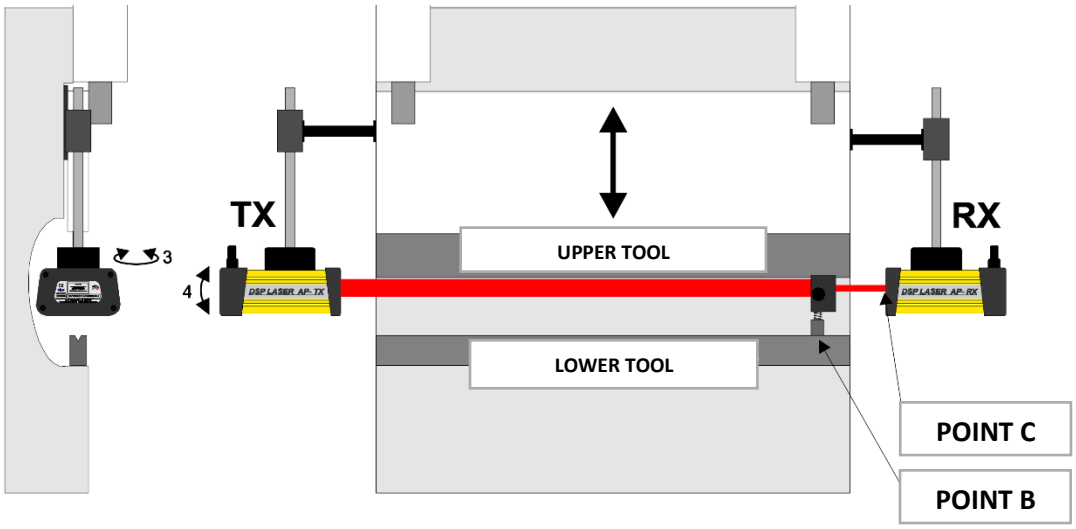
Fig. 55



8. Then move the test and positioning tool of the lower tool to the “point B” position (Figure 56) or, in any case, close to the RX.

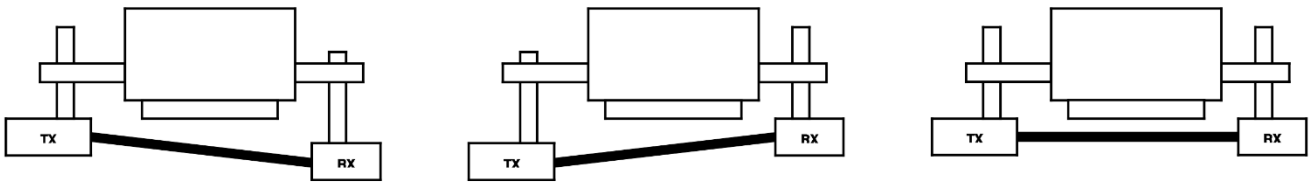
9. Verify that the bundle is still in its previous position (Figure 54). If the beam is in a different position (very probable situation), adjust the TX finely in the direction of arrows 3 and 4, without intervening on the calibration performed previously (movements indicated by arrows 1 and 2 in Figure 53).

Fig. 56



10. The lower edge of the laser emission must be parallel to the upper table (Figure 57), so that the value of the safety distance can be constant for the entire length of the upper tool.

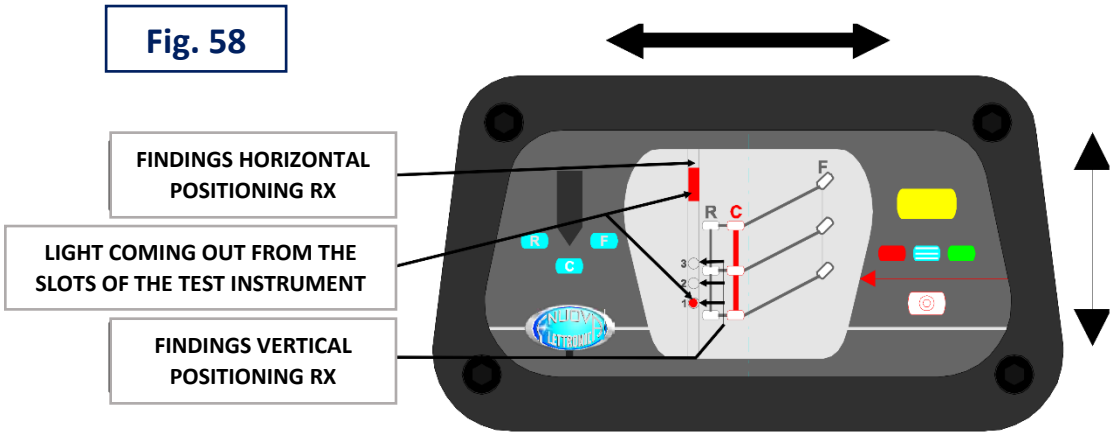
Fig. 57



WRONG **WRONG** **CORRECT**

11. After carrying out the calibrations with the test tool in the "point B" position, return it to the "point A" position and check that the emission is positioned as in Figure 50. Tighten the TX fixing screws to the pan / tilt. 12. Reposition the test instrument in the “point B” position and observe the front of the RX, “point C” which is illuminated by a portion of the laser beam coming out of the HORIZONTAL and VERTICAL POSITIONING SLOTS of the RX.

Fig. 58



13. Move RX horizontally so that the rectangular light is between the RX HORIZONTAL POSITIONING STRIKERS (Figure 58).

14. Move the RX vertically so that the circular light is inside one of the RX VERTICAL POSITIONING STRIKERS. The striker must be the one that has the same number as the line where the LOWER EDGE OF THE LASER EMISSION has been positioned (in this example inside the striker 1, Figure 54).

15. Remove the test tool from the machine.

16. Check that the GREEN LED lights up, confirming the alignment.

17. If not, act on the RX parallelism adjustment, as in point 5 was done for TX, thus obtaining the GREEN LED lighting.

18. Tighten the fixing screws of the RX to the pan / tilt.

THE CORRECT INSTALLATION OF THE SUPPORTS AND THE MECHANICAL ADJUSTMENT OF THE SAFETY DEVICES DSP LASER AP ASSUMES THAT, WITH EACH TOOL CHANGE OF THE BENDING PRESS, THE HEIGHT OF THE SAME IS SIMPLY ADJUSTED ACCORDING TO THE HEIGHT OF THE PUNCH WITHOUT INTERVENTION. ON HORIZONTAL ADJUSTMENT AND PARALLELISM.