

# The Ensat® in the workpiece ...

## Installation recommendation

The Ensat® should be processed appr. 0,1 – 0,2 mm recessed (fig. 4). After processing, the Ensat® can be immediately subjected to load. If the component material permits subsidence of the Ensat® under load, the Ensat® can only execute an axial movement of 0,1 to 0,2 mm. In other words, the pretension of the screw union is largely retained, loosening of the screw connection under dynamic load is impeded.

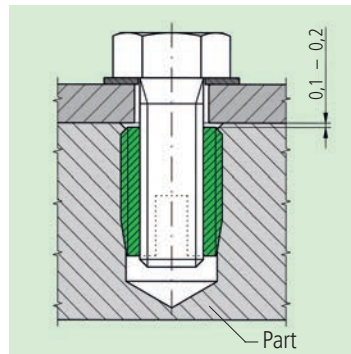


Fig. 4

## Example:

Female thread M8, recommended borehole diameter for

**Ensat®-S 302:**

10,9 to 11,2 mm

**Ensat®-SB 307/308:**

11,1 to 11,3 mm

(see Works Standard sheets)

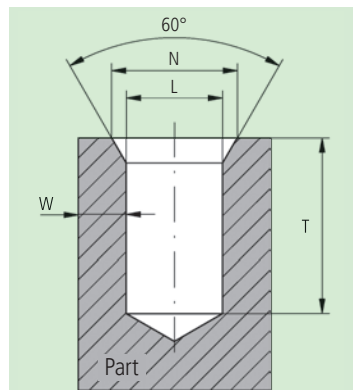
In case of processing problems (e.g. extreme screw-in torque levels), it is generally of no consequence. In case of doubt, it is worth testing this.

## Retaining hole

The receiving hole (L, fig. 5) can be simply drilled or already provided for in the casting.

Countersinking (N) the borehole (fig. 5) is recommended in order to:

- Prevent the workpiece surface from being raised
- Permit screwing in to a greater depth
- Ensure improved initial cutting characteristics



### Guideline values for countersink:

$$N = 0,06 \text{ to } 0,08 \times E + E$$

### Material thickness:

Smallest admissible material thickness  $\geq$  length of the Ensat®

### Depth of the blind hole T:

see Works Standard sheets, page 11 to 20

E = Outside diameter of the Ensat® [mm]

Fig. 5

## Borehole diameter

Brittle, tough and hard materials call for a larger borehole than soft or elastic materials. For guideline values, see the table above.

## Edge distance

The smallest still admissible edge distance W (fig. 5) depends on the planned stress level and the elasticity of the material into which the Ensat® is screwed.

Guideline values for plastic:

$$W \geq 0,25 \text{ to } 0,9 E$$

For moulding parts made of additionell plastic, the Ensat® achieved, due to the greater effective shearing area, a higher pullout strength as a direct screw coupling in the same application.