**Patent claims**

1. A device for handling a semiconductor wafer in an epitaxy reactor, comprising

a susceptor;

longitudinal holes extending through the susceptor;

a wafer lifting shaft;

wafer lifting pins, which are guided through the longitudinal holes;

a susceptor carrying shaft;

susceptor carrying arms;

susceptor support pins;

guide sleeves, which are anchored in the susceptor carrying arms; and

guide elements, which protrude from the guide sleeves and, at upper ends, have bores into which the wafer lifting pins are inserted, and which can be raised and lowered together with the wafer lifting pins by means of the wafer lifting shaft, wherein the guide elements and the wafer lifting pins have a different thermal expansion, and are manufactured with tolerances which are dimensioned in such a way that a clamping connection is formed between the guide elements and the wafer lifting pins at temperatures of more than 900°C.

2. The device as claimed in claim 1, wherein the susceptor carrying arms form a one-piece star-shaped element, which is screwed onto the upper end of the susceptor carrying shaft.

3. The device as claimed in claim 1 or claim 2, comprising upright elements, which are connected height-adjustably to the susceptor carrying arms at the outer ends of the latter and have axial bores into which the susceptor support pins are inserted, the susceptor support pins having spherically rounded heads.

4. The device as claimed in claim 3, comprising elongate blind holes on a rear side of the susceptor for receiving the spherically rounded heads of the susceptor support pins, the length and width of the blind holes increasing in the direction of the opening of the blind holes.

5. A method for producing a semiconductor wafer having an epitaxial layer, comprising

provision of a device as claimed in one of claims 1 to 4 in an epitaxy reactor;

placement of a semiconductor wafer on the wafer lifting pins;

placement of the semiconductor wafer on the susceptor by lowering the wafer lifting pins;

deposition of the epitaxial layer on the semiconductor wafer;

raising of the resulting semiconductor wafer with the epitaxial layer from the susceptor by raising the wafer lifting pins; and

removal of the semiconductor wafer with the epitaxial layer from the epitaxy reactor.

6. The method as claimed in claim 5, comprising the deposition of an epitaxial layer of silicon on a semiconductor wafer of monocrystalline silicon.