In an aspect, the present disclosure refers to a concrete shaping insert, which is formed to be arranged in a formwork mold before a concreting process, comprising a first and second fixing element, between which at least one displacement body is arranged, whereby: the displacement body has an interstitial tube, the first and second fixing element are connected to one another with at least one connecting component which proceeds through the interstitial tube, the connecting component has a first connecting element for mechanical coupling to the first fixing element and has a second connecting element for mechanical coupling to the second fixing element, and whereby the first connecting element has an elastic locking hook and/or the second connecting element has an elastic locking hook, characterized in that the elastic locking hook has a receptacle for a rod-shaped section of the first fixing element and an insertion gap through which the rod-shaped section of the first fixing element can be inserted into the receptacle.

The disclosure is achieved by a concrete shaping insert, which is characterized in that the displacement body has an interstitial tube and that the first fixing element and the second fixing element are connected to one another with at least one connecting component which proceeds through the interstitial tube. In an example, there is a Concrete shaping insert, which is formed to be arranged in a formwork mold before a concreting process, comprising a first and second fixing element, between which at least one displacement body is arranged, characterized in that the displacement body has an interstitial tube and that the first and second fixing element are connected to one another with at least one connecting component, which proceeds through the interstitial tube.
A further example is providing a method for producing a concrete shaping insert which can be used flexibly and which can be carried out easily.

The further example is achieved by a method, which is characterized in that at least one displacement body, which has an interstitial tube, in particular several displacement bodies, are arranged between a first fixing element and a second fixing element and that the first fixing element and the second fixing element are connected by means of a connecting component that proceeds through the interstitial tube.

The disclosure has a very special feature that a concrete shaping insert can be produced in a simple manner, with standard reinforcement parts that are advantageously available as the first and/or second fixing element, in particular simply and inexpensively, such as a simple reinforcing bar made of structural steel or a simple reinforcement bar Reinforcement mesh made of structural steel, can be used.

In particular, it is of particular advantage that the first fixing element and the second fixing element do not need to have a size or shape specially adapted for the displacement body to be used.

In particular, the present disclosure advantageously enables the required components to be delivered to the construction site in a space-saving manner and the concrete shaping insert to be produced on site by simply joining the components together, preferably without tools. It is particularly advantageous here, for example, if the first fixing element and the second fixing element are each formed as a simple reinforcing bar. Reinforcing bars of this type are available simply and inexpensively and can be transported in a space-saving manner.

In particular, the disclosure has the very special advantage that the space surrounding the displacement body, in particular the space surrounding the displacement body horizontally, can remain free and there is thus the possibility of using this space (in

Claims

1. Concrete shaping insert, which is formed to be arranged in a formwork mold before a concreting process, comprising a first and second fixing element, between which at least one displacement body is arranged, whereby: the displacement body has an interstitial tube, the first and second fixing element are connected to one another with at least one connecting component which proceeds through the interstitial tube, the connecting component has a first connecting element for mechanical coupling to the first fixing element and has a second connecting element for mechanical coupling to the second fixing element, and whereby the first connecting element has an elastic locking hook and/or the second connecting element has an elastic locking hook, characterized in that the elastic locking hook has a receptacle for a rod-shaped section of the first fixing element and an insertion gap through which the rod-shaped section of the first fixing element can be inserted into the receptacle.

2. Concrete shaping insert according to claim 1, characterized in that the connecting component can be fixed to the first fixing element without tools by means of the first connecting element and/or in that the connecting component can be fixed to the second fixing element without tools by means of the second connecting element.

3. Concrete shaping insert according to claims 1 or 2, characterized in that the first connecting element is formed as a locking device and/or in that the second connecting element is formed as a locking device.

4. Concrete shaping insert according to claim 1, characterized in that the locking hook engages around a section of the first fixing element, in particular a rod-shaped section of the first fixing element.

5. Concrete shaping insert according to claim 1, characterized in that the opening width of the insertion gap is smaller than the inner diameter of the receptacle.

6. Concrete shaping insert according to one of claims 1 to 5, characterized in that the second connecting element has an indentation for a rod-shaped section of the second fixing element.

7. Concrete shaping insert according to claim 6, characterized in that the second connecting element has a guide element, which is adjacent the indentation with a guide surface.

8. Concrete shaping insert according to one of claims 1 to 7, characterized in that the connecting component has an elongate web, wherein the first connecting element is arranged at one end of the web and the second connecting element is arranged at the other end of the web.

9. Concrete shaping insert according to one of claims 1 to 8, characterized in that the connecting component is formed in a manner that it can be fastened, in particular latching, initially to the first fixing element by means of the first connecting element, then it fastened by performing a pivoting movement, in particular latching can be connected to the second fixing element.

10. Concrete shaping insert according to one of claims 1 to 9, characterized in that the interstitial tube has a shape deviating from the circular shape in a cross-sectional plane perpendicular to its longitudinal direction or that the interstitial tube is polygonal, in particular square in cross-section.

11. Concrete shaping insert according to one of claims 1 to 10, characterized in that the displacement body is composed of a first displacement body part and a second displacement body part.

12. Concrete shaping insert according to Claim 11, characterized in that the first displacement body part has a first interstitial tube part and the second displacement body part has a second interstitial tube part, the first interstitial tube part and the second interstitial tube part together forming the interstitial tube.

13. Concrete shaping insert according to claim 12, characterized in that the first interstitial tube part has a first contact surface at the end, the second interstitial tube part has a second contact surface at the end, the first contact surface and the second contact surface in contact with one another and or in that there is a form-fit connection, in particular a tongue link, between the first interstitial tube part and the second interstitial tube part.

14. Concrete shaping insert according to one of claims 11 to 13, characterized in that the first displacement body part has a first connection device and that the second displacement body part has a second connection device, the first connection device and the second connection device working together and connect the first displacement body part and the second Connect the displacement body part.

15. Concrete shaping insert according to claim 14, characterized in that the first connecting device and the second connecting device are formed identically and/or in that the first connecting device and the second connecting device each have at least one locking element.

16. Concrete shaping insert according to one of claims 11 to 15, characterized in that the first displacement body part and the second displacement body part are each cover-shaped and can be connected or connected to one another by performing a connecting movement perpendicular to the plane of the cover opening by means of the connecting devices.

17. Concrete shaping insert according to one of claims 11 to 16, characterized in that the first displacement body part and the second displacement body part have a different height.

18. Concrete shaping insert according to one of claims 1 to 17, characterized in that the displacement body has a plurality of protruding members on its outside, or that the displacement body has a plurality of protruding members on its outside, which, starting from the outside, have a height in the domain of 10 mm to 25 mm, in particular in the domain from 15 mm to 20 mm, in particular from 15 mm or from 20 mm.

19. Concrete shaping insert according to one of claims 1 to 18, characterized in that the displacement body has on its outside at least one first bearing element with a, in particular formed as a trough, receptacle for a portion of the first fixing element and/or that the displacement body on its outside at least has a second bearing element with a receptacle, in particular formed as a trough, for a section of the second fixing element.

20. Concrete shaping insert according to one of claims 1 to 19, characterized in that the displacement body is placed between the first fixing element and the second fixing element or that the displacement body is placed by means of the connecting component between the first fixing element and the second fixing element.

21. Concrete shaping insert according to one of claims 1 to 20, characterized in that the at least one connecting component in each case exerts a force directed towards the displacement body on the first fixing element and the second fixing element.

22. Concrete shaping insert according to one of claims 1 to 21, characterized in that the connecting component is a component that is separate from the displacement body and/or manufactured separately.

23. Concrete shaping insert according to one of claims 1 to 22, characterized in that

a. the first fixing element has at least one rod, in particular a reinforcing rod, or characterized in that

b. the first fixing element has a rod, in particular a reinforcing bar, which is part of a reinforcement grid, or characterized in that

c. the first fixing element consists exclusively of a rod, in particular a reinforcing rod.

24. Concrete shaping insert according to one of claims 1 to 23, characterized in that

a. the second fixing element has at least one rod, in particular a reinforcing rod, or characterized in that

b. the second fixing element has a rod, in particular a reinforcing bar, which is part of a reinforcement grid, or characterized in that

c. the second fixing element consists exclusively of a rod, in particular a reinforcing rod.

25. Concrete shaping insert according to one of claims 1 to 24, characterized in that the first fixing element and second fixing element are arranged parallel to one another and/or that the first fixing element and second fixing element are arranged together in a symmetry plane of the at least one displacement body.

26. Concrete shaping insert according to one of claims 1 to 25, characterized in that a plurality of displacement bodies are present which have an interstitial tube, the first fixing element and the second fixing element being connected to one another with a connecting component each which proceed through the interstitial tubes.

27. Concrete shaping insert according to claim 26, characterized in that adjacent displacement bodies are connected directly to one another with a displacement body connector.

28. Concrete component, in particular concrete ceiling, containing at least one concrete shaping insert according to one of claims 1 to 27.