CLAIMS

1. Food- or feed-extruder cooling die (1), with
   - i) an inlet end (3) which can be secured on a food extruder respectively feed extruder (E) and at which extrudate can be introduced into the cooling die (1);
   - ii) an outlet end (5), at which cooled extrudate can be discharged;
   - iii) an extrudate flow channel (6), which extends essentially from the inlet end to the outlet end;
   - iv) at least one coolant flow channel (7), to which the extrudate flow channel (6) has heat-transfer connection;

   wherein in cross section (X-X) in relation to the main flow direction (8)
   - v) the extrudate flow channel (6) is essentially configured as ring section; and
   - vi) an external wall (9) of the extrudate flow channel (6) is formed at least from a first segment (10) and a second segment (11), wherein the first segment and the second segment are connected to one another via mechanical connection elements (12).

2. The cooling die (1) according to claim 1, wherein in cross section (X-X) in relation to the main flow direction (8), the extrudate flow channel (6) is essentially configured as ring section, in particular as circular ring section, of at least 300°, preferably at least 325°, particularly preferably at least 350°.

3. The cooling die (1) according to claim 1 or 2, wherein in the region of the cross section (X-X) not covered by the ring section of the extrudate flow channel (6), a supportive structure (13) for an internal wall (14) of the extrudate flow channel (6) is arranged, extending essentially over the entire length of the cooling tool (1).

4. The cooling die (1) according to any of claims 1 to 3, wherein an internal wall (14) of the extrudate flow channel (6) is essentially of cylindrical, in particular hollow cylindrical, configuration.

5. The cooling die (1) according to claim 4, wherein the internal wall (14) of the extrudate flow channel (6) is configured as single piece.

6. The cooling die (1) according to any of claims 1 to 5, wherein in operating condition, the external wall (9) of the extrudate flow channel (6) is of cylindrical, in particular hollow cylindrical, configuration.

7. The cooling die (1) according to any of claims 3 to 6, wherein the first segment (10) and the second segment (11) of the external wall (9) of the extrudate flow channel (6) are secured on the supportive structure (13) by means of mechanical connection elements (12).

8. The cooling die (1) according to claim 7, wherein the first segment (10) and the second segment (11) of the external wall (9) of the extrudate flow channel (6) have been secured on the supportive structure (13) in an articulated and/or pivotable manner.

9. The cooling die (1) according to any of claims 1 to 8 wherein in the region of the inlet end (3), an in particular exchangeable distributor (15) is arranged, which is configured in such a manner that extrudate can be introduced from a discharge channel of a food extruder respectively feed extruder (E) via a single distributor channel (17) into the extrudate flow channel (6) which is configured as ring section.

10. The cooling die (1) according to claim 9, wherein the distributor (15) comprises a distributor element (15a) which is configured as cone, in particular circular cone, or truncated cone, in particular truncated circular cone.

11. The cooling die (1) according to any of claims 9 or 10, wherein in the region of the distributor, in particular in a region of the end of the distributor (15) that faces away from the extruder and/or in a region of the end of the distributor (15) that faces towards the extruder, there is or there can be arranged, an aperture (18,18‘), which aperture (18,18‘) can narrow, or narrows, the distributor channel (17).

12. The cooling die(1) according to any of claims 9 to 11, wherein the distributor (15) is provided with one or more cooling channels (19) for the external and/or internal cooling of the distributor channel (17).

13. The cooling die (1) according to any of claims 1 to 12, wherein at least one coolant flow channel (7a,7b,7b‘), which has heat-transfer connection to the extrudate flow channel (6) is present

- on the internal side of the extrudate flow channel (6); and/or
- on the external side of the extrudate flow channel (6).

14. The cooling die (1) according to claim 3 and 13, wherein the at least one coolant flow channel (7a,7b,7b‘) on the internal side of the extrudate flow channel can be supplied with coolant via the supportive structure (13).

15. A cooling die (1), in particular according to any of claims 11 to 14, with an aperture in the region of a distributor channel, wherein the aperture narrows the distributor channel and in particular is configured as pinhole or as aperture with segmented slots that are configured as circular segments.