



Technical parameters and design specifications

Below is a detailed summary of the technical specifications for the multi-row die, compiled directly from the design documentation:

Overall dimensions and tolerances of the body:

- **Total length of the tool:** 4,000 millimetres.
- **Cross-sectional profile:** a square with a side length of 120 millimetres.
- **Tolerance on the external dimension:** 120 millimetres, with a deviation ranging from minus 0.1 millimetres to minus 0.05 millimetres.
- **Geometric precision:** the error in parallelism and straightness of the die along its entire length does not exceed 0.05 millimetres.

Geometry of the bending channels and V-grooves:

- **Main upper channel:** a wide opening measuring 90 millimetres with side sections of 30 millimetres each.
- **Main lower channel:** an opening 60 millimetres wide.
- **Set of side channels:** the tool is equipped with a series of grooves with widths of 45 mm, 36 mm, 24 mm, 16 mm, 12 mm, 10 mm and 8 mm.
- **Bending angles:** all standard V-channels have an opening angle of 86 degrees.
- **Working edge radii:** R9 and R5 radii are used for the largest channels. The remaining edges are

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finished with R4, R3 and R2 radii to protect the material from damage.



Installation details and finish specifications

- **Stabilisation system:** the die has two mounting holes for M16 bolts, 40 millimetres deep.
- **Final machining of the body:** sharp edges at both ends of the die have been safely rounded off with a wide 5 by 45-degree chamfer.
- **Finish of external edges:** a longitudinal external chamfer on the body, type 1 at 45 degrees, applied at four points along the profile.
- **Additional technical parameters:** relief channels measuring 2 by 2 millimetres have been machined in the bottoms of the working channels. All channel radii not marked on the drawing are R 0.5 millimetres.

*The photographs are for illustrative purposes only; the main photograph shows the cross-sectional shape of the tool as depicted in the technical drawing (without indicating the length), whilst the side photograph provides an example of how such a segment would look in reality