

Blank Calculations and Tolerances

Calculations

Sheet development:

$$A = [(d + s) \times \pi] + O$$

A = sheet development [mm]

d = Body blank inside diameter (round up to two decimal digits) [mm]

s = Sheet thickness [mm]

$\pi = 3.14159$

O = Overlap

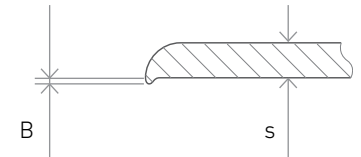
Burr:

$$B = \max. 0.15 \times s$$

Example:

$$s = 0.20 \text{ mm}$$

$$B = 0.15 \times 0.20 \text{ mm} = 0.03 \text{ mm}$$

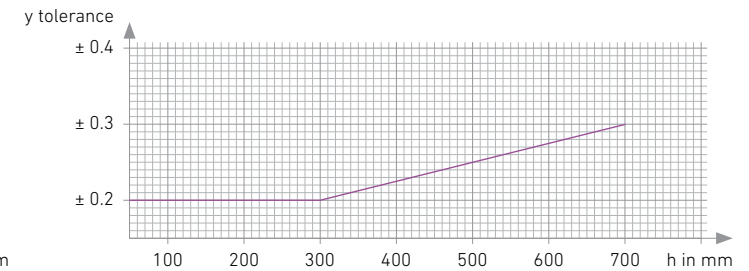
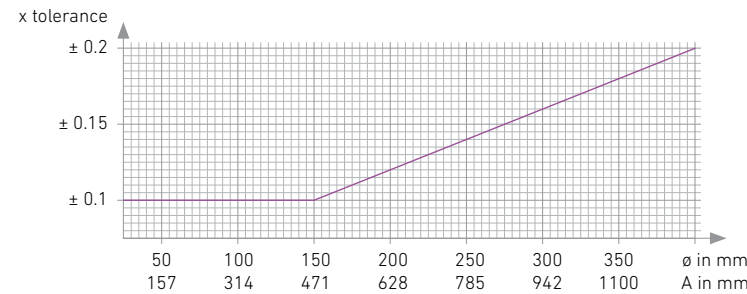


Tolerances

Development tolerance

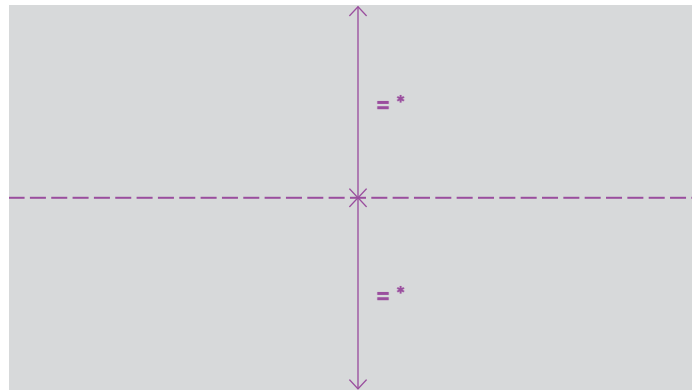


Angular tolerance



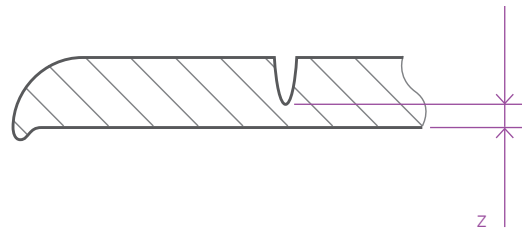
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Scoring line



* The scoring line must always be exactly in the middle of the cylinder height. Both, the deviation of the score line (in height) as well as the offset at the welded seam (at the side), must be within ± 0.1 mm. Larger deviations may result in problems because the score line is no longer flush with the parter.

Wall thickness after scoring



z = Residual wall thickness after scoring must be 0.05 mm with a tolerance of ± 0.005 mm and must not exceed 30% of sheet thickness. A scored blank must break when folded at an angle of 90° .