

TOLERANCES FOR CHILL CASTING

No responsibility is taken for the correctness of this information

Dimensional deviations at raw formed parts made of light metal alloys produced by chill casting mainly depend on:

- the dimensional exactness of the chill defined by the class of accuracy;
- the position of the chill parting line, of cores and sliders defined by the division of dimensions into bound to the mold and not bound to the mold;
- the nominal dimensions.

Table 3. Allowable deviations for linear dimensions (length, width, height, distance from center to center, diameter, curves)

Genauigkeitsgrad	Formabhängigkeit	Nennmaßbereich													
		bis 18	über 18 bis 30	über 30 bis 50	über 50 bis 80	über 80 bis 120	über 120 bis 180	über 180 bis 250	über 250 bis 315	über 315 bis 400	über 400 bis 500	über 500 bis 630	über 630 bis 800	über 800 bis 1000	über 1000 bis 1250
GTA 15/5	formgebunden	± 0,45	± 0,5	± 0,6	± 0,75	± 0,85	± 1	± 1,2	± 1,3	± 1,4	± 1,6	± 1,7	± 2	± 2,3	± 2,6
	nicht formgebunden	± 0,55	± 0,65	± 0,8	± 0,95	± 1,1	± 1,3	± 1,5	± 1,6	± 1,8	± 2	± 2,2	± 2,5	± 2,8	± 3,3

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Table 2. Allowable deviations for thickness dimensions without tolerance indication (wall thickness, bars, ribs)

Class of accuracy	Function of mold	Nominal dimension range		
		up to 6	over 6 up to 10	over 10 up to 18
GTA 15/5	bound to the mold	± 0,6	± 1,2	± 1,8
	not bound to the mold	± 0,8	± 1,5	± 2,2

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Dimensions bound to the mold are dimensions in the same part of the mold.

Dimensions not bound to the mold are dimensions formed by the interaction of movable mold parts such as wall thickness and bottom thickness dimensions or dimensions influenced by inserts or sliders.