

# Geometrical tolerance grades (aluminum)

Nominal dimensions of the casting part		Tolerance for straightness (mm)				Tolerance for flatness (mm)			
		GCTG 4	GCTG 5	GCTG 6	GCTG 7	GCTG 4	GCTG 5	GCTG 6	GCTG 7
0	bis 10	0,18	0,27	0,40	0,60	0,27	0,40	0,60	0,90
>10	bis 30	0,27	0,40	0,60	0,90	0,40	0,60	0,90	1,40
>30	bis 100	0,40	0,60	0,90	1,40	0,60	0,90	1,40	2,00
>100	bis 300	0,60	0,90	1,40	2,00	0,90	1,40	2,00	3,00
>300	bis 1.000	0,90	1,40	2,00	3,00	1,40	2,00	3,00	4,50
		Sand casting - hand moulded				Sand casting – hand moulded			
		Sand casting – machine moulded				Sand casting – machine moulded			

  

Nominal dimensions of the casting part		Round, parallel, angular, symmetric (mm)				Tolerance for coaxiality (mm)			
		GCTG 4	GCTG 5	GCTG 6	GCTG 7	GCTG 4	GCTG 5	GCTG 6	GCTG 7
0	bis 10	0,40	0,60	0,90	1,40	0,60	0,90	1,40	2,00
>10	bis 30	0,60	0,90	1,40	2,00	0,90	1,40	2,00	3,00
>30	bis 100	0,90	1,40	2,00	3,00	1,40	2,00	3,00	4,50
>100	bis 300	1,40	2,00	3,00	4,50	2,00	3,00	4,50	7,00
>300	bis 1.000	2,00	3,00	4,50	7,00	3,00	4,50	7,00	10,00
		Sand casting – hand moulded				Sand casting – hand moulded			
		Sand casting – machine moulded				Sand casting – machine moulded			



- Casting features with draft angle need wider tolerances. The tolerances do not apply to casting concave fillets, casting radii and chamfers.
- Worse values apply to small quantities, vibrating pressing and spare parts. Medium values for series on molding machine. Better values after separate coordination of reference system, pattern design and casting technology with the complexity of the cast parts.
- Tolerance information following ISO 8062-3 for sand casting