



TOLERANCES FOR DIE CASTING (ALUMINIUM AND MAGNESIUM)

At die casting, the procedural tolerances result from the mold shape, the used aluminium alloys and the applied die casting techniques. For the formed parts made by G.W.P., you can apply the following tolerances as reference.

No responsibility is taken for the correctness of this information

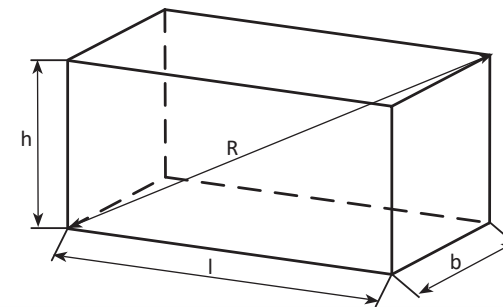
Dimensional deviations at die casting parts made of light alloys mainly depend on:

- the dimensional and functional accuracy of the die casting mold;
- the position of the mold parting line, defined by the division of the dimensions into mold related and not mold related;
- the form and the size of the formed part, marked by the space diagonal, and
- the nominal dimensions

Specification of the space diagonal:

- The space diagonal R is specified by the biggest dimensions of the formed part.
- It is calculated by the nominal dimensions of the prismatic surrounding body which defines any formed part.

$$R = \sqrt{l^2 + b^2 + h^2} \quad (\text{space diagonal})$$



comprehensive

Manufacturing Services

Customer-specific components, assemblies and housings in metal and plastic.

Partner along the value chain.



DIE CASTING TOLERANCES FOR LINEAR DIMENSIONS WITHOUT TOLERANCE INDICATION (length, width, height, distance from center to center, diameter, curves)

| Range of the dimension of the space diagonal | | Nominal dimension range | | | | | | | | | | |
|---|--------|-------------------------|------------|------------|------------|------------|--------|-------|-------|-------|-------|--|
| | | ≤ 10 | >10 ≤16 | >16 ≤25 | >25 ≤40 | >40 ≤50 | | | | | | |
| ≤ 50 | DCTG 6 | ± 0,26 | ± 0,27 | ± 0,29 | ± 0,32 | ± 0,35 | | | | | | |
| | | | | | | | | | | | | |
| > 50 ≤ 180 | DCGT 7 | ± 0,37 | ± 0,39 | ± 0,41 | ± 0,45 | ± 0,5 | ± 0,55 | ± 0,6 | ± 0,7 | | | |
| | | | | | | | | | | | | |
| > 180 ≤ 500 | DCGT 8 | ± 0,5 | ± 0,55 | ± 0,6 | ± 0,65 | ± 0,7 | ± 0,8 | ± 0,9 | ± 1 | ± 1,1 | ± 1,3 | |
| | | | | | | | | | | | | |

No responsibility is taken for the correctness of this information

comprehensive

Manufacturing Services

Customer-specific components, assemblies and housings in metal and plastic.

Partner along the value chain.



DIE CASTING TOLERANCES FOR THICKNESS DIMENSIONS WITHOUT TOLERANCE INDICATION (wall thickness, bars, ribs)

| Range of the dimension of the space diagonal | | Nominal dimension range | |
|---|---------|-------------------------|---------|
| | | ≤ 10 | >10 ≤16 |
| ≤ 50 | DCTG 7 | ± 0,37 | ± 0,39 |
| | | ± 0,37 | ± 0,39 |
| > 50 ≤ 180 | DCTG 8 | ± 0,5 | ± 0,55 |
| | | ± 0,5 | ± 0,55 |
| > 180 ≤ 500 | DCTG 9 | ± 0,75 | ± 0,8 |
| | | ± 0,75 | ± 0,8 |
| > 500 | DCGT 10 | ± 1 | ± 1,1 |
| | | ± 1 | ± 1,1 |

comprehensive

Manufacturing Services

Customer-specific components, assemblies and housings in metal and plastic.

Partner along the value chain.