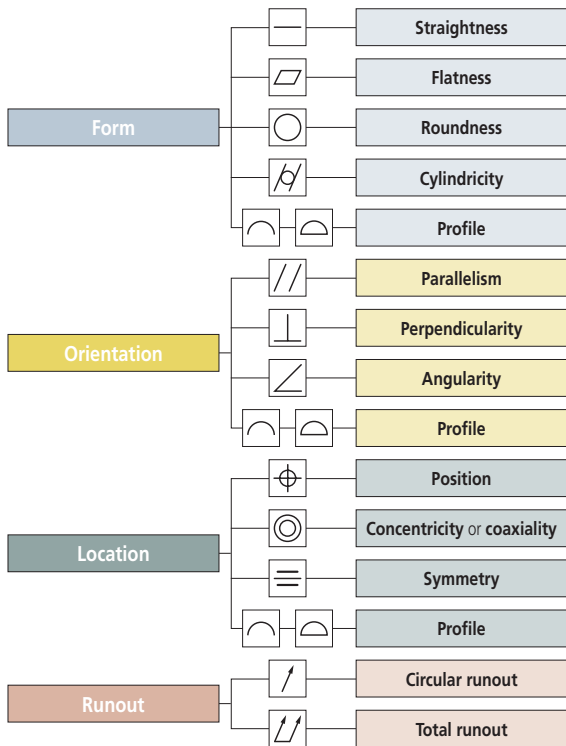


Geometric Tolerancing Symbols



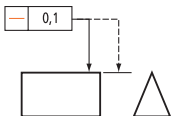
Note:

EN ISO 1101 Geometrical Product Specifications (GPS). Geometrical tolerancing. Tolerances of form, orientation, location and run-out should be consulted for full details.

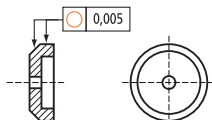
Geometric Tolerancing Symbols

> Examples of use

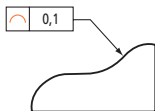
Straightness



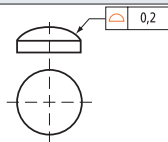
Roundness



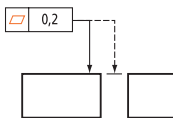
Profile of any line



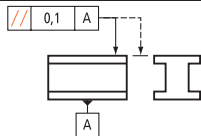
Profile of any surface



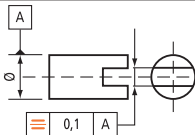
Flatness



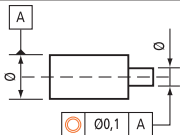
Parallelism



Symmetry



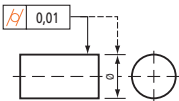
Concentricity or coaxiality



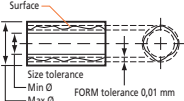
Geometric Tolerancing Symbols

> Examples of interpretation

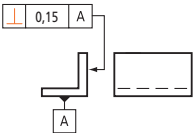
Cylindricity



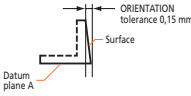
Interpretation:
surface to lie within 2 concentric cylinders 0,01 mm different in radius



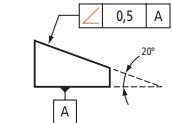
Perpendicularity



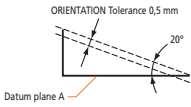
Interpretation:
surface to lie within 2 parallel planes 0,15 mm apart set perpendicular to datum A



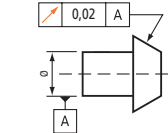
Angularity



Interpretation:
surface to lie within 2 parallel planes 0,5 mm apart set at 20 degrees to datum A



Circular runout



Interpretation:
any line on surface to lie within 2 circles concentric with datum A and 0,02 mm apart in the direction normal to the surface

