

GD&T Controls

Mechanical Engineering

The families of geometric control, named in plain words.

Symbols appear on the drawing; these are the names behind them.

Group	Controls	What it limits
Form	Flatness, straightness	The shape of one feature
Form	Circularity, cylindricity	Roundness, needs no datum
Orientation	Perpendicularity, parallelism	Angle relative to a datum
Location	Position, concentricity	Where a feature sits
Runout	Circular and total runout	Wobble about an axis
Profile	Line and surface profile	The whole boundary

Form controls need no datum. Orientation, location and runout all reference at least one datum feature.