

Brief Description on VDI 3441 Accuracy.

Positional Accuracy

Positioning Uncertainty (P) This is the overall deviation being calculated based for every position, average distinctive number: - Position Deviation (Pa) - Backlash (U) - Position Scatter (Ps) The uncertainty contains both random and systematic errors

Position Scatter (Ps)

Due to circumstantial errors a bandwidth can be determined statistically. It can be stated with a certain reliability (in this case $\pm 3s$) that all the circumstantial errors are within this bandwidth.

Maximum Position Scatter (Ps, max) The maximum value of all calculated position scatter values.

Position Deviation (Pa) At all positions the difference between the maximum value and the minimum value of the averages, calculated from translations in both directions.

Reversal Error

Reversal error (U) At every measured position the difference between the average of measurements moving in one direction and the average of measurements moving in the other direction (systematic error).

Maximum reversal error (U max) The maximum value of all calculated backlashes.

Average reversal error (U mean) The average value of all calculated backlashes.