



Miniature Bearings Australia

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Bearing Precision

AISI440C and SAE52100

- Bearings are manufactured to various precision grades. The precision grade of a bearing ultimately affects the bearing's performance. As the precision grade increases from ISO P0 upwards towards ABEC 9, the price generally increases and bearing performance increases. It must be remembered however that even the highest grade bearing will fail very quickly if subjected to adverse conditions.



316 Stainless Steel and Plastic

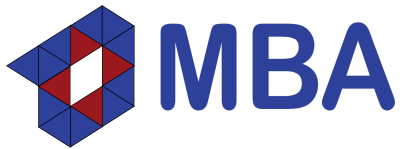
- 316 Stainless Steel is not as readily machineable as 440C grade stainless steel, so tolerances are not comparable to those listed for 440C. Also note that 316 Stainless Steel is a substantially softer material than 440C.
- Acetal bearings have a set of tolerances similar to 316 Stainless Steel.
- 316 Stainless Steel and Acetal bearings are meant for relatively low loaded, slow speed applications.

Tolerances in Simple Terms:

A tolerance is the amount of variation allowed. If I require a box of 1000 screws +/- 5, this means I can accept a box containing anything from 995 to 1005 screws. If a supplier states they can supply a box of 1000 +/- 2, this means their box contains anything from 998 to 1002 screws. The higher accuracy still meets my requirement of +/- 5. The same principle applies for tolerances of size, clearance, hardness or anything else.



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See also

[Bearing Tolerances for 440C & Chrome Steel](#)

[Bearing Tolerances for 316 Stainless & Plastic](#)

[Measuring Small Parts](#)

