

# Dimensional tolerances for cold drawn phosphor bronze

Alloys C51000, C52100, C53400, C54400

Manufactured to:



Designation: B139/B139M-12(2024)

Standard Specification for  
Phosphor Bronze Rod, Bar and  
Shapes

Tolerances to:



Designation: B249/B249M-23

Standard Specification for  
General Requirements for Extruded  
and Drawn Copper and Copper-  
Alloy Rod, Bar, Shapes and Forgings

## Diameter tolerance

|                                | Round                 | Hexagon & octagon         |
|--------------------------------|-----------------------|---------------------------|
| Up to 0.500" inclusive         | +/- 0.002"            | +/- 0.004"                |
| Over 0.500" to 1.00" inclusive | +/- 0.003"            | +/- 0.005"                |
| Over 1.00" to 2.00" inclusive  | +/- 0.004"            | +/- 0.006"                |
| Over 2.00"                     | 0.20% of the diameter | 0.40% of the flat to flat |

**Example of the over 2" diameter tolerance:**

2.5" diameter x 0.002 (0.20%) = 0.005". Therefore, the tolerance would be +/- 0.005"

2.5" hexagon x 0.004 (0.40%) = 0.010". Therefore, the tolerance would be +/- 0.010"