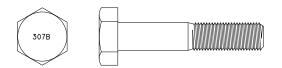


## Earnest Technical Bulletin Heavy Hex Head Bolts

A307 Grade B



Earnest Machine Products line of A307 Heavy Hex Bolts are manufactured to the material and physical properties specified by the American Society for Testing and Materials standard ASTM A307 for Grade B. The overall dimensions are made to the requirements of ASME B18.2.1 for heavy hex bolts.

Grade B heavy hex bolts are commonly used in applications where the bolt strength needs to be controlled so that if a problem arises the bolt will shear before a more expensive component of the machinery breaks. A307 Grade B bolts have a minimum and maximum tensile strengths that they must achieve (most grades of fasteners only list a minimum tensile strength).

The heavy hex designs ensures that the clamp loads developed in the assembly are distributed over a larger area than standard hex heads and the heavy hex also provides a larger wrenching area to resist rounding out of the head.

## **Physical Properties:**

| <b>Tensile Strength</b> |             | Elongation | Hardness   |
|-------------------------|-------------|------------|------------|
| Min                     | Max         | Min        |            |
| 60,000 psi              | 100,000 psi | 18% min    | Rb 69 / 95 |

Earnest Machine Products recommends the use of Grade 2 (carbon steel) Heavy Nuts and USS carbon steel washers with A307 bolts.

5/3/12