

How Strong Is It?

Bolted Closure Strength

5/16-18 UNC Grade 5 steel bolts - tensile strength 120000psi

Holding force 16 Grade 5 bolts - 88357 lbs

Failure pressure 16 Grade 5 bolts - 3719 psi

5/16-18 UNC Grade 8 steel bolts - tensile strength 140000psi

Holding force 16 Grade 8 bolts - 103083 lbs

Failure pressure 16 Grade 8 bolts - 4339 psi

*The Industrial Fastener Institute (7th ed. 2003. B-8) states that shear strength is approximately 60% of the minimum tensile strength.

Case Burst Pressure- no groove

6061-T6 aluminum 6"OD x .250"wall – using yield 35ksi, ultimate 42ksi

2917 psi yield strength

3500 psi ultimate strength

Case Burst Pressure- at .100" maximum groove, tolerance +.020"

6061-T6 aluminum 6"OD x .250"wall – using yield 35ksi, ultimate 42ksi

1517 psi yield strength

1820 psi ultimate strength

Yield- when material begins to deform

Ultimate- when material begins fracture

Bolt tensile- bolt material strength with no threads

