**METRIC CONVERSION CHART**

### Guage or Diameter

No. 0000 | 0.021 | .53  
No. 000  | 0.034 | .86  
No. 00   | 0.047 | 1.19 
No. 0    | 0.060 | 1.524
No. 1    | 0.073 | 1.854
No. 2    | 0.086 | 2.184
No. 3    | 0.099 | 2.515
No. 4    | 0.112 | 2.845
No. 5    | 0.125 | 3.175
No. 6    | 0.138 | 3.505
No. 8    | 0.164 | 4.166
No. 10   | 0.190 | 4.826
No. 12   | 0.216 | 5.484

### Fastener Conversion Chart

<table>
<thead>
<tr>
<th>Inch Equivalent</th>
<th>Metric Size-Pitch</th>
<th>ISO and IFI Rec.</th>
</tr>
</thead>
<tbody>
<tr>
<td>UNF</td>
<td>UNF</td>
<td></td>
</tr>
<tr>
<td>1 - 64</td>
<td>1 - 72</td>
<td>M2 x 0.4</td>
</tr>
<tr>
<td>3 - 48</td>
<td>3 - 56</td>
<td>M2.5 x 0.45</td>
</tr>
<tr>
<td>4 - 40</td>
<td>4 - 48</td>
<td>M3 x .05</td>
</tr>
<tr>
<td>6 - 32</td>
<td>6 - 40</td>
<td>M3.5 x .06</td>
</tr>
<tr>
<td>8 - 32</td>
<td>8 - 36</td>
<td>M4 x .07</td>
</tr>
<tr>
<td>10 - 24</td>
<td>10 - 32</td>
<td>M5 x .08</td>
</tr>
<tr>
<td>1/4 - 20</td>
<td>1/4 - 28</td>
<td>M6 x 1</td>
</tr>
<tr>
<td>5/16 - 18</td>
<td>5/16 - 24</td>
<td>M8 x 1.25</td>
</tr>
<tr>
<td>3/8 - 16</td>
<td>3/8 - 24</td>
<td>M10 x 1.5</td>
</tr>
<tr>
<td>7/16 - 14</td>
<td>7/16 - 20</td>
<td>M12 x 1.75</td>
</tr>
<tr>
<td>1/2 - 13</td>
<td>1/2 - 20</td>
<td>M14 x 2</td>
</tr>
<tr>
<td>5/8 - 11</td>
<td>5/8 - 18</td>
<td>M18 x 2</td>
</tr>
<tr>
<td>3/4 - 10</td>
<td>3/4 - 16</td>
<td>M20 x 2.5</td>
</tr>
<tr>
<td>1 - 8</td>
<td>1 - 12</td>
<td>M24 x 3</td>
</tr>
<tr>
<td>1-1/16 - 7</td>
<td>1-1/8 - 12</td>
<td>M30 x 3.5</td>
</tr>
<tr>
<td>1-1/2 - 6</td>
<td>1-1/4 - 12</td>
<td>M36 x 4</td>
</tr>
</tbody>
</table>

### MINIMUM STRENGTHS

**METRIC**

(ISO 898)

- Grade: 4, 8 (4.6, 5.8)
  - Tensile: 429 MPa (60,900 psi)
- Grade: 2
  - Tensile: 60,000 psi
- Grade: 5
  - Tensile: 120,000 psi
- Grade: 8
  - Tensile: 150,000 psi
- Grade: ASTM-A574
  - Tensile: 170,000 psi (Generally Not Marketed)

**INCH**

(SAE J429)

- No Marking

Grade: 8.8
- Tensile: 830 MPa (120,350 psi)
Grade: 10.9
- Tensile: 1040 MPa (150,800 psi)
Grade: 12.9
- Tensile: 1220 MPa (176,900 psi)
### Approximate Equivalency Chart
**Roughly Equivalent US Bolt Materials**

<table>
<thead>
<tr>
<th>Metric Nut Class</th>
<th>SAE J429 Normally Used</th>
<th>Grades</th>
<th>ASTM Grades</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.6</td>
<td>4 or 5</td>
<td>1</td>
<td>A306, Grade A</td>
</tr>
<tr>
<td>4.8</td>
<td>4 or 5</td>
<td>2</td>
<td>*</td>
</tr>
<tr>
<td>5.8</td>
<td>5</td>
<td>2</td>
<td>*</td>
</tr>
<tr>
<td>8.8</td>
<td>8</td>
<td>5</td>
<td>A325, A449</td>
</tr>
<tr>
<td>9.8</td>
<td>9</td>
<td>5+</td>
<td>A193, B7 and B16</td>
</tr>
<tr>
<td>10.9</td>
<td>10 or 12</td>
<td>8</td>
<td>A490, A354, Grade 8D</td>
</tr>
<tr>
<td>12.9</td>
<td>10 or 12</td>
<td>.</td>
<td>A540, B21 through B24</td>
</tr>
</tbody>
</table>

**Common DIN Numbers for Metric Fasteners**

**DIN**

- Hex Capscrews
  - 931 Coarse thread pitch partially threaded (specify grade)
  - 933 Coarse thread pitch fully threaded (specify grade)
  - 930 Fine thread pitch partially threaded (specify grade)
  - 961 Fine thread pitch fully threaded (specify grade)

**DIN**

- Nuts
  - 934 Hex nuts (specify pitch and class)
  - 985 Nylon insert locknuts (specify pitch and class)
  - 980V All metal locknuts (specify pitch and class)

**DIN**

- Washers
  - 125 Flatwashers
  - 127 Lockwashers

**DIN**

- Socket Products
  - 912 Socket head capscrews (normally GR 12.9 and coarse thread)
  - 7991 Flat head socket capscrews (normally GR 12.9 and coarse thread)
  - 916 Socket setscrews (normally GR 12.9 and coarse thread)

**DIN**

- Machine Screws
  - 7985 Pan head Phillips drive zinc plated
  - 965 Flat head Phillips drive zinc plated

**DIN**

- Threaded Rod
  - 975 All threaded rod (normally 1 meter lengths, specify grade and pitch)