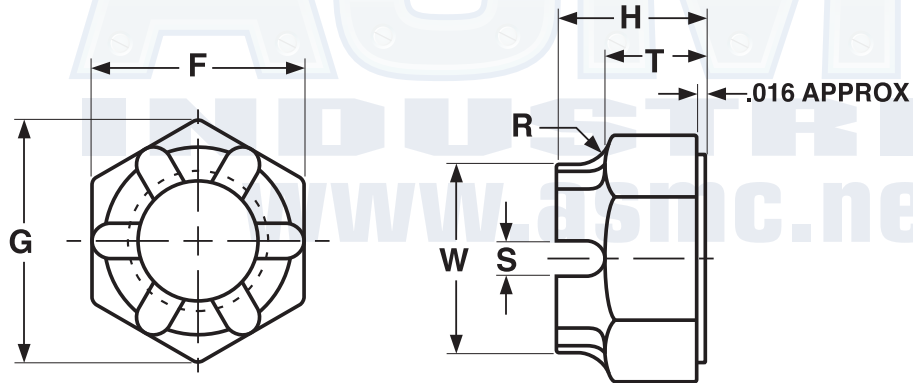


**HEX CASTLE** **Carbon Steel**



| HEX CASTLE NUTS   |                    |        |       |                         |       |       |           |       |       |  |      |      |                  |       |                     |                                   | ANSI<br>B18.2.2<br>1970             |
|---|--------------------|--------|-------|-------------------------|-------|-------|-----------|-------|-------|--|------|------|------------------|-------|---------------------|-----------------------------------|-------------------------------------|
| Nominal Size<br>or Basic Major<br>Diameter of<br>Thread | F                  |        |       | G                       |       |       | H         |       |       | T  |      |      | S                |       | R                   | W                                 | Runout of<br>Bearing<br>Surface FIR |
|   | Width Across Flats |        |       | Width Across<br>Corners |       |       | Thickness |       |       | Unslotted<br>Thickness and<br>Height of Flat |      |      | Width of<br>Slot |       | Radius<br>of Fillet | Diam. of<br>Cylindri-<br>cal Part |                                     |
|   | Basic              | Max    | Min   | Max                     | Min   | Basic | Max       | Min   | Nom   | Max  | Min  | Max  | Min              | +0.10 | Min                 | Max                               |                                     |
| 1/4   | 0.2500             | 7/16   | 0.438 | 0.428                   | 0.505 | 0.488 | 9/32      | 0.288 | 0.274 | 3/16   | 0.20 | 0.18 | 0.10             | 0.07  | 0.094               | 0.371                             | 0.015                               |
| 5/16  | 0.3125             | 1/2    | 0.500 | 0.489                   | 0.577 | 0.557 | 21/64     | 0.336 | 0.320 | 15/64  | 0.24 | 0.22 | 0.12             | 0.09  | 0.094               | 0.425                             | 0.016                               |
| 3/8   | 0.3750             | 9/16   | 0.562 | 0.551                   | 0.650 | 0.628 | 13/32     | 0.415 | 0.398 | 9/32   | 0.29 | 0.27 | 0.15             | 0.12  | 0.094               | 0.478                             | 0.017                               |
| 7/16  | 0.4375             | 11/16  | 0.688 | 0.675                   | 0.794 | 0.768 | 29/64     | 0.463 | 0.444 | 19/64  | 0.31 | 0.29 | 0.15             | 0.12  | 0.094               | 0.582                             | 0.018                               |
| 1/2   | 0.5000             | 3/4    | 0.750 | 0.736                   | 0.866 | 0.840 | 9/16      | 0.573 | 0.552 | 13/32  | 0.42 | 0.40 | 0.18             | 0.15  | 0.125               | 0.637                             | 0.019                               |
| 9/16  | 0.5625             | 7/8    | 0.875 | 0.861                   | 1.010 | 0.982 | 39/64     | 0.621 | 0.598 | 27/64  | 0.43 | 0.41 | 0.18             | 0.15  | 0.156               | 0.744                             | 0.020                               |
| 5/8   | 0.6250             | 15/16  | 0.938 | 0.922                   | 1.083 | 1.051 | 23/32     | 0.731 | 0.706 | 1/2  | 0.51 | 0.49 | 0.24             | 0.18  | 0.156               | 0.797                             | 0.021                               |
| 3/4   | 0.7500             | 1-1/8  | 1.125 | 1.088                   | 1.299 | 1.240 | 13/16     | 0.827 | 0.798 | 9/16   | 0.57 | 0.55 | 0.24             | 0.18  | 0.188               | 0.941                             | 0.023                               |
| 7/8   | 0.8750             | 1-5/16 | 1.312 | 1.269                   | 1.516 | 1.447 | 29/32     | 0.922 | 0.890 | 21/32  | 0.67 | 0.64 | 0.24             | 0.18  | 0.188               | 1.097                             | 0.025                               |
| 1   | 1.0000             | 1-1/2  | 1.500 | 1.450                   | 1.732 | 1.653 | 1         | 1.018 | 0.982 | 23/32  | 0.73 | 0.70 | 0.30             | 0.24  | 0.188               | 1.254                             | 0.027                               |
| 1-1/4   | 1.250              | 1-7/8  | 1.875 | 1.812                   | 2.165 | 2.066 | 1-1/4     | 1.272 | 1.228 | 7/8  | 0.89 | 0.86 | 0.40             | 0.31  | 0.250               | 1.570                             | 0.033                               |

|                                     |  |
|-------------------------------------|--|
| <b>Description</b>                  | Similar to a slotted nut with the following exception: the slots are cut into a cylindrical portion that is equal in length to the slot depth and slightly smaller in diameter than the hex width.                     |
| <b>Applications/<br/>Advantages</b> | The slots are for the insertion of a cotter pin to secure the nut when used with a drilled shank fastener. The slotted and castle styles are both interchangeable with the slotted design now the preferred style.     |
| <b>Material</b>                     | Carbon Steel<br><br>Nuts shall be made from a carbon steel which conforms to the following chemical composition requirements--<br><b>Carbon:</b> 0.47% max.; <b>Phosphorus:</b> 0.12% max.; <b>Sulfur:</b> 0.23% max.. |
| <b>Hardness</b>                     | Rockwell C32 maximum   |
| <b>Proof Load</b>                   | -  |
| <b>Plating</b>                      | See Appendix-A for plating information.  |

NOTE: There is no industry standard for Grade-5 Castle nut performance. These values are offered as a recommendation. Parts should be tested in actual applications before making final evaluations for suitability.