**Finished Hex Nuts** are six-sided internally threaded fasteners. Nuts are classified as finish hex nuts when the diameter is the nominal nut size, the nut thickness is 0.875 of diameter, and the width across the flats is 1.5 of diameter.





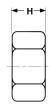


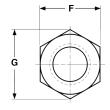




STAINLESS STEEL TYPE 18-8

# **DIMENSIONAL DATA**





**TABLE 1: DIMENSIONAL DATA OF FINISH HEX NUTS** 

| FINISH HEX NUTS                           |        |               |       |               |       | ANSI/ASN    | IE B18.2.2 |       |       |
|---|--------|---------------|-------|---------------|-------|-------------|------------|-------|-------|
|   |        |               | F     |               | (     | G           |            | Н     |       |
| NOMINAL OR BASIC MAJOR DIAMETER OF THREAD |        | BODY DIAMETER |       | HEAD DIAMETER |       | HEAD HEIGHT |            |       |       |
|   |        | BASIC         | MAX   | MIN           | MAX   | MIN         | BASIC      | MAX   | MIN   |
| 1/4                                       | 0.2500 | 7/16          | 0.438 | 0.428         | 0.505 | 0.488       | 7/32       | 0.226 | 0.212 |
| 5/16                                      | 0.3125 | 1/2           | 0.500 | 0.489         | 0.577 | 0.557       | 17/64      | 0.273 | 0.258 |
| 3/8                                       | 0.3750 | 9/16          | 0.562 | 0.551         | 0.650 | 0.628       | 21/64      | 0.337 | 0.320 |
| 7/16                                      | 0.4375 | 11/16         | 0.688 | 0.675         | 0.794 | 0.768       | 3/8        | 0.385 | 0.365 |
| 1/2                                       | 0.5000 | 3/4           | 0.750 | 0.736         | 0.866 | 0.840       | 7/16       | 0.448 | 0.427 |
| 9/16                                      | 0.5625 | 7/8           | 0.875 | 0.861         | 1.010 | 0.982       | 31/64      | 0.496 | 0.473 |
| 5/8                                       | 0.6250 | 15/16         | 0.938 | 0.922         | 1.083 | 1.051       | 35/64      | 0.559 | 0.535 |
| 3/4                                       | 0.7500 | 1-1/8         | 1.125 | 1.088         | 1.299 | 1.240       | 41/64      | 0.665 | 0.617 |
| 7/8                                       | 0.8750 | 1-5/16        | 1.312 | 1.269         | 1.516 | 1.447       | 3/4        | 0.776 | 0.724 |
| 1   | 1.0000 | 1-1/2         | 1.500 | 1.450         | 1.732 | 1.653       | 55/64      | 0.887 | 0.831 |
| 1-1/8                                     | 1.1250 | 1-11/16       | 1.688 | 1.631         | 1.949 | 1.859       | 31/32      | 0.999 | 0.939 |
| 1-1/4                                     | 1.2500 | 1-7/8         | 1.875 | 1.812         | 2.165 | 2.066       | 1-1/6      | 1.094 | 1.030 |
| 1-3/8                                     | 1.3750 | 2-1/16        | 2.062 | 1.994         | 2.382 | 2.273       | 1-11/64    | 1.206 | 1.138 |
| 1-1/2                                     | 1.5000 | 2-1/4         | 2.250 | 2.175         | 2.598 | 2.480       | 1-9/32     | 1.317 | 1.245 |
| 1-5/8                                     | 1.6250 | 2-7/16        | 2.438 | 2.356         | 2.815 | 2.686       | 1-25/64    | 1.429 | 1.353 |
| 1-3/4                                     | 1.7500 | 2-5/8         | 2.625 | 2.538         | 3.031 | 2.893       | 1-1/2      | 1.540 | 1.460 |
| 2   | 2.0000 | 3             | 3.000 | 2.900         | 3.464 | 3.306       | 1-23/32    | 1.763 | 1.675 |
| 2-1/4                                     | 2.2500 | 3-3/8         | 3.375 | 3.263         | 3.897 | 3.719       | 1-15/16    | 1.986 | 1.890 |
| 2-1/2                                     | 2.5000 | 3-3/4         | 3.750 | 3.625         | 4.330 | 4.133       | 2-5/32     | 2.209 | 2.105 |
| 2-3/4                                     | 2.7500 | 4-1/8         | 4.125 | 3.988         | 4.763 | 4.546       | 2-3/8      | 2.431 | 2.319 |
| 3   | 3.0000 | 4-1/2         | 4.500 | 4.350         | 5.196 | 4.959       | 2-19/32    | 2.654 | 2.534 |

DIMENSIONAL DATA ZINC PLATED - GRADE 2

#### **TABLE 2: MATERIAL DATA OF FINISH HEX NUTS ZINC**

| DESCRIPTION            | A six-sided internally threaded fastener whose thickness is 0.875 D where D is the nominal nut size and 1.5 D is their width across the flats, made from low carbon steel.                           |
|------------------------|--|
| APPLICATION/ADVANTAGES | The most versatile and widely used nut design. Grade 2 nuts are for use with any low carbon bolt or screw that is not head-treated, with a specified minimum tensile strength of 74,000 psi or less. |
| MATERIAL               | Grade 2 nuts shall be made from a low carbon steel which conforms to the following chemical composition requirements Carbon: 0.47% maximum; Phosphorus: 0.12% maximum; Sulfur: 0.23% maximum.        |
| HARDNESS               | Rockwell B68 - C32   |
| PROOF LOAD             | Coarse Thread: 90,000 psi.; Fine Thread: 80,000 psi.   |

DIMENSIONAL DATA STEEL HOT DIP GALVANIZED

## TABLE 3: MATERIAL DATA OF FINISH HEX NUTS HOT DIP GALVANIZED

| DESCRIPTION            | A six-sided internally threaded fastener whose thickness is 0.875 D where D is the nominal nut size and 1.5 D is their width across the flats, made from low carbon steel with a galvanic zinc coating. |
|------------------------|---|
| APPLICATION/ADVANTAGES | Designed for use with low carbon bolts and screws with a specified minimum tensile strength of 74,000 psi or less, which are subjected to moisture, salt and other such corrosive conditions            |
| MATERIAL               | Nuts shall be made from a low carbon steel which conforms to the following chemical composition requirements<br>Carbon:0.47% maximum; Phosphorus: 0.12% maximum; Sulfur: 0.23% maximum.                 |
| HARDNESS               | Rockwell B68 - C32  |
| PROOF LOAD             | Coarse Thread: 68,000 psi.; Fine Thread: 60,000 psi.  |

DIMENSIONAL DATA STAINLESS STEEL 18-8 & 316

### TABLE 4: MATERIAL DATA OF FINISH HEX NUTS STAINLESS STEEL

| DESCRIPTION            | A six-sided internally threaded fastener whose thickness is 0.875 D where D is the nominal nut size and 1.5 D is their width across the flats, made from austenitic alloys as described below.  |
|------------------------|---|
| APPLICATION/ADVANTAGES | Designed for use with stainless steel bolts and screws with a specified minimum tensile strength equal to or less than the specified proof stress of the mating nut. Both types of stainless are corrosion resistant with 316 stainless having greater such resistance as well as superior strength at raised temperatures. |
| Material               | 18-8: Nuts shall be made from one of the following austenitic allows: 303, 303Se, 304, XM7, all of which are characterized as having a chromium content of 18% and nickel content of 8-10%.   |
|                        | 316: Nuts shall be made from 316 stainless steel, an austenitic alloy which differs from 18-8 by its molybdenum content (2-3%) and a higher nickel content (10-14%).  |
| HARDNESS               | 1/4 through 5/8": Rockwell B95 - C32; 3/4 through 1": Rockwell B80-C32  |
| PROOF LOAD             | 1/4 through 5/8": 100,000 psi; Fine-thread: 85,000 psi  |

# **ORDERING INFORMATION**

**ZINC PLATED - GRADE 2** 

#### TABLE 5: ORDERING INFORMATION OF FINISH HEX NUTS ZINC

| PART #     | SIZE    | WAF*   | HEIGHT | QUANTITY / BOX    |
|------------|---------|--------|--------|-------------------|
| 2FHN1420   | 1/4-20  | 7/16   | 7/32   | 100 / Box         |
| 2FHN5618   | 5/16-18 | 1/2    | 17/64  | 100 / Box         |
| 2FHN3816   | 3/8-16  | 9/16   | 21/64  | 100 / Box         |
| 2FHN7614   | 7/16-14 | 11/16  | 3/8    | 50 / Box          |
| 2FHN1213   | 1/2-13  | 3/4    | 7/16   | 50 / Box          |
| 2FHN5811   | 5/8-11  | 15/16  | 35/64  | 25 / Box          |
| 2FHN3410   | 3/4-10  | 1-1/8  | 41/64  | 20 / Box          |
| 2FHN7809   | 7/8-9   | 1-5/16 | 3/4    | 15 / Box          |
| 2FHN0108   | 1-8     | 1-1/2  | 55/64  | 10 / Box          |
| BULK       |         |        |        | QUANTITY / CARTON |
| 2FHN3816-B | 3/8-16  | 9/16   | 21/64  | 3000 / Carton     |

<sup>\*</sup> Width Across Flats

## **ORDERING INFORMATION**

STEEL HOT DIP GALVANIZED

### TABLE 6: ORDERING INFORMATION OF FINISH HEX NUTS HOT DIP GALVANIZED

| PART #    | SIZE    | WAF*   | HEIGHT | QUANTITY / BOX |
|-----------|---------|--------|--------|----------------|
| 2FHNG1420 | 1/4-20  | 7/16   | 7/32   | 100 / Box      |
| 2FHNG5618 | 5/16-18 | 1/2    | 17/64  | 100 / Box      |
| 2FHNG3816 | 3/8-16  | 9/16   | 21/64  | 100 / Box      |
| 2FHNG1213 | 1/2-13  | 3/4    | 7/16   | 50 / Box       |
| 2FHNG5811 | 5/8-11  | 15/16  | 35/64  | 25 / Box       |
| 2FHNG3410 | 3/4-10  | 1-1/8  | 41/64  | 20 / Box       |
| 2FHNG7809 | 7/8-9   | 1-5/16 | 3/4    | 15 / Box       |
| 2FHNG0108 | 1-8     | 1-1/2  | 55/64  | 10 / Box       |

<sup>\*</sup> Width Across Flats

Note: WAF and height are approximate due to the galvanizing coating.

# **ORDERING INFORMATION**

**STAINLESS STEEL 316** 

### TABLE 7: ORDERING INFORMATION OF FINISH HEX NUTS 316 STAINLESS STEEL

| PART #     | SIZE   | WAF*  | HEIGHT | QUANTITY / BOX |
|------------|--------|-------|--------|----------------|
| 2FHNS43816 | 3/8-16 | 9/16  | 21/64  | 100 / Box      |
| 2FHNS41213 | 1/2-13 | 3/4   | 7/16   | 50 / Box       |
| 2FHNS45811 | 5/8-11 | 15/16 | 35/64  | 25 / Box       |

<sup>\*</sup> Width Across Flats

## **ORDERING INFORMATION**

**STAINLESS STEEL 18-8** 

#### TABLE 8: ORDERING INFORMATION OF FINISH HEX NUTS 18-8 STAINLESS STEEL

| PART #     | SIZE    | WAF*  | HEIGHT | QUANTITY / BOX |
|------------|---------|-------|--------|----------------|
| 2FHNS21420 | 1/4-20  | 7/16  | 7/32   | 100 / Box      |
| 2FHNS25618 | 5/16-18 | 1/2   | 17/64  | 100 / Box      |
| 2FHNS23816 | 3/8-16  | 9/16  | 21/64  | 100 / Box      |
| 2FHNS21213 | 1/2-13  | 3/4   | 7/16   | 50 / Box       |
| 2FHNS25811 | 5/8-11  | 15/16 | 35/64  | 25 / Box       |
| 2FHNS23410 | 3/4-10  | 1-1/8 | 41/64  | 20 / Box       |
| 2FHNS20108 | 1-8     | 1-1/2 | 55/64  | 10 / Box       |

<sup>\*</sup> Width Across Flats