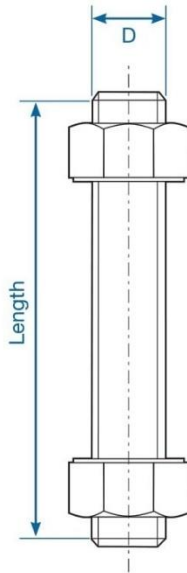


STUDBOLT **ONP**  
OMIDAN PITCH





# OMIDAN PITCH



## QUALITY ASSURED

### FULL THREAD STUDS

OUR STUD BOLT LENGTHS MEASURE FIRST THREAD TO FIRST THREAD. ENSURING THE CORRECT AMOUNT OF LEAD THREADS ARE STILL VISIBLE ONCE INSTALLED. THIS LENGTH IS CALCULATED BETWEEN CHAMFERED ENDS, A GUARANTEED SIGN OF QUALITY & CARE

## IMPERIAL & METRIC THREAD PITCH



| Size   | Imperial (TPI) Threads Per Inch |     |         |      |     | Metric Thread Pitch |        |      |
|--------|---------------------------------|-----|---------|------|-----|---------------------|--------|------|
|        | UNC                             | UN8 | UNF     | BSW  | BSF | Size                | Coarse | Fine |
| 1/8"   | 40                              | -   | 44      | 40   | -   | M3                  | 0.5    | 0.35 |
|        | 32                              | -   | 36      | -    | -   | M4                  | 0.7    | 0.50 |
| 3/16"  | 24                              | -   | 32      | 24   | 32  | M5                  | 0.8    | 0.50 |
| 1/4"   | 20                              | -   | 28      | 20   | 26  | M6                  | 1      | 0.75 |
| 5/16"  | 18                              | -   | 24      | 18   | 22  | M8                  | 1.25   | 1    |
| 3/8"   | 16                              | -   | 24      | 16   | 20  | M10                 | 1.5    | 1.25 |
| 1/2"   | 13                              | -   | 20      | 14   | 18  | M12                 | 1.75   | 1.5  |
| 9/16"  | 12                              | -   | 18      | 12   | 16  | M14                 | 2      | 1.5  |
| 5/8"   | 11                              | -   | 18      | 11   | 14  | M16                 | 2      | 1.5  |
|        | -                               | -   | -       | -    | -   | M18                 | 2.5    | 1.5  |
| 3/4"   | 10                              | -   | 16      | 10   | 12  | M20                 | 2.5    | 1.5  |
| 7/8"   | 9                               | -   | 14      | 9    | 11  | M22                 | 2.5    | 1.5  |
| 1"     | 8                               | 8   | 12 (14) | 8    | 10  | M24                 | 3      | 2    |
| 1 1/8" | 7                               | 8   | 12      | 7    | 9   | M27                 | 3      | 2    |
| 1 1/4" | 7                               | 8   | 12      | 7    | 9   | M30                 | 3.5    | 2    |
| 1 3/8" | 6                               | 8   | 12      | 6    | 8   | M33                 | 3.5    | 2    |
| 1 1/2" | 6                               | 8   | 12      | 6    | 8   | M36                 | 4      | 3    |
| 1 5/8" | -                               | 8   | -       | 5    | 8   | M39                 | 4      | 3    |
|        | -                               | -   | -       | -    | -   | M42                 | 4.5    | -    |
| 1 3/4" | 5                               | 8   | -       | 5    | 7   | M45                 | 4.5    | -    |
| 1 7/8" | -                               | 8   | -       | -    | -   | M48                 | 5      | -    |
| 2"     | 4.5                             | 8   | -       | 4.5  | 7   | M52                 | 5      | -    |
| 2 1/4" | 4.5                             | 8   | -       | 4    | 6   | M56                 | 5.5    | -    |
|        | -                               | -   | -       | -    | -   | M60                 | 5.5    | -    |
| 2 1/2" | 1                               | 8   | -       | 4    | 6   | M64                 | 6      | -    |
| 2 3/4" | 4                               | 8   | -       | 3.5  | 6   | M72                 | 6      | -    |
| 3"     | 4                               | 8   | -       | 3.5  | 5   | M80                 | 6      | -    |
| 3 1/4" | 4                               | 8   | -       | 3.25 | 5   | M-                  | -      | -    |
| 3 1/2" | 4                               | 8   | -       | 3.25 | 4.5 | M90                 | 6      | -    |
| 3 3/4" | 4                               | 8   | -       | 3    | 4.5 | M-                  | -      | -    |
| 4"     | 4                               | 8   | -       | 3    | 4.5 | M100                | 6      | -    |



| Product No.   | Size | Length (mm) | Length (inch) | Weight (kg)<br>Stud Only | Weight (kg)<br>Stud+2xNut |
|---------------|------|-------------|---------------|--------------------------|---------------------------|
| 6B7SBNU?12050 | 1/2" | 50          | 2"            | 0.04                     | 0.10                      |
| 6B7SBNU?12060 | 1/2" | 60          | 2 1/4"        | 0.05                     | 0.11                      |
| 6B7SBNU?12065 | 1/2" | 65          | 2 1/2"        | 0.05                     | 0.11                      |
| 6B7SBNU?12070 | 1/2" | 70          | 2 3/4"        | 0.06                     | 0.12                      |
| 6B7SBNU?12075 | 1/2" | 75          | 3"            | 0.06                     | 0.12                      |
| 6B7SBNU?12080 | 1/2" | 80          | 3 1/4"        | 0.06                     | 0.12                      |
| 6B7SBNU?12090 | 1/2" | 90          | 3 1/2"        | 0.07                     | 0.13                      |
| 6B7SBNU?12095 | 1/2" | 95          | 3 3/4"        | 0.08                     | 0.14                      |
| 6B7SBNU?12100 | 1/2" | 100         | 4"            | 0.08                     | 0.14                      |
| 6B7SBNU?12110 | 1/2" | 110         | 4 1/4"        | 0.09                     | 0.15                      |
| 6B7SBNU?12115 | 1/2" | 115         | 4 1/2"        | 0.09                     | 0.15                      |
| 6B7SBNU?12120 | 1/2" | 120         | 4 3/4"        | 0.10                     | 0.16                      |
| 6B7SBNU?12125 | 1/2" | 125         | 5"            | 0.10                     | 0.16                      |
| 6B7SBNU?12130 | 1/2" | 130         | 5 1/4"        | 0.10                     | 0.16                      |
| 6B7SBNU?12140 | 1/2" | 140         | 5 1/2"        | 0.11                     | 0.17                      |
| 6B7SBNU?12145 | 1/2" | 145         | 5 3/4"        | 0.12                     | 0.18                      |
| 6B7SBNU?12150 | 1/2" | 150         | 6"            | 0.12                     | 0.18                      |
| 6B7SBNU?12160 | 1/2" | 160         | 6 1/4"        | 0.13                     | 0.19                      |
| 6B7SBNU?12165 | 1/2" | 165         | 6 1/2"        | 0.13                     | 0.19                      |
| 6B7SBNU?12170 | 1/2" | 170         | 6 3/4"        | 0.14                     | 0.20                      |
| 6B7SBNU?12180 | 1/2" | 180         | 7"            | 0.14                     | 0.20                      |
| 6B7SBNU?12185 | 1/2" | 185         | 7 1/4"        | 0.15                     | 0.21                      |
| 6B7SBNU?12190 | 1/2" | 190         | 7 1/2"        | 0.15                     | 0.21                      |
| 6B7SBNU?12195 | 1/2" | 195         | 7 3/4"        | 0.16                     | 0.22                      |
| 6B7SBNU?12200 | 1/2" | 200         | 8"            | 0.16                     | 0.22                      |
| 6B7SBNU?12210 | 1/2" | 210         | 8 1/4"        | 0.17                     | 0.23                      |
| 6B7SBNU?12215 | 1/2" | 215         | 8 1/2"        | 0.17                     | 0.23                      |
| 6B7SBNU?12220 | 1/2" | 220         | 8 3/4"        | 0.18                     | 0.24                      |
| 6B7SBNU?12230 | 1/2" | 230         | 9"            | 0.18                     | 0.24                      |
| 6B7SBNU?12235 | 1/2" | 235         | 9 1/4"        | 0.19                     | 0.25                      |
| 6B7SBNU?12240 | 1/2" | 240         | 9 1/2"        | 0.19                     | 0.25                      |
| 6B7SBNU?12250 | 1/2" | 250         | 9 3/4"        | 0.20                     | 0.26                      |
| 6B7SBNU?12255 | 1/2" | 255         | 10"           | 0.20                     | 0.26                      |
| 6B7SBNU?12260 | 1/2" | 260         | 10 1/4"       | 0.21                     | 0.27                      |
| 6B7SBNU?12265 | 1/2" | 265         | 10 1/2"       | 0.21                     | 0.27                      |
| 6B7SBNU?12275 | 1/2" | 275         | 10 3/4"       | 0.22                     | 0.28                      |
| 6B7SBNU?12280 | 1/2" | 280         | 11"           | 0.22                     | 0.28                      |
| 6B7SBNU?12285 | 1/2" | 285         | 11 1/4"       | 0.23                     | 0.29                      |
| 6B7SBNU?12290 | 1/2" | 290         | 11 1/2"       | 0.23                     | 0.29                      |
| 6B7SBNU?12300 | 1/2" | 300         | 11 3/4"       | 0.24                     | 0.30                      |
| 6B7SBNU?12305 | 1/2" | 305         | 12"           | 0.24                     | 0.30                      |

1/2" UNC continued on page 8



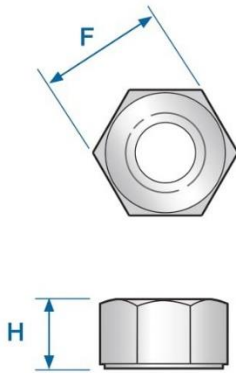
# HEAVY HEX NUTS DIMENSIONS

ASTM A194, A194M

## DIMENSIONS ASTM A194 / A194M



GRADE 2H, 4, 7, 8, 8M



| Thread diameter to fit: | Dimension F  |              | Dimension H  |              | Nut Wgt (kg) |
|-------------------------|--------------|--------------|--------------|--------------|--------------|
|                         | Min. (inch") | Max. (inch") | Min. (inch") | Max. (inch") |              |
| 1/4"                    | 0.488        | 0.500        | 0.218        | 0.250        | 0.01         |
| 5/16"                   | 0.546        | 0.562        | 0.280        | 0.314        | 0.01         |
| 3/8"                    | 0.669        | 0.688        | 0.341        | 0.377        | 0.01         |
| 7/16"                   | 0.728        | 0.750        | 0.403        | 0.441        | 0.02         |
| 1/2"                    | 0.850        | 0.875        | 0.464        | 0.504        | 0.03         |
| 9/16"                   | 0.909        | 0.938        | 0.526        | 0.568        | 0.04         |
| 5/8"                    | 1.031        | 1.062        | 0.587        | 0.631        | 0.05         |
| 3/4"                    | 1.212        | 1.250        | 0.710        | 0.758        | 0.09         |
| 7/8"                    | 1.394        | 1.438        | 0.833        | 0.885        | 0.13         |
| 1"                      | 1.575        | 1.625        | 0.956        | 1.012        | 0.19         |
| 1 1/8"                  | 1.756        | 1.812        | 1.079        | 1.139        | 0.26         |
| 1 1/4"                  | 1.938        | 2.000        | 1.187        | 1.251        | 0.37         |
| 1 3/8"                  | 2.119        | 2.188        | 1.310        | 1.378        | 0.48         |
| 1 1/2"                  | 2.300        | 2.375        | 1.433        | 1.505        | 0.58         |
| 1 5/8"                  | 2.481        | 2.562        | 1.556        | 1.632        | 0.78         |
| 1 3/4"                  | 2.662        | 2.750        | 1.679        | 1.759        | 0.96         |
| 1 7/8"                  | 2.844        | 2.938        | 1.802        | 1.866        | 1.16         |
| 2"                      | 3.025        | 3.125        | 1.925        | 2.013        | 1.40         |
| 2 1/4"                  | 3.388        | 3.500        | 2.155        | 2.251        | 1.90         |
| 2 1/2"                  | 3.750        | 3.875        | 2.401        | 2.505        | 2.56         |
| 2 3/4"                  | 4.112        | 4.250        | 2.647        | 2.750        | 3.35         |
| 3"                      | 4.475        | 4.625        | 2.893        | 3.013        | 4.32         |

### GRADE SYMBOL MARKING OF HEAVY HEX NUTS



These grades shall be uniformly reheated to proper austenitizing temperatures and be liquid quenched and tempered under substantially uniform conditions.

The H and M indicate heat-treated nuts.

An underline as a marking requirement for grades 2HM and 7M has been removed but is permitted.

**\*Manufactured in Accordance with 6.6** Nuts shall subsequently be carbide-solution treated by heating them for a sufficient time at a temperature to dissolve chromium carbides followed by cooling at a rate sufficient to prevent reprecipitation of the carbides.

| Grade & Type | Hot-forged or cold-punched | Machined from Bar Stock | see * |
|--------------|----------------------------|-------------------------|-------|
| 2H           | 2H                         | 2HB                     | -     |
| 2HM          | 2HM                        | 2HMB                    | -     |
| 3            | 3                          | 3B                      | -     |
| 4            | 4                          | 4B                      | -     |
| 6            | 6                          | 6                       | -     |
| 7            | 7                          | 7B                      | -     |
| 7M           | 7M                         | 7M                      | -     |
| 8            | 8                          | 8B                      | -     |
| 8C           | 8C                         | 8CB                     | -     |
| 8M           | 8M                         | 8MB                     | 8MA   |
| 8T           | 8T                         | 8TB                     | -     |





| Product No. | Size   | Thread (TPI) | Nut Wgt (kg) | Hardness (HRC) | Stress Area (inch <sup>2</sup> ) | Proof Load (lbf) |
|-------------|--------|--------------|--------------|----------------|----------------------------------|------------------|
| 6NH1U?006   | 1/4"   | 20           | 0.01         | 24-35          | 0.0316                           | 5570             |
| 6NH1U?008   | 5/16"  | 18           | 0.01         | 24-35          | 0.0524                           | 9170             |
| 6NH1U?010   | 3/8"   | 16           | 0.01         | 24-35          | 0.0774                           | 13560            |
| 6NH1U?011   | 7/16"  | 14           | 0.02         | 24-35          | 0.1063                           | 18600            |
| 6NH1U?012   | 1/2"   | 13           | 0.03         | 24-35          | 0.1419                           | 24830            |
| 6NH1U?014   | 9/16"  | 12           | 0.04         | 24-35          | 0.1820                           | 31850            |
| 6NH1U?016   | 5/8"   | 11           | 0.05         | 24-35          | 0.2260                           | 39550            |
| 6NH1U?020   | 3/4"   | 10           | 0.09         | 24-35          | 0.3340                           | 58450            |
| 6NH1U?022   | 7/8"   | 9            | 0.13         | 24-35          | 0.4620                           | 80850            |
| 6NH1U?025   | 1"     | 8            | 0.19         | 24-35          | 0.6060                           | 106000           |
| 6NH1U?028   | 1 1/8" | 7            | 0.26         | 24-35          | 0.7900                           | 138200           |
| 6NH1U?032   | 1 1/4" | 7            | 0.37         | 24-35          | 1.0000                           | 175000           |
| 6NH1U?038   | 1 1/2" | 6            | 0.58         | 24-35          | 1.4920                           | 261100           |
| 6NH1U?045   | 1 3/4" | 5            | 0.96         | 35 max         | 2.0800                           | 364000           |
| 6NH1U?050   | 2"     | 4.5          | 1.40         | 35 max         | 2.7700                           | 484800           |

? = finish/coating codes; see page 4

Based on proof stress of 175,000 psi



| Product No. | Size   | Thread (TPI) | Nut Wgt (kg) | Hardness (HRC) | Stress Area (inch <sup>2</sup> ) | Proof Load (lbf) |
|-------------|--------|--------------|--------------|----------------|----------------------------------|------------------|
| 6NH1U?028   | 1 1/8" | 8            | 0.26         | 24-35          | 0.790                            | 138200           |
| 6NH1U?032   | 1 1/4" | 8            | 0.37         | 24-35          | 1.000                            | 175000           |
| 6NH1U?035   | 1 3/8" | 8            | 0.48         | 24-35          | 1.233                            | 215800           |
| 6NH1U?038   | 1 1/2" | 8            | 0.58         | 24-35          | 1.492                            | 261100           |
| 6NH1U?040   | 1 5/8" | 8            | 0.78         | 35 max         | 1.780                            | 311500           |
| 6NH1U?045   | 1 3/4" | 8            | 0.96         | 35 max         | 2.080                            | 364000           |
| 6NH1U?048   | 1 7/8" | 8            | 1.16         | 35 max         | 2.410                            | 421800           |
| 6NH1U?050   | 2"     | 8            | 1.40         | 35 max         | 2.770                            | 484800           |
| 6NH1U?057   | 2 1/4" | 8            | 1.90         | 35 max         | 3.560                            | 623000           |
| 6NH1U?065   | 2 1/2" | 8            | 2.56         | 35 max         | 4.440                            | 777000           |
| 6NH1U?072   | 2 3/4" | 8            | 3.35         | 35 max         | 5.430                            | 950250           |
| 6NH1U?075   | 3"     | 8            | 4.32         | 35 max         | -                                | na               |
| 6NH1U?090   | 3 1/2" | 8            | 6.94         | 35 max         | -                                | na               |
| 6NH1U?100   | 4"     | 8            | 9.91         | 35 max         | -                                | na               |

? = finish/coating codes; see page 4

Based on proof stress of 175,000 psi



HEAVY HEX NUTS


# GRADE 2H & 2HM

ASTM A194, A194M



**Gr 2H**  
**Metric**

CARBON STEEL ASTM  
A194/A194M (AF=DIN934,  
HEIGHT=DIAMETER)



| Product No. | Size | Thread (Pitch) | Nut Wgt (kg) | Hardness (HRC) | Stress Area (mm <sup>2</sup> ) | Proof Load (kN) |
|-------------|------|----------------|--------------|----------------|--------------------------------|-----------------|
| 6NHIC?006   | M6   | 1.00           | 0.01         | 24 -35         | 20.1                           | 29.2            |
| 6NHIC?008   | M8   | 1.25           | 0.01         | 24 -35         | 36.6                           | 44.1            |
| 6NHIC?010   | M10  | 1.50           | 0.01         | 24 -35         | 58.0                           | 69.9            |
| 6NHIC?012   | M12  | 1.75           | 0.02         | 24 -35         | 84.3                           | 101.6           |
| 6NHIC?014   | M14  | 2.00           | 0.03         | 24 -35         | 115.0                          | 138.6           |
| 6NHIC?016   | M16  | 2.00           | 0.04         | 24 -35         | 157.0                          | 189.2           |
| 6NHIC?018   | M18  | 2.50           | 0.06         | 24 -35         | -                              | -               |
| 6NHIC?020   | M20  | 2.50           | 0.09         | 24 -35         | 245.0                          | 295.2           |
| 6NHIC?022   | M22  | 2.50           | 0.10         | 24 -35         | 303.0                          | 365.1           |
| 6NHIC?024   | M24  | 3.00           | 0.14         | 24 -35         | 353.0                          | 425.4           |
| 6NHIC?027   | M27  | 3.00           | 0.21         | 24 -35         | 459.0                          | 553.4           |
| 6NHIC?030   | M30  | 3.50           | 0.28         | 24 -35         | 561.0                          | 676.0           |
| 6NHIC?033   | M33  | 3.50           | 0.36         | 24 -35         | -                              | -               |
| 6NHIC?036   | M36  | 4.00           | 0.49         | 24 -35         | 817.0                          | 984.5           |
| 6NHIC?039   | M39  | 4.00           | 0.63         | 35 max         | -                              | -               |
| 6NHIC?042   | M42  | 4.50           | 0.81         | 35 max         | 1120.0                         | 1349.6          |
| 6NHIC?048   | M48  | 5.00           | 1.22         | 35 max         | 1470.0                         | 1771.4          |
| 6NHIC?052   | M52  | 5.00           | 1.52         | 35 max         | -                              | -               |
| 6NHIC?056   | M56  | 5.50           | 1.77         | 35 max         | 2030.0                         | 2446.2          |
| 6NHIC?064   | M64  | 6.00           | 2.48         | 35 max         | 2680.0                         | 3229.4          |
| 6NHIC?072   | M72  | 6.00           | 4.32         | 35 max         | 3460.0                         | 4169.3          |

? = finish/coating codes; see page 4

Based on proof stress of 1205 MPa

**Gr 2HM**  
**UNC & UN8**

CARBON STEEL  
ASTM A194/A194M



| Product No. | Size   | Thread (TPI) | Nut Wgt (kg) | Hardness (HRC) | Stress Area (inch <sup>2</sup> ) | Proof Load (lbF) |
|-------------|--------|--------------|--------------|----------------|----------------------------------|------------------|
| 6NH2HMU?010 | 3/8"   | 16           | 0.01         | 84-99          | 0.0774                           | 11620            |
| 6NH2HMU?012 | 1/2"   | 13           | 0.03         | 84-99          | 0.1419                           | 21280            |
| 6NH2HMU?016 | 5/8"   | 11           | 0.05         | 84-99          | 0.2260                           | 33900            |
| 6NH2HMU?020 | 3/4"   | 10           | 0.09         | 84-99          | 0.3340                           | 50100            |
| 6NH2HMU?022 | 7/8"   | 9            | 0.13         | 84-99          | 0.4620                           | 69300            |
| 6NH2HMU?025 | 1"     | 8            | 0.19         | 84-99          | 0.6060                           | 90900            |
| 6NH2HMU?028 | 1 1/8" | 8            | 0.26         | 84-99          | 0.7900                           | 118500           |
| 6NH2HMU?032 | 1 1/4" | 8            | 0.37         | 84-99          | 1.0000                           | 150000           |
| 6NH2HMU?035 | 1 3/8" | 8            | 0.48         | 84-99          | 1.2330                           | 185000           |
| 6NH2HMU?038 | 1 1/2" | 8            | 0.58         | 84-99          | 1.4920                           | 223800           |
| 6NH2HMU?040 | 1 5/8" | 8            | 0.78         | 84-99          | 1.7800                           | 267000           |
| 6NH2HMU?045 | 1 3/4" | 8            | 0.96         | 84-99          | 20.0800                          | 312000           |
| 6NH2HMU?048 | 1 7/8" | 8            | 1.16         | 84-99          | 2.4100                           | 361500           |
| 6NH2HMU?050 | 2"     | 8            | 1.40         | 84-99          | 2.7700                           | 415500           |

? = finish/coating codes; see page 4

Based on proof stress of 150,000 psi

