

# HEX BOLT UNC F593D STAINLESS STEEL



## APPLICATION

Bremick® Hex Head UNC 304 Stainless Steel bolts are designed for industrial and construction applications where extreme corrosion performance is required

## PRODUCT ATTRIBUTES

**Material Class:** 304 STAINLESS STEEL 1-CW2-F593D

**Thread Form:** Class 2A

**Standard:** Complies to ASME B18.2.1:2012

**Mechanical Properties:** Complies to ASTM F593:2024

**Chemical Composition:** Complies to ASTM F593:2024

## HEAD MARKING



In some cases, the Bremick head mark will be replaced by the mark of the original manufacturer

## MECHANICAL PROPERTIES (Full-Size Tests)

| ALLOY MECHANICAL<br>PROPERTY MARKING | Tensile Strength<br>(ksi) | Yield Strength<br>(ksi) | Hardness |
|--------------------------------------|---------------------------|-------------------------|----------|
|                                      |                           |                         | Rockwell |
|                                      | RANGE                     | MIN                     | RANGE    |
| F593D                                | 85~140                    | 45                      | B80-C32  |

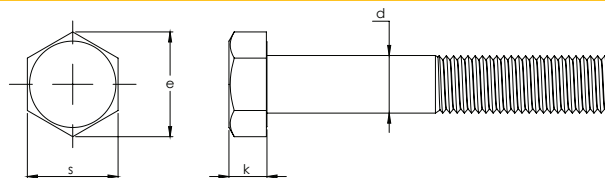
## CHEMICAL COMPOSITION (%)

| STAINLESS STEEL<br>GRADE | C    | Mn   | P     | S     | Si   | Cr        | Ni       | Cu   |
|--------------------------|------|------|-------|-------|------|-----------|----------|------|
|                          | MAX  | MAX  | MAX   | MAX   | MAX  | RANGE     | RANGE    | MAX  |
| 304                      | 0.08 | 2.00 | 0.045 | 0.030 | 1.00 | 18.0-20.0 | 8.0-10.5 | 1.00 |

## MATERIAL INFORMATION

| STAINLESS STEEL 304                                                                                                     |                                                                                                                                                                                                                        |                      |
|-------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|
| DESCRIPTION                                                                                                             | OVERVIEW                                                                                                                                                                                                               | CORROSION RESISTANCE |
| 304 is the most commonly used stainless steel. It is an austenitic, offers excellent strength and corrosion resistance. | Bremick® 304 Stainless Steel provides an extreme level of protection and is recommended for wet external application. Bremick® 304 Stainless Steel is an austenitic stainless steel that offers all round performance. | Extreme              |

## DIMENSIONAL DATA (inches)



| DIAMETER<br>(inches) | TPI | ACROSS FLATS (s) |       | ACROSS CORNERS (e) |       | HEAD HEIGHT (k) |       | MAJOR DIAMETER (d) |       |
|----------------------|-----|------------------|-------|--------------------|-------|-----------------|-------|--------------------|-------|
|                      | UNC | MIN              | MAX   | MIN                | MAX   | MIN             | MAX   | MIN                | MAX   |
| 3/4                  | 10  | 1.088            | 1.125 | 1.240              | 1.299 | 0.455           | 0.524 | 0.729              | 0.768 |
| 7/8                  | 9   | 1.269            | 1.312 | 1.447              | 1.516 | 0.531           | 0.604 | 0.852              | 0.895 |
| 1                    | 8   | 1.450            | 1.500 | 1.653              | 1.732 | 0.591           | 0.700 | 0.976              | 1.022 |
| 1 1/8                | 7   | 1.631            | 1.688 | 1.859              | 1.949 | 0.658           | 0.780 | 1.098              | 1.149 |
| 1 1/4                | 7   | 1.812            | 1.875 | 2.066              | 2.165 | 0.749           | 0.876 | 1.223              | 1.277 |
| 1 1/2                | 6   | 2.175            | 2.250 | 2.480              | 2.598 | 0.902           | 1.036 | 1.470              | 1.531 |

## SOCKET OR SPANNER SIZE (inches)

| BOLT DIAMETER | 3/4   | 7/8   | 1     | 1 1/8 | 1 1/4 | 1 1/2 |
|---------------|-------|-------|-------|-------|-------|-------|
| SPANNER SIZE  | 1 1/8 | 1 1/3 | 1 1/2 | 1 2/3 | 1 7/8 | 2 1/4 |

## THREAD LENGTH (inches)

| Length | 3/4   | 7/8   | 1     | 1 1/8 | 1 1/4 | 1 1/2 |
|--------|-------|-------|-------|-------|-------|-------|
| 1      |       |       |       |       |       |       |
| 1 1/4  |       |       |       |       |       |       |
| 1 1/2  |       |       |       |       |       |       |
| 1 3/4  |       |       |       |       |       |       |
| 2      | 1 3/4 |       |       |       |       |       |
| 2 1/4  | 1 3/4 | 2     |       |       |       |       |
| 2 1/2  | 1 3/4 | 2     | 2 1/4 |       |       |       |
| 2 3/4  | 1 3/4 | 2     | 2 1/4 | 2 1/2 |       |       |
| 3      | 1 3/4 | 2     | 2 1/4 | 2 1/2 | 2 3/4 |       |
| 3 1/4  | 1 3/4 | 2     | 2 1/4 | 2 1/2 | 2 3/4 |       |
| 3 1/2  | 1 3/4 | 2     | 2 1/4 | 2 1/2 | 2 3/4 | 3 1/4 |
| 3 3/4  | 1 3/4 | 2     | 2 1/4 | 2 1/2 | 2 3/4 | 3 1/4 |
| 4      | 1 3/4 | 2     | 2 1/4 | 2 1/2 | 2 3/4 | 3 1/4 |
| 4 1/4  | 1 3/4 | 2     | 2 1/4 | 2 1/2 | 2 3/4 | 3 1/4 |
| 4 1/2  | 1 3/4 | 2     | 2 1/4 | 2 1/2 | 2 3/4 | 3 1/4 |
| 4 3/4  | 1 3/4 | 2     | 2 1/4 | 2 1/2 | 2 3/4 | 3 1/4 |
| 5      | 1 3/4 | 2     | 2 1/4 | 2 1/2 | 2 3/4 | 3 1/4 |
| 5 1/4  | 1 3/4 | 2     | 2 1/4 | 2 1/2 | 2 3/4 | 3 1/4 |
| 5 1/2  | 1 3/4 | 2     | 2 1/4 | 2 1/2 | 2 3/4 | 3 1/4 |
| 5 3/4  | 1 3/4 | 2     | 2 1/4 | 2 1/2 | 2 3/4 | 3 1/4 |
| 6      | 1 3/4 | 2     | 2 1/4 | 2 1/2 | 2 3/4 | 3 1/4 |
| 6 1/2  | 2     | 2 1/4 | 2 1/2 | 2 3/4 | 3     | 3 1/2 |
| 7      | 2     | 2 1/4 | 2 1/2 | 2 3/4 | 3     | 3 1/2 |
| 7 1/2  | 2     | 2 1/4 | 2 1/2 | 2 3/4 | 3     | 3 1/2 |
| 8      | 2     | 2 1/4 | 2 1/2 | 2 3/4 | 3     | 3 1/2 |

ALL SIZES ABOVE THE STEPPED LINE ARE FULLY THREADED