

**Ball Lock Pins · single acting - comply with NAS / MS17985**  
EH 4211.**Product Description**

Ball Lock Pins according to MS17985 / NAS1333-1343 are used for quick fastening, locking, adjusting, changing and securing. Quickly and easily unlockable for frequently repeated connections.

Ball Lock Pins (Quick Release Pins) are produced according to Aviation Norm MS / NAS and tested to NAS 1332.

Surface treatment:

- All stainless steel parts are passivated according AMS2700
- All aluminium parts alloy anodized according MIL-A-8625

Heat treatment:

- Body: Rc. 40 min. (AMS2759, Condition H900)
- Spindle: Rc. 40 min. (AMS2759, Condition H900)
- Ball: Rc. 58-62 min. (AMS2759)

**Material****Body**

- Stainless steel, precipitation-hardened, passivated - CRES 17-4PH (specification AMS5643)

**Spindle**

- Stainless steel, precipitation-hardened, passivated - CRES 17-4PH (specification AMS5643)

**Spring**

- Stainless steel, passivated - CRES 302 (specification ASTM-A-313)

**Handle**

- Aluminium, black anodised - Alum.Alloy A380 (specification ASTM B85/B85)

**Attaching ring**

- Stainless steel, passivated - CRES 302 (specification ASTM A-313/A313M)

**Press button**

- Stainless steel, passivated - CRES 303 (specification ASTM A484/484M)

**Ball**

- Stainless steel, precipitation-hardened, passivated - CRES 440C (specification AMS5630)

**Operation**

Ball lock pins single acting are self-locking and require a push of the button to release the balls.

**More information****Notes**

All further dimensions are available on request.

Other diameter / length combinations not listed which comply with the standard can be produced at short notice on customer request. Customized design on request.



- This product is manufactured in INCH dimensions.



Drawing







Order information



| Nominal diameter<br>A | A      |        | Clamping length<br>L<br>+0.02<br>0 | Dimensions |            |       |       |       |      | Location hole<br>max. | Shearing resistance,<br>two-shear<br>min. | Temperature |      | Weight<br>[g] | Standard description | Art. No.                    |          |
|-----------------------|--------|--------|------------------------------------|------------|------------|-------|-------|-------|------|-----------------------|---|-------------|------|---------------|----------------------|-----------------------------|----------|
|                       | min.   | max.   |                                    | B          | C          | D     | E     | F     | G    |                       |   | H           | min. |               |                      |                             | max.     |
| [in]                  | [in]   | [in]   | [in]                               | ±0.005     | 0<br>-0.04 | max.  | max.  | max.  | max. | min.                  | [in]                                      | [lbf]       | [°F] | [g]           |                      |                             |          |
| 3/16                  | 0.1870 | 0.1885 | 0.3                                | 0.220      | 0.260      | 0.310 | 0.500 | 1.815 | 1.27 | 0.800                 | 0.1940                                    | 5,150       | -65  | 200           | 18.5                 | MS17985C303 / NAS1333A2C03D | 4211.A03 |
| 3/16                  | 0.1870 | 0.1885 | 0.4                                | 0.220      | 0.260      | 0.310 | 0.500 | 1.815 | 1.27 | 0.800                 | 0.1940                                    | 5,150       | -65  | 200           | 18.8                 | MS17985C304 / NAS1333A2C04D | 4211.A04 |
| 3/16                  | 0.1870 | 0.1885 | 0.5                                | 0.220      | 0.260      | 0.310 | 0.500 | 1.815 | 1.27 | 0.800                 | 0.1940                                    | 5,150       | -65  | 200           | 19.1                 | MS17985C305 / NAS1333A2C05D | 4211.A05 |
| 3/16                  | 0.1870 | 0.1885 | 0.6                                | 0.220      | 0.260      | 0.310 | 0.500 | 1.815 | 1.27 | 0.800                 | 0.1940                                    | 5,150       | -65  | 200           | 19.5                 | MS17985C306 / NAS1333A2C06D | 4211.A06 |
| 3/16                  | 0.1870 | 0.1885 | 0.7                                | 0.220      | 0.260      | 0.310 | 0.500 | 1.815 | 1.27 | 0.800                 | 0.1940                                    | 5,150       | -65  | 200           | 19.8                 | MS17985C307 / NAS1333A2C07D | 4211.A07 |
| 3/16                  | 0.1870 | 0.1885 | 0.8                                | 0.220      | 0.260      | 0.310 | 0.500 | 1.815 | 1.27 | 0.800                 | 0.1940                                    | 5,150       | -65  | 200           | 20.2                 | MS17985C308 / NAS1333A2C08D | 4211.A08 |
| 3/16                  | 0.1870 | 0.1885 | 1.0                                | 0.220      | 0.260      | 0.310 | 0.500 | 1.815 | 1.27 | 0.800                 | 0.1940                                    | 5,150       | -65  | 200           | 20.8                 | MS17985C310 / NAS1333A2C10D | 4211.A10 |
| 3/16                  | 0.1870 | 0.1885 | 1.1                                | 0.220      | 0.260      | 0.310 | 0.500 | 1.815 | 1.27 | 0.800                 | 0.1940                                    | 5,150       | -65  | 200           | 21.2                 | MS17985C310 / NAS1333A2C11D | 4211.A11 |
| 3/16                  | 0.1870 | 0.1885 | 1.2                                | 0.220      | 0.260      | 0.310 | 0.500 | 1.815 | 1.27 | 0.800                 | 0.1940                                    | 5,150       | -65  | 200           | 21.5                 | MS17985C312 / NAS1333A2C12D | 4211.A12 |
| 3/16                  | 0.1870 | 0.1885 | 1.3                                | 0.220      | 0.260      | 0.310 | 0.500 | 1.815 | 1.27 | 0.800                 | 0.1940                                    | 5,150       | -65  | 200           | 21.9                 | MS17985C313 / NAS1333A2C13D | 4211.A13 |
| 3/16                  | 0.1870 | 0.1885 | 1.4                                | 0.220      | 0.260      | 0.310 | 0.500 | 1.815 | 1.27 | 0.800                 | 0.1940                                    | 5,150       | -65  | 200           | 22.2                 | MS17985C314 / NAS1333A2C14D | 4211.A14 |
| 3/16                  | 0.1870 | 0.1885 | 1.5                                | 0.220      | 0.260      | 0.310 | 0.500 | 1.815 | 1.27 | 0.800                 | 0.1940                                    | 5,150       | -65  | 200           | 22.5                 | MS17985C315 / NAS1333A2C15D | 4211.A15 |
| 3/16                  | 0.1870 | 0.1885 | 1.6                                | 0.220      | 0.260      | 0.310 | 0.500 | 1.815 | 1.27 | 0.800                 | 0.1940                                    | 5,150       | -65  | 200           | 22.7                 | MS17985C316 / NAS1333A2C16D | 4211.A16 |
| 3/16                  | 0.1870 | 0.1885 | 2.0                                | 0.220      | 0.260      | 0.310 | 0.500 | 1.815 | 1.27 | 0.800                 | 0.1940                                    | 5,150       | -65  | 200           | 24.2                 | MS17985C320 / NAS1333A2C20D | 4211.A20 |
| 3/16                  | 0.1870 | 0.1885 | 2.1                                | 0.220      | 0.260      | 0.310 | 0.500 | 1.815 | 1.27 | 0.800                 | 0.1940                                    | 5,150       | -65  | 200           | 24.6                 | MS17985C321 / NAS1333A2C21D | 4211.A21 |
| 3/16                  | 0.1870 | 0.1885 | 2.2                                | 0.220      | 0.260      | 0.310 | 0.500 | 1.815 | 1.27 | 0.800                 | 0.1940                                    | 5,150       | -65  | 200           | 24.9                 | MS17985C322 / NAS1333A2C22D | 4211.A22 |
| 3/16                  | 0.1870 | 0.1885 | 2.3                                | 0.220      | 0.260      | 0.310 | 0.500 | 1.815 | 1.27 | 0.800                 | 0.1940                                    | 5,150       | -65  | 200           | 25.3                 | MS17985C323 / NAS1333A2C23D | 4211.A23 |
| 3/16                  | 0.1870 | 0.1885 | 2.5                                | 0.220      | 0.260      | 0.310 | 0.500 | 1.815 | 1.27 | 0.800                 | 0.1940                                    | 5,150       | -65  | 200           | 25.9                 | MS17985C325 / NAS1333A2C25D | 4211.A25 |



| Nominal diameter<br>A | A<br>min. | A<br>max. | Clamping<br>length<br>L<br>+0.02<br>0 | Dimensions  |                 |           |           |           |           |           | Location<br>hole<br>max. | Shearing<br>resistance,<br>two-shear<br>min. |  |      |  | Standard<br>description     | Art. No. |
|-----------------------|-----------|-----------|---------------------------------------|-------------|-----------------|-----------|-----------|-----------|-----------|-----------|--------------------------|--|---|------|---|-----------------------------|----------|
|                       |           |           |                                       | B<br>±0.005 | C<br>0<br>-0.04 | D<br>max. | E<br>max. | F<br>max. | G<br>max. | H<br>min. |                          |  | min.  | max. |   |                             |          |
| [in]                  | [in]      | [in]      | [in]                                  | [in]        |                 |           |           |           |           |           | [in]                     | [lbf]  | [°F]  |      | [g]   |                             |          |
| 3/16                  | 0.1870    | 0.1885    | 2.6                                   | 0.220       | 0.260           | 0.310     | 0.500     | 1.815     | 1.27      | 0.800     | 0.1940                   | 5,150  | -65   | 200  | 26.3  | MS17985C326 / NAS1333A2C26D | 4211.A26 |
| 3/16                  | 0.1870    | 0.1885    | 4.5                                   | 0.220       | 0.260           | 0.310     | 0.500     | 1.815     | 1.27      | 0.800     | 0.1940                   | 5,150  | -65   | 200  | 32.7  | MS17985C345 / NAS1333A2C45D | 4211.A45 |
| 3/16                  | 0.1870    | 0.1885    | 5.5                                   | 0.220       | 0.260           | 0.310     | 0.500     | 1.815     | 1.27      | 0.800     | 0.1940                   | 5,150  | -65   | 200  | -   | MS17985C355 / NAS1333A2C55D | 4211.A55 |
| 3/16                  | 0.1870    | 0.1885    | 6.0                                   | 0.220       | 0.260           | 0.310     | 0.500     | 1.815     | 1.27      | 0.800     | 0.1940                   | 5,150  | -65   | 200  | 37.8  | MS17985C360 / NAS1333A2C60D | 4211.A60 |
| 1/4                   | 0.2470    | 0.2485    | 0.5                                   | 0.289       | 0.290           | 0.310     | 0.500     | 1.815     | 1.27      | 0.800     | 0.2540                   | 9,200  | -65   | 200  | 21.5  | MS17985C405 / NAS1334A2C05D | 4211.B05 |
| 1/4                   | 0.2470    | 0.2485    | 0.6                                   | 0.289       | 0.290           | 0.310     | 0.500     | 1.815     | 1.27      | 0.800     | 0.2540                   | 9,200  | -65   | 200  | 22.1  | MS17985C406 / NAS1334A2C06D | 4211.B06 |
| 1/4                   | 0.2470    | 0.2485    | 0.7                                   | 0.289       | 0.290           | 0.310     | 0.500     | 1.815     | 1.27      | 0.800     | 0.2540                   | 9,200  | -65   | 200  | 22.7  | MS17985C407 / NAS1334A2C07D | 4211.B07 |
| 1/4                   | 0.2470    | 0.2485    | 0.8                                   | 0.289       | 0.290           | 0.310     | 0.500     | 1.815     | 1.27      | 0.800     | 0.2540                   | 9,200  | -65   | 200  | 23.3  | MS17985C408 / NAS1334A2C08D | 4211.B08 |
| 1/4                   | 0.2470    | 0.2485    | 0.9                                   | 0.289       | 0.290           | 0.310     | 0.500     | 1.815     | 1.27      | 0.800     | 0.2540                   | 9,200  | -65   | 200  | 23.9  | MS17985C409 / NAS1334A2C09D | 4211.B09 |
| 1/4                   | 0.2470    | 0.2485    | 1.0                                   | 0.289       | 0.290           | 0.310     | 0.500     | 1.815     | 1.27      | 0.800     | 0.2540                   | 9,200  | -65   | 200  | 24.5  | MS17985C410 / NAS1334A2C10D | 4211.B10 |
| 1/4                   | 0.2470    | 0.2485    | 1.1                                   | 0.289       | 0.290           | 0.310     | 0.500     | 1.815     | 1.27      | 0.800     | 0.2540                   | 9,200  | -65   | 200  | 25.2  | MS17985C411 / NAS1334A2C11D | 4211.B11 |
| 1/4                   | 0.2470    | 0.2485    | 1.2                                   | 0.289       | 0.290           | 0.310     | 0.500     | 1.815     | 1.27      | 0.800     | 0.2540                   | 9,200  | -65   | 200  | 25.8  | MS17985C412 / NAS1334A2C12D | 4211.B12 |
| 1/4                   | 0.2470    | 0.2485    | 1.3                                   | 0.289       | 0.290           | 0.310     | 0.500     | 1.815     | 1.27      | 0.800     | 0.2540                   | 9,200  | -65   | 200  | 26.4  | MS17985C413 / NAS1334A2C13D | 4211.B13 |
| 1/4                   | 0.2470    | 0.2485    | 1.4                                   | 0.289       | 0.290           | 0.310     | 0.500     | 1.815     | 1.27      | 0.800     | 0.2540                   | 9,200  | -65   | 200  | 27.0  | MS17985C414 / NAS1334A2C14D | 4211.B14 |
| 1/4                   | 0.2470    | 0.2485    | 1.5                                   | 0.289       | 0.290           | 0.310     | 0.500     | 1.815     | 1.27      | 0.800     | 0.2540                   | 9,200  | -65   | 200  | 27.6  | MS17985C415 / NAS1334A2C15D | 4211.B15 |
| 1/4                   | 0.2470    | 0.2485    | 1.6                                   | 0.289       | 0.290           | 0.310     | 0.500     | 1.815     | 1.27      | 0.800     | 0.2540                   | 9,200  | -65   | 200  | 28.2  | MS17985C416 / NAS1334A2C16D | 4211.B16 |
| 1/4                   | 0.2470    | 0.2485    | 1.7                                   | 0.289       | 0.290           | 0.310     | 0.500     | 1.815     | 1.27      | 0.800     | 0.2540                   | 9,200  | -65   | 200  | 28.8  | MS17985C417 / NAS1334A2C17D | 4211.B17 |
| 1/4                   | 0.2470    | 0.2485    | 1.8                                   | 0.289       | 0.290           | 0.310     | 0.500     | 1.815     | 1.27      | 0.800     | 0.2540                   | 9,200  | -65   | 200  | 29.5  | MS17985C418 / NAS1334A2C18D | 4211.B18 |
| 1/4                   | 0.2470    | 0.2485    | 2.0                                   | 0.289       | 0.290           | 0.310     | 0.500     | 1.815     | 1.27      | 0.800     | 0.2540                   | 9,200  | -65   | 200  | 30.7  | MS17985C420 / NAS1334A2C20D | 4211.B20 |
| 1/4                   | 0.2470    | 0.2485    | 2.1                                   | 0.289       | 0.290           | 0.310     | 0.500     | 1.815     | 1.27      | 0.800     | 0.2540                   | 9,200  | -65   | 200  | 31.3  | MS17985C421 / NAS1334A2C21D | 4211.B21 |
| 1/4                   | 0.2470    | 0.2485    | 2.3                                   | 0.289       | 0.290           | 0.310     | 0.500     | 1.815     | 1.27      | 0.800     | 0.2540                   | 9,200  | -65   | 200  | 32.5  | MS17985C423 / NAS1334A2C23D | 4211.B23 |
| 1/4                   | 0.2470    | 0.2485    | 2.4                                   | 0.289       | 0.290           | 0.310     | 0.500     | 1.815     | 1.27      | 0.800     | 0.2540                   | 9,200  | -65   | 200  | 33.1  | MS17985C424 / NAS1334A2C24D | 4211.B24 |
| 1/4                   | 0.2470    | 0.2485    | 2.5                                   | 0.289       | 0.290           | 0.310     | 0.500     | 1.815     | 1.27      | 0.800     | 0.2540                   | 9,200  | -65   | 200  | 33.8  | MS17985C425 / NAS1334A2C25D | 4211.B25 |
| 1/4                   | 0.2470    | 0.2485    | 2.6                                   | 0.289       | 0.290           | 0.310     | 0.500     | 1.815     | 1.27      | 0.800     | 0.2540                   | 9,200  | -65   | 200  | 34.4  | MS17985C426 / NAS1334A2C26D | 4211.B26 |
| 1/4                   | 0.2470    | 0.2485    | 2.7                                   | 0.289       | 0.290           | 0.310     | 0.500     | 1.815     | 1.27      | 0.800     | 0.2540                   | 9,200  | -65   | 200  | 35.0  | MS17985C427 / NAS1334A2C27D | 4211.B27 |
| 1/4                   | 0.2470    | 0.2485    | 2.8                                   | 0.289       | 0.290           | 0.310     | 0.500     | 1.815     | 1.27      | 0.800     | 0.2540                   | 9,200  | -65   | 200  | 35.6  | MS17985C428 / NAS1334A2C28D | 4211.B28 |
| 1/4                   | 0.2470    | 0.2485    | 2.9                                   | 0.289       | 0.290           | 0.310     | 0.500     | 1.815     | 1.27      | 0.800     | 0.2540                   | 9,200  | -65   | 200  | 36.2  | MS17985C429 / NAS1334A2C29D | 4211.B29 |
| 1/4                   | 0.2470    | 0.2485    | 3.0                                   | 0.289       | 0.290           | 0.310     | 0.500     | 1.815     | 1.27      | 0.800     | 0.2540                   | 9,200  | -65   | 200  | 36.8  | MS17985C430 / NAS1334A2C30D | 4211.B30 |
| 1/4                   | 0.2470    | 0.2485    | 3.1                                   | 0.289       | 0.290           | 0.310     | 0.500     | 1.815     | 1.27      | 0.800     | 0.2540                   | 9,200  | -65   | 200  | 37.4  | MS17985C431 / NAS1334A2C31D | 4211.B31 |
| 1/4                   | 0.2470    | 0.2485    | 3.2                                   | 0.289       | 0.290           | 0.310     | 0.500     | 1.815     | 1.27      | 0.800     | 0.2540                   | 9,200  | -65   | 200  | 38.1  | MS17985C432 / NAS1334A2C32D | 4211.B32 |
| 1/4                   | 0.2470    | 0.2485    | 3.3                                   | 0.289       | 0.290           | 0.310     | 0.500     | 1.815     | 1.27      | 0.800     | 0.2540                   | 9,200  | -65   | 200  | 39.0  | MS17985C433 / NAS1334A2C33D | 4211.B33 |
| 1/4                   | 0.2470    | 0.2485    | 3.5                                   | 0.289       | 0.290           | 0.310     | 0.500     | 1.815     | 1.27      | 0.800     | 0.2540                   | 9,200  | -65   | 200  | 39.9  | MS17985C435 / NAS1334A2C35D | 4211.B35 |

| Nominal diameter<br>A | A<br>min. | A<br>max. | Clamping<br>length<br>L<br>+0.02<br>0 | Dimensions  |                 |           |           |           |           |           | Location<br>hole<br>max. | Shearing<br>resistance,<br>two-shear<br>min. | <br>min. max. |                    | <br>[g] | Standard<br>description        | Art. No. |
|-----------------------|-----------|-----------|---------------------------------------|-------------|-----------------|-----------|-----------|-----------|-----------|-----------|--------------------------|--|--|--------------------|--|--------------------------------|----------|
|                       |           |           |                                       | B<br>±0.005 | C<br>0<br>-0.04 | D<br>max. | E<br>max. | F<br>max. | G<br>max. | H<br>min. |                          |  | [in]   | [lb <sub>f</sub> ] |  |                                |          |
| [in]                  | [in]      | [in]      | [in]                                  | [in]        |                 |           |           |           |           |           | [in]                     | [lb <sub>f</sub> ]                           | [°F]   |                    | [g]  |                                |          |
| 1/4                   | 0.2470    | 0.2485    | 4.0                                   | 0.289       | 0.290           | 0.310     | 0.500     | 1.815     | 1.27      | 0.800     | 0.2540                   | 9,200  | -65  | 200                | 43.0   | MS17985C440 /<br>NAS1334A2C40D | 4211.B40 |
| 1/4                   | 0.2470    | 0.2485    | 5.0                                   | 0.289       | 0.290           | 0.310     | 0.500     | 1.815     | 1.27      | 0.800     | 0.2540                   | 9,200  | -65  | 200                | 49.1   | MS17985C450 /<br>NAS1334A2C50D | 4211.B50 |
| 1/4                   | 0.2470    | 0.2485    | 5.2                                   | 0.289       | 0.290           | 0.310     | 0.500     | 1.815     | 1.27      | 0.800     | 0.2540                   | 9,200  | -65  | 200                | 50.4   | MS17985C452 /<br>NAS1334A2C52D | 4211.B52 |
| 1/4                   | 0.2470    | 0.2485    | 6.0                                   | 0.289       | 0.290           | 0.310     | 0.500     | 1.815     | 1.27      | 0.800     | 0.2540                   | 9,200  | -65  | 200                | 55.3   | MS17985C460 /<br>NAS1334A2C60D | 4211.B60 |
| 5/16                  | 0.3095    | 0.3110    | 0.3                                   | 0.375       | 0.330           | 0.310     | 0.500     | 1.815     | 1.27      | 0.800     | 0.3165                   | 14,400                                       | -65  | 200                | 23.1   | MS17985C503 /<br>NAS1335A2C03D | 4211.C03 |
| 5/16                  | 0.3095    | 0.3110    | 0.4                                   | 0.375       | 0.330           | 0.310     | 0.500     | 1.815     | 1.27      | 0.800     | 0.3165                   | 14,400                                       | -65  | 200                | 24.0   | MS17985C504 /<br>NAS1335A2C04D | 4211.C04 |
| 5/16                  | 0.3095    | 0.3110    | 0.5                                   | 0.375       | 0.330           | 0.310     | 0.500     | 1.815     | 1.27      | 0.800     | 0.3165                   | 14,400                                       | -65  | 200                | 25.0   | MS17985C505 /<br>NAS1335A2C05D | 4211.C05 |
| 5/16                  | 0.3095    | 0.3110    | 0.6                                   | 0.375       | 0.330           | 0.310     | 0.500     | 1.815     | 1.27      | 0.800     | 0.3165                   | 14,400                                       | -65  | 200                | 26.0   | MS17985C506 /<br>NAS1335A2C06D | 4211.C06 |
| 5/16                  | 0.3095    | 0.3110    | 0.8                                   | 0.375       | 0.330           | 0.310     | 0.500     | 1.815     | 1.27      | 0.800     | 0.3165                   | 14,400                                       | -65  | 200                | 27.8   | MS17985C508 /<br>NAS1335A2C08D | 4211.C08 |
| 5/16                  | 0.3095    | 0.3110    | 0.9                                   | 0.375       | 0.330           | 0.310     | 0.500     | 1.815     | 1.27      | 0.800     | 0.3165                   | 14,400                                       | -65  | 200                | 28.8   | MS17985C509 /<br>NAS1335A2C09D | 4211.C09 |
| 5/16                  | 0.3095    | 0.3110    | 1.0                                   | 0.375       | 0.330           | 0.310     | 0.500     | 1.815     | 1.27      | 0.800     | 0.3165                   | 14,400                                       | -65  | 200                | 29.7   | MS17985C510 /<br>NAS1335A2C10D | 4211.C10 |
| 5/16                  | 0.3095    | 0.3110    | 1.1                                   | 0.375       | 0.330           | 0.310     | 0.500     | 1.815     | 1.27      | 0.800     | 0.3165                   | 14,400                                       | -65  | 200                | 30.7   | MS17985C511 /<br>NAS1335A2C11D | 4211.C11 |
| 5/16                  | 0.3095    | 0.3110    | 1.2                                   | 0.375       | 0.330           | 0.310     | 0.500     | 1.815     | 1.27      | 0.800     | 0.3165                   | 14,400                                       | -65  | 200                | 31.6   | MS17985C512 /<br>NAS1335A2C12D | 4211.C12 |
| 5/16                  | 0.3095    | 0.3110    | 1.3                                   | 0.375       | 0.330           | 0.310     | 0.500     | 1.815     | 1.27      | 0.800     | 0.3165                   | 14,400                                       | -65  | 200                | 32.6   | MS17985C513 /<br>NAS1335A2C13D | 4211.C13 |
| 5/16                  | 0.3095    | 0.3110    | 1.5                                   | 0.375       | 0.330           | 0.310     | 0.500     | 1.815     | 1.27      | 0.800     | 0.3165                   | 14,400                                       | -65  | 200                | 34.5   | MS17985C515 /<br>NAS1335A2C15D | 4211.C15 |
| 5/16                  | 0.3095    | 0.3110    | 1.6                                   | 0.375       | 0.330           | 0.310     | 0.500     | 1.815     | 1.27      | 0.800     | 0.3165                   | 14,400                                       | -65  | 200                | 35.4   | MS17985C516 /<br>NAS1335A2C16D | 4211.C16 |
| 5/16                  | 0.3095    | 0.3110    | 1.8                                   | 0.375       | 0.330           | 0.310     | 0.500     | 1.815     | 1.27      | 0.800     | 0.3165                   | 14,400                                       | -65  | 200                | 37.3   | MS17985C518 /<br>NAS1335A2C18D | 4211.C18 |
| 5/16                  | 0.3095    | 0.3110    | 2.0                                   | 0.375       | 0.330           | 0.310     | 0.500     | 1.815     | 1.27      | 0.800     | 0.3165                   | 14,400                                       | -65  | 200                | 39.2   | MS17985C520 /<br>NAS1335A2C20D | 4211.C20 |
| 5/16                  | 0.3095    | 0.3110    | 2.2                                   | 0.375       | 0.330           | 0.310     | 0.500     | 1.815     | 1.27      | 0.800     | 0.3165                   | 14,400                                       | -65  | 200                | 41.1   | MS17985C522 /<br>NAS1335A2C22D | 4211.C22 |
| 5/16                  | 0.3095    | 0.3110    | 2.3                                   | 0.375       | 0.330           | 0.310     | 0.500     | 1.815     | 1.27      | 0.800     | 0.3165                   | 14,400                                       | -65  | 200                | 42.0   | MS17985C523 /<br>NAS1335A2C23D | 4211.C23 |
| 5/16                  | 0.3095    | 0.3110    | 2.4                                   | 0.375       | 0.330           | 0.310     | 0.500     | 1.815     | 1.27      | 0.800     | 0.3165                   | 14,400                                       | -65  | 200                | 43.0   | MS17985C524 /<br>NAS1335A2C24D | 4211.C24 |
| 5/16                  | 0.3095    | 0.3110    | 2.5                                   | 0.375       | 0.330           | 0.310     | 0.500     | 1.815     | 1.27      | 0.800     | 0.3165                   | 14,400                                       | -65  | 200                | 43.9   | MS17985C525 /<br>NAS1335A2C25D | 4211.C25 |
| 5/16                  | 0.3095    | 0.3110    | 2.6                                   | 0.375       | 0.330           | 0.310     | 0.500     | 1.815     | 1.27      | 0.800     | 0.3165                   | 14,400                                       | -65  | 200                | 44.9   | MS17985C526 /<br>NAS1335A2C26D | 4211.C26 |
| 5/16                  | 0.3095    | 0.3110    | 2.7                                   | 0.375       | 0.330           | 0.310     | 0.500     | 1.815     | 1.27      | 0.800     | 0.3165                   | 14,400                                       | -65  | 200                | 46.0   | MS17985C527 /<br>NAS1335A2C27D | 4211.C27 |
| 5/16                  | 0.3095    | 0.3110    | 2.8                                   | 0.375       | 0.330           | 0.310     | 0.500     | 1.815     | 1.27      | 0.800     | 0.3165                   | 14,400                                       | -65  | 200                | 46.8   | MS17985C528 /<br>NAS1335A2C28D | 4211.C28 |
| 5/16                  | 0.3095    | 0.3110    | 2.9                                   | 0.375       | 0.330           | 0.310     | 0.500     | 1.815     | 1.27      | 0.800     | 0.3165                   | 14,400                                       | -65  | 200                | 47.7   | MS17985C529 /<br>NAS1335A2C29D | 4211.C29 |
| 5/16                  | 0.3095    | 0.3110    | 3.0                                   | 0.375       | 0.330           | 0.310     | 0.500     | 1.815     | 1.27      | 0.800     | 0.3165                   | 14,400                                       | -65  | 200                | 48.7   | MS17985C530 /<br>NAS1335A2C30D | 4211.C30 |
| 5/16                  | 0.3095    | 0.3110    | 3.2                                   | 0.375       | 0.330           | 0.310     | 0.500     | 1.815     | 1.27      | 0.800     | 0.3165                   | 14,400                                       | -65  | 200                | 50.6   | MS17985C532 /<br>NAS1335A2C32D | 4211.C32 |
| 5/16                  | 0.3095    | 0.3110    | 3.3                                   | 0.375       | 0.330           | 0.310     | 0.500     | 1.815     | 1.27      | 0.800     | 0.3165                   | 14,400                                       | -65  | 200                | 51.5   | MS17985C533 /<br>NAS1335A2C33D | 4211.C33 |
| 5/16                  | 0.3095    | 0.3110    | 3.4                                   | 0.375       | 0.330           | 0.310     | 0.500     | 1.815     | 1.27      | 0.800     | 0.3165                   | 14,400                                       | -65  | 200                | 52.4   | MS17985C534 /<br>NAS1335A2C34D | 4211.C34 |
| 5/16                  | 0.3095    | 0.3110    | 3.5                                   | 0.375       | 0.330           | 0.310     | 0.500     | 1.815     | 1.27      | 0.800     | 0.3165                   | 14,400                                       | -65  | 200                | 53.4   | MS17985C535 /<br>NAS1335A2C35D | 4211.C35 |
| 5/16                  | 0.3095    | 0.3110    | 3.8                                   | 0.375       | 0.330           | 0.310     | 0.500     | 1.815     | 1.27      | 0.800     | 0.3165                   | 14,400                                       | -65  | 200                | 56.2   | MS17985C538 /<br>NAS1335A2C38D | 4211.C38 |



| Nominal diameter<br>A | A<br>min. | A<br>max. | Clamping<br>length<br>L<br>+0.02<br>0 | Dimensions  |                 |           |           |           |           |           | Location<br>hole<br>max. | Shearing<br>resistance,<br>two-shear<br>min. |  |      |  | Standard<br>description        | Art. No. |
|-----------------------|-----------|-----------|---------------------------------------|-------------|-----------------|-----------|-----------|-----------|-----------|-----------|--------------------------|--|---|------|---|--------------------------------|----------|
|                       |           |           |                                       | B<br>±0.005 | C<br>0<br>-0.04 | D<br>max. | E<br>max. | F<br>max. | G<br>max. | H<br>min. |                          |  | min.  | max. |   |                                |          |
| [in]                  | [in]      | [in]      | [in]                                  | [in]        |                 |           |           |           |           |           | [in]                     | [lbf]  | [°F]  |      | [g]   |                                |          |
| 5/16                  | 0.3095    | 0.3110    | 4.0                                   | 0.375       | 0.330           | 0.310     | 0.500     | 1.815     | 1.27      | 0.800     | 0.3165                   | 14,400                                       | -65   | 200  | 58.1  | MS17985C540 /<br>NAS1335A2C40D | 4211.C40 |
| 5/16                  | 0.3095    | 0.3110    | 4.1                                   | 0.375       | 0.330           | 0.310     | 0.500     | 1.815     | 1.27      | 0.800     | 0.3165                   | 14,400                                       | -65   | 200  | 59.1  | MS17985C541 /<br>NAS1335A2C41D | 4211.C41 |
| 5/16                  | 0.3095    | 0.3110    | 4.2                                   | 0.375       | 0.330           | 0.310     | 0.500     | 1.815     | 1.27      | 0.800     | 0.3165                   | 14,400                                       | -65   | 200  | 60.0  | MS17985C542 /<br>NAS1335A2C42D | 4211.C42 |
| 5/16                  | 0.3095    | 0.3110    | 4.3                                   | 0.375       | 0.330           | 0.310     | 0.500     | 1.815     | 1.27      | 0.800     | 0.3165                   | 14,400                                       | -65   | 200  | 61.0  | MS17985C543 /<br>NAS1335A2C43D | 4211.C43 |
| 5/16                  | 0.3095    | 0.3110    | 5.0                                   | 0.375       | 0.330           | 0.310     | 0.500     | 1.815     | 1.27      | 0.800     | 0.3165                   | 14,400                                       | -65   | 200  | 67.6  | MS17985C550 /<br>NAS1335A2C50D | 4211.C50 |
| 5/16                  | 0.3095    | 0.3110    | 6.0                                   | 0.375       | 0.330           | 0.310     | 0.500     | 1.815     | 1.27      | 0.800     | 0.3165                   | 14,400                                       | -65   | 200  | 77.1  | MS17985C560 /<br>NAS1335A2C60D | 4211.C60 |
| 3/8                   | 0.3720    | 0.3735    | 0.5                                   | 0.440       | 0.365           | 0.390     | 0.625     | 2.065     | 1.45      | 0.850     | 0.3790                   | 20,700                                       | -65   | 200  | 38.1  | MS17985C605 /<br>NAS1336A2C05D | 4211.D05 |
| 3/8                   | 0.3720    | 0.3735    | 0.7                                   | 0.440       | 0.365           | 0.390     | 0.625     | 2.065     | 1.45      | 0.850     | 0.3790                   | 20,700                                       | -65   | 200  | 40.8  | MS17985C607 /<br>NAS1336A2C07D | 4211.D07 |
| 3/8                   | 0.3720    | 0.3735    | 0.8                                   | 0.440       | 0.365           | 0.390     | 0.625     | 2.065     | 1.45      | 0.850     | 0.3790                   | 20,700                                       | -65   | 200  | 42.2  | MS17985C608 /<br>NAS1336A2C08D | 4211.D08 |
| 3/8                   | 0.3720    | 0.3735    | 0.9                                   | 0.440       | 0.365           | 0.390     | 0.625     | 2.065     | 1.45      | 0.850     | 0.3790                   | 20,700                                       | -65   | 200  | 43.5  | MS17985C609 /<br>NAS1336A2C09D | 4211.D09 |
| 3/8                   | 0.3720    | 0.3735    | 1.0                                   | 0.440       | 0.365           | 0.390     | 0.625     | 2.065     | 1.45      | 0.850     | 0.3790                   | 20,700                                       | -65   | 200  | 44.9  | MS17985C610 /<br>NAS1336A2C10D | 4211.D10 |
| 3/8                   | 0.3720    | 0.3735    | 1.1                                   | 0.440       | 0.365           | 0.390     | 0.625     | 2.065     | 1.45      | 0.850     | 0.3790                   | 20,700                                       | -65   | 200  | 46.3  | MS17985C611 /<br>NAS1336A2C11D | 4211.D11 |
| 3/8                   | 0.3720    | 0.3735    | 1.2                                   | 0.440       | 0.365           | 0.390     | 0.625     | 2.065     | 1.45      | 0.850     | 0.3790                   | 20,700                                       | -65   | 200  | 47.6  | MS17985C612 /<br>NAS1336A2C12D | 4211.D12 |
| 3/8                   | 0.3720    | 0.3735    | 1.3                                   | 0.440       | 0.365           | 0.390     | 0.625     | 2.065     | 1.45      | 0.850     | 0.3790                   | 20,700                                       | -65   | 200  | 49.0  | MS17985C613 /<br>NAS1336A2C13D | 4211.D13 |
| 3/8                   | 0.3720    | 0.3735    | 1.4                                   | 0.440       | 0.365           | 0.390     | 0.625     | 2.065     | 1.45      | 0.850     | 0.3790                   | 20,700                                       | -65   | 200  | 50.3  | MS17985C614 /<br>NAS1336A2C14D | 4211.D14 |
| 3/8                   | 0.3720    | 0.3735    | 1.5                                   | 0.440       | 0.365           | 0.390     | 0.625     | 2.065     | 1.45      | 0.850     | 0.3790                   | 20,700                                       | -65   | 200  | 51.7  | MS17985C615 /<br>NAS1336A2C15D | 4211.D15 |
| 3/8                   | 0.3720    | 0.3735    | 1.6                                   | 0.440       | 0.365           | 0.390     | 0.625     | 2.065     | 1.45      | 0.850     | 0.3790                   | 20,700                                       | -65   | 200  | 53.1  | MS17985C616 /<br>NAS1336A2C16D | 4211.D16 |
| 3/8                   | 0.3720    | 0.3735    | 1.7                                   | 0.440       | 0.365           | 0.390     | 0.625     | 2.065     | 1.45      | 0.850     | 0.3790                   | 20,700                                       | -65   | 200  | 54.4  | MS17985C617 /<br>NAS1336A2C17D | 4211.D17 |
| 3/8                   | 0.3720    | 0.3735    | 1.8                                   | 0.440       | 0.365           | 0.390     | 0.625     | 2.065     | 1.45      | 0.850     | 0.3790                   | 20,700                                       | -65   | 200  | 55.8  | MS17985C618 /<br>NAS1336A2C18D | 4211.D18 |
| 3/8                   | 0.3720    | 0.3735    | 1.9                                   | 0.440       | 0.365           | 0.390     | 0.625     | 2.065     | 1.45      | 0.850     | 0.3790                   | 20,700                                       | -65   | 200  | 57.1  | MS17985C619 /<br>NAS1336A2C19D | 4211.D19 |
| 3/8                   | 0.3720    | 0.3735    | 2.0                                   | 0.440       | 0.365           | 0.390     | 0.625     | 2.065     | 1.45      | 0.850     | 0.3790                   | 20,700                                       | -65   | 200  | 58.5  | MS17985C620 /<br>NAS1336A2C20D | 4211.D20 |
| 3/8                   | 0.3720    | 0.3735    | 2.1                                   | 0.440       | 0.365           | 0.390     | 0.625     | 2.065     | 1.45      | 0.850     | 0.3790                   | 20,700                                       | -65   | 200  | 59.9  | MS17985C621 /<br>NAS1336A2C21D | 4211.D21 |
| 3/8                   | 0.3720    | 0.3735    | 2.2                                   | 0.440       | 0.365           | 0.390     | 0.625     | 2.065     | 1.45      | 0.850     | 0.3790                   | 20,700                                       | -65   | 200  | 61.2  | MS17985C622 /<br>NAS1336A2C22D | 4211.D22 |
| 3/8                   | 0.3720    | 0.3735    | 2.3                                   | 0.440       | 0.365           | 0.390     | 0.625     | 2.065     | 1.45      | 0.850     | 0.3790                   | 20,700                                       | -65   | 200  | 63.0  | MS17985C623 /<br>NAS1336A2C23D | 4211.D23 |
| 3/8                   | 0.3720    | 0.3735    | 2.4                                   | 0.440       | 0.365           | 0.390     | 0.625     | 2.065     | 1.45      | 0.850     | 0.3790                   | 20,700                                       | -65   | 200  | 63.9  | MS17985C624 /<br>NAS1336A2C24D | 4211.D24 |
| 3/8                   | 0.3720    | 0.3735    | 2.5                                   | 0.440       | 0.365           | 0.390     | 0.625     | 2.065     | 1.45      | 0.850     | 0.3790                   | 20,700                                       | -65   | 200  | 65.3  | MS17985C625 /<br>NAS1336A2C25D | 4211.D25 |
| 3/8                   | 0.3720    | 0.3735    | 2.6                                   | 0.440       | 0.365           | 0.390     | 0.625     | 2.065     | 1.45      | 0.850     | 0.3790                   | 20,700                                       | -65   | 200  | 66.7  | MS17985C626 /<br>NAS1336A2C26D | 4211.D26 |
| 3/8                   | 0.3720    | 0.3735    | 2.7                                   | 0.440       | 0.365           | 0.390     | 0.625     | 2.065     | 1.45      | 0.850     | 0.3790                   | 20,700                                       | -65   | 200  | 68.0  | MS17985C627 /<br>NAS1336A2C27D | 4211.D27 |
| 3/8                   | 0.3720    | 0.3735    | 2.8                                   | 0.440       | 0.365           | 0.390     | 0.625     | 2.065     | 1.45      | 0.850     | 0.3790                   | 20,700                                       | -65   | 200  | 69.4  | MS17985C628 /<br>NAS1336A2C28D | 4211.D28 |
| 3/8                   | 0.3720    | 0.3735    | 3.0                                   | 0.440       | 0.365           | 0.390     | 0.625     | 2.065     | 1.45      | 0.850     | 0.3790                   | 20,700                                       | -65   | 200  | 72.1  | MS17985C630 /<br>NAS1336A2C30D | 4211.D30 |
| 3/8                   | 0.3720    | 0.3735    | 3.1                                   | 0.440       | 0.365           | 0.390     | 0.625     | 2.065     | 1.45      | 0.850     | 0.3790                   | 20,700                                       | -65   | 200  | 73.5  | MS17985C631 /<br>NAS1336A2C31D | 4211.D31 |
| 3/8                   | 0.3720    | 0.3735    | 3.2                                   | 0.440       | 0.365           | 0.390     | 0.625     | 2.065     | 1.45      | 0.850     | 0.3790                   | 20,700                                       | -65   | 200  | 74.8  | MS17985C632 /<br>NAS1336A2C32D | 4211.D32 |

| Nominal diameter<br>A | A<br>min. | A<br>max. | Clamping<br>length<br>L<br>+0.02<br>0 | Dimensions  |                 |           |           |           |           |           | Location<br>hole<br>max. | Shearing<br>resistance,<br>two-shear<br>min. |  |      |  | Standard<br>description     | Art. No. |
|-----------------------|-----------|-----------|---------------------------------------|-------------|-----------------|-----------|-----------|-----------|-----------|-----------|--------------------------|--|---|------|---|-----------------------------|----------|
|                       |           |           |                                       | B<br>±0.005 | C<br>0<br>-0.04 | D<br>max. | E<br>max. | F<br>max. | G<br>max. | H<br>min. |                          |  | min.  | max. |   |                             |          |
| [in]                  | [in]      | [in]      | [in]                                  | [in]        |                 |           |           |           |           |           | [in]                     | [lbf]  | [°F]  |      | [g]   |                             |          |
| 3/8                   | 0.3720    | 0.3735    | 3.4                                   | 0.440       | 0.365           | 0.390     | 0.625     | 2.065     | 1.45      | 0.850     | 0.3790                   | 20,700                                       | -65   | 200  | 77.5  | MS17985C634 / NAS1336A2C34D | 4211.D34 |
| 3/8                   | 0.3720    | 0.3735    | 3.5                                   | 0.440       | 0.365           | 0.390     | 0.625     | 2.065     | 1.45      | 0.850     | 0.3790                   | 20,700                                       | -65   | 200  | 78.9  | MS17985C635 / NAS1336A2C35D | 4211.D35 |
| 3/8                   | 0.3720    | 0.3735    | 4.0                                   | 0.440       | 0.365           | 0.390     | 0.625     | 2.065     | 1.45      | 0.850     | 0.3790                   | 20,700                                       | -65   | 200  | 85.7  | MS17985C640 / NAS1336A2C40D | 4211.D40 |
| 3/8                   | 0.3720    | 0.3735    | 4.2                                   | 0.440       | 0.365           | 0.390     | 0.625     | 2.065     | 1.45      | 0.850     | 0.3790                   | 20,700                                       | -65   | 200  | 89.0  | MS17985C642 / NAS1336A2C42D | 4211.D42 |
| 3/8                   | 0.3720    | 0.3735    | 4.5                                   | 0.440       | 0.365           | 0.390     | 0.625     | 2.065     | 1.45      | 0.850     | 0.3790                   | 20,700                                       | -65   | 200  | 92.5  | MS17985C645 / NAS1336A2C45D | 4211.D45 |
| 3/8                   | 0.3720    | 0.3735    | 4.8                                   | 0.440       | 0.365           | 0.390     | 0.625     | 2.065     | 1.45      | 0.850     | 0.3790                   | 20,700                                       | -65   | 200  | 96.6  | MS17985C648 / NAS1336A2C48D | 4211.D48 |
| 3/8                   | 0.3720    | 0.3735    | 5.0                                   | 0.440       | 0.365           | 0.390     | 0.625     | 2.065     | 1.45      | 0.850     | 0.3790                   | 20,700                                       | -65   | 200  | 99.3  | MS17985C650 / NAS1336A2C50D | 4211.D50 |
| 3/8                   | 0.3720    | 0.3735    | 5.5                                   | 0.440       | 0.365           | 0.390     | 0.625     | 2.065     | 1.45      | 0.850     | 0.3790                   | 20,700                                       | -65   | 200  | 106.0   | MS17985C655 / NAS1336A2C55D | 4211.D55 |
| 3/8                   | 0.3720    | 0.3735    | 6.0                                   | 0.440       | 0.365           | 0.390     | 0.625     | 2.065     | 1.45      | 0.850     | 0.3790                   | 20,700                                       | -65   | 200  | 113.0   | MS17985C660 / NAS1336A2C60D | 4211.D60 |
| 7/16                  | 0.4345    | 0.4360    | 0.8                                   | 0.509       | 0.380           | 0.390     | 0.625     | 2.065     | 1.47      | 0.850     | 0.4425                   | 28,500                                       | -65   | 200  | 48.1  | MS17985C708 / NAS1337A2C08D | 4211.E08 |
| 7/16                  | 0.4345    | 0.4360    | 1.0                                   | 0.509       | 0.380           | 0.390     | 0.625     | 2.065     | 1.47      | 0.850     | 0.4425                   | 28,500                                       | -65   | 200  | 51.8  | MS17985C710 / NAS1337A2C10D | 4211.E10 |
| 7/16                  | 0.4345    | 0.4360    | 1.1                                   | 0.509       | 0.380           | 0.390     | 0.625     | 2.065     | 1.47      | 0.850     | 0.4425                   | 28,500                                       | -65   | 200  | 53.6  | MS17985C711 / NAS1337A2C11D | 4211.E11 |
| 7/16                  | 0.4345    | 0.4360    | 1.2                                   | 0.509       | 0.380           | 0.390     | 0.625     | 2.065     | 1.47      | 0.850     | 0.4425                   | 28,500                                       | -65   | 200  | 55.5  | MS17985C712 / NAS1337A2C12D | 4211.E12 |
| 7/16                  | 0.4345    | 0.4360    | 1.5                                   | 0.509       | 0.380           | 0.390     | 0.625     | 2.065     | 1.47      | 0.850     | 0.4425                   | 28,500                                       | -65   | 200  | 61.1  | MS17985C715 / NAS1337A2C15D | 4211.E15 |
| 7/16                  | 0.4345    | 0.4360    | 1.6                                   | 0.509       | 0.380           | 0.390     | 0.625     | 2.065     | 1.47      | 0.850     | 0.4425                   | 28,500                                       | -65   | 200  | 62.9  | MS17985C716 / NAS1337A2C16D | 4211.E16 |
| 7/16                  | 0.4345    | 0.4360    | 1.8                                   | 0.509       | 0.380           | 0.390     | 0.625     | 2.065     | 1.47      | 0.850     | 0.4425                   | 28,500                                       | -65   | 200  | 66.7  | MS17985C718 / NAS1337A2C18D | 4211.E18 |
| 7/16                  | 0.4345    | 0.4360    | 2.0                                   | 0.509       | 0.380           | 0.390     | 0.625     | 2.065     | 1.47      | 0.850     | 0.4425                   | 28,500                                       | -65   | 200  | 70.4  | MS17985C720 / NAS1337A2C20D | 4211.E20 |
| 7/16                  | 0.4345    | 0.4360    | 2.1                                   | 0.509       | 0.380           | 0.390     | 0.625     | 2.065     | 1.47      | 0.850     | 0.4425                   | 28,500                                       | -65   | 200  | 72.2  | MS17985C721 / NAS1337A2C21D | 4211.E21 |
| 7/16                  | 0.4345    | 0.4360    | 2.3                                   | 0.509       | 0.380           | 0.390     | 0.625     | 2.065     | 1.47      | 0.850     | 0.4425                   | 28,500                                       | -65   | 200  | 75.9  | MS17985C723 / NAS1337A2C23D | 4211.E23 |
| 7/16                  | 0.4345    | 0.4360    | 2.4                                   | 0.509       | 0.380           | 0.390     | 0.625     | 2.065     | 1.47      | 0.850     | 0.4425                   | 28,500                                       | -65   | 200  | 77.8  | MS17985C724 / NAS1337A2C24D | 4211.E24 |
| 7/16                  | 0.4345    | 0.4360    | 2.5                                   | 0.509       | 0.380           | 0.390     | 0.625     | 2.065     | 1.47      | 0.850     | 0.4425                   | 28,500                                       | -65   | 200  | 79.6  | MS17985C725 / NAS1337A2C25D | 4211.E25 |
| 7/16                  | 0.4345    | 0.4360    | 2.6                                   | 0.509       | 0.380           | 0.390     | 0.625     | 2.065     | 1.47      | 0.850     | 0.4425                   | 28,500                                       | -65   | 200  | 81.5  | MS17985C726 / NAS1337A2C26D | 4211.E26 |
| 7/16                  | 0.4345    | 0.4360    | 2.7                                   | 0.509       | 0.380           | 0.390     | 0.625     | 2.065     | 1.47      | 0.850     | 0.4425                   | 28,500                                       | -65   | 200  | 83.0  | MS17985C727 / NAS1337A2C27D | 4211.E27 |
| 7/16                  | 0.4345    | 0.4360    | 2.8                                   | 0.509       | 0.380           | 0.390     | 0.625     | 2.065     | 1.47      | 0.850     | 0.4425                   | 28,500                                       | -65   | 200  | 85.2  | MS17985C728 / NAS1337A2C28D | 4211.E28 |
| 7/16                  | 0.4345    | 0.4360    | 2.9                                   | 0.509       | 0.380           | 0.390     | 0.625     | 2.065     | 1.47      | 0.850     | 0.4425                   | 28,500                                       | -65   | 200  | 87.1  | MS17985C729 / NAS1337A2C29D | 4211.E29 |
| 7/16                  | 0.4345    | 0.4360    | 3.0                                   | 0.509       | 0.380           | 0.390     | 0.625     | 2.065     | 1.47      | 0.850     | 0.4425                   | 28,500                                       | -65   | 200  | 88.9  | MS17985C730 / NAS1337A2C30D | 4211.E30 |
| 7/16                  | 0.4345    | 0.4360    | 3.1                                   | 0.509       | 0.380           | 0.390     | 0.625     | 2.065     | 1.47      | 0.850     | 0.4425                   | 28,500                                       | -65   | 200  | 90.8  | MS17985C731 / NAS1337A2C31D | 4211.E31 |
| 7/16                  | 0.4345    | 0.4360    | 3.2                                   | 0.509       | 0.380           | 0.390     | 0.625     | 2.065     | 1.47      | 0.850     | 0.4425                   | 28,500                                       | -65   | 200  | 92.6  | MS17985C732 / NAS1337A2C32D | 4211.E32 |
| 7/16                  | 0.4345    | 0.4360    | 3.3                                   | 0.509       | 0.380           | 0.390     | 0.625     | 2.065     | 1.47      | 0.850     | 0.4425                   | 28,500                                       | -65   | 200  | 94.5  | MS17985C733 / NAS1337A2C33D | 4211.E33 |
| 7/16                  | 0.4345    | 0.4360    | 3.6                                   | 0.509       | 0.380           | 0.390     | 0.625     | 2.065     | 1.47      | 0.850     | 0.4425                   | 28,500                                       | -65   | 200  | 100.0   | MS17985C736 / NAS1337A2C36D | 4211.E36 |
| 7/16                  | 0.4345    | 0.4360    | 4.0                                   | 0.509       | 0.380           | 0.390     | 0.625     | 2.065     | 1.47      | 0.850     | 0.4425                   | 28,500                                       | -65   | 200  | 107.0   | MS17985C740 / NAS1337A2C40D | 4211.E40 |
| 7/16                  | 0.4345    | 0.4360    | 4.2                                   | 0.509       | 0.380           | 0.390     | 0.625     | 2.065     | 1.47      | 0.850     | 0.4425                   | 28,500                                       | -65   | 200  | 111.0   | MS17985C742 / NAS1337A2C42D | 4211.E42 |

| Nominal diameter<br>A | A<br>min. | A<br>max. | Clamping<br>length<br>L<br>+0.02<br>0 | Dimensions  |                 |           |           |           |           |           | Location<br>hole<br>max. | Shearing<br>resistance,<br>two-shear<br>min. | <br>min. max. |       | <br>[g] | Standard<br>description     | Art. No. |
|-----------------------|-----------|-----------|---------------------------------------|-------------|-----------------|-----------|-----------|-----------|-----------|-----------|--------------------------|--|--|-------|--|-----------------------------|----------|
|                       |           |           |                                       | B<br>±0.005 | C<br>0<br>-0.04 | D<br>max. | E<br>max. | F<br>max. | G<br>max. | H<br>min. |                          |  | [in]   | [lbF] |  |                             |          |
| [in]                  | [in]      | [in]      | [in]                                  | [in]        |                 |           |           |           |           |           | [in]                     | [lbF]  | [°F]   |       | [g]  |                             |          |
| 7/16                  | 0.4345    | 0.4360    | 4.6                                   | 0.509       | 0.380           | 0.390     | 0.625     | 2.065     | 1.47      | 0.850     | 0.4425                   | 28,500                                       | -65  | 200   | 119.0  | MS17985C746 / NAS1337A2C46D | 4211.E46 |
| 7/16                  | 0.4345    | 0.4360    | 5.0                                   | 0.509       | 0.380           | 0.390     | 0.625     | 2.065     | 1.47      | 0.850     | 0.4425                   | 28,500                                       | -65  | 200   | 126.0  | MS17985C750 / NAS1337A2C50D | 4211.E50 |
| 7/16                  | 0.4345    | 0.4360    | 5.3                                   | 0.509       | 0.380           | 0.390     | 0.625     | 2.065     | 1.47      | 0.850     | 0.4425                   | 28,500                                       | -65  | 200   | 132.0  | MS17985C753 / NAS1337A2C53D | 4211.E53 |
| 7/16                  | 0.4345    | 0.4360    | 5.5                                   | 0.509       | 0.380           | 0.390     | 0.625     | 2.065     | 1.47      | 0.850     | 0.4425                   | 28,500                                       | -65  | 200   | 135.0  | MS17985C755 / NAS1337A2C55D | 4211.E55 |
| 7/16                  | 0.4345    | 0.4360    | 5.6                                   | 0.509       | 0.380           | 0.390     | 0.625     | 2.065     | 1.47      | 0.850     | 0.4425                   | 28,500                                       | -65  | 200   | 137.0  | MS17985C756 / NAS1337A2C56D | 4211.E56 |
| 7/16                  | 0.4345    | 0.4360    | 5.8                                   | 0.509       | 0.380           | 0.390     | 0.625     | 2.065     | 1.47      | 0.850     | 0.4425                   | 28,500                                       | -65  | 200   | 141.0  | MS17985C758 / NAS1337A2C58D | 4211.E58 |
| 1/2                   | 0.4970    | 0.4985    | 0.8                                   | 0.594       | 0.460           | 0.565     | 0.800     | 2.345     | 1.60      | 0.885     | 0.5050                   | 36,900                                       | -65  | 200   | 69.6   | MS17985C808 / NAS1338A2C08D | 4211.F08 |
| 1/2                   | 0.4970    | 0.4985    | 0.9                                   | 0.594       | 0.460           | 0.565     | 0.800     | 2.345     | 1.60      | 0.885     | 0.5050                   | 36,900                                       | -65  | 200   | 72.1   | MS17985C809 / NAS1338A2C09D | 4211.F09 |
| 1/2                   | 0.4970    | 0.4985    | 1.0                                   | 0.594       | 0.460           | 0.565     | 0.800     | 2.345     | 1.60      | 0.885     | 0.5050                   | 36,900                                       | -65  | 200   | 74.4   | MS17985C810 / NAS1338A2C10D | 4211.F10 |
| 1/2                   | 0.4970    | 0.4985    | 1.1                                   | 0.594       | 0.460           | 0.565     | 0.800     | 2.345     | 1.60      | 0.885     | 0.5050                   | 36,900                                       | -65  | 200   | 76.9   | MS17985C811 / NAS1338A2C11D | 4211.F11 |
| 1/2                   | 0.4970    | 0.4985    | 1.2                                   | 0.594       | 0.460           | 0.565     | 0.800     | 2.345     | 1.60      | 0.885     | 0.5050                   | 36,900                                       | -65  | 200   | 79.3   | MS17985C812 / NAS1338A2C12D | 4211.F12 |
| 1/2                   | 0.4970    | 0.4985    | 1.3                                   | 0.594       | 0.460           | 0.565     | 0.800     | 2.345     | 1.60      | 0.885     | 0.5050                   | 36,900                                       | -65  | 200   | 81.8   | MS17985C813 / NAS1338A2C13D | 4211.F13 |
| 1/2                   | 0.4970    | 0.4985    | 1.4                                   | 0.594       | 0.460           | 0.565     | 0.800     | 2.345     | 1.60      | 0.885     | 0.5050                   | 36,900                                       | -65  | 200   | 84.2   | MS17985C814 / NAS1338A2C14D | 4211.F14 |
| 1/2                   | 0.4970    | 0.4985    | 1.5                                   | 0.594       | 0.460           | 0.565     | 0.800     | 2.345     | 1.60      | 0.885     | 0.5050                   | 36,900                                       | -65  | 200   | 86.6   | MS17985C815 / NAS1338A2C15D | 4211.F15 |
| 1/2                   | 0.4970    | 0.4985    | 1.6                                   | 0.594       | 0.460           | 0.565     | 0.800     | 2.345     | 1.60      | 0.885     | 0.5050                   | 36,900                                       | -65  | 200   | 89.1   | MS17985C816 / NAS1338A2C16D | 4211.F16 |
| 1/2                   | 0.4970    | 0.4985    | 1.7                                   | 0.594       | 0.460           | 0.565     | 0.800     | 2.345     | 1.60      | 0.885     | 0.5050                   | 36,900                                       | -65  | 200   | 91.5   | MS17985C817 / NAS1338A2C17D | 4211.F17 |
| 1/2                   | 0.4970    | 0.4985    | 1.8                                   | 0.594       | 0.460           | 0.565     | 0.800     | 2.345     | 1.60      | 0.885     | 0.5050                   | 36,900                                       | -65  | 200   | 94.0   | MS17985C818 / NAS1338A2C18D | 4211.F18 |
| 1/2                   | 0.4970    | 0.4985    | 1.9                                   | 0.594       | 0.460           | 0.565     | 0.800     | 2.345     | 1.60      | 0.885     | 0.5050                   | 36,900                                       | -65  | 200   | 96.4   | MS17985C819 / NAS1338A2C19D | 4211.F19 |
| 1/2                   | 0.4970    | 0.4985    | 2.0                                   | 0.594       | 0.460           | 0.565     | 0.800     | 2.345     | 1.60      | 0.885     | 0.5050                   | 36,900                                       | -65  | 200   | 98.8   | MS17985C820 / NAS1338A2C20D | 4211.F20 |
| 1/2                   | 0.4970    | 0.4985    | 2.1                                   | 0.594       | 0.460           | 0.565     | 0.800     | 2.345     | 1.60      | 0.885     | 0.5050                   | 36,900                                       | -65  | 200   | 101.0  | MS17985C821 / NAS1338A2C21D | 4211.F21 |
| 1/2                   | 0.4970    | 0.4985    | 2.2                                   | 0.594       | 0.460           | 0.565     | 0.800     | 2.345     | 1.60      | 0.885     | 0.5050                   | 36,900                                       | -65  | 200   | 104.0  | MS17985C822 / NAS1338A2C22D | 4211.F22 |
| 1/2                   | 0.4970    | 0.4985    | 2.3                                   | 0.594       | 0.460           | 0.565     | 0.800     | 2.345     | 1.60      | 0.885     | 0.5050                   | 36,900                                       | -65  | 200   | 106.0  | MS17985C823 / NAS1338A2C23D | 4211.F23 |
| 1/2                   | 0.4970    | 0.4985    | 2.4                                   | 0.594       | 0.460           | 0.565     | 0.800     | 2.345     | 1.60      | 0.885     | 0.5050                   | 36,900                                       | -65  | 200   | 109.0  | MS17985C824 / NAS1338A2C24D | 4211.F24 |
| 1/2                   | 0.4970    | 0.4985    | 2.5                                   | 0.594       | 0.460           | 0.565     | 0.800     | 2.345     | 1.60      | 0.885     | 0.5050                   | 36,900                                       | -65  | 200   | 111.0  | MS17985C825 / NAS1338A2C25D | 4211.F25 |
| 1/2                   | 0.4970    | 0.4985    | 2.6                                   | 0.594       | 0.460           | 0.565     | 0.800     | 2.345     | 1.60      | 0.885     | 0.5050                   | 36,900                                       | -65  | 200   | 114.0  | MS17985C826 / NAS1338A2C26D | 4211.F26 |
| 1/2                   | 0.4970    | 0.4985    | 2.8                                   | 0.594       | 0.460           | 0.565     | 0.800     | 2.345     | 1.60      | 0.885     | 0.5050                   | 36,900                                       | -65  | 200   | 118.0  | MS17985C828 / NAS1338A2C28D | 4211.F28 |
| 1/2                   | 0.4970    | 0.4985    | 2.9                                   | 0.594       | 0.460           | 0.565     | 0.800     | 2.345     | 1.60      | 0.885     | 0.5050                   | 36,900                                       | -65  | 200   | 121.0  | MS17985C829 / NAS1338A2C29D | 4211.F29 |
| 1/2                   | 0.4970    | 0.4985    | 3.0                                   | 0.594       | 0.460           | 0.565     | 0.800     | 2.345     | 1.60      | 0.885     | 0.5050                   | 36,900                                       | -65  | 200   | 123.0  | MS17985C830 / NAS1338A2C30D | 4211.F30 |
| 1/2                   | 0.4970    | 0.4985    | 3.1                                   | 0.594       | 0.460           | 0.565     | 0.800     | 2.345     | 1.60      | 0.885     | 0.5050                   | 36,900                                       | -65  | 200   | 126.0  | MS17985C831 / NAS1338A2C31D | 4211.F31 |
| 1/2                   | 0.4970    | 0.4985    | 3.2                                   | 0.594       | 0.460           | 0.565     | 0.800     | 2.345     | 1.60      | 0.885     | 0.5050                   | 36,900                                       | -65  | 200   | 128.0  | MS17985C832 / NAS1338A2C32D | 4211.F32 |
| 1/2                   | 0.4970    | 0.4985    | 3.3                                   | 0.594       | 0.460           | 0.565     | 0.800     | 2.345     | 1.60      | 0.885     | 0.5050                   | 36,900                                       | -65  | 200   | 138.0  | MS17985C833 / NAS1338A2C33D | 4211.F33 |
| 1/2                   | 0.4970    | 0.4985    | 3.4                                   | 0.594       | 0.460           | 0.565     | 0.800     | 2.345     | 1.60      | 0.885     | 0.5050                   | 36,900                                       | -65  | 200   | 133.0  | MS17985C834 / NAS1338A2C34D | 4211.F34 |

| Nominal diameter<br>A | A<br>min. | A<br>max. | Clamping<br>length<br>L<br>+0.02<br>0 | Dimensions  |                 |           |           |           |           |           | Location<br>hole<br>max. | Shearing<br>resistance,<br>two-shear<br>min. | <br>min. max. |                    | <br>[g] | Standard<br>description      | Art. No. |
|-----------------------|-----------|-----------|---------------------------------------|-------------|-----------------|-----------|-----------|-----------|-----------|-----------|--------------------------|--|--|--------------------|--|------------------------------|----------|
|                       |           |           |                                       | B<br>±0.005 | C<br>0<br>-0.04 | D<br>max. | E<br>max. | F<br>max. | G<br>max. | H<br>min. |                          |  | [in]   | [lb <sub>f</sub> ] |  |                              |          |
| [in]                  | [in]      | [in]      | [in]                                  | [in]        |                 |           |           |           |           |           | [in]                     | [lb <sub>f</sub> ]                           | [°F]   |                    | [g]  |                              |          |
| 1/2                   | 0.4970    | 0.4985    | 3.5                                   | 0.594       | 0.460           | 0.565     | 0.800     | 2.345     | 1.60      | 0.885     | 0.5050                   | 36,900                                       | -65  | 200                | 135.0  | MS17985C835 / NAS1338A2C35D  | 4211.F35 |
| 1/2                   | 0.4970    | 0.4985    | 3.6                                   | 0.594       | 0.460           | 0.565     | 0.800     | 2.345     | 1.60      | 0.885     | 0.5050                   | 36,900                                       | -65  | 200                | 138.0  | MS17985C836 / NAS1338A2C36D  | 4211.F36 |
| 1/2                   | 0.4970    | 0.4985    | 3.7                                   | 0.594       | 0.460           | 0.565     | 0.800     | 2.345     | 1.60      | 0.885     | 0.5050                   | 36,900                                       | -65  | 200                | 140.0  | MS17985C837 / NAS1338A2C37D  | 4211.F37 |
| 1/2                   | 0.4970    | 0.4985    | 4.0                                   | 0.594       | 0.460           | 0.565     | 0.800     | 2.345     | 1.60      | 0.885     | 0.5050                   | 36,900                                       | -65  | 200                | 148.0  | MS17985C840 / NAS1338A2C40D  | 4211.F40 |
| 1/2                   | 0.4970    | 0.4985    | 4.2                                   | 0.594       | 0.460           | 0.565     | 0.800     | 2.345     | 1.60      | 0.885     | 0.5050                   | 36,900                                       | -65  | 200                | 153.0  | MS17985C842 / NAS1338A2C42D  | 4211.F42 |
| 1/2                   | 0.4970    | 0.4985    | 4.3                                   | 0.594       | 0.460           | 0.565     | 0.800     | 2.345     | 1.60      | 0.885     | 0.5050                   | 36,900                                       | -65  | 200                | 155.0  | MS17985C843 / NAS1338A2C43D  | 4211.F43 |
| 1/2                   | 0.4970    | 0.4985    | 4.4                                   | 0.594       | 0.460           | 0.565     | 0.800     | 2.345     | 1.60      | 0.885     | 0.5050                   | 36,900                                       | -65  | 200                | 157.0  | MS17985C844 / NAS1338A2C44D  | 4211.F44 |
| 1/2                   | 0.4970    | 0.4985    | 4.5                                   | 0.594       | 0.460           | 0.565     | 0.800     | 2.345     | 1.60      | 0.885     | 0.5050                   | 36,900                                       | -65  | 200                | 160.0  | MS17985C845 / NAS1338A2C45D  | 4211.F45 |
| 1/2                   | 0.4970    | 0.4985    | 4.6                                   | 0.594       | 0.460           | 0.565     | 0.800     | 2.345     | 1.60      | 0.885     | 0.5050                   | 36,900                                       | -65  | 200                | 162.0  | MS17985C846 / NAS1338A2C46D  | 4211.F46 |
| 1/2                   | 0.4970    | 0.4985    | 4.7                                   | 0.594       | 0.460           | 0.565     | 0.800     | 2.345     | 1.60      | 0.885     | 0.5050                   | 36,900                                       | -65  | 200                | 165.0  | MS17985C847 / NAS1338A2C47D  | 4211.F47 |
| 1/2                   | 0.4970    | 0.4985    | 4.8                                   | 0.594       | 0.460           | 0.565     | 0.800     | 2.345     | 1.60      | 0.885     | 0.5050                   | 36,900                                       | -65  | 200                | 167.0  | MS17985C848 / NAS1338A2C48D  | 4211.F48 |
| 1/2                   | 0.4970    | 0.4985    | 5.0                                   | 0.594       | 0.460           | 0.565     | 0.800     | 2.345     | 1.60      | 0.885     | 0.5050                   | 36,900                                       | -65  | 200                | 172.0  | MS17985C850 / NAS1338A2C50D  | 4211.F50 |
| 1/2                   | 0.4970    | 0.4985    | 5.5                                   | 0.594       | 0.460           | 0.565     | 0.800     | 2.345     | 1.60      | 0.885     | 0.5050                   | 36,900                                       | -65  | 200                | 184.0  | MS17985C855 / NAS1338A2C55D  | 4211.F55 |
| 1/2                   | 0.4970    | 0.4985    | 6.0                                   | 0.594       | 0.460           | 0.565     | 0.800     | 2.345     | 1.60      | 0.885     | 0.5050                   | 36,900                                       | -65  | 200                | 196.0  | MS17985C860 / NAS1338A2C60D  | 4211.F60 |
| 9/16                  | 0.5595    | 0.5610    | 1.0                                   | 0.666       | 0.510           | 0.565     | 0.800     | 2.345     | 1.60      | 0.885     | 0.5675                   | 46,700                                       | -65  | 200                | 84.9   | MS17985C910 / NAS1339A2C10D  | 4211.G10 |
| 9/16                  | 0.5595    | 0.5610    | 1.2                                   | 0.666       | 0.510           | 0.565     | 0.800     | 2.345     | 1.60      | 0.885     | 0.5675                   | 46,700                                       | -65  | 200                | 91.2   | MS17985C912 / NAS1339A2C12D  | 4211.G12 |
| 9/16                  | 0.5595    | 0.5610    | 1.7                                   | 0.666       | 0.510           | 0.565     | 0.800     | 2.345     | 1.60      | 0.885     | 0.5675                   | 46,700                                       | -65  | 200                | 107.0  | MS17985C917 / NAS1339A2C17D  | 4211.G17 |
| 9/16                  | 0.5595    | 0.5610    | 2.4                                   | 0.666       | 0.510           | 0.565     | 0.800     | 2.345     | 1.60      | 0.885     | 0.5675                   | 46,700                                       | -65  | 200                | 128.0  | MS17985C924 / NAS1339A2C24D  | 4211.G24 |
| 9/16                  | 0.5595    | 0.5610    | 2.5                                   | 0.666       | 0.510           | 0.565     | 0.800     | 2.345     | 1.60      | 0.885     | 0.5675                   | 46,700                                       | -65  | 200                | 132.0  | MS17985C925 / NAS1339A2C25D  | 4211.G25 |
| 9/16                  | 0.5595    | 0.5610    | 3.2                                   | 0.666       | 0.510           | 0.565     | 0.800     | 2.345     | 1.60      | 0.885     | 0.5675                   | 46,700                                       | -65  | 200                | 153.0  | MS17985C932 / NAS1339A2C32D  | 4211.G32 |
| 9/16                  | 0.5595    | 0.5610    | 3.6                                   | 0.666       | 0.510           | 0.565     | 0.800     | 2.345     | 1.60      | 0.885     | 0.5675                   | 46,700                                       | -65  | 200                | 166.0  | MS17985C936 / NAS1339A2C36D  | 4211.G36 |
| 9/16                  | 0.5595    | 0.5610    | 4.0                                   | 0.666       | 0.510           | 0.565     | 0.800     | 2.345     | 1.60      | 0.885     | 0.5675                   | 46,700                                       | -65  | 200                | 178.0  | MS17985C940 / NAS1339A2C40D  | 4211.G40 |
| 9/16                  | 0.5595    | 0.5610    | 5.0                                   | 0.666       | 0.510           | 0.565     | 0.800     | 2.345     | 1.60      | 0.885     | 0.5675                   | 46,700                                       | -65  | 200                | 209.0  | MS17985C950 / NAS1339A2C50D  | 4211.G50 |
| 9/16                  | 0.5595    | 0.5610    | 5.5                                   | 0.666       | 0.510           | 0.565     | 0.800     | 2.345     | 1.60      | 0.885     | 0.5675                   | 46,700                                       | -65  | 200                | 225.0  | MS17985C955 / NAS1339A2C55D  | 4211.G55 |
| 5/8                   | 0.6220    | 0.6240    | 1.4                                   | 0.750       | 0.580           | 0.580     | 0.975     | 3.100     | 1.70      | 0.980     | 0.6300                   | 57,800                                       | -65  | 200                | 147.0  | MS17985C1014 / NAS1340A2C14D | 4211.H14 |
| 5/8                   | 0.6220    | 0.6240    | 1.5                                   | 0.750       | 0.580           | 0.580     | 0.975     | 3.100     | 1.70      | 0.980     | 0.6300                   | 57,800                                       | -65  | 200                | 151.0  | MS17985C1015 / NAS1340A2C15D | 4211.H15 |
| 5/8                   | 0.6220    | 0.6240    | 1.6                                   | 0.750       | 0.580           | 0.580     | 0.975     | 3.100     | 1.70      | 0.980     | 0.6300                   | 57,800                                       | -65  | 200                | 155.0  | MS17985C1016 / NAS1340A2C16D | 4211.H16 |
| 5/8                   | 0.6220    | 0.6240    | 1.8                                   | 0.750       | 0.580           | 0.580     | 0.975     | 3.100     | 1.70      | 0.980     | 0.6300                   | 57,800                                       | -65  | 200                | 162.0  | MS17985C1018 / NAS1340A2C18D | 4211.H18 |
| 5/8                   | 0.6220    | 0.6240    | 2.0                                   | 0.750       | 0.580           | 0.580     | 0.975     | 3.100     | 1.70      | 0.980     | 0.6300                   | 57,800                                       | -65  | 200                | 170.0  | MS17985C1020 / NAS1340A2C20D | 4211.H20 |
| 5/8                   | 0.6220    | 0.6240    | 2.5                                   | 0.750       | 0.580           | 0.580     | 0.975     | 3.100     | 1.70      | 0.980     | 0.6300                   | 57,800                                       | -65  | 200                | 190.0  | MS17985C1025 / NAS1340A2C25D | 4211.H25 |
| 5/8                   | 0.6220    | 0.6240    | 2.6                                   | 0.750       | 0.580           | 0.580     | 0.975     | 3.100     | 1.70      | 0.980     | 0.6300                   | 57,800                                       | -65  | 200                | 193.0  | MS17985C1026 / NAS1340A2C26D | 4211.H26 |
| 5/8                   | 0.6220    | 0.6240    | 3.0                                   | 0.750       | 0.580           | 0.580     | 0.975     | 3.100     | 1.70      | 0.980     | 0.6300                   | 57,800                                       | -65  | 200                | 209.0  | MS17985C1030 / NAS1340A2C30D | 4211.H30 |



| Nominal diameter<br>A | A<br>min. | A<br>max. | Clamping<br>length<br>L<br>+0.02<br>0 | Dimensions  |                 |           |           |           |           | Location<br>hole<br>max. | Shearing<br>resistance,<br>two-shear<br>min. | <br>min. max. |      | <br>[g] | Standard<br>description | Art. No.                     |          |
|-----------------------|-----------|-----------|---------------------------------------|-------------|-----------------|-----------|-----------|-----------|-----------|--------------------------|--|--|------|--|-------------------------|------------------------------|----------|
|                       |           |           |                                       | B<br>±0.005 | C<br>0<br>-0.04 | D<br>max. | E<br>max. | F<br>max. | G<br>max. |                          |  | H<br>min.  | [°F] |  |                         |                              |          |
| [in]                  | [in]      | [in]      | [in]                                  | [in]        |                 |           |           |           |           | [in]                     | [lbf]  |  |      | [g]  |                         |                              |          |
| 5/8                   | 0.6220    | 0.6240    | 3.2                                   | 0.750       | 0.580           | 0.580     | 0.975     | 3.100     | 1.70      | 0.980                    | 0.6300                                       | 57,800   | -65  | 200  | 216.0                   | MS17985C1032 / NAS1340A2C32D | 4211.H32 |
| 5/8                   | 0.6220    | 0.6240    | 3.5                                   | 0.750       | 0.580           | 0.580     | 0.975     | 3.100     | 1.70      | 0.980                    | 0.6300                                       | 57,800   | -65  | 200  | 228.0                   | MS17985C1035 / NAS1340A2C35D | 4211.H35 |
| 5/8                   | 0.6220    | 0.6240    | 3.8                                   | 0.750       | 0.580           | 0.580     | 0.975     | 3.100     | 1.70      | 0.980                    | 0.6300                                       | 57,800   | -65  | 200  | 239.0                   | MS17985C1038 / NAS1340A2C38D | 4211.H38 |
| 5/8                   | 0.6220    | 0.6240    | 4.0                                   | 0.750       | 0.580           | 0.580     | 0.975     | 3.100     | 1.70      | 0.980                    | 0.6300                                       | 57,800   | -65  | 200  | 247.0                   | MS17985C1040 / NAS1340A2C40D | 4211.H40 |
| 5/8                   | 0.6220    | 0.6240    | 4.5                                   | 0.750       | 0.580           | 0.580     | 0.975     | 3.100     | 1.70      | 0.980                    | 0.6300                                       | 57,800   | -65  | 200  | 267.0                   | MS17985C1045 / NAS1340A2C45D | 4211.H45 |
| 5/8                   | 0.6220    | 0.6240    | 6.0                                   | 0.750       | 0.580           | 0.580     | 0.975     | 3.100     | 1.70      | 0.980                    | 0.6300                                       | 57,800   | -65  | 200  | 324.0                   | MS17985C1060 / NAS1340A2C60D | 4211.H60 |
| 3/4                   | 0.7470    | 0.7485    | 1.6                                   | 0.887       | 0.670           | 0.700     | 1.000     | 3.100     | 1.72      | 1.030                    | 0.7570                                       | 83,200   | -65  | 200  | 198.0                   | MS17985C1216 / NAS1341A2C16D | 4211.K16 |
| 3/4                   | 0.7470    | 0.7485    | 2.5                                   | 0.887       | 0.670           | 0.700     | 1.000     | 3.100     | 1.72      | 1.030                    | 0.7570                                       | 83,200   | -65  | 200  | 248.0                   | MS17985C1225 / NAS1341A2C25D | 4211.K25 |
| 3/4                   | 0.7470    | 0.7485    | 3.0                                   | 0.887       | 0.670           | 0.700     | 1.000     | 3.100     | 1.72      | 1.030                    | 0.7570                                       | 83,200   | -65  | 200  | 276.0                   | MS17985C1230 / NAS1341A2C30D | 4211.K30 |
| 3/4                   | 0.7470    | 0.7485    | 3.1                                   | 0.887       | 0.670           | 0.700     | 1.000     | 3.100     | 1.72      | 1.030                    | 0.7570                                       | 83,200   | -65  | 200  | 281.0                   | MS17985C1231 / NAS1341A2C31D | 4211.K31 |
| 3/4                   | 0.7470    | 0.7485    | 4.0                                   | 0.887       | 0.670           | 0.700     | 1.000     | 3.100     | 1.72      | 1.030                    | 0.7570                                       | 83,200   | -65  | 200  | 331.0                   | MS17985C1240 / NAS1341A2C40D | 4211.K40 |
| 3/4                   | 0.7470    | 0.7485    | 4.2                                   | 0.887       | 0.670           | 0.700     | 1.000     | 3.100     | 1.72      | 1.030                    | 0.7570                                       | 83,200   | -65  | 200  | 342.0                   | MS17985C1242 / NAS1341A2C42D | 4211.K42 |
| 3/4                   | 0.7470    | 0.7485    | 5.0                                   | 0.887       | 0.670           | 0.700     | 1.000     | 3.100     | 1.72      | 1.030                    | 0.7570                                       | 83,200   | -65  | 200  | 387.0                   | MS17985C1250 / NAS1341A2C50D | 4211.K50 |
| 3/4                   | 0.7470    | 0.7485    | 5.0                                   | 0.887       | 0.670           | 0.700     | 1.000     | 3.100     | 1.72      | 1.030                    | 0.7570                                       | 83,200   | -65  | 200  | 392.0                   | MS17985C1251 / NAS1341A2C51D | 4211.K51 |
| 7/8                   | 0.8720    | 0.8735    | 4.0                                   | 1.046       | 0.760           | 0.840     | 1.320     | 3.520     | 2.17      | 1.310                    | 0.8820                                       | 112,500  | -65  | 200  | 506.0                   | MS17985C1440 / NAS1342A2C40D | 4211.L40 |
| 1                     | 0.9970    | 0.9985    | 1.0                                   | 1.219       | 0.810           | 0.950     | 1.320     | 3.520     | 2.17      | 1.310                    | 1.0100                                       | 147,200  | -65  | 200  | 333.0                   | MS17985C1610 / NAS1343A2C10D | 4211.M10 |
| 1                     | 0.9970    | 0.9985    | 1.5                                   | 1.219       | 0.810           | 0.950     | 1.320     | 3.520     | 2.17      | 1.310                    | 1.0100                                       | 147,200  | -65  | 200  | 383.0                   | MS17985C1615 / NAS1343A2C15D | 4211.M15 |
| 1                     | 0.9970    | 0.9985    | 2.9                                   | 1.219       | 0.810           | 0.950     | 1.320     | 3.520     | 2.17      | 1.310                    | 1.0100                                       | 147,200  | -65  | 200  | 522.0                   | MS17985C1629 / NAS1343A2C29D | 4211.M29 |
| 1                     | 0.9970    | 0.9985    | 3.1                                   | 1.219       | 0.810           | 0.950     | 1.320     | 3.520     | 2.17      | 1.310                    | 1.0100                                       | 147,200  | -65  | 200  | 541.0                   | MS17985C1631 / NAS1343A2C31D | 4211.M31 |
| 1                     | 0.9970    | 0.9985    | 3.3                                   | 1.219       | 0.810           | 0.950     | 1.320     | 3.520     | 2.17      | 1.310                    | 1.0100                                       | 147,200  | -65  | 200  | 561.0                   | MS17985C1633 / NAS1343A2C33D | 4211.M33 |
| 1                     | 0.9970    | 0.9985    | 4.0                                   | 1.219       | 0.810           | 0.950     | 1.320     | 3.520     | 2.17      | 1.310                    | 1.0100                                       | 147,200  | -65  | 200  | 631.0                   | MS17985C1640 / NAS1343A2C40D | 4211.M40 |
| 1                     | 0.9970    | 0.9985    | 5.0                                   | 1.219       | 0.810           | 0.950     | 1.320     | 3.520     | 2.17      | 1.310                    | 1.0100                                       | 147,200  | -65  | 200  | 581.0                   | MS17985C1650 / NAS1343A2C50D | 4211.M50 |
| 1                     | 0.9970    | 0.9985    | 5.5                                   | 1.219       | 0.810           | 0.950     | 1.320     | 3.520     | 2.17      | 1.310                    | 1.0100                                       | 147,200  | -65  | 200  | 779.0                   | MS17985C1655 / NAS1343A2C55D | 4211.M55 |

## Compliance

### RoHS compliant

Compliant according to Directive 2011/65/EU and Directive 2015/863.

### Does not contain SVHC substances

No SVHC substances with more than 0.1% w/w contained - SVHC list [REACH] as of 27.06.2024.

### Does not contain Proposition 65 substances

No Proposition 65 substances included.

<https://www.P65Warnings.ca.gov/>

### Free from Conflict Minerals

This product does not contain any substances designated as "conflict minerals" such as tantalum, tin, gold or tungsten from the Democratic Republic of Congo or adjacent countries.