

# Sex Bolt & Barrel Nut Size Chart

**Tip:** Set your PDF viewer to "Actual size" before printing to maintain scale.

## Standard Thread Sizes and Barrel Lengths

| Thread Size | Head Diameter | Common Barrel Lengths | Max Material Thickness | Typical Uses                   |
|-------------|---------------|-----------------------|------------------------|--------------------------------|
| M3 (3mm)    | 6-8mm         | 4-15mm                | 3-14mm                 | Electronics, small leather     |
| M4 (4mm)    | 8-10mm        | 6-20mm                | 5-18mm                 | Light assemblies, thin panels  |
| M5 (5mm)    | 10-12mm       | 8-25mm                | 7-23mm                 | General purpose, leather goods |
| 6-32        | 5/16"-3/8"    | 3/16"-1"              | 1/8"-15/16"            | Common American size, albums   |
| 8-32        | 3/8"-1/2"     | 1/4"-1-1/4"           | 3/16"-1-1/8"           | Furniture, heavy leather goods |
| 10-24       | 1/2"-5/8"     | 1/4"-1-1/2"           | 3/16"-1-3/8"           | Heavy furniture, structural    |
| 1/4"-20     | 1/2"-3/4"     | 3/8"-2"               | 1/4"-1-7/8"            | Large furniture, industrial    |

## Clearance Hole Sizing Guide

| Thread Size | Barrel Body Diameter | Recommended Clearance Hole | Tight Fit Hole |
|-------------|----------------------|----------------------------|----------------|
| M3          | ~4.5mm               | 4.8mm (3/16")              | 4.6mm          |
| M4          | ~6mm                 | 6.5mm (1/4")               | 6.2mm          |
| M5          | ~7.5mm               | 8mm (5/16")                | 7.7mm          |
| 6-32        | ~0.180"              | 13/64" (0.203")            | #11 (0.191")   |
| 8-32        | ~0.230"              | 1/4" (0.250")              | #3 (0.237")    |
| 10-24       | ~0.290"              | 5/16" (0.3125")            | #2 (0.302")    |
| 1/4"-20     | ~0.350"              | 3/8" (0.375")              | U (0.368")     |

## Barrel Length Selection Formula

Required Barrel Length = Material Thickness + 1/16" to 1/8" clearance

**Example 1:** For 1/2" thick material

- Barrel length needed: 1/2" + 1/16" = 9/16" minimum
- Select: 9/16" or 5/8" barrel length (use next size up if exact isn't available)

**Example 2:** For 12mm thick material

- Barrel length needed: 12mm + 2mm = 14mm minimum
- Select: 15mm barrel length (standard size)

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## Common Configuration Chart

| Application           | Typical Thread Size | Barrel Length Range | Head Style                |
|-----------------------|---------------------|---------------------|---------------------------|
| Photo albums          | 6-32 or M5          | 1/4"-3/4"           | Decorative flat head      |
| Leather goods         | 6-32 or 8-32        | 1/4"-1/2"           | Low-profile or decorative |
| Furniture connections | 8-32 or 10-24       | 1/2"-1-1/2"         | Standard flat head        |
| Sign mounting         | 8-32 or 1/4"-20     | 1/2"-2"             | Decorative or standoff    |
| Electronics panels    | M3 or M4            | 6-20mm              | Low-profile               |

## Important Notes

- Always select the next standard barrel length UP if exact size is not available
- Clearance holes should allow free passage of barrel body (not head)
- Male screw length is typically 1/16" shorter than barrel for proper engagement
- Head diameter should be large enough to prevent pull-through in your material
- For stacked materials, add all thicknesses together before calculating barrel length

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