

10-32 Hardware

10-32 is the most common fastener size used in FRC. It provides a good balance of strength, weight, and ease of use, making it suitable for many robot assemblies.

What Does 10-32 Mean?

- **#10** refers to the screw diameter.
- **32** refers to the number of threads per inch (TPI).

This makes 10-32 a fine-thread fastener that provides good holding strength in aluminum.

Common Hardware

10-32 hardware includes:

- Socket head cap screws
 - Button head screws
 - Nylock nuts
 - Washers
 - Tapped holes in aluminum
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Common Lengths

Typical lengths used in FRC include:

- 1/2"
- 3/4"
- 1"
- 1-1/4"
- 1-1/2"

The correct length should allow full thread engagement without excessive exposed threads.

Typical Tools

- 5/32" hex key or T-handle
 - 3/8" wrench or socket for nuts
 - #21 drill bit for tap holes
 - 13/64" drill bit for clearance holes
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Why FRC Teams Use It

- Strong enough for most robot assemblies
 - Easy to tap into aluminum
 - Widely available from FRC vendors
 - Compatible with many commercial robot components
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Key Idea

10-32 hardware is the standard fastener system for many FRC robots because it provides reliable strength while remaining compact and easy to work with.

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