

Pliers and Vice Grips

Pliers and vice grips are gripping tools used in FRC for holding, bending, and temporarily securing parts. They are not primary fastening tools, but they are useful for support tasks during assembly.

Pliers

Pliers are hand tools used to grip, bend, or hold small parts.

Common uses in FRC:

- Holding nuts in tight spaces
- Bending wire or light metal
- Removing or adjusting small components

Types:

- Needle-nose pliers (precision work in tight areas)
 - Standard pliers (general gripping and bending)
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Vice Grips (Locking Pliers)

Vice grips are adjustable pliers that lock into place with high gripping force.

Advantages:

- Strong, adjustable grip
- Can hold parts without continuous hand pressure
- Useful for temporary clamping

Common uses in FRC:

- Holding bolts or nuts in place
 - Temporary clamping of parts during assembly
 - Removing stripped or stuck fasteners
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Proper Use

- Adjust grip before locking vice grips into place
 - Avoid over-tightening, which can damage parts
 - Use only when a proper tool (wrench or socket) is not practical
 - Release locking mechanism carefully to avoid sudden movement
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Common Mistakes

- Using vice grips as a permanent fastening solution
 - Over-tightening and damaging hardware
 - Slipping off due to poor adjustment
 - Using pliers instead of the correct size wrench or socket
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Key Idea

Pliers and vice grips are support tools in FRC. They are best used for holding and adjusting parts, not for replacing proper fastener tools like wrenches or sockets.

Revision #1

Created 25 June 2026 19:09:19 by eharis

Updated 25 June 2026 19:09:43 by eharis