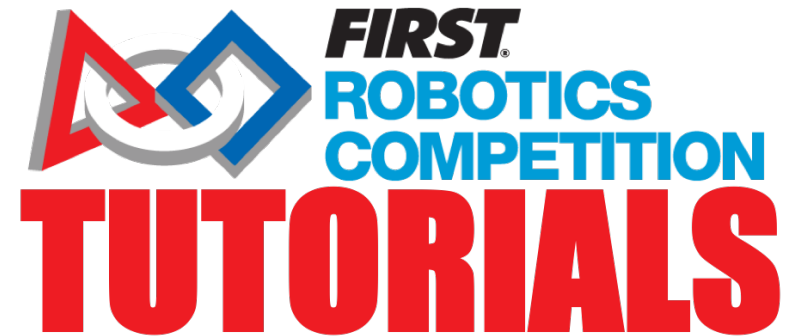


Useful Tools

TEAM 8027



Safety First

- Safety is the biggest priority in FRC
- Having and using proper safety equipment is instrumental in the success of an FRC team
- This includes gloves, safety glasses, and proper safety guards on dangerous equipment



Screwdrivers and Wrenches

- In order to easily and effectively add and remove screws and nuts of all different sizes, screwdrivers and wrenches can be very useful
- Wrenches can be used to tighten nuts into the right places in addition to removing nuts quickly
- Screwdrivers can be used to tighten and remove screws
- Also useful are allen keys, which can tighten and remove screws with a socket in the shape of a hexagon



Handheld Drills

- Another very useful tool to have to create screwholes and other holes in metal is a handheld drill
- These are easy to use to drill into harder to reach areas
- There are different types of handheld drills, some used to get into hard to reach areas, such as the right angle drill



Rivets and Rivet Gun

- An alternative to using screws in some scenarios is to use a rivet which can be very useful
- These are easier to remove and add than certain screws and are more cost effective
- Having a automatic riveting gun can be very useful as it can allow you to add rivets much faster than with a manual rivet gun or with certain screwdrivers and screws



Drill Press



- In FRC, there are often larger holes that must be made in parts for certain purposes
- These require the use of a larger, more powerful machine known as the drill press which is a semi-automatic drill
- The drill press can be used to make anywhere from small holes for smaller screws to larger holes for axles
- You can adjust the size of the holes by adjusting the drill bit, which is the part of the drill press that actually makes the holes

Band Saw

- Additionally, larger cuts may need to be made on certain parts in FRC
- To make these, the use of a machine known as the band saw is often required
- The band saw is large, automatic saw that is used to cut and shape metal (and wood occasionally) with a continuous blade



Useful Links

Band Saw:

<https://www.homedepot.com/b/Tools-Power-Tools-Saws-Band-Saws-Stationary-Band-Saws/N-5yc1vZc3wt>

Drill Press & Drill Bits:

<https://www.homedepot.com/s/drill%2520press?NCNI-5>

<https://www.homedepot.com/s/drill%2520bits?NCNI-5>

Allen Keys Set:

<https://www.amazon.com/AmazonBasics-Hex-Allen-Wrench-Ball/dp/B0776C2D6H>

Wrench Set:

<https://www.homedepot.com/p/Milwaukee-SAE-Metric-Combination-Ratcheting-Wrench-Mechanics-Tool-Set-30-Piece-48-22-9416-48-22-9516/309800942>

Useful Links - Continued

Screwdriver Set:

https://www.amazon.com/CREMAX-Magnetic-Screwdriver-Cushion-Phillips/dp/B07K1C744B?ref=s9_apbd_orecs_hd_bw_b2Jwu&pf_rd_r=QVWH5WXS4FCVS51XQR07&pf_rd_p=6e4d9b8c-4111-590f-8aaf-f17fa8bd5a04&pf_rd_s=merchandised-search-10&pf_rd_t=BROWSE&pf_rd_i=553344

Right-Angle Drill:

https://www.amazon.com/DEWALT-Right-Cordless-Driver-DCD740C1/dp/B0052Ml3C/ref=sr_1_3?dchild=1&keywords=right+angle+drill&qid=1591126331&s=hi&sr=1-3

Hand-Held Drill:

https://www.amazon.com/DCD777C2-Contralador-taladro-compacto-escobillas/dp/B01J7UPHIS/ref=sr_1_3?dchild=1&keywords=drill+dewalt&qid=1591126483&s=hi&sr=1-3

Vacuum Cleaner:

https://www.amazon.com/DEWALT-DCV517B-Baretool-Cordless-Portable/dp/B01CKIZ8BA/ref=sr_1_1?dchild=1&keywords=vacuum+cleaner+dewalt&qid=1591126453&s=hi&sr=1-1

Rivet Gun:

https://www.amazon.com/URGENEX-Rivet-Riveter-Rivets-Professional/dp/B08357W8RN/ref=sr_1_2?dchild=1&keywords=rivet+gun&qid=1591126414&sr=8-2

Credits

- This lesson was written by FRC 8027 for FRCTutorials.com
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