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REF: Tools - 170

Hand Held Grinder / Cutter / Dremil

Angle grinders / die grinders are very useful tools to have around and have many uses by switching the wheel or attachment:

You just need to make the sure the different wheels / attachmnets are compatible with your tool.

- Grinding and Sharpening:
 - Using a grinding wheel, you can grind welded joints smooth, remove excess material, de-burr edges, shape metal, sharpen / dull / round off metal edges, sharpen blades etc.
 - Just keep the grinder moving throughout the operation to keep the heat down.
- Cutting Metal:
 - Using a metal cutting wheel, you can cut rods, bars, frames, shorten bolts, etc.
- Cleaning Metal:
 - Using a wire wheel or cup brush, you can remove rust and flaking paint, clean the threads on a used bolt etc.
- Polishing Metal:
 - Using a buffing wheel, you can polish metal.

Please Use Proper Safety Precautions

These power tools are used every day, all day somewhere.

In the right hands, they are excellent tools to cut job time and tackle some tasks that normally could not be done in a home setting.

With that being said, they are also dangerous tools in inexperienced hands (and some otherwise experienced complacent ones).

With great power comes a great risk of injury, especially since grinder discs spin at high speeds that can reach 10,000 to 11,000 RPM.

One slip of a hand and you may lose a finger, arm, or leg.

This article is not to scare you, but to empathize the importance of safety measures when using these tools.

Safety has to come first regardless of what you're using an angle grinder for. Here are some precautions that you can take:

- Angle grinders toss a helluva lot of dust into the air, so make sure to wear your dust mask, safety goggles, and gloves, head covering if possible, etc.
If you're not working alone, make sure everyone in the room is wearing a dust mask.

Also be aware that dust can settle in your hair, eye brows etc and later fall into your eyes if not fully washed / flushed after using these tools.

Metal flies so fast off the tools, you'll never see it coming (especially fine grinded mist) before it lodges in your eyes.

- Keep a firm grip with both hands throughout the operation, and attach the handle whenever it's possible.
- Angle grinders produce sparks when cutting, so don't use them near flammable materials.
- When replacing new wheels, unplug, change wheel, plug back up and run it in a protected area to make sure it isn't defective before continuing cutting.
- The guard is there to protect you, so attach it whenever it's possible.
- When not in use, store your angle grinders away from children.
- Secure the work piece firmly to avoid slippage (never use your knees as a vise).

Angle Grinder vs Die Grinder

The main differences between an angle grinder and a die grinder are the design of the tool, size, and power.

An angle grinder is primarily used for cutting and rough grinding, whereas the die grinder is a rotary tool used for precision work.

Angle Grinder



Die Grinder

Custom fender fitting. ³⁾



Dremil Rotary Tool

Dremil Type Rotary Tool

A Dremil tool has many uses from cutting to polishing metal. Always wear a face shield when using this tool.

It operates at a very high speed and tiny pieces of the cutting bits and the metal will hit your eyes faster than you can blink.

It's good for cutting carbon & stainless steel, shortening bolts, shaping metal, polishing etc.

Dremil tool. ⁴⁾	Cutting slots in pipes for shields. ⁵⁾

Usually, cutting the end off a bolt requires sanding / filing the cut area to deburr / chamfer the end. However, the Dremil tool cuts at a high speed with a thin cutting disc.

Keep the cutting blade perpendicular to the threads while cutting and, most of the time, deburring the cut end is optional or at least minimal.

There is no need to install a nut and back it off the threads as you would normally do when using a hack saw or grinder.

Shortening a bolt. ⁶⁾



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