

Long pants are required to be worn at all times when operating this equipment

Job/Task Step	Hazard	Hazard Control Method/PPE
Inspect Equipment/PPE Check/Buddy System	N/A	<ul style="list-style-type: none"> • Don all required PPE for use of the Drill Press. Approved Safety Glasses with side shields, Long Pants, Closed Toe Shoes, Ear plugs, and Gloves (until start up). • Additional foot protection is required when working with heavy parts and pieces. • Tuck in shirt, not loose fitting clothing or jewelry. • Long hair must be pulled back or tucked into a hat. • Work with the supervisor of the space to review operation and ensure all risks have been addressed.
Rotate drill up and install the bit	Abrasions/Lacerations, Pinch Points	<ul style="list-style-type: none"> • Be aware of hand placement to avoid Abrasions/lacerations and Pinch Points. • Gloves must be worn.
Place material to be drilled on the platform	Abrasions/Lacerations, Muscle Strains, Pinch Points	<ul style="list-style-type: none"> • Be aware of hand/body placement and sharp edges of the material. • Use proper lifting technique while placing the material on the drill. • Ask for help if the material is too heavy or awkward in size/shape. • Be aware of hand and body placement. • Gloves must be worn.
Secure Materials with C-Clamps	Abrasions/Lacerations, Pinch Points	<ul style="list-style-type: none"> • Be aware of hand placement to avoid Abrasions/lacerations and Pinch Points. • Gloves must be worn.
STOP	PPE CHECK	<ul style="list-style-type: none"> • PRIOR TO STARTING THE DRILL PRESS ENSURE THAT GLOVES ARE REMOVED, LOOSE FITTING CLOTHING IS TUCKED IN, JEWELRY IS REMOVED, AND LONG HAIR IS PULLED BACK OR TUCKED INTO A HAT!!!

		<ul style="list-style-type: none"> • Required PPE: Safety Glasses, Ear Plugs, Closed Toe Shoes, and Long Pants
Turn on Drill Press	Rotating Parts, Pinch Points, High Noise, and Flying Debris.	<ul style="list-style-type: none"> • Be aware of hand/body placement due to rotating parts/pinch point hazards. • Wear ear plugs to protect from loud noises. • Wear safety glasses to prevent eye injury.
Pull Handle to Drill Material	Rotating Parts, Pinch Points, High Noise, Flying Debris, Hot Material, and Slipping hazards.	<ul style="list-style-type: none"> • Be aware of hand/body placement due to rotating parts/pinch point hazards. • Wear ear plugs to protect from loud noises. • Wear safety glasses to prevent eye injury. • If metal is being drilled and lubricate is being used to prevent overheating, ensure it does not spill on the floor to prevent slipping. • Metal shavings may be hot. • Wear closed toe shoes to prevent burns. • If wood is being drilled, be aware of saw dust falling on the floor and into the air. • Be aware of foot placement and walking surfaces to prevent slipping. • Wear safety glasses to prevent eye injury.
Turn off Drill Press	Ensure the Drill has completely stopped before moving on.	<ul style="list-style-type: none"> • Do not touch the material or the drill bit until the bit stops completely.
STOP	Ensure all required PPE is in place	<ul style="list-style-type: none"> • Gloves must be put back on at this point to avoid being injured.
Remove the Drilled Material	Abrasions/Lacerations, Muscle Strains, Pinch Points, High Temperature.	<ul style="list-style-type: none"> • Be aware of hand/body placement and sharp edges of the material. • Use proper lifting technique while removing the material from the drill. • Ask for help if the material is too heavy or awkward in size/shape. • Be aware of hand and body placement. • The bit and drilled material may be hot. Do not touch without proper hand protection.

		<ul style="list-style-type: none"> • Gloves must be worn.
<p>Clean up work area</p>	<p>Abrasions/Lacerations, Flying Objects, Hot Material, Slipping Hazards.</p>	<ul style="list-style-type: none"> • Be aware of hand/body placement and sharp edges of the material. • The bit and drilled material may be hot. Do not touch without proper hand protection. • Do not attempt to remove metal shavings from the bit with your hands. • Use a shop brush to remove the shavings and a broom and dust pan to pick them up off of the ground. • Some metal shaving may be sharp, hot, or wet from lubricant. • Wipe up any wet surface (drill platform/shop floor) during the cleaning process. • Gloves must be worn.

Lockout/Tag out information

Only Authorized Individuals who completed the appropriate Lockout/tag out training may complete lockout/tag out.

Individuals must review the MakerSpace Lockout/Tag out Procedure prior to applying locks and tags.

Before shutting down the equipment, authorized individual must have knowledge of the type and magnitude of the energy to be controlled and the methods or means to control the energy.

If your Supervision has not authorized you to perform LO/TO, you must get an Authorized Individual to do so.

- The equipment is plugged into a wall socket not hard wired.
- After notifications have been made, the authorized individual may unplug the printer and apply the can cover over the plug and apply the lock.
- The key must stay in the possession of the authorized individual at all times.
- The tag must be filled out completely with the following;
 - Name
 - Contact information
 - Date
 - Reason for LO/TO

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- Once the job is completed, the lock and tag may be removed by the same authorized individual that applied it.
- If the job last longer that the authorized individual's shift, transfer may be made and must follow the MakerSpace LO/TO procedure.

Job Hazard Analysis

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