ETH STUDENT PROJECT HOUSE

Bench Grinder

Proton BS-100T

- For deburring and beveling (sanding belt)
- For tool sharpening (grinding wheel)
- For polishing (buffing wheel)
- 120-grit sanding belt mounted

SAFETY

This is a quick reference guide. Always follow the manufacturer's operating manual and consult your supervisor if you are unsure about any procedure.

Required PPE

- Wear a **fire-resistant overall and leather apron**.
- Wear **safety shoes**.
- Wear **fully enclosed safety goggles**.
- Wear an **FFP3 mask.**
- Wear **hearing protection**.
- Do **not** wear loose clothing, jewellery, or gloves near moving parts.

Keep Clear

- Keep clear of **hot surfaces**.
- Keep clear of **moving parts**, particularly the sanding belt, grinding wheel and buffing wheel.
- Do not touch the **workpiece or nearby metal surfaces** until they have cooled.
- Be aware of **sparks and hot particles** generated during grinding.
- Never place your hands near the moving belt or wheels.

Before Operating

- Use the machine only if you have been **trained and authorised** to do so.
- Check that the machine and work area are in a safe condition before starting.
- Use only workpieces **150 mm or longer**.
- Do **not** change the belt, wheel, disc or any other machine component. **Only the supervisor may make these changes.**
- Make sure you have a **secure, balanced stance** and sufficient space to work safely.

USAGE

1. General

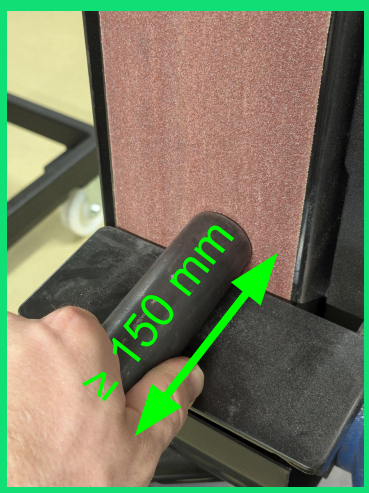
- Support the workpiece on the grinder table or tool rest whenever possible.
- Hold the workpiece firmly with both hands where practicable.
- Maintain a stable and balanced working position.
- Never operate the machine from an awkward or unstable position where you could lose control of the workpiece or be exposed to sparks or particles.
- Switch the machine on only when you are ready to begin work.
- Switch the machine off as soon as you have finished.
- Allow the workpiece to cool before handling it.

2. Sanding belt

Use the sanding belt for:

- Deburring
- Beveling
- General material removal

Maintain a safe distance from the moving belt and keep your hands clear of the work area.



3. Workpiece length

Minimum workpiece length: ≥ 150 mm

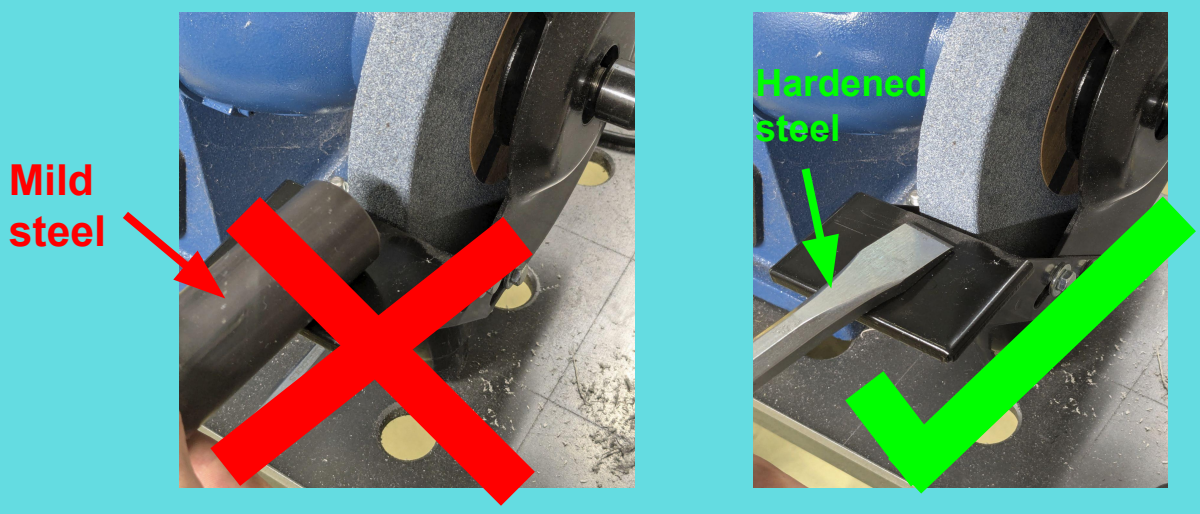
This minimum length is required to maintain a safe distance between your hands and the sanding belt or grinding wheel.

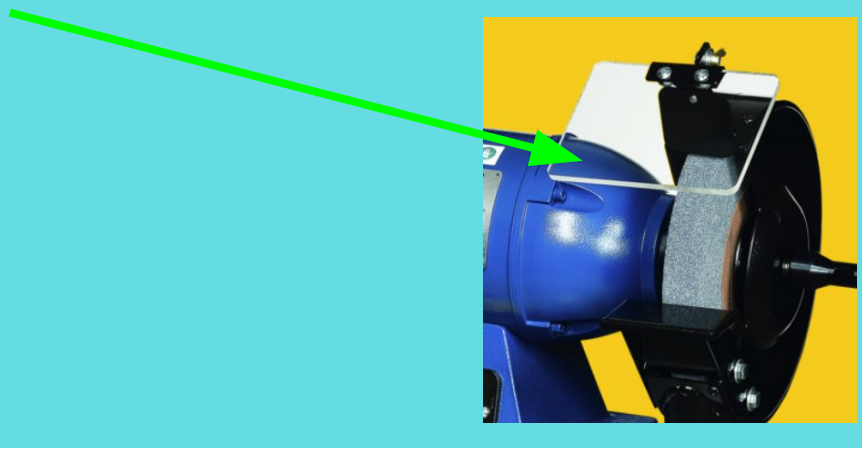
4. Grinding wheel

Use the grinding wheel only for tools made from hardened steel or for tungsten electrodes.

Do not use the grinding wheel for soft materials (mild steel, stainless steel, non-ferrous metals).

Support the workpiece on the grinder table/tool rest whenever possible and maintain control at all times.



5. Eye guard

Ensure that the eye guard is in place when using the grinding wheel.