

# Safe Work Instruction

## Explosive Powered Tools



### INTRODUCTION:

Only trained and competent persons shall select and use EPT (in accordance with AS1873 “Explosive-powered Hand-held Fastening Tools, Fasteners and Explosive Charges”).

Care in the selection of tools, assessment of the material into which the fastener is to be driven, the location of personnel, and operator working position are all factors to be considered prior to operation.

Explosive Powered tools are either direct-acting or indirect-acting. It is the characteristic of the tool that determines its suitability for carrying out the various types of fastening applications.

Note: Direct Acting -Where the energy produced by the charge acts directly on the fastener.

Indirect Acting - Where the energy produced by the charge is transmitted to the fastener by means of a piston with limited axial movements.

### WORK INSTRUCTION:

- Only trained and qualified persons are to use Explosive Powered Tools (EPT).
- The EPT and fastening devices shall be used in accordance with the manufacturer’s recommendations and shall not be modified in any way.
- Correct signage must be placed in the work area (“Caution: Explosive Powered Tools in Use”) to advise others of their use.
- Fasteners shall not be driven into brittle or hard materials such as glazed brick or tile, terracotta, marble, granite, slate, glass, cast iron or high tensile or hardened steel.
- Consider the following points when deciding whether the work is suitable for the fasteners:
  - the material type and thickness of the work,
  - any possible inconsistencies or changes of material beneath the surface, which might cause the material to shatter or the fastener to ricochet or pass through into open space,
  - The constraints necessary for the use of pins near the edges of work surfaces and where the working surfaces are not flat.
- There are a number of hazards associated with the use of EPT, which must be considered when assessing suitability, including:
  - fire or explosion from the use in a flammable atmosphere, explosion from misuse / handling of misfired cartridge,
  - explosion from the incorrect storage of charges and misfired charges,
  - Accidental firing.

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- Regular maintenance and servicing of explosive power tools to be carried out by a competent person and any defects reported to the Supervisor.
- EPT shall be completely overhauled at least every 12 months.

### Safety Precautions:

- When firing, the operator and those directly engaged in firing activities shall wear a full face shield, suitable eye and hearing protection, and other PPE as appropriate.
- EPT shall not be used in the presence of any explosive or flammable gas, dust or vapour, or in any place where the explosive charge may be unintentionally exploded or rendered dangerous by the presence of heat.
- Only cartridges recommended by the manufacturer shall be used.
- Only trained and competent persons shall make the selection of pins and cartridges.
- If the Explosive Powered tool misfires the operator shall observe the manufacturer's misfire precautions and procedures.
- Shields shall be erected in the work area to minimise the risk from ricochets.
- Unauthorised personnel shall be kept out of the work area.
- Appropriate, clearly visible barriers and signs shall be placed around the work area in which EPT is being used.
- EPT shall not be loaded until immediately before use. In the event of a delay, they shall be unloaded before being put down.
- Fasteners shall not be driven:
  - less than 75mm from the edge of concrete or brick surface,
  - into a corner brick,
  - less than 150mm from the existing pin hole in concrete or brick work,
  - into steel less than 4mm thick,
  - Less than 15mm from the edge of a steel plate.
- All fasteners shall be fired as near perpendicular to the working surface as practicable, and in all cases within 7mm of the perpendicular.
- Live or spent cartridges shall not be left in the firing chamber of the Explosive Powered Tool or carried loose in pockets.
- Loaded EPT must not be left unattended.
- EPT only to be used when a substantial background is available as a backing medium and shall be used on overhead structures only when sufficient precautions are taken by the operator to ensure nobody is in the line of fire.
- Tools and explosive charges are to be stored in the original container in a secure location when not in use and, disposed of in an appropriate manner.