



**THE PROFESSIONALS' CHOICE**

[www.mrmarks.com](http://www.mrmarks.com)

# TOOLS SAFETY

**MANUAL HANDBOOK**



# **MR.MARK Operation Manual & Safety Instruction**



**BEFORE ATTEMPTING TO INSTALL OR OPERATE THE TOOLS,  
READ CAREFULLY ALL THE PROCEEDING SAFETY WARNINGS**

This Safety Manual was specially brought to you by MR. MARK TOOLS (M) SDN. BHD.  
(a company that specialized in professional tools)



The goal of MR. MARK, is to produce tools that help you work safely and efficiently. However the most effective and safety work environment still depend on YOU.

Your awareness and concern for safety are the best protection against injuries. Although all possible hazards cannot be covered here, we will try to highlight some of the important ones.

For your own safety, please read the operating instruction carefully before using the tools.

The following OSHA standards provide mandatory requirements and compliance assistance for employers when selecting proper eye and face protection, detail information can be found at

<http://www.osha.gov/SLTC/etools/eyeandface/employer/requirements.html>:

- 1910.132 - General requirements
- 1910.133 - General Industry
- 1915.153 - Maritime
- 1926.102 - Construction

Always uses appropriate eyewear and face mask for protection when exposed to eye or face hazards such as flying particles, molten metal, liquid chemicals, acids or caustic liquids, chemical gases or vapours, or potentially injurious light radiation. To select the right PPE for the workplace, see the Hazard Assessment Module.

Safety messages in this catalogue use the guidelines of the American National Standard ANSI Z535.4 for Product Safety Signs and Labels and ANSI Z535.3 Criteria for Safety Symbols. Messages associated with specific products use a triangular hazard alert symbol, signal word (CAUTION, WARNING, DANGER) and how to avoid the hazard. Each message refers to pages (M1-M4) which provides additional safety symbols and three-part messages advising of :

- The Hazard
- How to avoid the hazard
- The possible consequence of not avoiding hazard

## Tools Safety

- All tools are manufactured with safety in mind but, tragically, a serious accident often occurs before a safety steps are taken to prevent such incident i.e. to avoid or eliminate such tool related hazards.
- Hand tools can include anything from axes to wrenches. Whether on the job or in your home workshop, the greatest hazard posed by hand tool often result from misuse and improper maintenance. Even with experienced hands, unsafe tools can cause accidents.



- Broken, worn out, bent or damaged tools are not only frustrating to work with but, if used repeatedly can lead to an accident or injury.
- Establish a procedure for the control of your tools and check them for any defects on regular basis. Discard all tools that show dent, cracks, extreme mushrooming or excessive wear.
- Mushrooming heads on striking tools can often be re-dressed but if a striking tool easily mushrooms it is probably unsuitable for its use and should be replaced with one that is more appropriate for the job.
- Hammers or screwdrivers with broken or split handles, wrenches with worn jaws and saws with dull teeth are examples of tools that should be fully repaired or discarded. Tools handles should be solid, firmly attached and slip resistant. Handles that fit poorly make control of the tool difficult and hazardous. If the wooden handle on a tool such as a hammer or an axe is loose, splintered, or cracked, the head of the tool may fly off and strike the user or another person.
- Cutting tools should be kept sharp for greater safety and efficiency. Chisels, wedges, drift pins and other impact tools should be checked to make sure they have not mushroomed to a dangerous degree. The heads might shatter on impact, sending sharp fragments flying.
- Be sure to use the right tool for the job. Using a screwdriver as a chisel may cause the tip to break and fly, hitting the user or another person.
- Around flammable substances, sparks produced by iron or steel hand tools can be a dangerous ignition source. Where this hazard exist, spark-resistance tools made from brass, plastic, aluminum or wood will provide for safety. Take all other precautions necessary when dealing with flammable substances.
- Keep floors as clean and dry as possible to prevent accidental slips with or around hand tools. When working with hand tools, safety gloves as well as safety eyewear may be required and it depends on the nature of the job requirement.
- Safety requires hand tools be used and maintained properly. Learn to recognize the hazards associated with the different types of tools and the safety precautions necessary to prevent those hazards.





# Safety Symbols



THIS SYMBOL INDICATES PROHIBITED ACTION



NO IMPACT/POWER DRIVE



DO NOT OVER-TORQUE  
NO PIPES OR LEVER EXTENSIONS



NO HAMMERING



DO NOT STEP IN OR ON DRAWERS



DO NOT OPEN MULTIPLE DRAWERS



NO PRYING



DO NOT PULL TO MOVE



DO NOT STRIKE ON HARD OBJECTS



KEEP CHILDREN AWAY



THIS SYMBOL INDICATES MANDATORY ACTION



MANDATORY PROTECTIVE CLOTHING



MANDATORY EAR PROTECTION



MANDATORY PROTECTIVE GLOVES



MANDATORY FACE SHIELD



MANDATORY EYE PROTECTION



MANDATORY MASK



MUST READ INSTRUCTIONS BEFORE USE



MANDATORY RESPIRATOR



THIS SYMBOL INDICATES A HAZARD ALERT

RED BACKGROUND-DANGER  
ORANGE BACKGROUND-WARNING  
YELLOW BACKGROUND-CAUTION



VIBRATION HAZARD



RISK OF EXPLOSION



RISK OF ELECTRIC SHOCK



OVERHEAD/ OVERLOAD HAZARD



RISK OF ENTANGLEMENT



RISK OF FIRE



# Safety Symbols



Read operating and safety manuals before using lift!



Do not operate a damaged lift!



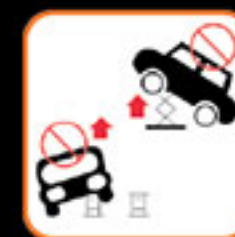
Proper maintenance and inspection are necessary for safe operation!



Lift to be used by trained operator only!



In the event of raised vehicle falls from the lift, run away to a safe distance.



Do not lift one side of the vehicle. (Possibility of vehicle overturn and/or damage to lift may happen.)



Do not stand under the vehicle on the lift while lift is operating. (Death or serious injury may occur.)



Do not place any poles under the vehicle and lower it to dismantle the part from the raised vehicle.



Do not modify any safety systems of hoist. (If safety device malfunctions, serious accident may occur.)



Do not place feet under any moving part of lift while lowering.



Do not shake a raised vehicle excessively. (Danger of vehicle falling from lift may occur.)



Do not operate a lift with people on it.



Electrical shock may occur when opening control box.



Always use safety stands when removing or installing heavy components.



Authorized personnel only in lift area.



Do not spray water directly onto lift.



Stop raising lift when imbalance is detected while rising vehicle.



Use height extenders (Truck adapters) when necessary to ensure good contact.



Use vehicle manufacturer's lift points.



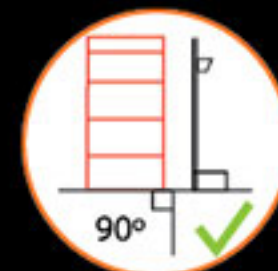
Do not operate lift when hydraulic oil leak is detected in the lift area.

(Work Shop)



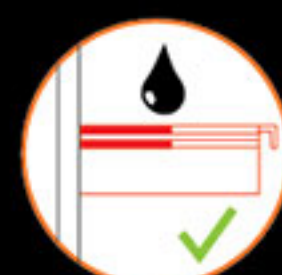
## Display Safety Uses

- Ensure tools are distributed properly on the display to ensure stability.
- Display should always be placed on a level surface. The stand has adjustable feet for use on unlevel surfaces.
- Do not load the displays with excessive weight.
- Check that trays and hooks are fixed securely.



## Cabinets, Boxes & Tools Set Safety Uses

- Oil the smooth action runners
- Always keep the drawers and doors of the cabinets locked during movement or transportation
- Do not stack items on the cabinet as they may fall if it moved.
- Do not use the boxes as supports for work surfaces.
- Do not overload the drawer of the cabinets or boxes with excessive weight.
- Do not open more than one loaded drawer at a time.
- Do not overload drawers.
- Do not pull a tool cabinet, push.

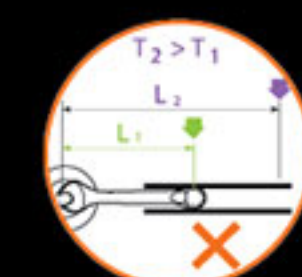
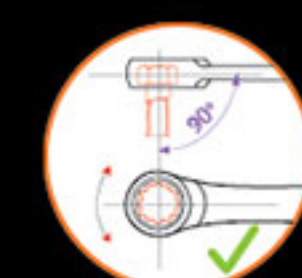
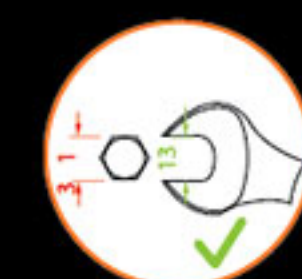


- Set the brakes on the locking casters after you have moved the cabinet to your work area.
- Watch your back when lifting heavy containers.
- Do not stand on a tool box.
- Mind your hands : sharp or rough objects should not be kept loose.
- Apply the brake when stationary. Close all drawers before moving and do not pull a cabinet towards you; always push it at speeds enabling you to stop or turn at will.
- Do not move cabinets with items balanced on top.



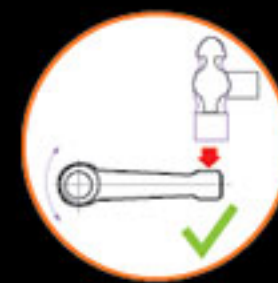
## Wrenches & Spanners Safety Uses

- Wear eye protection.
- Always use the right size for the fastener head. Do not use metric wrenches on inch fasteners.
- Always use the wrench perpendicularly to the axis of the screw/nut.
- DO NOT use pipe or other extension bar to obtain more torque as there are risk of breaking the wrench.
- DO NOT strike the wrenches unless they are made specifically for this purpose.





- Never exceed the capacity of a tool. Do not use an extension or a hammer with a standard wrench; slogging wrenches are available for that purpose.
- A ring wrench is preferable for high torques. When using an open end wrench, engage fastener head fully to avoid distorting the nose of the wrench, and work in a straight line.
- Pull the wrench towards you. Do not push.



## Sensible precautions

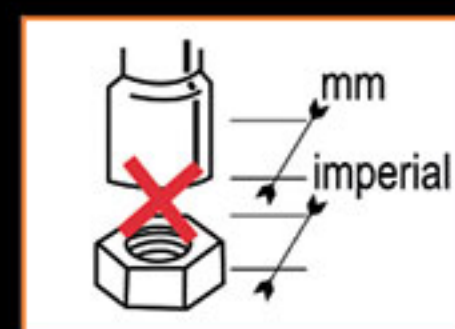
- Secure your balance and pull the wrench towards you rather than push it.
- Wear gloves and eye protection.
- Do not grind, weld or heat your tool. It could become unsafe.
- Check condition of both fastener and tool before use.



- Always pull wrench towards you

## Correct tool selection - without overload.

- Never exceed tool capacity. Do not use an extension or a hammer with a standard wrench. Slogging wrenches are available for that purpose.
- Always use the right size for the fastener head. No metric wrenches on inch fasteners.
- Select a ring wrench for high torques. When using an open-end wrench, engage fastener head fully to avoid distorting the nose of the wrench, and work in a straight line.



- No metric tools on inch -sizes

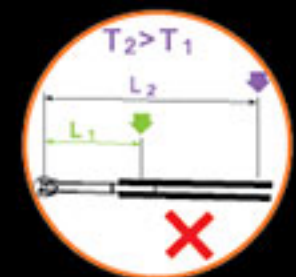
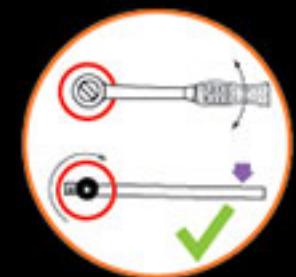


- Only fit slogging wrenches



# Torque Wrenches & Torque Multipliers Safety Uses

- Always wear safety glasses to protect eye.
- Select the socket size according to the standard of screw or nut.
- Always use a suitable accessory for operation with socket. Use ratchet for operation requires quickness. Use T handle or flexible handle for final tightening.
- Do not use cheater bars, hammers or other damaging objects.
- Do not exceed rated torque capacity of wrench.
- Do not exceed capacity of fastener.
- Do not use torque wrench to break fasteners loose.
- Pull the wrench towards you. Do not push.
- Do not use torque multipliers with impact wrenches.
- Place reaction bars of torque multipliers against fixed, strong object.
- Do not grind, weld or heat the tools as it could make them unsafe.
- Check the condition of both fasteners of tools before use a commercial lubricant on corroded fastener.
- Be sure to avoid overloading by applying torques beyond rated capacity.
- Never fit an extension as this would modify lever ratios and result in incorrect readings.
- Always store torque wrenches carefully after use.
- Do not use impact drivers on torque multipliers.



- Never fit an extension to a torque wrench.



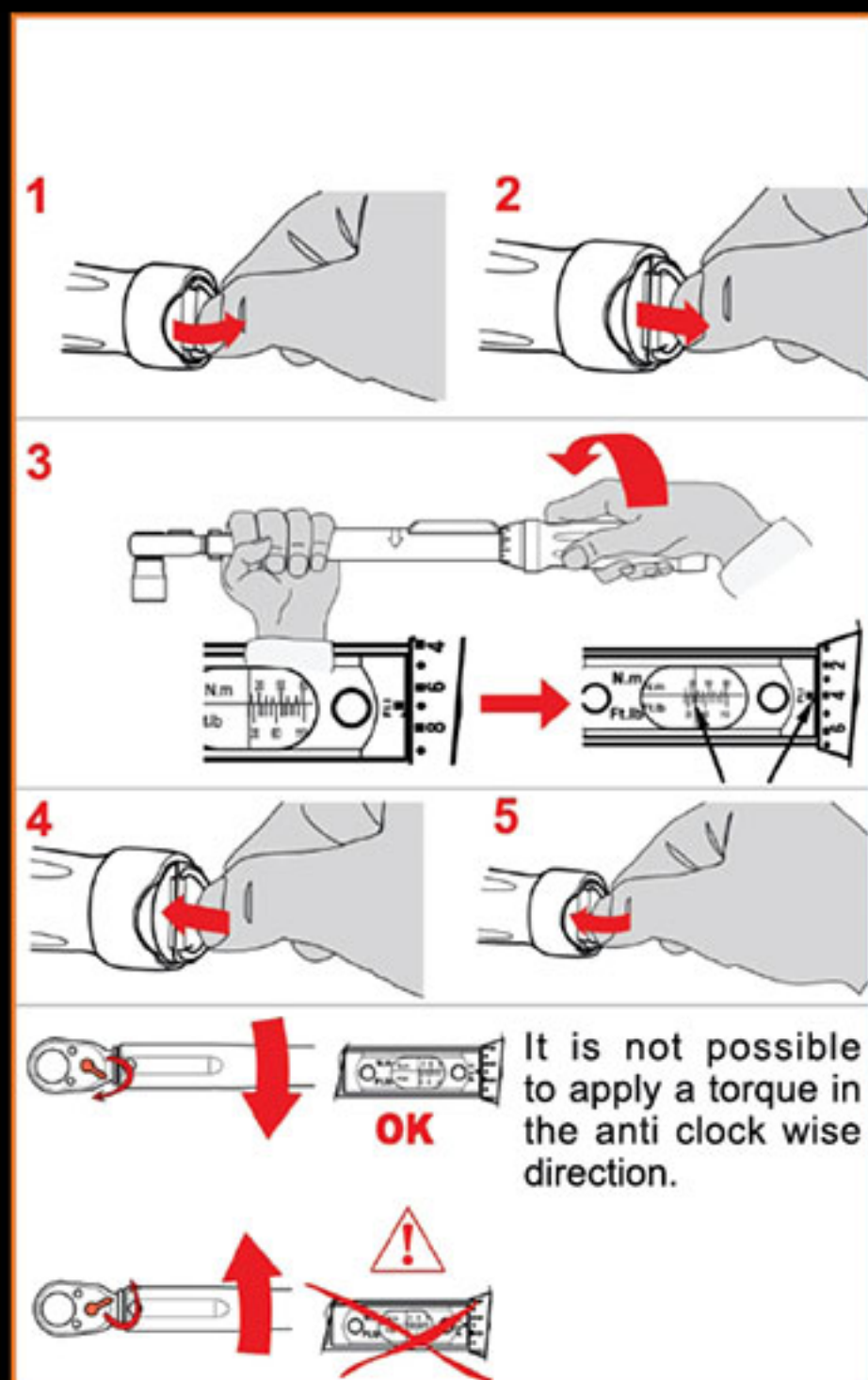
- Torque wrenches are precision tools.
- Torque wrenches are precision tools. Have yours checked regularly by MR. MARK inspection facilities.
- Read operating instructions before use.



- Careful storage and regular inspection

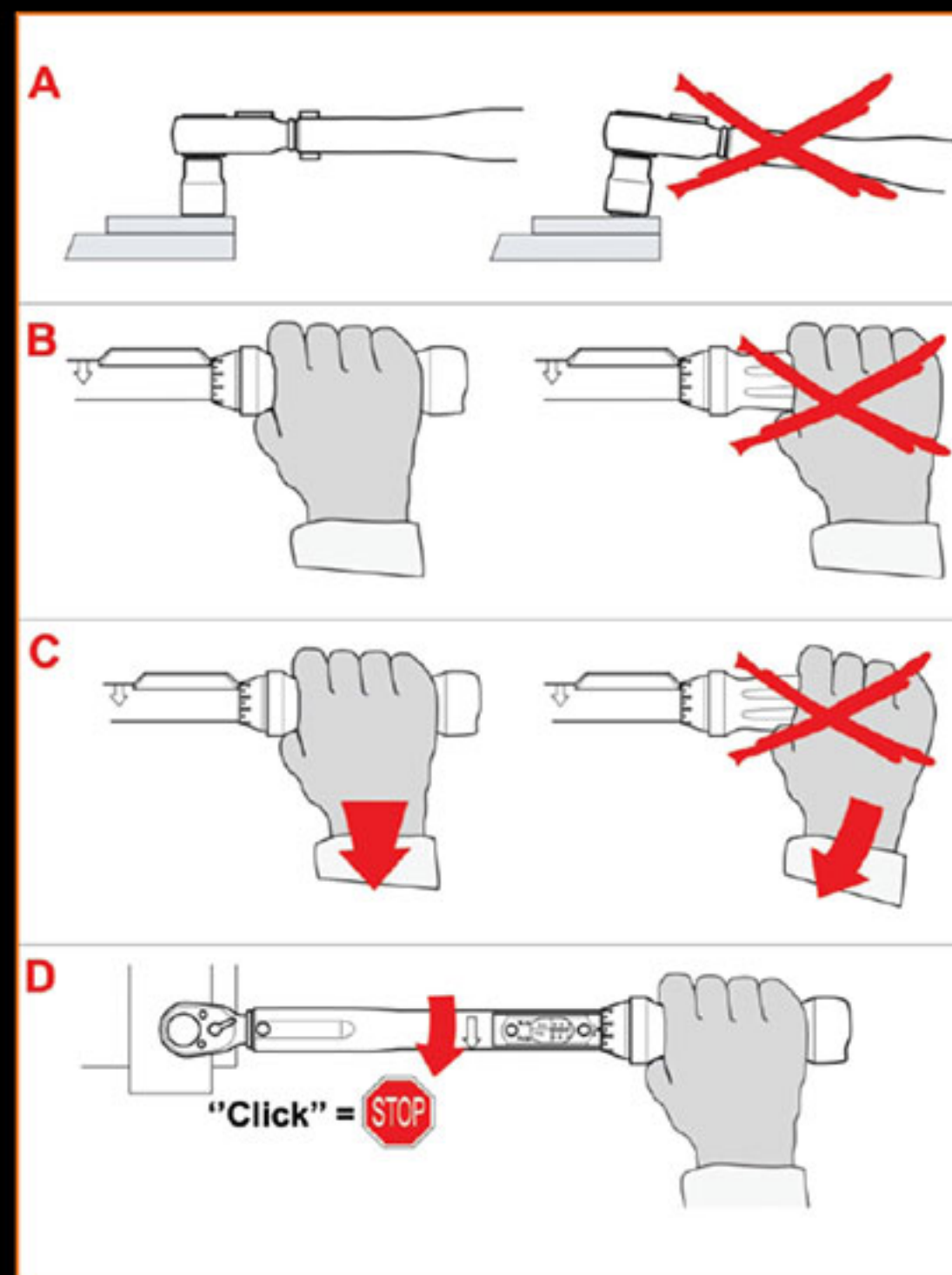
## Operating procedure

Setting to the required torque



## Do and Don't

Tightening





# Sockets

## Personal safety with impact sockets !

- Always secure sockets to the machine with locking ring and pin (references given for each socket). Never hold a socket or accessory while the machine is turning.
- Wear gloves and eye protection.

**NEVER USE A MANUAL OR SIMPLE MACHINE SOCKET ON A POWER IMPACT TOOL.**

## Sensible precautions !

- Secure your balance. Pull the tool towards you rather than push it.
- Use only recommended extensions and do not overload.
- Ratchets are designed to speed up rotation. For loosening very tight fasteners, select a sliding tee. Check that ratchet mechanisms engage fully.
- Ratchet maintenance is simple. Cleaning and lubrication is normally sufficient. Use MR. MARK service kits where necessary.
- Select 6-point sockets if fasteners are worn or hardened.
- Check condition of both tool and fastener before use. Do not use tools showing signs of breakage or excessive wear.



- Only use impact sockets when locked



- Don't exceed tool capacity or use oversize extensions.

# Hand Sockets Safety Uses

- Do not use hand sockets with impact or power-driven tools. Serious injury is possible.
- Use safety goggles. Serious eye injury is possible.
- Do not hammer on sockets or drive tools.
- Do not use extenders or cheater bars.

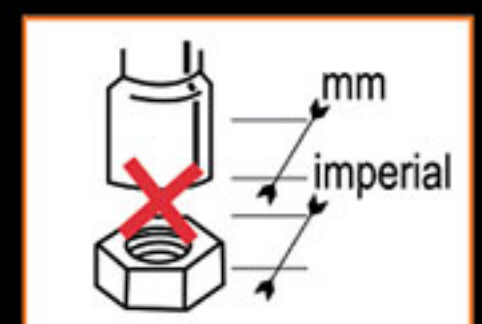


- Wear gloves and eye protection.
- Make sure that you are well balanced, and pull the tool towards you rather than pushing it.
- Use only recommended extension and do not overload.
- Ratchets are specially designed to speed up rotation. For loosening very tight fasteners, it is preferable to select a sliding tee. Check that ratchet mechanism engage fully.
- Ratchets maintenances is simple and normally requires only cleaning and lubrication to ensure optimum performance.
- Select 6 point socket if fasteners are worn or hardened.
- Check condition of both tool and fastener before use. Do not use tools showing sign of excessive wear or breakage.
- Disconnect electricity when working on electrical parts.
- Prevent slipping. Keep tools clean.



## Impact Sockets Safety Uses

- Wear gloves & eye protection
- Always secure sockets to the machine with locking ring & pin.
- Select the socket size according the standard of bolts/nuts.
- Do not use damaged sockets.
- DO NOT hold a socket or accessory while the machine is turning.
- Do not continue to hammer with an impact tool once the fastener is tight.



- No metric tools on inch -sizes



# Pliers Safety Uses

- Keep within cutter capacity (wire diameter and hardness).
- Do not modify or heat tips as this will impair performance.
- Cut at right angles and avoid twisting the wire. Use the throat rather than the tip of cutting edges.
- When fitting circlips, use a tool within the correct range and only compress or expand the clip just enough.
- Lock-grip pliers should not be used as a permanent clamp.
- Components can move due to vibration or shock.
- Wear eye protection, especially when cutting wire and fitting circlips or rivets.
- Sheathed handles are not insulating. Only 1000V tools are designed for working with live components.
- Always wear safety glasses to protect the eye.
- Never Use pliers as a hammer. It can crack and even break.
- Never expose pliers to excessive heat. It can change the heat treatment applied at the cutting edges and reduce performance.
- Never increase the length of the pliers handle.
- Always ensure pliers are perpendicular to the wire for a quicker and safer operation.
- Do not use cracked insulated grip pliers for electrical lines.
- Oil the joint occasionally.
- When fitting circlips, use tool within the correct range and only compress or expand the clip just enough.
- Lock grip pliers should not be used as a permanent clamp.
- Cut wire back in jaw, Not at tip.



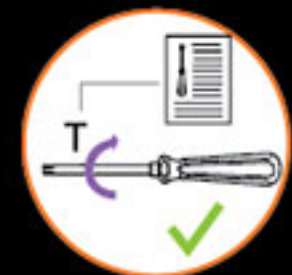
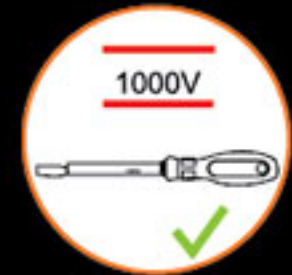
- Never modify the shape of a tool



# Screwdrivers

## Safety Uses

- Always wear safety glasses to protect the eyes.
- Always use insulated screwdriver with electrical lines.
- Use the correct end screwdriver for each screw.
- Beware of the established torque for each type of screwdriver.
- Do not use the screwdriver as a chisel or lever or punches.
- Do not modify or heat blades as this will impair performance.
- For extra torque, select a screwdriver with a hexagon shoulder to take a wrench, but never use pliers.
- Wood handled through-blade screw driver can withstand gentle tapping on the end to free seized fasteners.
- Avoid using screwdrivers as chisels, levers or punches.
- To avoid damage to fastener head or tool blade, always select the appropriate pattern, especially Phillips and Pozidriv, in the correct size.
- Plastic-handled screwdrivers are not insulated. Use 1000V tools when working on live components.
- Keep your free hand clear when driving home a fastener in case the screwdriver slips.
- Wear gloves.



Select the correct pattern:

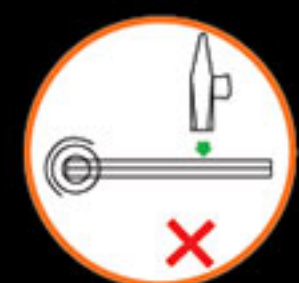
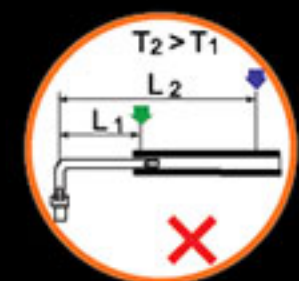
- Back blades for pozidriv
- Chrome blades for Phillips head





## Hex Key Safety Uses

- Always wear safety glasses to protect the eyes.
- Wear gloves to protect the hands
- Use the correct size of wrench for each bolt or nut.
- Do not change the length of the lever using pipes or extension bar.
- Do not strike the wrench to tighten the screw.



## Hammers Safety Uses

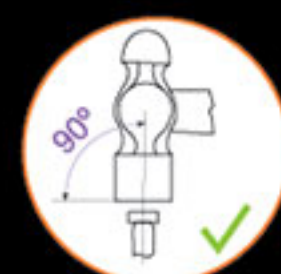
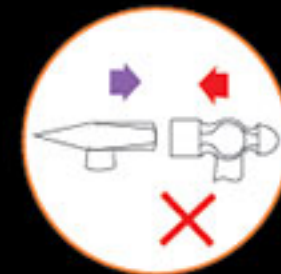
- Wear gloves and eye protection.
- Do not use suspect tools such as hammers with chipped heads, insecure or cracked handles, excessively mushroomed chisel or punch ends. Check handle fit before use.
- Hammering may generate sparks. Do not use hammers in a fire-risk area.
- Rule of thumb: hammer head should have a diameter about 10 mm larger than the surface to be struck. Avoid hitting with the edge of the hammer.



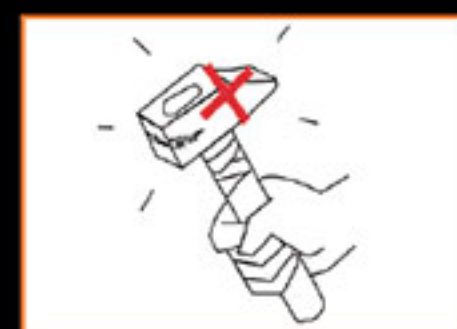
- Never "hard on hard"
- Check tool condition before use



- Always wear safety glasses to protect the eyes.
- Never strike two hammers, one against the other.
- Never strike anything with the side of the hammer.
- Select the hammer that will hit the chisel or pin as follows; the impact face shall have a diameter 10mm bigger than the face to hit.
- Always strike the hammer perpendicularly to the surface or work tool.
- Never use a soft faced hammer or wood hammer to nail or strike metallic pins.
- Avoid striking equally hard surfaces. Do not use a hammer on surfaces exceeding 46HRc. Use a mallet instead.
- Select chisels and punches fitted with a guard for increased safety and comfort.
- Do not use punches for leverage.



- Never use tools with ill-fitting or damaged handles



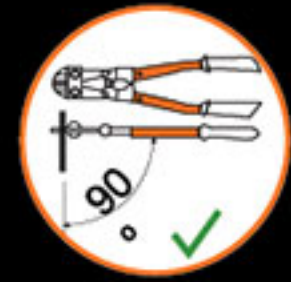
## Cutting Tools Safety Uses

- Always wear safety glasses to protect the eyes.
- Wear gloves to protect the hands.
- Place the wire or strip to be cut perpendicularly to the cutting tool.





- Keep the cutting edges oiled.
- Ensure the cutting capacity of the tool is sufficient to cut material required.
- Cover the part of piece that will be cut to avoid it jumping when using a bolt cutter.
- Do not use broken, worn or cracked blades.
- Metal shears are designed for cutting sheet metal and not for wire.
- Keep within capacities.
- Do not cut wire with metal shears.
- Keep hands away from the cutting path.



- Don't cut wire with metal shears
- Keep hands away from the cutting path



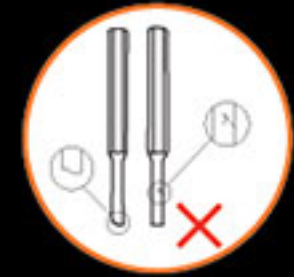
## Punches & Cold Chisel Safety Uses

- Always wear safety glasses to protect the eyes.
- Wear gloves to protect the hands.
- Use punches and chisels on lower hardness surfaces than cutting edge or end.
- Do not use center punches to remove pin.
- Do not use cracked and damaged impact face punch and chisel.
- Strike the punches or chisel perpendicularly to the impact face.



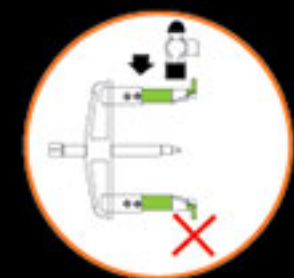
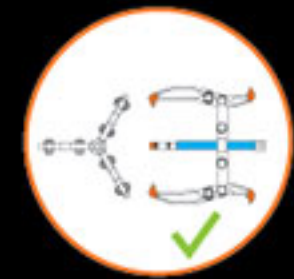


- Keep cutting edge of chisel away from people.
- Do not use cold chisels on stone or concrete.
- Use a punch and chisel holder to prevent hand injury.



## Gear Puller Safety Uses

- Wear gloves and eye protection.
- Select the gear puller with capacity suitable for pulley or bush size.
- Keep the gear puller spindle oiled for better performance and longer life.
- Place the gear puller accordingly on the pulley or bush before starting the extraction.
- Do not strike the gear puller to place it on the pulley or bush.
- Instructions:
  - Use largest puller that fits the job.
  - Use 3 jaws, if possible.
  - Use largest jaw that fits the job.
  - Use shortest leg that fit the job.
  - Square puller to work; jaws and screw parallel.
  - Shield work to protect yourself and bystanders.
  - Use a light lubricating oil on the forcing screw.
- Do not use power impact wrench with any puller.
- Pullers generate several tonnes of force during use.
- Ensure correct positioning - centered, in line with the pulling axis and with good grip on each leg.





- Steady a puller when necessary to avoid rotation during tightening.
- Cover the assembly to contain components if the fitting splits suddenly or the puller slips. Do not stand in line with the puller and keep other people away.
- Never exceed puller capacity.
- Use a 3-leg puller rather than a 2-leg, and select short legs.
- Always check tool condition before use and lubricate the screw. If a leg needs changing, replace the complete set.
- Never modify or heat the legs as this will make them unsafe.
- Do not operate with an impact wrench.
- Use a mallet if the screw needs tapping to unstick a fitting.
- Do not use impact drivers on nut splitters.



- Always check that the pressure screw is properly centered and legshaft secure properly. Lubricate the screw regularly



- Don't modify the legsofa puller as this will make it unsafe

## C- Clamps Safety Uses

- Use safety goggles. Serious eye injury is possible.
- Do not use a damaged C-Clamp. Replace bend screws or missing pressure pads.
- Do not use C-Clamps to pull or lift.
- Disconnect electricity when working on electrical parts.
- Instructions:
  - Apply clamping force perpendicular
  - Engage pressure pad and anvil fully.
  - Prevent slipping. Keep tools clean.
  - Maintain your balance.





# Presses and Bar Clamps

## Safety Uses

- Presses and bar clamps are not designed for permanent clamping, and should never be used to construct a guard rail or platform.
- Avoid using bar clamps to hold assemblies subjected to vibration or shocks, as the join could come loose.
- Do not use these tools for lifting.
- Always check before use and keep within clamping capacity (do not use extensions or impact tools)



- Never erect guard rails or platforms using clamps



- Don't use an extension for tightening.

# Vices

## Safety Uses

- Fit the vice securely to a suitable sized support.
- Never use an extension or a hammer to tighten a vice. Avoid clamping hard towards the end of the jaws.
- Do not use the jaws as an anvil.
- Never modify or repair a vice.
- Always wear eye and hand protection when grinding, sawing, drilling, and hammering.
- Select a swivel-base vice so that you approach the workpiece from the best angle.
- Do not use a hammer or extension to increase pressure.



- Fix vice securely to bench



- Don't use a hammer or extension to increase pressure.



# Sawing, Cutting, Drilling Safety Uses

- Wear eye protection and gloves when sawing, cutting or drilling, and when handling sheet metal or metal objects while machining.
- Keep hands away from the cutting path.
- Metal shears are designed for cutting sheet metal, not for wire. Keep within capacities.



- Keep hands away from the cutting path



- Wear eye protection when drilling, grinding, etc



- Don't cut wire with metal shears



- Wear gloves when handling metal objects

# Working on or near live components

Live work is governed by UTE C 18-510 regulations covering electrical safety.

- Only VSE 1000V insulated tools protect from electrical hazard up to 1000V AC.
- Inspect your tool after each use. Discard if the insulation is damaged.
- Give yourself additional protection by using gloves, mats and anti UV goggles.
- Never use a tool with damaged insulation.



- Never use a tool with damaged insulation.



- 1000V insulated tools must be used when working near live components.



# Pneumatic or Electric Tools Safety Uses

- Wear gloves and eye protection. Wear a dust mask especially when sanding.
- For intensive use, protect your hearing with ear muffs.
- Consider the safety of bystanders.
- Always disconnect tools before fitting drill bits, grinding wheels or impact sockets.
- Keep within accessory rated diameters and speeds.
- Retain original guards (e.g. on grinding tools).
- On impact power wrenches, use only impact sockets with appropriate locking pin and ring.
- Read operating instructions before use.



- Always lock sockets to the machine



- Always disconnect power tools before fitting



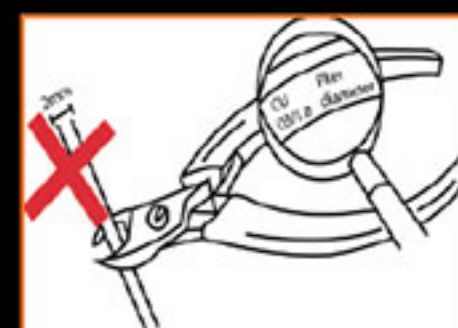
- Always wear appropriate protective gear

# Electronic Components and Assemblies Safety Uses

- Wear eye protection whenever there is a risk of flying debris e.g. for wire cutting, stripping or crimping. Choose wire strippers with offcut retainers.
- Never work with loaded capacitors or live components using antistatic tools (dissipating sheaths).
- For optimum service life, keep within cutting capacities of electronics pliers.
- Do not leave a hot soldering iron on fragile or inflammable surfaces. Always use a stand. Do not place a hot soldering iron in a storage container. Disconnect after use.
- Use antistatic tools to protect sensitive electronic components. For ESD tools to EN 100-015/1.
- Always rest a hot soldering iron its stand.
- Choose electronics pliers to suit wire type and diameter.



- Always rest a hot soldering iron on its stand.



- Choose electronics pliers to suit wire type and diameter.



## Handling Tools Boxes

- Cautions:
  - Watch your back when lifting heavy containers.
  - Do not stand on a tool box.
  - Mind your hands-sharp or rough objects should not be kept loose.

## Jack Safety Uses

- All jacks - lever and ratchet jacks, screw jacks and hydraulic jacks must have a device that stops them from jacking up too high. And always be aware of manufacturer's load limit marked on the jack and should not be exceeded beyond the usage limit.
- A jack should never be used to support a lifted load. Once the load has been lifted, it must immediately be blocked up.
- Use a wooden blocking under the base if necessary to make the jack level and secure. If the lift surface is metal, place a 1-inch-thick hardwood block or equivalent between it and the metal jack head to reduce the danger of slippage.
- To set up a jack, make certain of the following: the base rest of a firm level surface,
  - the jack is correctly centered,
  - the jack head bears against a level surface, and the lift force is applied evenly
  - proper maintenance of jacks is essential for safety.
- All jacks must be inspected before each use and lubricated regularly. If a jack is subjected to an abnormal load or shock, it should be thoroughly examined to make sure it has not been damaged.
- Hydraulic jacks exposed to freezing temperatures must be filled with an adequate antifreeze liquid.
- Malaysian condition does not have freezing temperatures.

## Power Tools - Grinder Safety Uses

### Cautions:

Body contact with the abrasive product

- When using grinding tools, the greatest caution and care is necessary. Tie back long hair and do not wear loose clothing, ties and jewellery.



- Prevent inadvertently switching on the machine before clamping or replacing the abrasive disc. If necessary, disconnect the machines from the power supply.
- Never dispel with the safety equipment on the machines and make sure that they are serviceable and safely fitted before you switch on the machine.
- If the machine or work piece is held in the hand, always wear gloves and appropriate clothing.
- After switching off the machine, make sure that the machine has completely stopped before you leave it unattended.

### Cautions:

Injury through failure of a grinding.

- Operating grinding tools requires the greatest of caution, because these can be easily damaged. Check all products for signs of damage before use.
- Grinding tools should be stored to prevent damaging influences such as moisture, frost and large temperature deviations, as well as mechanical damage.
- Coated abrasive products should be stored at 18-22° C and 45-65 relative air humidity.
- Abrasive belts should be stored on a rod or hook of minimum diameter of 50mm.
- Never use the grinding tools after the expiry date. If there is no expiry date given, observe the shelf-life of the following products: Plastic and schellac-bonded products 3 years;
  - Abrasive discs with rubber bond 5 years; ceramic-bonded abrasive discs 10 years.
  - Observe the warning or safety instructions on grinding tools or packaging.

## Insulated Tools Safety Uses

- Always wear safety glasses to protect the eyes.
- Wear gloves to protect the hands.
- Don't change the original shape and dimension of tools.
- Reject any tool that shows damage such as, cracks wearing, or signs of excessive use.
- Always use a wrench that corresponds to the size of screw or nut. These precaution will increase the tools lifetime and the safety of your operation.
- Don't strike the tools unless they are designed for this purpose.



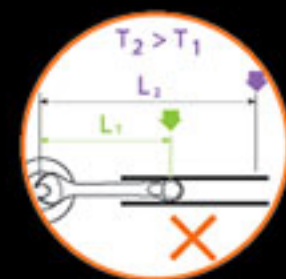


- Always store the insulated tools in a clean and dry place.
- Keep the cutting tools out of the reach of children.
- Be aware of the established torque for each type of tool. Don't use levers or extension bars to reach higher torque values.



## Safety Tools

- Always wear safety glasses to protect the eyes.
- Do not polish, mill or melt the Beryllium-Copper (CuBe) tools.
- Always use a wrench that corresponds to the size of screw or nut.
- Do not use pipes or other extension bars to obtain more torque. While this will increase the force application distance ( $L_2 > L_1$ ) and torque that is provided to the screw, you will also run the risk of breaking the wrench.



## Pneumatic Tools General Guidelines

- Pneumatic tools are powered by compressed air and include chippers drills, hammers, and sanders.
- There are several dangers encountered in the use of pneumatic tools. The main one is the danger of getting hit by one of the tools attachments or by some kind of fastener the worker is using with the tool.
- Eye protection is required and face protection is recommended for employees working with pneumatic tools.
- Noise is another hazard. Working with noisy tools such as jackhammers requires proper, effective use of hearing protection.



- When using pneumatic tools, check to see the tools and accessory are fastened securely to the hose to prevent them from becoming disconnected. A short wire of positive locking device attaching the air hose to the tool will serve as an added safeguard.
- A safety clip or retainer must be installed to prevent attachments, such as chisel on a chipping hammer, from being unintentionally shot from the barrel.
- Screens must be set up to protect nearby workers from being struck by flying fragments around chippers, riveting guns, staplers, or air drills.
- Compressed air guns should never be pointed towards anyone. Users should never "dead-end" it against themselves or anyone else.
- Operating instruction (ANSI B 186.1 safe operating code)
  - Please always keep the proper pressure of air inlet at 90 psi (6.3kg/cm<sup>2</sup>) in order to protect your own safety and also maintain the tool life expectancy.
  - Don't wear loose or baggy clothing when you operate the air tool. Remove anything that may be cause injury. i.e.: Neckties, jewellery, etc. Tie back long hair and wear eye protection.
  - It is the owner's responsibility to lubricate the air tool properly, but don't use any inflammable or volatile oils for lubricating, i.e. Diesel oil, gasoline or kerosene.
  - Make sure to use impact-quality socket only; don't use hand-tool sockets. The crack of sockets will reduce the torque of air tool and may cause serious injury.
  - Never point an air tool at oneself or any other person. It could cause serious injury.
  - Don't depress trigger when connecting the air supply hose.
  - Keep all nuts, bolts and screws tight and ensure equipment is in safe working condition.

## Pneumatic Tools Safety Uses

- Before operation
  - connect the air joint & hose securely to the tool, air leakage may result serious accidents
  - check the tool & accessories carefully. do not use defective tool
  - Make sure tools applicable for the working purpose



# Pneumatic Tools Safety Instruction

- Air Supply & Connection Hazards:
  - Use only air supply from air compressor. DO NOT use other air supply such as home gas & etc
  - USE recommended air pressure (at the tool). Excessively high pressure than recommended level may ruin the tools. Install air dryer and filter to remove dust and moisture.
  - Air under pressure can cause severe injury.
  - Disconnect tool from air supplier before assembling or replacing.
  - Be sure that switch is at "OFF" position before connect with air supply system.
  - Always shut off air supply, drain hose of air pressure and disconnect tool from air supply when not in use, before changing accessories or when making repairs.
  - Never direct air at yourself or anyone else.
  - Whipping hoses can cause serious injury, Always check for damaged or loose hoses and fittings.
  - Do not use quick disconnect couplings at tool and see the instruction for correct set-up.
  - Whenever universal twist couplings are used, lock pins must be installed
  
- Projectile Hazards:
  - Wear proper clothes without any accessories. Wear a safety cap for a person who has long hair.
  - Wear protective gears (goggles, working gloves, hard hat, ear pads, safety shoes and etc)
  - Always wear impact resistant eye and face protection when involved with or near the operation, repair or maintenance of the tools or changing accessories on the tool.
  - Be sure all others in their area are wearing impact-resistant eye and face protection also
  - Even small projectiles can injure eyes and cause blindness.
  - Accessory bursts may also cause serious injury.
  
- Workplace Hazards:
  - Check safety around. Working in a proper posture.
  - Slip/Trip/Fall is a major cause of serious injury or death. Be aware of excess hose left on the walking or work surface.
  - High sound levels can cause permanent hearing loss. Use hearing protection as recommended by your employer.




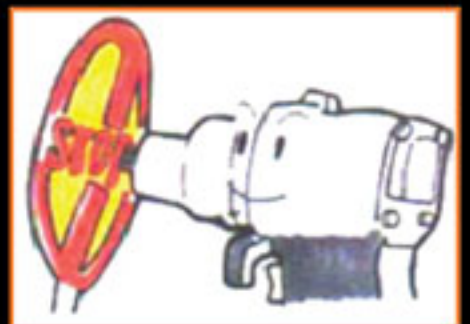





- Danger cause by Vibration. You have to maintain a balance body position and secure footing.
- Repetitive work motions, awkward positions and exposure to vibration can be harmful to hands and arms. If you feel numbness, tingling pain or whitening of the skin occurs, immediately stop using the tools and consult a physician.
- Avoid inhaling dust or handling debris from work process that can be harmful to your health.
- Operators and maintenance personnel must be physically able to handle the bulk weight and power of this tool.
- This tool is not intended for use in explosive atmospheres and is not insulated for contact with electric Power sources.



- Entanglement Hazards:
  - Keep away from rotating spindle and accessory.
  - Do not wear jewellery or loose clothing.
  - This tool and its accessories must not be modified.
  - The liability of manufactory lapses if the user uses spare parts that are not identical with the original.
  - Operators and maintenance personnel must be physically able to handle the power of the tool and capable of performing the job task.
  - Accessory bursts may also cause serious injury.
- Operating Hazards:
  - Avoid direct contact with rotating spindle and accessory to prevent cutting of hands or other body parts. Wear gloves to help protect hands.
  - Do not disable the safety lock off feature on the throttle lever.
  - This tool and its accessories must not be modified.
  - The liability of manufactory lapses if the user uses spare parts that are not identical with the original.
  - Operators and maintenance personnel must be physically able to handle the power of the tool and capable of performing the job task.
  - Accessory bursts may also cause serious injury.
- Noise & Hearing Pressure:
  - Mr. Mark pneumatic tool products use quiet tool technology and reduce high dB noise rating to lower one. By connecting muffler hose, the tool noise rating can be dropped about 3-5 dB points. All tool operators are still required to wear ear protectors in order to reduce hearing injury and work place hazard.
  - Do not disable the safety lock off feature on the throttle lever.
  - This tool and its accessories must not be modified.



- The liability of manufactory lapses if the user uses spare parts that are not identical with the original.
  - Operators and maintenance personnel must be physically able to handle the power of the tool and capable of performing the job task.
  - Accessory bursts may also cause serious injury.
- Vibration
    - Mr.Mark pneumatic tool products offer ergonomic housing designed specifically to reduce the harmful vibration affecting tool operator wrist and arms. The short housing tool body gives tool operator complete hand control and protect the wrist and arm from being injured through tool vibration. However, prolonged use of pneumatic tools can still lead or caused health disorders.
- Proper lubrication is needed for machine. Refill several drops of the spindle oil No. 60 (hydraulic oil VG 10) through the air inlet on the machine body during & after machine operation. Apply grease (lithium based) periodically to the impact area such as gears & bearing.
- 
- Handling the machine:
    - Shut off the compressed air at the compressor when finished work. Stop the rotation of the tool and air supply when replace tip tools
    - DO NOT use hand tool application tools as it will cause damage and serious accident. Choosing proper bits and adaptor for air tools.
    - DO NOT touch the rotational areas of the machine in use as injury may occurred.
- 
- Installing the tip tools
    - Disconnect air hose from the tool when replacing or installing tip tool
- 
- Air screwdriver
    - Use bits and socket for power tool application
- 
- Air impact wrench
    - Use bits and socket for power tool application
- Air nipper & blade
    - Immediately replace the broken blade as this may cause serious damage.
    - When replacing blade of the heat nippers, always aware of the heat even the power is off.
- 



- Air micro grinder
  - Choose proper tip tools
  - DO NOT use broken grindstones.
  - DO NOT use grindstones with different shaft diameter
  - Avoid over tightening and tightening the collet without shaft of the tip tool.



## Air Line 3pc. Combined Set:

### 1. Filter :

To eliminate the moisture and dirt articles from air line to the tool.



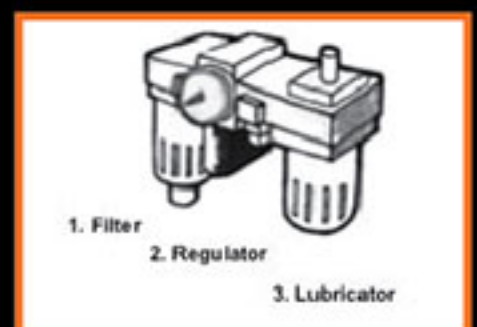
### 2. Regulator :

To adjust the air volume for correct and recommended pressure to the tool.

### 3. Lubricator :

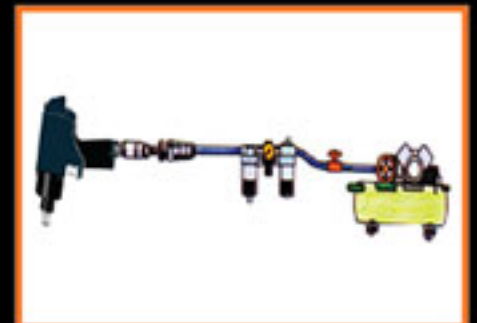
Our air tools need the lubrication periodically for correct performance of the tool.

Recommended oil : ISO-VG10 or equivalent.



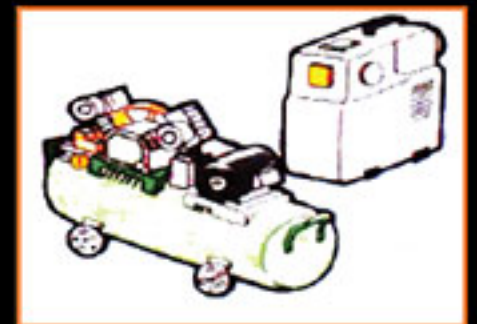
## Air Compressor:

- Choose the air compressor to supply enough air pressure and flow consumption volume.
- Check periodically to remove the drain water to be free from rusting and possible troubles of air tools.



## Air Hose Couplings:

- Connection tool between air hose and air tool or between air hoses.
  - Choose the one with better air flow so that prevent decreasing air pressure and lack of it.
  - Make sure to mount the connection tight and put the sealing on the screw part.
  - Coupling can connect socket and plug by one touch. You can select from our own manufactured couplings.
- See other pages for the details.



## Air Hose:

- Air supply hoses are made of rubber, urethane, nylon and so on.
- Choose the proper one by pressure resistance, length, and diameter size.
- Use the regulator to adjust the air pressure for tools.







## BEAR IN MIND

Tools have played a vital role in helping mankind in endless tasks like cutting, drilling, chopping, slicing, stripping, striking, punching, gripping etc. Today, hand tools have acquired a very important place not only in daily routine work and home repairs but also in various industries, farm shop, vehicles, machinery or facility repair. However, if they are not used carefully or not maintained properly, they can lead to serious injuries such as:

- > Loss of eye
- > Puncture wounds
- > Severed fingers
- > Broken bones
- > Contusions



# SAFETY FIRST!!