

Tools and Materials



Tool Descriptions and Usage

2-2





Tool Descriptions and Usage

At completion of this unit, you should be able to demonstrate an understanding of the purposes of tools universal across the building trades and how to use them.

Every skilled construction worker knows the importance of good tools. Each tool is like another pair of hands for us. We must know exactly what kind of tool we need, especially if there are many varieties of certain tools. Different styles of hammers, for example, have been specifically developed for different tasks.

Employers will supply some tools, but many of the tools we use on the job – as well as toolboxes and tool belts – are our own. Local bargaining agreements usually include a list of tools we must provide.

When you choose your tools, you should look for those that will do the job easily, efficiently, and safely. We need tools that will hold up well after years of use. Only top-notch tools will do top-notch jobs.

Many experienced tradesmen have strong – and differing – opinions about hand tools. Watch them, and notice the brands and types they use. Ask them which tools they prefer, and why. Try the tools yourself, and make up your own mind which is best for you.

No matter who owns them, treat all tools with care. Even quality tools become unsafe if they are not used properly and carefully maintained.

Directions: Use these pages to make notes about the tools and their uses.

2-2



Utility Knife

- Sharp cutting edge fills a variety of purposes
- Replaceable blade
- Make sure the blade is always sharp

Tool Descriptions and Usage



Framing (Claw) Hammer

- Flat pounding face
- Split prong for pulling nails
- Versatile
- Make sure that handle is solid and tool is tight on the handle
- Strike with the face, not the cheeks



24' Tape Measure

- Locks for easier measurement
- Accurate to 1/16 inch
- Rigid blade
- Hook to allow for inside and outside measurements



Combination Square

- 90 degrees angles
- 45 degree shoulder for checking and laying out miters
- Adjustable head
- Scriber housed in the head
- Vial for checking level and plumb

Tool Descriptions and Usage



6' Folding Rule

- Marked on both sides, both edges.
- Graduated to 1/16ths both edges; 16" stud centers marked in red.
- Regular outside markings. "



Scratch Awl

- Scribes metal
- Starts screw holes
- Performs a variety of piercing and punching jobs



Tool Pouch/Belt

- main nail & tool pockets
- smaller pockets for pliers; pencils; nail sets; etc.
- Pry bar or combination square holder
- Tape rule holder
- Hammer loop

Tool Descriptions and Usage



Carpenter's Pencil/Marker

- Pencils don't smear and are erasable
- Need to be sharpened to maintain shape, or use a mechanical one



Pipe Level (magnetic)

- Plumb and level vials



Flashlight

- For illuminating hard-to-see areas

Tool Descriptions and Usage



Side Cutting Pliers

- Have smooth, streamlined nose
- Used to cut screws, bolts, and wire
- Used to strip wire



Screwdrivers:

- Wide variety of sizes
- Variety of head shapes
- Worn screwdrivers slip easily

Standard Screwdriver

- Tightens and loosens
- Fits slotted-head screws and bolts



Phillips Screwdriver

- Tightens and loosens
- Fits Phillips-head screws and bolts

Tool Descriptions and Usage**Crescent Wrench**

- Adjustable jaw
- Loosens or tightens nut or bolt
- Make sure that the wheel screw designed to hold the jaws in tension isn't damaged, and that the jaws are stable and fit snugly where they are positioned.
- Turn the nut into the fixed jaw.

**Locking Pliers**

- Curved jaw
- includes wire cutter.
- Ideal for tightening, clamping, twisting and turning
- Turn screw to adjust pressure and fit work
- Stays adjusted for repetitive use
- Make sure that the points aren't rounded and fit snugly where they are positioned.

Tool Descriptions and Usage



Plumb Bob/Chalk box

- Specially designed weight and coarse string made of twisted cotton or nylon threads. (Masons prefer nylon because it stands up better over time to the dampness that comes with the trade.)
- Precisely machined and balanced bobs have pointed tips
- can be made of brass, steel, or other materials, including plastic
- To use, the string is fixed at the point to be plumbed. The weight, or bob, is then allowed to swing freely; when it stops, the point of the bob is precisely below the point at which the string is fixed above. (Note that the line must be hanging free to get an accurate reading.)

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Chisel (flat 2")

- Sharp cutting edge that can be guided through the stock
- Handle built specifically to aid the chisel's intended cutting task
- Keep the cutting edge sharp
- Avoid mushroomed heads (which are soft and expanded from being struck, and could shatter)
- Cut away from your body, and don't grip it too tightly.

Tool Descriptions and Usage



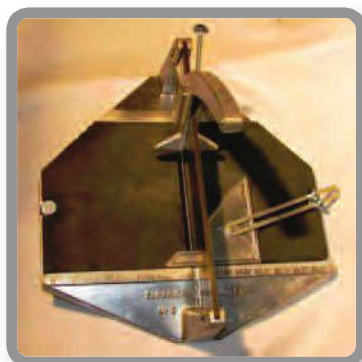
Notch Trowel

- Steel blade
- Used to apply all of the various kinds of bonding materials for ceramic tile
- Available in the serrated and square-tooth design
- Teeth are made in various sizes
- Correct tooth size and depth must be used to apply the thickness of bonding mortar specified



Stone Mason's Hammer

- Made of forged and tempered steel
- Has 16" wood handle
- Used to strike and shape stone in rubble masonry
- Can be used at times in place of chisels, mash or strike hammers



Ceramic Tile Cutter

- Made of cast aluminum
- Cuts up to 10" X 10" ceramic tile
- Quality carbide scoring wheel
- Staple of the industry since 1930

Tool Descriptions and Usage



Brick Trowel

- One piece forging made from the highest grade trowel steel
- Used for laying brick and block
- Precision balanced and typically fitted with hardwood handle
- Comes in various sizes



Joiner/slicker

- Available in various sizes and joint finishes
- Used for finishing mortar joints in brick and block



Brick Hammer

- Available in various sizes
- Used for cutting brick and block
- Used for tidying the edges of cuts to leave a clean edge
- Exceptionally well balanced, rugged one piece handle won't break off, dent or get chewed up

Tool Descriptions and Usage**Tower Crane**

- Used in the construction of tall buildings
 - Hoists forms
 - Transports building material on the job site
 - Places heavy structural elements including structural steel and pre-cast masonry units
 - The tower crane consists of a jib (or “boom”) and a counter-jib balanced by a counter-weight (often cement blocks); a trolley from which the load is suspended; and a hoist motor and transmissions situated on the counter-jib
 - Controlled by an operator in the cabin located atop the tower or may also be controlled from the ground by remote control
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**Grader**

- Shapes surface of the ground
 - Can be used to landscape around a building
 - Shapes ground for airports, highways and earth dams
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**Scraper**

- Lifts material (topsoil for example) a minimum level and deposits it on site to a defined thickness
 - Cuts drainage ditches
 - May be used with a grader in contouring ground around a building, or in the construction of dams and highways
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Tool Descriptions and Usage



Stapler

- Secures insulation materials in place



Boning Knife

- Used to cut insulation materials
- Must be kept very sharp
- Many different types used



Nippers

- Cuts, twists and ties wires



Scissors

- Cuts insulation materials
- Must be kept sharp

Tool Descriptions and Usage



Sewing Machine

- Used in the fabrication of insulating pads and blankets
- Must be properly maintained



Trowel

- Used to smooth insulating cements



Snips

- Used to cut and fabricate

Tool Descriptions and Usage



Bristle Brush

- Used to apply paint



Roller Brush

- An application tool useful for rapidly painting large flat surfaces efficiently



Glass Cutter Pliers

- Used primarily at the cutting table to run a score without having to tap it to start the run which insures a clean edge



Wallpaper Brush

- Used to smooth out wall coverings and work out bubbles

Tool Descriptions and Usage



Trowels

- Used to apply, spread, shape, smooth, and shape materials

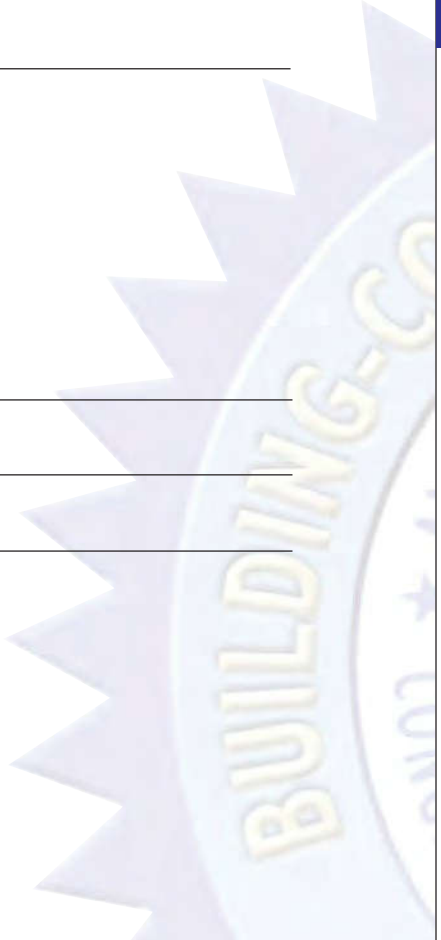


Drill For Mixing Compound



Tile Cutter

- Tool used to cut floor tiles



Tool Descriptions and Usage



Caulking Gun

- The Caulk Gun is used to discharge caulk from a caulk cartridge and is a common tool for construction repair use. It discharges the caulk from the caulk cartridge by use of a plunger driven by a pressure rod.



Putty Knives/Broad Knives

- A flat-bladed tool for filling cracks and holes with spackling compound



Pipe Wrench

- For gripping and turning pipe
- Replaceable Jaws
- Aluminum and Steel

Tool Descriptions and Usage



Electric Reciprocating Sawzall

- Electric Reciprocating Sawzall
- For cutting various metals and woods
- Faster than a handsaw
- Useable in tight spots
- Easy blade replacement



Electric 4" Grinder

- Used for beveling pipe
- Cleaning up sharp metal edges



Pipe Threader

- Used for threading various types of pipe
- Can be used in a hand held method also

Tool Descriptions and Usage



Electric Bandsaw

- Used for cutting various metals
- Quick blade change system
- Steady Cutting Speed
