California Agricultural Mechanics Tool and Materials Identification Manual

2014

Manual is compiled and maintained by Michael Spiess at California State University, Chico based on the 2005 manual with changes adopted by CATA June, 2013 and approved by the ad hoc committee. New tools were added and descriptions updated. Tool names were updated to reflect current industry names. New high resolution images were added as available. Some tools have been moved to different sections.

The manual and associated formats are generated with an Access database that can produce custom lists, PowerPoint presentations, and multiple choice tests. The entire application and image files are available for download at: http://ag.csuchico.edu/agmech.

California Ag Mechanics CDE Tool and Material ID

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Common Tools

Axes

Hand Axe

Used for sharpening stakes, cutting small limbs or brush. Also used to drive in small stakes, grade stakes, and corner stakes. The hand axe is similar to the single bit axe but smaller. The handle is 16 to 18 inches long.

Single Bit Axe

Used for building fences, cutting small trees and construction work. This very versatile tool should not be used as a sledge hammer on wedges or iron stakes. Handles are usually of hickory, 36 inches long, oval in cross section and shaped for good balance.

Double Bit Axe

Used to cut small trees, trim logs and tops. Its two cutting edges should not be left in a vertical position because of the safety hazard. The 36 inch handle is oval and straight.

Pliers

Water Pump Pliers

The jaws are adjustable to 2 inches. Used for turning & holding nuts & bolts, gripping irregularly shaped objects, holding pipes etc. These are similar to "Channel Lock" (a brand name) or generically tongue and groove pliers.

Slip Joint Combination Pliers

Used for general purpose work, for holding flat or round stock, and for cutting soft wires.

Diagonal Cutting Pliers

It has curved handles, lap joined; and diagonal cutting jaws. Intended for cutting wire. Slant of the jaws allows cutting nearly flush with a surface.

Common Tools

Fence Pliers

Grips between the handles hold the wire tightly while leverage is exerted against the fence post to stretch the wire fairly tight. Can be used for a variety of things, such as cutting wires, pulling staples, hammering nails.

Locking Pliers

Locks with a toggle action that holds until the lever is opened. Commonly called Vise-Grip (a brand name) pliers.

Punches

Pin Punch

This punch has a long, straight shank, the diameter of which designates the size. Used to remove bolts and pins.

Drift Punch

The shank is tapered. Used as an aid in aligning bolt or rivet holes prior to inserting a fastener.

Leather Punch

The handles are similar to pliers. Used to punch holes in soft materials like leather and rubber.

Prick Punch

The punch should be sharp and ground to 30 degrees. Used to precisely create a dimple in metal for layout work or further expansion by a center punch.

Hole Punch

These punches are used to make holes in gaskets and other materials. Also called a belt punch.

Center Punch

It is manufactured in various sizes and lengths. Used to mark the center of a point. The dimple created by the punch will keep a drill centered.

Screwdrivers

Common Tools

Torx Head Screwdriver

Also used on appliances, lawn and garden, and electronic equipment.

Slotted Screwdriver

Used to drive slotted wood and machine screws.

Offset Screwdriver

Used where it is difficult to reach the screw head with a common or standard screwdriver.

Stubby Screwdriver

It comes in slotted and Phillips, and has a blade length of 1 1/4 to 1 1/2 inches long. Same use as a screwdriver, but designed for small, tight spaces.

Screwdriver Bit

Available in slotted, Phillips, square, and torx drives for power screwdrivers. Shank is hexagonal.

Nut Driver

This is a very popular tool in the electrical and sheet metal industry. Nut drivers are used for tightening nuts and hex head machine screws.

Square Recess Screwdriver

Used for square drive screws. These screws are commonly used for decks.

Phillips Screwdriver

Used to drive Phillips head machine and wood screws. Always select the correct size for the correct application. Common sizes are 0,1, and 2.

Clutch Driver

This is a specialty drive that fits screws used in mobile homes, boats, recreational vehicles, and electric motors.

Wrenches

Common Tools

Combination End Wrench

The reason for the popularity of this wrench is that it has the advantage of having both open and box ends. Used to provide grip and mechanical advantage in applying torque to turn objects—usually rotary fasteners, such as nuts and bolts—or keep them from turning. Box end can be 6 or 12 point.

Open End Wrench

Both ends of the wrench are open but are of different sizes. Used for turning fasteners in locations where a box end wrench cannot encompass the fastener.

Six Point Socket

The socket has 6 points inside to fit over hexagonal nuts. Will grip better than a 12 point socket.

Box End Wrench

Wrench is available in 12 and 6 point ends.

Flex Socket

Permits working at various angles.

Tubing Wrench

The box at each end of the wrench is 6 point only. Also called a flare nut wrench.

Twelve Point Socket

The socket has thin walls to fit in tight places.

Deep Socket

The deep socket is made in standard, thin, and extra thin walls, with 6 or 12 point openings and with 3/8, 1/2 or ¾ inch drive.

Common Tools

Eight Point Socket

Has 8 points and is used on square nuts found on farm machinery.

Extension Bar

Used to connect, the socket wrench to the ratchet handle to give working clearance, and are 3 to 20 inches long.

Universal Joint

It makes work possible in restricted places where the wrench cannot be aligned with the bolt. Used with a socket.

Speed Handle

Used with a socket to rapidly remove a nut or bolt. Common drive sizes 1-4”-3/4”.

Ratchet Handle

The ratchet speeds up the work. Common drive sizes 1-4”-3/4”.

Socket Adaptor

Allows the use of larger drive sockets with smaller socket drives; i.e., 1/2 inch drive socket and 3/8 inch drive ratchet.

Slide Bar Handle

Used as a “T” or “L” handle and is normally used with the extension.

Flex Handle

The end that fits into the socket is swivel hinged, and the other end has a hole with a sliding cross bar to permit use of the wrench at an angle.

Chain Wrench

It is made in several sizes ranging from 13 ¾ to 87 inches long, and will handle pipe from 1/8 to 18 inches in diameter. Similar to a pipe wrench but uses a chain.

Common Tools

Strap Wrench

The adjustable strap is useful in rotating large diameter objects like filters.

Hex Key

This wrench is made of hexagon stock with one end bent to a 90 degree angle. Used to drive set screws and bolts with a hex socket head.

Adjustable Wrench

Size is designated by inches in length. Jaws are adjustable to fit nuts of various sizes.

Bars

Ripping Bar

Usually it is of octagon tempered steel. Used for demolition and pulling large nails. Also called a Wrecking Bar.

Flat Pry Bar

Contoured flat bar, with beveled nail slots at each end. Also called a Wonder Bar (Stanley brand name). Used to pull out nails or pry apart boards and other objects.

Crow Bar

It is normally four or five feet long with one end tapered round and the other end with a chisel point. It is used as a lever either to force apart two objects or to remove nails. Crowbars are commonly used to open nailed wooden crates. Common uses for larger crowbars are: removing nails, prying apart boards, etc.

Pry or Fitting Bar

It has a long round taper at one end and a curved pry hook at the other. Used to pull out nails, reposition heavy equipment, or jimmy heavy machinery in place.

Brushes

Common Tools

Parts Brush

Metal handle is usually sealed at both ends to enable brush to float in solvent to prevent losing brush in solvent tank. Used for cleaning metal parts

Push Broom

Handles are 7/8 inch in diameter 4 to 5 feet long and are threaded into broom body or bolted on. Used to sweep up debris from the shop floor and other large, flat surfaces.

Machinist's Vise

A bench mounted vise for metal with a swivel base and replaceable jaws. It should not be used for hammering or bending metal. Also called a Bench Vise.

Bench Brush

The overall length is 16 inches. Used to clean rust and burrs from metal parts and for removing corrosion from tight corners

Wire Brush

Used for cleaning metal parts to be welding, cleaning machinery parts and removing slag and rust.

Woodworker's Vise

The flat smooth jaws open up to 12 inches. For woodworking, the jaws are made of wood, plastic or from metal, in the latter case they are usually faced with wood to avoid marring the work piece.

Vises

Common Tools

Drill Press Vise

Drilling is safe and more accurate when a vise is used, and fewer drill bits are broken. Commonly clamped to the drill press table.

Bar Clamp

Bar type clamp has quick non- slip adjustment to approximate size; then screws tight to apply pressure. Used for securing edge to edge boards together to create larger panels and for holding together frame assemblies.

Strap Clamp

Uses a fabric strap that tightens around large or irregular projects.

Clamps

Pipe Clamp

A clamp made with a steel pipe. When referring to piping, pipe clamps are used to connect the pipe to the pipe hanger assembly.

Locking Welding Clamp

Works well when clamping two pieces adjacent to each other or at 90 degree angles.

Spring Clamp

Jaws are specially formed to hold flat or round objects.

Corner Clamp

Jaws are at 90 degree angles. Used to clamp items like cabinet frames.

"C" Clamp Locking Pliers

Used for clamping irregular shapes quickly and firmly when welding or fastening.

Common Tools

"C" Clamp

The screw has a sliding bar or a thumb screw at one end and usually a ball and socket pad at the other Sizes range from 2 to 12 inches. Used for a firm hold on metal fabricating or woodworking projects.

Shovels, Rakes, Picks, and Posthole Diggers

Scoop Shovel

The handle can be a short capped ferrule “0” type or 54 inch long handle.

Round Point Shovel

A shovel used for digging. Typical handle length approximately 50 inches.

Square Point Shovel

Used for scooping materials such as sand and gravel. Typically the handle about 50 inches long.

Irrigating Shovel

The same as the round point except the blade is almost straight with the handle.

Bow Rake

Has 15, 2 1/2 inch pointed teeth attached at 90 degrees to a 5 foot ferruled handle.

Clay Picks

The handles for all picks are 32 inches long and are larger at the head or blade end.

Cutter Mattocks

The blades ends are rotated 90 degrees and oval hole is in the center for the handle which is sold separate.

Pick Mattocks

Similar to the cutter mattocks except one end of the blade comes to a sharp point for breaking or digging in hardpan or very hard soil.

Common Tools

Posthole Auger

It is operated by rotating the handle. Used to build fences in solid without rocks.

Posthole Digger

It is operated by thrusting the points into the soil and spreading the handles to remove the soil. Also called a Clam Shell.

Miscellaneous

Safety Goggles

Eye protection that covers eye glasses.

Safety Glasses

Eye protection that covers eyes only. Safety glasses have side shields. The California State Educational Code states that all students, teachers, and visitors in a school shop must wear eye protection.

Face Shield

Eye protection that covers the entire face. Often used with safety glasses when full protection of the face is required.

Chain Saw

Most chain saws are gasoline powered, but smaller pruning saws can be electric or hydraulically powered. Used to trim trees.

Air Compressor

Used for supplying compressed air for spray painting and for operating air tools at low pressures (less than 100 psi).

Rotary Hammer

Used for drilling holes in concrete and with chisel attachments. Special carbide tipped bits must be used with this unit.

Common Tools

Contractors Wheelbarrow

Used widely in the construction industry. Typical capacity 1/5 cubic yard. Wheel is pneumatic.

Hog Ringer

It is some what like a pair of pliers except the jaws of the ringer has special slots for holding the ring. Used in many applications including; nursery cages, fencing, wire mesh products, erosion control, bedding and automotive.

Bolt Cutter

The toggle and lever joints develop great mechanical advantage. Commonly used to cut bolts, chain, and reinforcing bar.

Anvil

Sizes range in weight from 20 to 200 pounds. Used to shape cold and hot metal.

Electric Drill

Many models are variable speed. Typical chuck sizes are 1/4" to 1/2".

Hammer Drill

A power drill (corded or cordless) that creates a hammering action on the drill bit. Commonly used for concrete drilling with masonry bits.

Hammer Tacker

A stapler that operates like a hammer. Used to install insulation, builder's paper, roofing felt, etc.

Common Tools

Power Screwdriver

Comes in many shapes and sizes. These power tools are battery or AC powered, reversible, and variable speed. They are commonly used for dry wall or decking installation. Many models also have a high speed range for drilling.

Staple Gun

Heavy duty and light utility models are available driving 3/16 to 1/2 inch staples. Staple guns are used for many different applications and to affix a variety of materials, including insulation, house wrap, roofing, wiring, carpeting, upholstery, and hobby and craft materials.

Measuring, Layout, and Surveying

Measuring And Marking Tools

Micrometer

Sizes range from 0 to 1 inch up to 12 inches. Used for measurement of machined parts to .001 inches.

Fractional Vernier Caliper

Direct reading of 16ths and 32nds of an inch on the handle, and Vernier readings of 1/128 inch.

Dial Caliper

Used for accurate measurement to .001 inches. Capacity is from 0 to 6 inches.

Fiberglass Tape

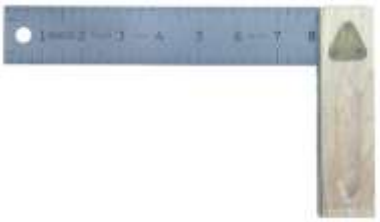
Lengths of 50', 100', 200, and 300' common. Tape maybe graduated in feet and inches, feet and 1/100', or metric.

Steel Tape

A retractable measuring tool available in widths 1/2" to 1" and lengths 6' to 30'. It should be cleaned after using and kept free from rust.

Measuring Wheel

Used to measure long distances such as field boundaries or road length where high accuracy is not required.



Try Square

A fixed square. It is marked in 8ths and 16ths of an inch.

Framing Square

Rafter framing squares are marked in 12ths of an inch on the back side. Also called a Carpenter's or steel square. Many of these squares are inscribed with rafter tables.

Rafter Square

An aluminum square marked for cutting rafters and angles. Also can be used as a guide for cross cutting with a circular saw. Small size will fit in a nail pouch.

Measuring, Layout, and Surveying

Combination Square

A level and a scribe are contained in the beam. The rule is commonly marked with 1/8", 1/16", and 32nd" marking.

Inside Calipers

The calipers are adjusted to the diameter of the object and then laid on a rule where the reading is taken.

Carpenter's Level

Used for marking level lines and for checking surfaces for level and plumb. Typical length 24-48 inches. Longer levels are often called masonry levels since they are commonly used to lay brick.

Sliding "T" Bevel

Used to reproduce angles. After it is set at the correct angle, it is much the same as a square.

Outside Calipers

The calipers are adjusted to the outside diameter of the object and then laid on a rule where the reading is taken.

Dividers

Used for marking out circles or parts of circles, for transferring or duplicating short measurements, and for dividing distances into a number of equal parts.

Depth Gauge

Usually graduated in 32nds and 64ths.

Line Level

It consists of a bubble tube housed in a metal or plastic case which has hooks for attaching to the string line.

Protractor

It is graduated from 0 to 180 degrees it is used to measure angles.

Measuring, Layout, and Surveying

Feeler Gauge

Used for gauging the clearance or spacing of valve tappets and other jobs where accurate measurements of .001 to .032 may be desired.

Chalk Line

A special container contains the chalk powder and line which is on a winding spool. Used to mark straight lines by stretching the string and popping it.

Scribe

Used to mark metal. The tip is brittle and will snap off if dropped on the point or used as center punch.

Plumb Bob

Used to establish a plumb line in laying brick or concrete blocks. Also used to establish a survey instrument (like a transit) above a specific point.

Soapstone

Unlike chalk, it is hard enough not to mark hands or clothing and can be used in holders that resemble pencils.

Surveying Tools

Builder's Level

A telescope instrument used to check level of forms or field grades. Builders' levels are designed to be used for short distances. Farm or dumpy levels are similar to builder's levels, but have more powerful telescopes. Farm levels are used for longer distances. Both instruments are leveled manually using adjusting screws. An “auto” level requires less manual leveling and has only three leveling screws.

Marking Gauge

It is marked in 8ths and 16ths of an inch and is 8 inches long. Used to scribe a line parallel to an edge.

Scratch Awl

Used to mark metal. Also used as a punch for making small holes in light gauge sheet metal for the insertion of sheet metal screws.

Measuring, Layout, and Surveying

Direct Elevation Rod

Rod reads elevations directly (without subtraction from the HI) by used a sliding tape. Some rods have a cut/fill scale for use in grading.

Laser Level

A level that used a rotating laser beam to establish a level plane. Leveling can be done with a single person.

Philadelphia Rod

Reads like a tape measure. An adjustable target is available to allow readings up to 700 feet in distance.

Global Position System Receiver

Commonly called GPS receivers, they used satellites to establish the user's position (e.g., latitude and longitude). Recreational receivers have an accuracy of 13 m and survey grade receivers have an accuracy of 2 cm. Differential GPS receivers (accuracy 2cm – 1 m) are commonly used in agriculture to map field boundaries, scout fields, and provide tractor guidance.

Range pole

A simple pole used in lieu of a rod where elevation measurement is not needed.

Laser Level Receiver

The receiver that detects the laser beam of the laser level. Can be fitted to a Philadelphia or Direct Elevation rod.

Transit

Similar to a level, but a transit telescope can be tilted vertically to measure vertical angles. Surveyor's have generally replaced these with "Total Stations", but transits are still used to measure vertical angles in construction.

Measuring, Layout, and Surveying

Surveyor's Arrows

Sizes range from 10 to 14 inches in length. Used to mark distances when "chaining" or measuring distance.

Rod Target

Used with the surveyor's rod to allow readings at a greater distance.

Surveyor's Steel Tape

Quite often called a "chain." These may be stored on a reel or coiled. True "chains" are 66 feet long.

Hand Level

The hand level is held in the hand thus providing little accuracy. Used to establish general slope of land.

Surveying Tripod

Used to hold a level or other survey instrument. To protect threads, keep cap on when not in use.

Fasteners

Bolts

Toggle Bolt

When the screw is tightened a firm anchorage is made. Used in plaster and sheetrock walls.

Machine Bolt

The head and nut may be square or hexagon shaped. Used to connect metal parts.

Cap Screw

It resembles a short bolt with a hexagon head with either coarse, fine, or metric thread. Term describes machine bolts and machine screws.

Machine Screw

The head is slotted for a screwdriver and may be either round of flat. Typical sizes 4-12.

Lag Bolt

The bolt has a square or hex head with a tapered wood screw on the other end. Common sizes 1/4 to 1/2 in diameter, 2" to 12" long. Also called a Lag Screw.

Eye Bolt

It has an eye on one end and coarse or fine threads on the other.

Plow Bolt

No wrench is necessary to hold the bolt head. Used to make mechanical connections that require a flush surface at the location where the bolt head protrudes.

Carriage Bolt

Commonly used to bolt wood. Never use a washer under the head as the square shoulders designed to grip the wood. Also found on machinery.

Grade 2 Bolt

Soft bolt commonly used for landscape applications and other applications where strength is not important.

Fasteners

Grade 5 Bolt

Mildly hardened bolt used commonly in machinery and equipment applications. Three markings on the head.

Wing Nut

Used where hand tightening (no wrench) is desired such as inspection covers.

Castellated Hex Nut

Used with a cotter pin to prevent loosening or tightening. Top of the nut is smaller in diameter than the base.

Grade 8 Bolt

Hardened bolt used where high tensile strength is required. 6 markings on the head.

Square Nut

Used on farm implements with carriage bolts, machine bolts, stoves bolts and plow bolts.

Cap Nut

A nut closed on one side to cover an exposed bolt.

Nuts

Hex Nut

It may have NC, NF, or metric threads. Used with machine bolts.

Self-Locking Nut

When tightened on a bolt the scored threads bite into the threads of the bolt preventing it from backing off.

Slotted Hex Nut

It differs from the castellated nut in that there is no stepped-in castle-like top. Used with a cotter pin to prevent loosening.

Washers

Fasteners

Finishing Washer

This is a chrome plated countersunk washer used with oval head wood or metal screws.

Fender Washers

A larger washer than a common flat washer. Use with large holes for aligning or adjusting for proper fit.

Set Screw

When screwed into a set collar the cup point makes an indentation in the shaft preventing the collar from vibrating loose.

Malleable Iron Washer

Used where excess pressure or stress is exerted on wooden structures.

Lock Washer

A lock washer will be used with the part of the assembly that most likely could turn such as the nut. It could be used under the bolt head in instances where the bolt screws into threads in one part of the assembly. It should not be used on wood.

Sheet Metal Screws

Head types are flat, round, pan, oval and binding. Used to fasten sheet metal.

Flat Washer

Used to prevent the nut from rubbing and becoming imbedded in the bolted material. Also called a Cut Washer.

Screws

Screw Eye

It may be described as a screw with an eye or ring head.

Fasteners

Torx Head Screws

The head is similar to the Phillips but having a six point star shaped opening in the center of the head rather than a four point star.

Self Tapping Screws

Screw has a sharp point with coarse threads that make their own threads when screwed into a pre-drilled hole that is smaller than the diameter of the screw.

Self Drilling Screws

No pre-drilling is necessary when using a self drilling screw. Tip is hardened and sharpened. Commonly used to attach metal siding to steel frames.

Drywall Screws

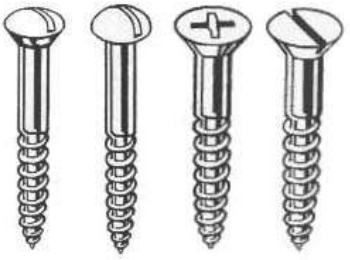
All Are Phillips Except the Hex Wafer Head. Used to fasten drywall. Bugle shaped flat head.

Screw Hook

Can be screw into wood walls or concrete or masonry when pre-drilled and a plastic or lead anchor is

Deck Screws

A straight shank wood screw with a bugle head. Commonly made with a Phillips or square drive 2 1/2" of longer. Coated to prevent rusting.



Wood Screws

A tapered screw with a round, oval, or flat head. The threaded portion of the screw is tapered with a very coarse thread and cuts its own thread as it is turned into the wood. Shown L-R oval head, round head, flat head Phillips, and flat head slotted.

Nails

Duplex-Head Nail

The point is sharp, and there are two heads, one above the other, to make removal easy. Common sizes 6d, 8d, 16d.

Fasteners

Box Nail

Roughly speaking, d equals 1/4 inch in length, but this is not constant. The shank is smaller in diameter than the common nail to prevent splitting of the wood. Common sizes 2d to 16d

Common Nail

Roughly speaking, d equals 1/4 inch in length, but this is not constant. The shank is larger in diameter than the box nail making the nail less likely to bend. Common sizes 2d – 20d. Sizes larger then 20s are often called spikes.

Finish Nail

The sizes range from 2d to 20d. The nail is designed to be counter sunk and the hole filled.

Galvanized Nail

Common, box, and finish nails are available for exterior use with a galvanized coating. The coating may be hot dipped (thicker) or electro-plated (EG). Used in many small projects as well as general construction projects.

Spiral Shank Nails

Designed for the construction and repair of wood pallets. These spiral shank nails are also good for re-nailing wagon beds, trailers.

Wire Brad

The size is expressed in wire gauge and ranges from 1/4 to 1 1/2 inches long. Used for fine nailing applications.

Fasteners

Cement Coated Nails

Sizes range from 2d to 16d. Commonly found in a green coating in 8d and 16d ("sinkers"). Cement coated nails are used for projects that require an extra bond, with the reduction in the chance of splitting. They are also well suited for nailing down plywood.

Blue Plaster Board Nail

The range in size is 1 to 1 1/2 inches. Used to attach wallboard to wood studs.

Aluminum Roofing Nails

Sizes range from 1 to 1 1/2 inches long. Used to apply aluminum roofing.

Lead-Head Nails

Lead washer is to prevent oxidation between the head of the nail and the galvanized roofing and also prevents leakage.

Galvanized Shingle Nail

A small nail commonly 3d in size is generally used for wood shingles.

Galvanized Roofing Nail

The head is about 1/2 inch in diameter, and the length ranges from ¾ to 2 inches. Used in roofing and construction projects.

Furring Nail

This allows the wire to become a reinforcing agent and the nails hold the plaster to the wall.

Miscellaneous Fasteners

Corrugated Fastener

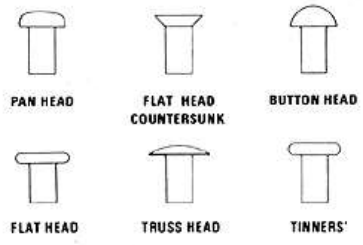
The size is 1/4 to 1 inch in depth and 2 to 7 corrugations. Used to fasten wood.

Cotter Pin

This prevents the nut from working loose. Also called a Cotter Key.

Rivets

Fasteners



Soft Iron Rivet

The size is based on length and diameter.

Rivet Set

A rivet set is a small bar of steel with a hole drilled in the end to receive the rivet, and with a cup-like depression for forming a round head on the rivet.

Pop Rivet

A rivet used to fasten metal. Requires access on to one side of the project. Pop rivets are made in aluminum or steel. Commonly found in 1/8 to 1/4" diameters and various lengths.

Pop Rivet Tool

Tool is adjustable to used to install the various sizes (diameter) of pop rivets.

Hardware

Hinges

Gate Latch

The hook is inserted into the eye screw to latch.

Strap Hinge

The size is measured from the hinge pin to the end of one strap.

Hinge Hasp

One end is like a strap hinge with a slot which folds over an eye or staple to accommodate a padlock.

Butt Hinge

This hinge is available with fast pin or loose pin and is plain brass or steel or primed with paint.

"T" Hinge

Size is measured from hinge pin to the end of the strap. Commonly use for gates ("T" fastens to post).

Barrel Bolt

The other end, a separate piece is an eye which the bolt slides into when locking.

Continuous Hinge

Same as the butt hinge except it comes in 8" to 8' lengths and is cut to length with a hacksaw. Also called a Piano hinge

Fencing And Supplies

Nail On Electric Fence Insulator

Commonly a plastic insulator that nails to a wood post. Insulators hold electric fence conductors about 1" from the post.

Wire Stretcher

It consists of two double sheave blocks specifically designed with hooks, holding lock, wire clamp and a rope.

Hardware

Wire Grip

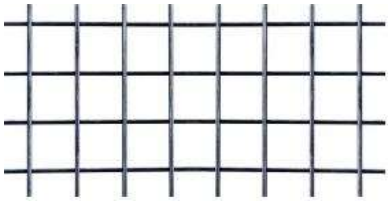
Made of steel or malleable iron. Used to grip fencing wire when tightening

Steel Fence Posts

Round steel post with an anchor plate 12 inches from the bottom and comes in 3 to 6 foot lengths.

Woven Wire Fencing

The roll contains 20 rods of wire ranging from 32 to 47 inches wide.



Welded Wire Fence

Consists of 16 gauge galvanized wire spot welded rather than woven, and has 2 inch by 3 inch mesh.

Fence Staple

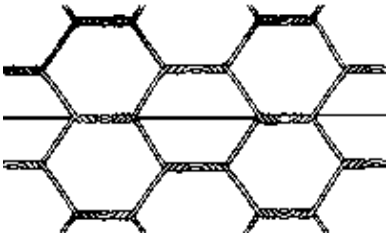
The length is stated in inches and fractions.

Electric Fence Gate Handle

By pulling on the handle, tension can be released on the fence and it can be disconnected allowing entry.

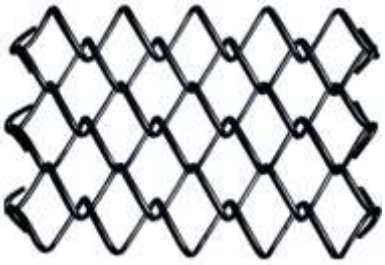
T-Post Insulator

The insulator is clipped to the steel post and the wire inserted into the plastic clip, thus preventing grounding of the electrical system.



Poultry Wire Netting

The rolls are 50 to 150 feet long and from 1 1/4 to 4 feet wide. Used to build poultry pens or for framing of small craft projects.



Chain Link Fencing

Comes in 36 to 60 inch widths and 50 to 100 foot lengths. Also called Diamond Mesh.

Hardware

Come-A-Long

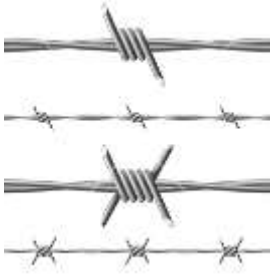
By working the ratchet handle the cable is tightened and moves the sheave block closer to the ratchet spool.

Turn Buckle

Turning the body tightens or loosens both at the same time.

Tension Spring

This spring can be extended, but exerts force by extending to pull back to its original length.



Barbed Wire

Used for livestock fencing. A spool of wire is 80 rods long.

Smooth Galvanized Wire

Used for livestock fencing. It is made of smooth galvanized steel and is available in a variety of gauges.

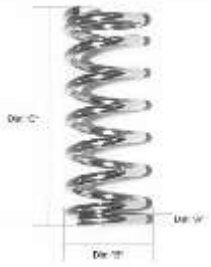
Torsion Spring

When the spring is wound up it exerts a twisting force. Commonly found in roll up doors.

T Post

A steel post with an attached plate to help anchor the post. Commonly 5'-8' long.

Springs



Compression Spring

A compression spring is one that exerts pressure when it is compressed.

Rope and Chain

Chains, Lashing Straps, and Accessories

Proof Coil Chain

A welded link chain. Chain size is designated by the diameter of the steel used in making the links (e.g.. 3/16"-3/4"). Made from low carbon steel, proof coil is a general utility chain for such uses as tie-down, log chain and assembly tow and switch chain. Available in plain, hot galvanized, and bright zinc finishes.

Sash Chain

Sash Chain is sold by the foot. Used to hang light fixtures, etc.

Twist Link Chain

Used where the chain must travel easily over something (links don't get caught).

Double Loop Chain

Used for tether chains, swings and hammocks and wherever a light inexpensive chain is needed.

Repair Link

Used to repair a broken chain and for attaching rings and hooks. Also called a Lap Link

Load or Chain Binder

This devise consists of a handle, two offset links and grab hooks which, when connected to a section of the load-binding chain and the handle pulled, tightens the chain.

Slip Hook

A round hook used on one end of a log chain to permit it to slip along the chain.

Grab Hook

Grab hooks are designed to hook over a chain link and will hold fast when the chain is tightened.

Rope and Chain

Swivel

It consists of two chain links connected by a riveted pin.

Clevis or Shackle

Used for fastening an implement to a draw bar for pulling, fastening a tow cable, and for purposes requiring the fastening or securing of machines or materials.

Winch

A ratcheting device used to tighten a rope or lashing strap.

Lashing Strap

Used for securing loads. Not used for securing heavy equipment. Typical polyester or nylon strap strength is 10,000-20,000 pounds. Smaller straps are available with a built-in winch. Larger straps are designed to be used with winches mounted on the truck bed.

Chain Hoist

Sizes are available from 1/2 to 5 ton capacity.

Rope

Rope Thimble

Used to protect the eye in a rope or cable.

Wire Rope

Laid construction of steel wire. Very stiff but much stronger than plastic or natural fiber rope.

Twisted Polypropylene Rope

Keep away from flames and hot metal, it will melt or solidify and break easily. Also called trucker's rope which is generally black with an orange stripe.

Rope and Chain

Nylon Rope

Maybe manufactured as a laid (twisted) rope or a braided rope. Stronger and more expensive then poly rope. Braided rope does not have individual strands therefore it is not suited for hand braiding.

Manila Rope

This is a laid (twisted) and comes in three and four strands. A natural fiber, manila is stronger than cotton, but weaker than the synthetic ropes.

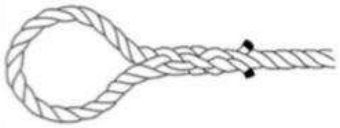
Cotton Rope

Cotton ropes are soft but the weakest of the natural fiber ropes.

Wire Rope Clamp

There are two types, the "U" bolt with cleat and the bolt clamp that are used to fasten wire rope. Maybe used to make eyes or splices.

Knots, Hitches, and Splices



Eye Splice

Used to make a permanent loop in a laid (twisted) rope.

Sheet Bend

A knot for joining ropes of different diameters

Square Knot

A common knot for joining two ropes

Bowline

A knot for making a loop

Clove Hitch

A hitch used to secure a rope to a hook.

Trucker's Hitch

A hitch used for securing a load

Metal Working

Metals

Bronze

An alloy of copper and tin. It is less malleable than brass. It is sold by the piece or by the pound.

Copper

A non-ferrous metal that resists oxidation. It is sold by the piece, running foot or pound.

Brass

An alloy of copper and zinc. It is sold by the piece or by the pound.

Aluminum

A light weight non-ferrous metal that resists oxidation. It is sold by the square foot, by the piece or by the pound.

Cast Iron

Used to make castings for cylinder blocks, plow bottoms, housings for tractor differentials, transmission cases, sprockets wheels, pulleys, pipe fittings and gears.

Galvanized Steel

The zinc coating varies from 0.0002 inch for the lightest coating to 0.002 inch for water pipe inhibits rusting.

Stainless Steel

An alloy steel that resists oxidation. Commonly a chrome or nickel alloy of iron.

Hot Rolled Steel

Available in many shapes. Formed hot the finish is rough and dark.

Cold Rolled Steel

It is commonly used for making bolts and shafting. Shaped cold the metal is bright and shiny.

Metal Working

Sheet Metal

Sizes thinner than 1/8". Commonly hot rolled steel in 2',3', and 4' widths and 8', 10', and 12' lengths. Steel may be plain or galvanized. Thickness in wire gauge sizes.

Square Tubing

Wall thickness varies from very light (ex. .080") to thick in larger sizes (ex. 1/2"). Heavier wall tubing is excellent for cultivator tool bars because of its smooth exterior finish and ability to with stand heavy loads.

Rectangular Tubing

Unequal dimensions (ex. 2"x4") steel tubing. Wall thickness varies from very light (ex. .080") to thick in larger sizes (ex. 1/2"). Also see square tubing.

Tool Steel

It can be tempered to various degrees of hardness. Contains more carbon than mild steel alloy.

Plate

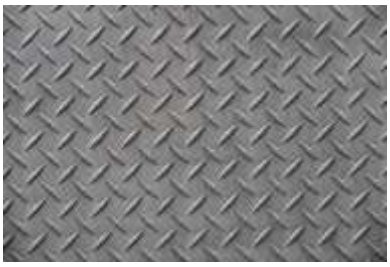
Sizes thicker than 1/8". Commonly hot rolled in 4'x8' sheets.

Channel Iron

A "U" shaped form. The common sizes range from 1/2” X 1 inch to 4 X 12 inches.

Angle Iron

Sized by the length of the legs and thickness. Ex. 2”x2”x1/4”.



Diamond Plate

Sizes range from 1/8 to 1/4 inch thick, 4 to 5 feet in width and 8 to 12 feet in length. Surface texture is less slick than plate.

Metal Working

Square Bar

A solid square shape. Ranges in size from 1/8 inch and greater.

Strip Iron

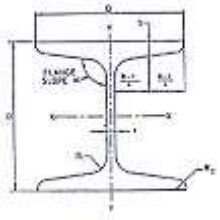
It is 1/8 inch or less in thickness and comes in various widths.

Straight Shank Twist Drill

If used on hard steel and at high speeds, it should be made of high speed steel. Designed for general purpose drilling in a wide variety of materials.

Expanded Metal

Come in gauge thickness and usually 4 to 5 foot width and 8 to 12 foot lengths.



H Beam

A 4 inch H beam is 4 inches wide and 4 inches high. Commonly used vertically in buildings.

Reduced Shank Drills

The shank of the drill comes in three sizes, 1/4, 1/2, and ¾ inch. Allows a larger hole to be drilled using smaller cutting tools.

Flat Bar

Size is 3/16 inch thick and greater and comes in a variety of widths.

I Beam

Used to support structures (placed horizontally). Typical lengths 20-40 feet.

Tapered Shank Twist Drill

It should never be used in a chuck. They are designed for general purpose drilling in a wide variety of

Boring Tools (Metal)

Metal Working

Drill Drift

Used for removing Morse taper sleeves and tapered shank twist drills from a drill press. Also called a Center Key.

Chuck

Used to hold a drill in a drill press or drill motor. May portable drill motors are using keyless chucks that are tightened by hand.

Diamond Chisel

Use for cutting keyways and groves. Useful for tight places where a cold chisel is too large. Sized by the width of the cutting edge.

Taper Reamer

Used to ream holes for tapered pins used on farm machinery and equipment.

Chuck Key

Used in keyed chuck to tighten or loosen the chuck

Cape Chisel

Use for cutting keyways and groves. Useful for tight places where a cold chisel is too large. Sized by the width of the cutting edge.

Morse Taper Sleeve

Used as an adaptor to insert different number taper shank twist drills into the drill press.

Countersink

The shank is 1/4 inch in diameter and can be used in hand or power drills. Used to create cone-shaped holes to countersink flat head wood or machine screws.

Chisels

Metal Working

Cold Chisel

Size is determined by the width of the cutting edge. Cold chisels are used to cut rivets, to split nuts or bolts that refuse to come loose, or to break castings. They can also be used to cut sheet metal. The metal chisels with edges in other shapes have other applications, such as grooving or shaping corners. Don't use a cold chisel to cut masonry; there are specially made tools for that purpose.

Round Nose Chisel

The sides of the shank are flattened and the width at the cutting edge determines the size. It is used to align drilled holes, cut channels, cutout grooves and similar work.

Hammers (Metal)

Engineer's Hammer

Sizes are form 2 1/2 to 4 pound with handle length of 16 inches.

Ball Peen Hammer

This hammer is constructed with a ball at one end and a round crowned hammering face at the other. Also called a Machinist's Hammer

Blacksmith's Hammer

The hammering surface is crowned. Designed for use in forming hot metal.

Dead Blow Hammer

It does not absorb liquids or produce sparks when striking steel objects. Some models are weighted with lead shot.

Hand Drilling Hammer

The head is made in three different sizes, 2, 3, and 4 pound. It has a short handle and can be used in tight places to drive punches and chisels.

Tinner's Hammer

The hammer head is beveled on one end and has a square face on the other.

Metal Working

Sledge Hammer

Looks like engineers hammer but much larger. 6-12 pounds in weight.

"T" Tap Wrench

"T" type tap wrenches have an adjustable chuck. Used to hold a tap. Jaws are square to mate with a tap.

SAE Tap

Used to cut Society of Automotive Engineers or National Fine threads in bored holes and nuts.

Files, Threading, and Cutting Tools

Metal File

Common Shapes: flat, mill, square, half round, round and three square (triangular). Common Coarseness Cuts (rough to smooth): bastard, second cut, smooth. Kinds of Teeth: Single Cut and Double Cut. Used to cut fine amounts of material from a work piece.

Tap Wrench

Used to hold the tap when threading.

USS Tap

Used to cut United States Standard or National Coarse threads in drilled holes or nuts.

File Card

The card is a small fine wire brush. Used for cleaning the teeth of a file. Some also have a brush side.

Bottoming Tap

Used after the plug tap to complete a thread in a bottom of a hole.

Metal Working

Plug Tap

Used after a taper tap and before the bottoming tap to cut threads in a blind hole. It has less taper than a taper tap and should not be used to start threads.

Taper Tap

Used as the initial tool to cut threads in a hole. The most commonly used tap.

SAE Dies

Used to cut Society of Automotive Engineers of National Fine (NF) Threads on bolts.

USS Die

The die cuts the male thread of a bolt or rod. USS also called National Course (NC) thread.

Die Stock

Used as a handle for dies.

Hack Saw

The handle normally has a pistol type grip. Used for cutting materials such as metal or plastic. Cuts on the push stroke.

Screw Extractor

A hole is drilled in the center of the broken stud, and the extractor screwed into the hole in a counter clockwise direction. Screw extractors are often called easyouts, these can be used to remove a broken bolt or a broken stud from a tapped hole.

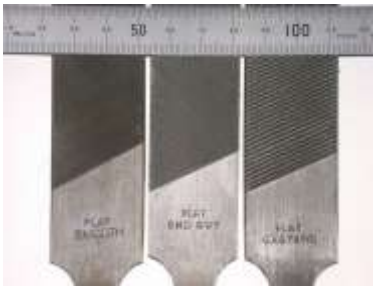
Whet Stone

An abrasive stone used for hand sharpening tools such as wood chisels and other tools to a fine edge.

Metal Working

Round File

A round file is a woodwork device used for removing small amounts of material from a work piece. The round file consists of a long pointed metal body and a square tang for attaching a handle. It is available 4 to 16 inches long and 3/16 to ¾ inches in diameter.



Single Cut File

It has a single series of teeth and is made in bastard cut, second cut and smooth type teeth. Used for filing soft materials.

Sheet Metal Tools

Flat Leg Pattern Dividers

Used For precision transferring Of segments from a pattern to work.

Sheet Metal Layout Rule

Typically 4' long and marked in 1/16". It also has circumference measurements on the back side. Used for sheet metal layout.

Wing Dividers

Divider Tips Are Adjustable By Loosening A Set Screw And Spreading The Tips Apart.

Shear

A powered hand tool used for cutting sheet metal up to 12 gauge.

Adjustable Trammel Points

The trammel points can be adjusted to any point on the bar. Used to scribe large circles or arcs.

Tin Snip

There are four types available; regular straight snip, curved (left and right) snip, and duckbill snip.

Metal Working

Aviation Snips

Available in straight, left, or right. Compound action makes cutting easier and the jaws are usually serrated. Also called Compound snips.

Sheet Metal Shear

Foot operated shear that cuts sheet metal.

Cut Off Saw

Cutting wheels may be disposable or with teeth. Used for cutting steel bar and pipe.

Power and Stationary Tools

Bench Grinder

Used for sharpening and removing material. Stones are classified by diameter, width, and coarseness (i.e. 1" x 6" 80 grit).

Brake

Used for bending sheet metal.

Angle Grinder

Available in sizes from 2 to 9 inch. May be used with a grinding, sanding, or wire brush wheel. Used to grind down, sand, or clean metal.

Hydraulic Shear

Powered by a hydraulic pump and cylinder these shears commonly can cut flat stock, angle iron, and punch holes.

Woodworking

Wood

Pine

A softwood used for small projects and moldings.

Pressure Treated Lumber

Generally fir species that is treated to resist decay. Green in color.

Plywood

Composed of layers of wood sheets with the grain of each sheet glued at right angles. Very strong. Used for flooring, roof sheeting, and shear walls. Comes in various grades denoted by letters. A=best, D=worst. For example AC would be A on one side and C on the other. Plywood can be designated as interior or exterior depending on the type of glue used in its manufacture.

Particle Board

Primarily made from sawdust. Used for subfloor where shear strength is not needed.

Oriented Strand Board (OSB)

Primarily made from wood chips. Used for shear walls and roof sheeting

Cedar

Known for its resistance to decay. Used for fencing.

Douglass Fir

Used primarily for structural framing. Very strong.

Woodworking

Redwood

Known for its resistance to decay. Used for landscaping, decking, etc.

Oak

A hardwood used for cabinets and similar applications. The grain is very distinctive. May be used as a solid wood or as a veneer on plywood or particle board.

Birch

A hardwood used for cabinets, door veneer, and similar applications. May be used as a solid wood or as a veneer on plywood or particle board.

Tack Hammer

One side of the head is magnetic and used for starting short tacks.

Straight Claw Hammer

The hammer head is the same as a curved claw hammer, but the claw is nearly straight. Weight 16-28 oz. Head may be smooth or serrated. Also called a Ripping hammer. Primarily used for pounding nails into, or extracting nails from, some other object. Generally, a claw hammer is associated with woodworking but is not limited to use with wood products.

Curved Claw Hammer

Used for driving and puling nails. Face is commonly rounded for finish work. Weight 13-16 oz.

Mallet

Heads are made of wood, plastic, rawhide and rubber. Also called a Soft Headed Hammer. Used to drive a chisel or wedge.

Shingler's Hatchet

It has a gauge that can be adjusted for the desired shingle exposure and has a nail pulling slot in the back and above the cutting edge. Used to install shingles or other roofing materials.

Hammers (Wood)

Saws And Accessories

Woodworking

Back Saw

This saw should be used in a horizontal position. Used for making accurate, deep cuts in wood. Has fine teeth.

Keyhole or Compass Saw

Used for sawing curves, especially where the cut must be started from a hole bored with an auger bit.

Circular Saw

Primarily used for cutting wood, however many blades types are available for cutting sheet metal, metal, stone, and various other products. Available as a direct drive or worm drive (gear).

Hand Cross Cut Saw

The standard length is 26 inches. Typically 8-12 teeth/inch. Used in carpentry for cutting against the grain. Teeth are pointed.

Coping Saw

The blade is installed to cut on the pull stroke. Used to cut intricate external shapes and interior cutouts in woodworking or carpentry. Primary use is for "coping" or fitting moldings.

Jack Plane

Planing should be done with the grain of the wood. Note tail behind the handle. Used for general smoothing of the edges.

Hand Rip Saw

The edges of the teeth are not beveled, but are shaped like chisels. Typically 4-7 teeth/inch. Used for cutting wood with the grain.

Power Tools

Belt Sander

Sands or cuts using a sanding belt. Used for course sanding of large surfaces.

Woodworking

Smooth Plane

Sizes range from 5 1/2 to 10 inches long and 1 1/4 to 2 3/8 inches wide. The smoothing plane is typically the last plane used on a wood surface - when used properly, the finish it gives will be far superior to that made by sandpaper or scrapers. The smooth finish is the result of planing the wood off in strips, rather than by successive buffing and scratching.

Finishing Sander

Sands by a vibrating action.

Jig Saw

Many variations of blades are available for cutting wood, plastics, and other soft materials. Also called a Saber Saw. Used to cut in the interior of a project (e.g.; a hole) and cut curves.

Router

Depth of cut is adjustable. Used to shape wood (ex. round the edge of a board).

Power Miter Saw

Used to cut wood. The saw pivots on the miter box to cut angles.

Block Plane

Sizes range form 5 1/2 to 7 inches long and 1 3/8 to 1 5/8 inches wide. Used to plane the end of a board.

Circular Saw Blade

The size is determined by the diameter of the blade.

Woodworking

Nail Gun

Nails are fed automatically from a loading chamber and are dispensed by pulling the trigger. Available to drive brads, box and finish nails, roofing nails, and staples. Air powered or powered with a gas charge.

Reciprocating Saw

Similar to the jig saw but much larger and used for heavy duty work. Commonly used to cut materials such as nails, pipe, as well as wood.

Hole Saw

Hole saws come in sizes from ¾ to 2 1/2 inches and one mandrel fits all. This blade creates a hole in the work piece without having to cut up the core material.

Surface Planer

Used for planing wood surfaces. Commonly as stationary tool, but also available as portable tool. A power version of a hand plane.

Disc Sander

A stationary power tool with a 6-12 inch sanding disc.

Auger Bit

The straight round shank adapted for power drills.

Boring Tools (Wood)

Forstner Bit

A power bit for drilling flat bottomed holes in wood. Commonly found in sizes 3/8-2 inch.

Spade Bit

A wood boring bit with a hex shaft to be used in a power hand drill or drill press.

Woodworking

Expansive Bit

The shank is a square taper, adapted for the bit brace.

Hand Screw Clamp

The wooden handles are mounted on opposite sides of the jaws. Used to clamp wood projects.

Wood Rasp

Used to shape wood. Much courser than a metal file. Other rasps are 4-in-hand and horse rasps.

Woodworking Tools

Surform Tool

A tool like a wood rasp with a replaceable cutter. Available in flat, round, and half round shapes.

Cat's Paw

A tool used to pull nails

Nail Puller

Used to remove nails from a work, commonly used in demolition. A pair of jaws is driven into the wood below the nail head by impact action of the handle.

Nail Set

A nail punch also called a nail set, is used to drive the head of a nail flush with a surface.

Wood Chisel

It is sharpened only on one side to a 25 or 30 degree angle and may be used with or across the grain. A sharp wood chisel can cut mortises, shave rough surfaces, chop out corners and scrape off glue.

Construction

Utility Knife

A sharp knife for cutting drywall, roofing felt, etc.

Woodworking

Drywall Trowel

A flexible trowel for applying drywall compound and tapping.

Drywall Saw

A tapered hand saw for cutting drywall.

Stationary Power Tools

Drill Press

A stationary drill that can be equipped with specific bits that are designed to drill through different wood and metal materials.

Band Saw

Used for making curved cuts in wood or metal.

Radial Arm Saw

A saw designed to cross cut and rip with the ability to cut compound angles.

Table Saw

A stationary saw used primarily for ripping lumber and sheet materials.

Concrete

Concrete Tools And Supplies

Portland Cement

Fine power made from limestone. Used to make concrete and mortar. Commonly sold in 94 lb. bags (1 cubic foot).

Sand

Fine aggregate less than 1/4" in size.

Gravel

Course aggregate greater than 1/4" and commonly less than 1 1/2" in size. Used in concrete production, road paving, landscaping, etc.

Concrete

A mix of cement, sand, and gravel. Typically in a ratio of 1:2:3 or 1:2:4. Used for building pads, sidewalks, and equipment pads.

Mortar

A mix of cement, lime, and sand used to lay bricks or concrete blocks.

Sponge Rubber Float

Must be dipped continuously in water when working plaster to keep the plaster from adhering to the rubber. Used for plaster or grout application.

Bull Float

A large float with a long detachable handle. Made from wood or magnesium. Common sizes are 8 inches wide by 36 or 48 inches long. Used to flatten fresh concrete surfaces.

Hand Float

It is 4 to 5 inches wide and 13 inches long. Floats are used for rough finishing.

Concrete

Corner Trowel

Size is 2 1/2 by 2 1/2 wide and 6 inches long. Used to finish corner in curbs, steps, etc. The handle placement determines if the trowel is outside or inside. Outside corner trowel is also called a step trowel.

Fresno Trowel

This large finish trowel also has a long detachable handle. This trowel is used in hard-to-access areas or large areas of concrete where a traditional hand trowel floating is not possible.

Concrete Tamper

A tubular steel frame handle is attached to the top which allows a person to operate the tamper while walking in the concrete. Also called a Jitterbug. Used to force aggregate below the surface of the wet concrete.

Finishing Trowel

The finishing trowel is made of steel and is 4 inches wide by 14 inches long. Used to smooth, level, or texture the top layer of hardening concrete

Concrete Edger

The ends may be curved up slightly. Used to finish the edges of concrete.

Mortar Hoe

It also has a 5 1/2 foot handle and holes in the hoe to aid mixing.

Groover

It is 2 7/8 inches wide and 6 inches long with the ridge being 1/2 inch deep and 1/2 inch wide. Use to place groves in concrete slabs.

Mud Pan

Used mostly with small trowels or putty knifes to hold dry wall taping compound or mortar.

Concrete

Hawks

The size is 13 x 13 inches square. Use to carry mortar.

Brick Layer's Hammer

The wedge shaped end is for scoring and cutting brick, and the other end is for tapping bricks into place when leveling. Used to break bricks, stones, and other hardscape materials.

Brick Jointer

The jointer is bent at each end at about 20 degrees to allow the mason to use one end as a handle and the other as a jointer. The tool is used to finish the joints between bricks.

Star Drill

It is operated by striking with a hammer while rotating by hand. Used for making holes in stones or masonry projects.

Brick Chisel

Blade is 3 1/2 inches wide, overall length is 7 inches. Used to make smooth cuts on bricks.

Brick Trowel

It is pointed and measures 4 ¾ inches by 11 inches. Used in masonry.

Masonry Bit

Used to drill in brick, block, and concrete. The tip is treated with tungsten carbide to resist heat and wear.

Reinforcing Bar

Available in 20, 30, and 40 foot lengths. Common sizes (diameter) of 3/8" to 1" are use in small construction projects. Numbered sizes are 1/8s of an inch in diameter.

Plumbing Tools And Supplies

Plumbing Tools and Supplies

PVC Pipe Cutter

This cutter makes smooth clean cuts on small diameter PVC pipe. Also used with polyethylene (PEX) tubing.

Pipe Cutter

Used to cut steel pipe. Too much pressure on the handle may cause the cutting wheel to break.

Pipe Die Stock

Operates as a ratchet in both directions. Hold the pipe die.

Pipe or Burring Reamer

This type of reamer is made with bit brace shank, round shank, or "T" handle.

Teflon Tape

Used for sealing threads on metal and PVC pipe and on valves.

Copper Fitting Brush

Used to clean metal parts to be soldered or welded and for cleaning pipe threads.

Flaring Tool

Used to make flared ends for soft tempered tubing.

Pipe Die

Pipe dies should not be used for bolt threading as they are tapered.

O.D. Tube Cleaning Brush

A wire brush used to clean copper pipe or tubing for soldering. Comes in sizes 1/2" to 1".

Plumbing Tools And Supplies

Pipe Tap

Used to cut internal threads in pipe fittings.

ABS Cement

Used to connect ABS Plastic pipe and fitting. Black in color. Not compatible with PVC Pipe.

Pipe Vise

Used for holding pipe while cutting and threading.

Pipe Wrench

Adjustable and is used to turn pipe or conduit or round stock. Sizes 6" – 18" in length are common, but can be much larger.

Propane Torch

A propane/air torch that develops temperatures suitable for soldering.

Solid Solder

It is available in I or 5 pound spools. Lead free solder is used for plumbing of domestic copper pipe.

Acid Brush

Used for applying pipe joint compound on threaded pipe and thinner's fluid (acid) or flux on copper pipe for soldering. The handle is tubular sheet metal 3/8 inch in diameter and 6 inches long. Also useful in woodworking to apply glue.

PVC Glue

When gluing, apply glue to both the fitting and the pipe, slide the two pieces together and rotate 1/4 turn for good adhesion. Glue comes in a variety of thicknesses, set times, and colors.

Plumbing Tools And Supplies

Tubing Cutter

Used to cut copper and aluminum tubing.

PEX Crimp Tool

Use to close the crimp fasteners that hold PEX pipe to fittings. There are a number of other systems in use.

PEX Cinch Tool

Use to close the cinch fasteners that hold PEX pipe to fittings. There are a number of other systems in use.

PVC Pipe And Fittings

PVC Primer

Used to clean and soften PVC pipe before applying cement. Generally recommended for pipe 1" and larger.

SxT PVC Street Elbow

Used to connect PVC pipe to threaded pipe at an angle. May be threaded on both ends, slip on both ends, or slip-thread.

SxSxS PVC Tee

Used to connect three pieces of PVC pipe together. Outlet is commonly smaller than the ends. A typical designation is 1" x 1" x 1/2 SSS Tee. If the outlet is threaded then the designation would be SST.

SxT PVC Reducer Bushing

Used to connect PVC pipe to a smaller diameter threaded pipe.

SxT PVC Elbow

Used to connect PVC pipe to threaded pipe at a 45 or 90 degree angle. May change sizes. Such as 3/4" x 1/2" ST Elbow.

Plumbing Tools And Supplies

PVC Pipe

Used for cold water purposes, sizes range from 1/2 to 2 inch and it comes in 20 foot lengths.

SxS PVC Coupling

Used to connect two pieces of pipe together in a straight line.

Compression Coupling

Can be used on steel or PVC pipe. Usually used for repair or temporary connections. Seals with a neoprene gasket.

SxS PVC Reducer Bushing

Used to connect PVC pipes of different diameters.

SxS PVC Elbow

Comes in 45 and 90 degree angles. Both ends are glued.

Male Adaptor

The PVC slip end is female and the threaded end is male thread.

S PVC Cap

Used to stop the flow on PVC pipe. Slip cap is shown, but can be threaded.

SxS PVC Street Elbow

Used to connect two pieces of PVC pipe at an 90 degree angle. One end is male and other is female.

Female Adaptor

Used to connect PVC pipe to threaded pipe, has female ends.

Plumbing Tools And Supplies

SxSxT PVC Tee

Used to connect a straight length of PVC pipe to a threaded pipe at an intersection. Sizes are given as end, end, middle such as 3/4" x 3/4" x 1/2" SST.

PEX Pinch Clamp

Use to fasten PEX pipe to barbed fittings. Used with a cinch tool. Made of stainless steel.

PEX Tee

A barbed tee fitting used with PEX pipe systems. Commonly described by the size or each opening such as 1/2" x 1/2" x 3/4" (end, end, middle).

T PVC Cap

Used to stop the flow on threaded pipe.

PEX Crimp Ring

Used to hold the PEX pipe on the barbed fitting. Used with a crimp tool. Commonly made of copper.

PEX Elbow

A 90 degree barbed elbow used with PEX systems

PEX Pipe And Fittings

PEX Pipe

Cross-linked polyethylene plastic pipe (tubing) is used for hot and cold water. It is easily worked and used with barbed fittings.

PEX Coupling

Couples PEX pipe.

PEX Female Adapter

An adapter from the PEX barbed system to female iron pipe threads.

Plumbing Tools And Supplies

PEX Male Adapter

An adapter from the PEX barbed system to male iron pipe threads.

PEX Stubout

An adapter to copper pipe. Commonly used to with shutoff valves with compression fittings for water supply lines.

Copper Pipe and

Copper Pipe

Rigid pipe used for water supply plumbing. Sizes commonly 1/2" - 2". Connections are soldered. Copper pipe is available in three basic types: Type M is thin-walled, Type L is medium-walled and Type K is thick-walled.

Copper Tubing

Flexible tubing used for water applications. Sizes commonly 1/4"-2" O.D. Connections are soldered, flared, or compression type.

CxC Street Ell

A street elbow for use with copper fittings. Often used with a C x C Ell to make a odd angle.

CxC Union

Used to connect two copper pipes together when neither can be moved.

C Cap

Used to stop the flow of liquid or gas in a copper pipe.

Plumbing Tools And Supplies

Paste Flux

Flux is used in soldering to clean pipe allowing solder to flow easily.

CxT Adaptor or Male Adapter

Used to connect copper pipe to threaded pipe.

CxCxT Tee

Used to connect two copper pipes to a threaded pipe.

CxC Coupling

Used to connect two copper pipes together.

CxC Reducing Coupling

Used to connect copper pipes of different diameters.

CxT Female Adapter

Used to adapt to female threads

Steel Pipe and Fittings

CxC Elbow

Comes in 45 and 90 degree angles.

CxCxC Tee

Used to connect three pieces of copper pipe together.

90 Degree Elbow

A elbow that changes direction by 90 degrees. Both ends are female threads.

Plumbing Tools And Supplies

Floor Flange

It is a steel flange with female threads in the center and holes drilled on the edge of the flange for bolts or screws.

Galvanized Pipe

Steel pipe with a galvanized coating to prevent corrosion. It Should Not Be Used In Hydraulic Systems.

Union

A three piece fitting. The center piece is hex shaped to accommodate a wrench and tighten the two outer pieces. Used to join two pipes so they can be easily disconnected or join threaded pipe in the middle of a piping run.

Coupling

It is used to connect two pieces of pipe in a straight line.

45 Degree Elbow

A elbow that changes direction by 45 degrees. Both ends are female threads.

Nipple

Short pieces of threaded pipe, nipples are classified as close, short and medium, or are measured in inches of length.

Bushing

Used to reduce pipe size. One end is hex shaped to receive a wrench.

Black Pipe

Pipe lines may be constructed with threaded fittings or may be welded. Used for natural gas not water.

Plumbing Tools And Supplies

Cross

It is shaped like a cross and is threaded inside at the four ends.

Street Ell

An elbow with male thread on one end and female threads on the other. Available in 90 and 45 degree angles.

Cap

Used to screw over the threaded end of a pipe to seal the opening.

Pipe Plug

The end is square to accommodate a wrench.

Tee

Used to connect lateral branches of a pipe.

Pipe Clamp

For 1/2 to 2 inch pipe. Used for repairing small leaks in steel pipe.

Bell Reducer

Similar to a coupling, but changes pipe sizes.

Close Nipple

A nipple that is as short as possible (threads touch).

ABS Pipe and Fittings

Plumbing Tools And Supplies

ABS Pipe

Acrylonitrile-Butadiene-Styrene (ABS) pipe used for sewer applications. Pipe is black plastic. ABS fittings are glued like other plastic pipe systems. Male and female ends are designated as "spigot" and "hub" respectively. Elbows are not designated by degrees, but rather by the part of the circle (ex. 1/4 bend = 90 degrees). Pipe commonly is found in sizes from 1 1/4" to 6" and 20 foot lengths.

Long Sweep 1/4 Bend Hub

Used to connect ABS pipe at a 90 degree angle and allows for easy clean out when using a drain auger or plumbers snake to clean out lines.

Double Wye Hub

Used for connecting two lines at a 45 degree angle to a straight ABS pipe.

Wye Hub

Used for attaching a line at a 45 degree angle to a straight line.

Male Adaptor-Hub X Male Pipe

Used to connect ABS pipe to female pipe threads.

Female Adaptor-Hub X Female

Used to connect ABS pipe to threaded pipe.

Adaptor-Spigot X Female Pipe

Used to connect female ABS pipe fitting to male pipe thread. Often used for cleanouts.

P Trap Hub With Union

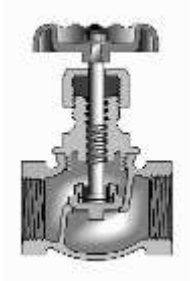
Liquid is held in the base of the P Trap to prevent the passage of air or gasses.

Valves

Plumbing Tools And Supplies

Hose Bib

It has standard pipe threads on one end and hose coupling threads on the other.



Globe Valve

The flow is stopped when the handle is screwed in, forcing the disk over the vent. Uses a replaceable neoprene washer. High pressure loss is common, but the valve is suitable for regulating flow.

Gate Valve

The flow is stopped when the wedge or gate is lowered into the seat. Used as a shutoff valve. Should be only fully open or fully closed. Low pressure loss due to the straight through design.

Check Valve

Once liquid has passed through the valve it cannot flow back.

Ball Valve

By rotating the ball with the handle the valve closes or opens. Can be used to control flow. Low pressure loss due to the straight through design. Quick action since the lever is turned 90 degrees between open and closed.

Cock Valve

Used to stop the flow of liquid or gas through a pipe. Also called a Stop Cock

Misc Plumbing

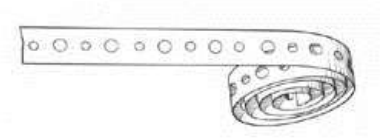
Drain Auger

By rotating the auger while feeding it into the line the auger bit tip cuts away the obstruction in the line.

Plumbing Tools And Supplies

Pipe Joint Compound

Used to seal threaded fittings. May be formulated for use with plastic pipe or steel pipe only.



Plumbers Tape

A galvanized flexible steel tape with holes for screws or nails used to secure plumbing. It is cut to length on the job, wrapped around the pipe and secured with a nail or screw.

Hose Clamp

Used with rubber hose and polyethylene pipe. It consists of a circular steel collar with a tightening screw to secure the hose in place on a barbed fitting.

Electrical

Electrical Tools

Voltage Tester

Used for testing voltage on electrical outlets, fuse clips, and circuit breakers will test voltage from 120 to 600 volts.

Wire Stripper

Used to strip plastic coating from solid electrical wires without damaging the wire . Can be adjusted to be used on various wire sizes.

Conduit Bender

This enables an electrician to make accurate 45 and 90 degree bends in conduit. Bender may be designated for EMT or rigid conduit.

Continuity Tester

A device used to test the continuity of a circuit.

Lineman's Pliers

They are used on both bare and insulated wire. Note: These tools are also used for fence work and tying concrete rebar.

Non-Metallic Cable Ripper

Made of a thin “U” shaped metal piece. When you pull the wire ripper down the length of the cable, the cutting head penetrates the outer cable but leaves the inner wires untouched.

Multi-Tester or Volt-Ohm Meter

An analog or digital meter that commonly will measure AC volts, DC volts, Ohms, and milli-amps.

NM Cable Cutter

A cutter for cutting Type NM cable.

Long Nose Pliers

Used for stripping wire, making eyes in wire and holding wire in place while inserting screws.

Electrical

Wire Stripper And Crimping Tool

Used for stripping wire, cutting wire and crimping wire terminals on stripped wire ends.

Fish Tape

Fish tapes come in 25, 50 and 100 foot lengths. Used by electricians to pull wiring through walls and electrical conduit.

Soldering Gun

It is fitted with a replaceable tip and operates on 115-volt AC. Used primarily for soldering wires.

Fuse Puller

Made of plastic to prevent electrician from being shocked while installing or removing fuses.

Hickey

The Hickey or bender is used for short radius bends in rigid conduit.

Electrical Supplies

Armored Cable

This cable must run from box to box without splices. Often used in basements and other areas where the wire is not encased in a finished wall.

Knockout Punch

Sizes range from 1/2 to 2 1/2 inches. Used to create a hole in panel for connecting conduit.

Electric Soldering Iron

It has a replaceable copper tip. Soldering irons are sized from very light duty for soldering fine wires to heavy duty for soldering sheet metal.

Electrical

Knife Fuse

The knife fuse is made in several sizes for service of 60 to 600 amps and is not interchangeable with cartridge fuses or knife fuses of different capacities. Used to protect asymmetrical circuits.

Solderless Connector

Used where a permanent connection is desired. Connectors can be insulated or un-insulated. Commonly used for wiring on mobile equipment.

Plastic Tape

It is used alone without friction tape.

Circuit Breaker

Used to protect the wire in a circuit. Rated in amps.

Ground Rod

It is connected to the electrical service box or meter can by a shielded ground wire and a ground clamp.

Ground Rod Clamp

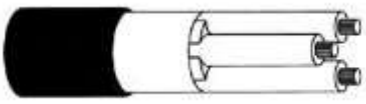
Connects a ground wire to a grounding rod, reinforcing bar, or metal water pipe. This provides for a good ground in the event of a power spike or lightning strike.

Wire Nut

Used to connect AC wires. Color coded to denote capacity.

Friction Tape

Used over rubber insulating tape on wire Splices and is used to replace the outer braid.



Electric Cord

A flexible cable used for extension cords and connecting power tools (e.g.. Type SJ). May be plastic or rubber covered.

Electrical

Conduit Strap

Conduit is placed in the curved portion and strap is secured by nails or screws. Single foot and double foot styles. Sized for EMT and rigid/PVC conduit.

Insulated Staple

Commonly used for low voltage wire used in applications such as door bells or sprinkler controllers. It should not be used 120-volt lines.

Non-metallic Cable Staples

Staples used to secure type NM cable to wood.

Cartridge Fuse

It is a cylinder shaped like a cartridge case and has metal ferrules at each end and a soft fusible element inside. Used to protect motors and branch circuits where higher amps or volt ratings are required.

Core Solder

It is available in spools. Rosin core is used to solder wires and acid core to solder sheet metal.

Non-Metallic Clamp

The cable is secured by means of a bracket tightened with screws. Used to secure a NM cable to a box.

Conduit Drive Strap

Used to secure conduit to wood, it is driven into wood with a hammer with conduit resting in curved end.

Electrical

UF Cable

A solid plastic covering is used on this cable making it suitable for direct burial of the cable. UF cable is sized like NM cable. Generally used as feeder to outside post lamps, pumps, and other loads or apparatus fed from a distribution point in an existing building as specified in the National Electrical Code.

Non-Metallic Cable

A cable with a plastic cover used for residential indoor wiring. Commonly found with 3 and 4 conductor in sizes 14-6. For example "14-2 w/ ground" will have 3 14 gauge conductors, 1 black, one white, and one bare. Commonly used in many electrical projects.

Service Entrance Panel (SEP)

Used to distribute power in a building. Contains a main disconnect and circuit breakers.

Single Conductor

A single conductor with thermal plastic insulation. Wire may be solid or stranded. Typical types are TW and THHN. Common sizes 14-0

Rubber Tape

Used on high voltage connections. It is covered with friction tape or plastic tape.

EMT & Flex Conduit

Flexible Conduit

It consists of a heavily zinc coated steel strip wound spiraling, with interlocked construction permitting greater flexibility. Ground wires are required.

Electrical

Electrical Metallic Tubing

A thin walled conduit. Commonly abbreviated as EMT. It is coupled with special fittings and is smooth inside. Manufactured in 10 foot lengths. Common sizes 1/2"-2". Approved for

EMT Sweep

A pre-formed bend used with EMT. Attached with EMT couplings. Commonly used with larger EMT where hand bending is difficult.

EMT Coupling

A compression fitting used to join EMT conduit.

EMT Connector

Used to connect EMT conduit to a box, panel, or other threaded fitting.

Rigid Conduit

Ridged Coupling

Made of galvanized steel used to couple rigid conduit.

Ridged Entrance Ellbow

Has female thread on each end and has removable cap for access to wire for splicing or pulling.

Ridged Conduit

Steel pipe used where strength is important or where the conduit must be sealed. It is available in galvanized and enamel finishes.

Ridged Elbow or Sweep

Sizes range from 1/2 to 2 inch. Threaded on both ends.

Raintite Hub

Made of cast aluminum and has a flange with pre-drilled holes for mounting to panel, and threaded inlet for conduit.

Electrical

Service Entrance Cap

Made of cast aluminum or PVC.

PVC Conduit Elbow or Sweep

It has a long radius and is connected by gluing couplings on elbow and pipe.

Cord Cap

It is some times called a male plug. Used on extension cords and power tool cords.

PCV Conduit

PVC Conduit

PVC conduit is used inside, outside or underground. Gray in color. Glued connections make it waterproof.

PVC Conduit Male Adaptor

Adapts PVC conduit to a threaded fitting for connecting to a box, panel , etc.

Cord Connectors

This connecting body is designed to accommodate the cord cap and is sometimes called a female plug.

PVC Conduit Coupling

Used to connect PVC conduit, must be glued and once connected cannot be removed.

PVC Pull Elbow

Used to make 90 degree bends and has removable cap for splicing or pulling wire. Glues to PVC conduit. Types denote the location of the cover (e.g. LB, LR)

Lampholder

A plastic or porcelain device that holds a lamp.

Boxes and Devices

Electrical

Duplex Receptacle

Receptacles may be installed in outlet boxes flush with the wall or in surface mounted boxes or junction boxes. Available in 15 or 20 Amp capacity.

Plastic Box

Commonly constructed of PVC plastic and used with NM cable. May be attached with nails (shown) or screws. Comes in 1 -4 gang sizes and varying depths.

Surface Cover

Used with 4" junction boxes to adapt the box to a specific device when the box is mounted on the surface of a wall. In this case a switch and DR, but they come in many configurations. Blank (flat) covers are also used when no device is mounted in the box.

Switch Box

Comes with knockouts for non-metallic sheathed cable or electrical metallic tubing. Boxes must be covered either with a cover or a fixture.

Junction Box

Usually made of metal in square or octagon shaped boxes. Boxes must be covered either with a cover or a fixture.

Box Cover

Used to cover a device such as a switch or DR. Many configurations are available.

Plaster Ring

Used with 4" junction boxes to adapt the box to a specific device where the box will be behind drywall or stucco. In this used for a switch or DR, but they come in many configurations and in different depths. Also called a mud ring

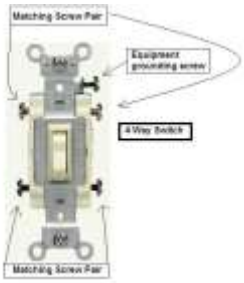
Electrical

Toggle Switch

When the toggle switch is pushed up the service is on and off when pushed down.

Three-Way Toggle Switch

Used to control a device from two locations. Traveler or go between wires connect to lighter colored brass screws; hot wire is connected to the darker colored brass screw.



4 way switch

A toggle switch that is used between three way switches. More than one 4 way switch may be used between 3 ways switches to control a load (lights) at multiple locations.

Power Mechanics

Power Mechanics Tools

Impact Wrench

Available in 3/8, 1/2 and ¾ inch drive. Used to tighten or loosen stubborn bolts and nuts.

Power Timing Light

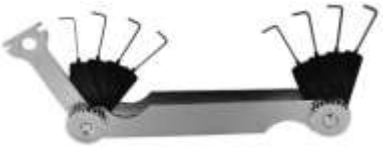
Operates on 6 or 12 volt DC producing a blue-white flash for reading of timing mark.

Torque Wrench

Comes in 1/4, 3/8, 1/2, and ¾ inch drives. Used to precisely set the tightness of a bolt on engines and machinery.

Compression Gauge

Ranges from 0 to 300 pounds. Used as a diagnostic tool check engine compression.



Spark Plug Gauge Set

Usually ranges from .020 to .040 thick wire sizes.

Tachometer

Useful for checking speed on tools, machines, and engines.

Battery Pliers

Used for removing battery terminals. The end clearance prevents cell-cover damage.

Retaining Ring Pliers

User for remove and install internal and external retaining (snap) rings.

Expansion or Adjustable Reamer

Used for reaming piston pin holes, king pin holes, holes for water pump bushings, valve stem guides and other precision reaming jobs.

Grease Guns And Fittings

Power Mechanics

Air Pressure Type Grease Gun

It is portable but must be attached to an air line.

Lever Type Grease Gun

It is filled by hand, cartridge, or from an air pressure gun.

Zerk Grease Fitting

This fitting will withstand high pressure. The grease gun "snaps on" to the fitting.

Welding

Arc Welding Tools

Arc Welder Power Supply

Converts AC power to welding current. SMAW and GTAW processes use constant current power supplies and GMAW processes use constant voltage power supplies.

GMAW Welder

A constant voltage power supply with a wire electrode feed. May be used with solid or flux core wire. Commonly used with a shielding gas (required for solid wire electrode). Common shielding gasses are carbon dioxide and argon.

Plasma Cutter

Uses an arc and compressed gas to create a plasma stream for cutting and gouging of ferrous and non-ferrous metals.

Welding Helmet

A colored lens filters out harmful light rays. Len shades are typically 10-12 (dark). Some helmets are equipped with an electronic lens that will "auto darken".

Leather Gloves

Gauntlet style gloves are recommended.

Electrode Holder

Connected to the welding cable and holds the electrode for SMAW process welding.

Ground Clamp

Used to connect one of the cable leads from the welding machine to the welding table or the material being welded so as to make a complete circuit.

GTAW Torch

Holds a non-consumable electrode and directs shielding gas to the weld.

Welding

MIG Gun

Used with a constant voltage power supply and a gas source (e.g. carbon dioxide, argon) for GMAW process.

Gas Flow Regulator

Used with GMAW and GTAW to control the flow of shielding gas.

Chipping Hammer

One end of the head is shaped with a blunt point, and the other end is shaped like a cold chisel. Also called Slag hammer,

Tungsten Electrode

Non-consumable electrode used for GTAW process welding.

Tubular Wire Electrode

Tubular electrode (e.g. E-70T-L) is flux cored., and the last number is position and usability capabilities, as no gas is required for tubular flux cored rod. See Solid Welding Wire Electrode. Also called innershield wire since the shielding flux is "inside".

Solid Welding Wire Electrode

Identified in a similar manner as SMAW rod . For example ER-70S-4. Solid wire is classified in a ER means it is an electrode, 70 is tensile strength, S means it is solid wire, 4 is type of shielding gas. Shield Gases: 2. C02A-O,A-C02, 3. C02A-O,A-C02, 4. CO2, 5. CO2, 6. C02A-O, 7. C02A-O,A-C02 and C02=Carbon Dioxide, C02A-O=Carbon Dioxide, Argon and Oxygen, A-CO2 = Argon and CO2

Arc Welding Electrodes

Welding

SMAW Electrode

Electrode used in the SMAW process for example E-6010. E meaning it is an electrode, 60 means it has a tensile strength of 60,000 PSI, 1 indicates welding in all positions, 0 indicates the coating to be cellulose sodium and the welding current is DCEP or direct current electrode positive

Hard Facing Electrode

Hard facing arc rod is not classified by a numbering system. Each manufacturer has their own nomenclature for their particular rod.

Oxyacetylene Welding Tools

Heating Tip

A tip with multiple orifices used to for heating metal usually for bending. Also called a rosebud.

Copper Coated Mild Steel Welding Rod

Available in 1/16 to 3/16 inch diameter and 36 inches long. Used for gas welding of steel.

Cutting Tip

The larger center hole is for pure oxygen to oxidize or cut the metal. Replaceable tip for a cutting torch.

Oxygen Regulator

Used to regulate the amount of oxygen flow. The threads on the hose connector are right hand.

Tip Cleaner

Used to clean welding tips. It consists of several needle-like round files of different sizes.

Torch Handle

A torch handle holds the torch in placed and serves as a place to hold the torch. It is quite often called a torch butt.

Welding

Welding Goggles

Used to protect the eyes from harmful rays and from spatter when using the welding torch. Commonly shade 5.

Acetylene Regulator

Regulates the amount of acetylene allowed to flow in the welder. The threads on the hose connector are left hand.

Spot Welder

Used for welding sheet metal. Uses electric current to fuse metal in a small "spot".

Welding Tip

The tips come in various sizes. Used for welding and brazing.

Flux Coated Brazing Rod

Generally available in 1/8 inch diameter rod. Used for brazing applications.

Cutting Torch

Used to cut steel to specific sizes and shapes. It consists of valves for mixing oxygen and acetylene, and a valve lever attached to the torch handle to release oxygen which does the cutting.

Brazing Rod

Rod used to braze metal materials together. Available in1/16 to 3/16 inch diameter and 36 inches long. Used with powered flux.

Other Welding Equipment

Painting

Painting And Glazing Equipment

Non-woven Abrasive Pads

A plastic abrasive pad. Non-rusting and washable. Commonly called Scotch-Brite pads (3M brand name).

Paint Brush

Natural bristle brushes are used for oil based paints. Polyester and nylon brushes are used with water based paints. Sizes are commonly found from 1” to 6” widths. Clean immediately after using with solvent appropriate for the type of paint used.

Masking Tape

It will adhere to paper, glass, walls and metal and is easily removed.

Mixing Paddle

Used in an electric drill to stir paint and other liquids.

Airless Paint Sprayer

No thinning is required and very little over-spray is developed. Uses a positive displacement pump to pump the paint at high pressure.

Caulking Gun

Used to apply tube caulking. One to two pound cartridge refills are available in various colors.

Drop Cloth

Disposable cloths are made of paper or plastic and permanent cloths are made of canvas or soft cotton cloth.

Dust Mask

Used to protect the user form dust (e.g.; sanding). This mask is disposable and should not be reused.

Painting

Paint Filter

Used to filter foreign material from paints, particularly those used in paint guns.

High Volume Low Pressure Sprayer

Similar in design to an compressed air sprayer, but low pressure produces less fine spray, causes less drift, and air pollution.

Putty Knife

Sizes range from 1 inch to 12 inches. Used to apply putty to the window sash to seal the glass. A flexible bladed knife for applying putty and spackle. Stiffer knives can be used for scraping

Glass Cutter

Pressure applied on the glass from beneath the scratch or tapping gently will cause it to break cleanly along the cutter line.

Steel Wool

Comes is pads or rolls and size is designated by 4/0, 3/0, 2/0, 1/0, 0, 1, 2, 3, 4, with 4/0 being the finest and 4 being very coarse.

Respirator

This filter system is far superior to the dust mask.

Foam Brush

Brushes should be cleaned immediately after painting with a suitable thinner or cleaning agent.

Paint Roller And Pan

Use to apply paint to flat wood and plaster surfaces. Roller covers are available in 1/4" to 1/2" nap. Special rollers are available for painting corners and trim.

Sandpaper

Comes in various grits from very fine to very coarse.

Painting

Spray Gun

Used primarily for metal painting or wood lacquer applications. Paint must be fairly thin to spray. Should be used in a closed area with proper ventilation and good air filtration. Uses compressed air to spray the paint.

Glazier Points

The glazier points, triangular pieces of zinc coated metal, are driven into the sash about 6 inches apart to hold the glass in place.

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