

Group	Category Name	Description
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.
	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.
	Fence Pliers	Grips between the handles hold the wire tightly while leverage is exerted against the fence post to stretch the wire fairly tight.
	Locking Pliers	Locks with a toggle action that holds until the lever is opened. Commonly called Vise-Grip 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.
	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.
	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.
Screwdrivers		
	Torx Head Screwdriver	Also used on appliances, lawn and garden, and electronic equipment.
	Stubby Screwdriver	It comes in slotted and Phillips, and has a blade length of 1 1/4 to 1 1/2 inches long.
	Square Recess Screwdriver	Each screwdriver is color coded for easy size identification.
	Slotted Screwdriver	Used mostly in woodworking applications.
	Screwdriver Bit	Available in slotted, Phillips, square, and torx drives for power screwdrivers. Shank is hexagonal.

Group	Category Name	Description
	Phillips Screwdriver	Always select the correct size for the correct application.
	Offset Screwdriver	Used where it is difficult to reach the screw head with a common or standard screwdriver.
	Nut Driver	This is a very popular tool in the electrical and sheet metal industry.
	Clutch Driver	This is a specialty drive that fits screws used in mobile homes, boats, recreational vehicles, and electric motors.
	Wrenches	
	Combination End Wrench	The reason for the popularity of this wrench is that it has the advantage of having both open and box ends.
	Tubing Wrench	The box at each end of the wrench is 6 point only. Also called a flare nut wrench.
	Open End Wrench	Both ends of the wrench are open but are of different sizes.
	Box End Wrench	Wrench is available in 12 and 6 point ends.
	Twelve Point Socket	The socket has thin walls to fit in tight places.
	Six Point Socket	The socket has 6 points inside to fit over hexagonal nuts.
	Flex Socket	This permits working at various angles.
	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 3/4 inch drive.
	Eight Point Socket	Has 8 points and is used on square nuts found on farm machinery.
	Speed Handle	Used to rapidly remove a nut or bolt. Common drive sizes 1-4"-3/4".
	Slide Bar Handle	Used as a "T" or "L" handle and is normally used with the extension.
	Extension Bar	Used to connect, the socket wrench to the ratchet handle to give working clearance, and are 3 to 20 inches long.
	Ratchet Handle	The ratchet speeds up the work. Common drive sizes 1-4"-3/4".
	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.
	Universal Joint	It makes work possible in restricted places where the wrench cannot be aligned with the bolt.
	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.
	Chain Wrench	It is made in several sizes ranging from 13 3/4 to 87 inches long, and will handle pipe from 1/8 to 18 inches in diameter.
	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.
	Adjustable Wrench	Size is designated by inches in length.

Bars

Group	Category Name	Description
	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).
	Crow Bar	It is normally four or five feet long with one end tapered round and the other end with a chisel point.
	Pry or Fitting Bar	It has a long round taper at one end and a curved pry hook at the other.
	Brushes	
	Parts Brush	Metal handle is usually sealed at both ends to enable brush to float in solvent to prevent losing brush in solvent tank.
	Bench Brush	The overall length is 16 inches.
	Push Broom	Handles are 7/8 inch in diameter 4 to 5 feet long and are threaded into broom body or bolted on.
	Wire Brush	Used for cleaning metal parts to be welding, cleaning machinery parts and removing slag and rust.
	Vises	
	Machinist's Vice	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.
	Woodworker's Vice	The flat smooth jaws open up to 12 inches. Jaws may be lined with wood.
	Drill Press Vise	Drilling is safe and more accurate when a vise is used, and fewer drill bits are broken.
	Clamps	
	Pipe Clamp	A clamp made with a steel pipe.
	Bar Clamp	Bar type clamp has quick non-slip adjustment to approximate size; then screws tight to apply pressure.
	Locking Welding Clamp	Works well when clamping two pieces adjacent to each other or at 90 degree angles.
	"C" Clamp Locking Pliers	Used for clamping irregular shapes quickly and firmly when welding or fastening.
	Strap Clamp	Uses a fabric strap that tightens around large or irregular projects.
	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	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.
	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.

Group	Category Name	Description
	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.
	Posthole Auger	It is operated by rotating the handle.
	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.
	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.
	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.
	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.
	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.

Group	Category Name	Description
	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.

Measuring, Layout, and Surveying

Measuring And Marking Tools

Micrometer	Sizes range from 0 to 1 inch up to 12 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	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	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	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.
Combination Square	A level and a scribe are contained in the beam.
Sliding "T" Bevel	After it is set at the correct angle, it is much the same as a square.
Depth Gauge	Usually graduated in 32nds and 64ths.
Inside Calipers	The calipers are adjusted to the diameter of the object and then laid on a rule where the reading is taken.
Outside Calipers	The calipers are adjusted to the outside diameter of the object and then laid on a rule where the reading is taken.
Line Level	It consists of a bubble tube housed in a metal or plastic case which has hooks for attaching to the line.
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.
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.
Protractor	It is graduated from 0 to 180 degrees.
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.

Group	Category Name	Description
	Plumb Bob	It can also be 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.
	Marking Gauge	It is marked in 8ths and 16ths of an inch and is 8 inches long.
	Chalk Line	A special container contains the chalk powder and line which is on a winding spool.
	Soapstone	Unlike chalk, it is hard enough not to mark hands or clothing and can be used in holders that resemble pencils.
	Scratch Awl	Also used as a punch for making small holes in light gauge sheet metal for the insertion of sheet metal screws.
	Scribe	The tip is brittle and will snap off if dropped on the point or used as center punch.
	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.
	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.
	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.
	Laser Level	A level that used a rotating laser beam to establish a level plane. Leveling can be done with a single person.
	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.
	Philadelphia Rod	Reads like a tape measure. An adjustable target is available to allow readings up to 700 feet in distance.
	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.
	Surveyor's Arrows	Sizes range from 10 to 14 inches in length. Used to mark distances when "chaining" or measuring distance.
	Surveyor's Steel Tape	Quite often called a "chain". These may be stored on a reel or coiled.
	Surveying Tripod	Used to hold a level or other survey instrument. To protect threads, keep cap on when not in use.

Group	Category Name	Description
	Rod Target	Used with the surveyor's rod to allow readings at a greater distance.
	Hand Level	The hand level is held in the hand thus providing little accuracy.
Fasteners		
Bolts		
	Toggle Bolt	When the screw is tightened a firm anchorage is made.
	Machine Screw	The head is slotted for a screwdriver and may be either round or flat. Typical sizes 4-12.
	Plow Bolt	No wrench is necessary to hold the bolt head.
	Machine Bolt	The head and nut may be square or hexagon shaped.
	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.
	Carriage Bolt	Never use a washer under the head. Use to bolt wood.
	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.
	Eye Bolt	It has an eye on one end and coarse or fine threads on the other.
	Grade 2 Bolt	Soft bolt commonly used for landscape applications and other applications where strength is not important.
	Grade 5 Bolt	Mildly hardened bolt used commonly in machinery and equipment applications. Three markings on the head.
	Grade 8 Bolt	Hardened bolt used where high tensile strength is required. 6 markings on the head.
Nuts		
	Hex Nut	It may have NC, NF, or metric threads.
	Wing Nut	Used where hand tightening (no wrench) is desired such as inspection covers.
	Square Nut	Used on farm implements with carriage bolts, machine bolts, stove bolts and plow bolts.
	Self-Locking Nut	When tightened on a bolt the scored threads bite into the threads of the bolt preventing it from backing off.
	Castellated Hex Nut	Used with a cotter pin to prevent loosening or tightening. Top of the nut is smaller in diameter than the base.
	Cap Nut	A nut closed on one side to cover an exposed bolt.
	Slotted Hex Nut	It differs from the castellated nut in that there is no stepped-in castle-like top.
Washers		
	Finishing Washer	This is a chrome plated countersunk washer used with oval head wood or metal screws.
	Malleable Iron Washer	Used where excess pressure or stress is exerted on wooden structures.

Group	Category Name	Description
	Flat Washer	Used to prevent the nut from rubbing and becoming imbedded in the bolted material. Also called a Cut Washer.
	Fender Washers	The large holes are used for aligning or adjusting for proper fit.
	Lock Washer	It should not be used on wood.
	Screws	
	Set Screw	When screwed into a set collar the cup point makes an indentation in the shaft preventing the collar from vibrating loose.
	Sheet Metal Screws	Head types are flat, round, pan, oval and binding.
	Screw Eye	It may be described as a screw with an eye or ring head.
	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.
	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 used.
	Deck Screws	A straight shank wood screw with a bugle head. Commonly made with a Phillips or square drive 2 1/2" or 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.
	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 than 20d 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).

Group	Category Name	Description
	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.
	Cement Coated Nails	Sizes range from 2d to 16d. Commonly found in a green coating in 8d and 16d ("sinkers").
	Blue Plaster Board Nail	The range in size is 1 to 1 1/2 inches.
	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	The 3d is generally used for shingling.
	Galvanized Roofing Nail	The head is about 1/2 inch in diameter, and the length ranges from 3/4 to 2 inches.
	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	
	Soft Iron Rivet	The size is based on length and diameter.
	Pop Rivet	A pop rivet tool is required to set the rivet.
	Pop Rivet Tool	Tool is adjustable to use the various sizes (diameter) of rivets available.
	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.
	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

Group	Category Name	Description
	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.
	Wire Grip	Made of steel or malleable iron. Used to grip fencing wire when tightening
	Welded Wire Fence	Consists of 16 gauge galvanized wire spot welded rather than woven, and has 2 inch by 3 inch mesh.
	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.
	Steel Fence Posts	Round steel post with an anchor plate 12 inches from the bottom and comes in 3 to 6 foot lengths.
	Fence Staple	The length is stated in inches and fractions.
	Poultry Wire Netting	The rolls are 50 to 150 feet long and from 1 1/4 to 4 feet wide.
	Woven Wire Fencing	The roll contains 20 rods of wire ranging from 32 to 47 inches wide.
	Electric Fence Gate Handle	By pulling on the handle, tension can be released on the fence and it can be disconnected allowing entry.
	Chain Link Fencing	Comes in 36 to 60 inch widths and 50 to 100 foot lengths. Also called Diamond Mesh.
	Come-A-Long	By working the ratchet handle the cable is tightened and moves the sheave block closer to the ratchet spool.
	Barbed Wire	A spool of wire is 80 rods long.
	T Post	A steel post with an attached plate to help anchor the post. Commonly 5'-8' long.
	Turn Buckle	Turning the body tightens or loosens both at the same time.
	Smooth Galvanized Wire	It is made of smooth galvanized steel and is available in a variety of gauges.
	Springs	
	Compression Spring	A compression spring is one that exerts pressure when it is compressed.
	Tension Spring	This spring can be extended, but exerts force by extending to pull back to its original length.
	Torsion Spring	When the spring is wound up it exerts a twisting force.

Rope and Chain

Chains, Lashing Straps, and Accessories

Group	Category Name	Description
	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 device 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.
	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	To coil or uncoil, roll the rope like a steel hoop.
	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.
	Nylon Rope	Maybe manufactured as a laid (twisted) rope or a braided rope. Stronger and more expensive than 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.

Group	Category Name	Description
	Wire Rope Clamps	There are two types, the "U" bolt with cleat and the bolt clamp.
	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	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	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 coating varies from 0.0002 inch for the lightest coating to 0.002 inch for water pipe.
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.
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.
Tool Steel	It can be tempered to various degrees of hardness.
Angle Iron	It is sold by the pound. Sized by the length of the legs and thickness. Ex. 2"x2"x1/4".
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.
Plate	Sizes thicker than 1/8". Commonly hot rolled in 4'x8' sheets.
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.
Channel Iron	The common sizes range from 1/2" X 1 inch to 4 X 12 inches.

Group	Category Name	Description
	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.
	Square Bar	Ranges in size from 1/8 inch and greater.
	Expanded Metal	Come in gauge thickness and usually 4 to 5 foot width and 8 to 12 foot lengths.
	Flat Bar	Size is 3/16 inch thick and greater and comes in a variety of widths.
	Strip Iron	It is 1/8 inch or less in thickness and comes in various widths.
	H Beam	A 4 inch H beam is 4 inches wide and 4 inches high.
	I Beam	Used to support structures (placed horizontally). Typical lengths 20-40 feet.
	Boring Tools (Metal)	
	Straight Shank Twist Drill	If used on hard steel and at high speeds, it should be made of high speed steel.
	Reduced Shank Drills	The shank of the drill comes in three sizes, 1/4, 1/2, and 3/4 inch.
	Tapered Shank Twist Drill	It should never be used in a chuck.
	Drill Drift	Used for removing Morse taper sleeves and tapered shank twist drills from a drill press. Also called a Center Key.
	Taper Reamer	Used to ream holes for tapered pins used on farm machinery and equipment.
	Morse Taper Sleeve	Used as an adaptor to insert different number taper shank twist drills into the drill press.
	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.
	Chuck Key	Used in keyed chuck to tighten or loosen the chuck
	Countersink	The shank is 1/4 inch in diameter and can be used in hand or power drills.
	Chisels	
	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.
	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.
	Cold Chisel	Size is determined by the width of the cutting edge.
	Round Nose Chisel	The sides of the shank are flattened and the width at the cutting edge determines the size.
	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

Group	Category Name	Description
	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.
	Sledge Hammer	Looks like engineers hammer but much larger. 6-12 pounds in weight.
	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.
	"T" Tap Wrench	"T" type tap wrenches have an adjustable chuck.
	Tap Wrench	Used to hold the tap when threading.
	File Card	The card is a small fine wire brush.
	SAE Tap	Used to cut Society of Automotive Engineers or National Fine threads in bored holes and nuts.
	USS Tap	Used to cut United States Standard or National Coarse threads in drilled holes or nuts.
	Bottoming Tap	Widely used in machine operations to complete a thread in a bottom of a hole.
	Plug Tap	Used to cut threads in machine operations.
	Taper Tap	Also used to start threads in a blind hole.
	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.
	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. Also called an easy out.
	Whet Stone	Used for sharpening tools such as wood chisels and other tools to a fine edge.
	Round File	It is available 4 to 16 inches long and 3/16 to 3/4 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.
	Sheet Metal Tools	
	Flat Leg Pattern Dividers	Used For Precision Transferring Of Segments From Pattern To Pattern.
	Sheet Metal Layout Rule	It also has circumference measurements on the back side.

Group	Category Name	Description
	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.
	Tin Snip	There are four types available; regular straight snip, curved (left and right) snip, and duckbill snip.
	Aviation Snips	Available in straight, left, or right. Compound action makes cutting easier and the jaws are usually serrated. Also called Compound snips.
	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).
	Hydraulic Shear	Powered by a hydraulic pump and cylinder these shears commonly can cut flat stock, angle iron, and punch holes.
	Sheet Metal Shear	Foot operated shear
	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.
	Cut Off Saw	Cutting wheels may be disposable or with teeth. Used for cutting steel bar and pipe.

Woodworking

Wood

Pine	A softwood used for small projects and mouldings.
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.
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.

Group	Category Name	Description
	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.
	Hammers (Wood)	
	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.
	Curved Claw Hammer	Used for driving and pulling 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.
	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.
	Saws And Accessories	
	Back Saw	This saw should be used in a horizontal position.
	Hand Cross Cut Saw	The standard length is 26 inches. Typically 8-12 teeth/inch.
	Hand Rip Saw	The edges of the teeth are not beveled, but are shaped like chisels. Typically 4-7 teeth/inch.
	Keyhole or Compass Saw	Used for sawing curves, especially where the cut must be started from a hole bored with an auger bit.
	Coping Saw	The blade is installed to cut on the pull stroke.
	Power Tools	
	Belt Sander	Sands or cuts using a sanding belt. Used for course sanding of large surfaces.
	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.
	Jack Plane	Planing should be done with the grain of the wood. Note tail behind the handle.
	Smooth Plane	Sizes range from 5 1/2 to 10 inches long and 1 1/4 to 2 3/8 inches wide.
	Block Plane	Sizes range from 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.
	Finishing Sander	Sands by a vibrating action.
	Router	Depth of cut is adjustable. Used to shape wood (ex. round the edge of a board).
	Circular Saw Blade	The size is determined by the diameter of the blade.
	Jig Saw	Many variations of blades are available for cutting wood, plastics, and other soft materials. Also called a Saber Saw
	Power Miter Saw	The saw pivots on the miter box for various angles.
	Nail Gun	Nails are fed automatically from a loading chamber and are dispensed by pulling the trigger.

Group	Category Name	Description
	Planer	Used for planing wood surfaces. A portable power version of a hand plane.
	Reciprocating Saw	Similar to the jig saw but much larger and used for heavy duty work.
	Disc Sander	A stationary power tool with a 6-12 inch sanding disc.
	Boring Tools (Wood)	
	Forstner Bit	A power bit for drilling flat bottomed holes in wood. Commonly found in sizes 3/8-2 inch.
	Hole Saw	Hole saws come in sizes from 3/4 to 2 1/2 inches and one mandrel fits all.
	Auger Bit	The straight round shank adapted for power drills.
	Spade Bit	A wood boring bit with a hex shaft to be used in a power hand drill or drill press.
	Expansive Bit	The shank is a square taper, adapted for the bit brace.
	Woodworking Tools	
	Surform Tool	A tool like a wood rasp with a replaceable cutter. Available in flat, round, and half round shapes.
	Nail Set	The point has a slight hollow at the end.
	Hand Screw Clamp	The wooden handles are mounted on opposite sides of the jaws.
	Cat's Paw	A tool used to pull nails
	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.
	Wood Rasp	Other rasps are 4-in-hand and horse rasps.
	Nail Puller	A pair of jaws is driven into the wood below the nail head by impact action of the handle.
	Construction	
	Utility Knife	A sharp knife for cutting drywall, roofing felt, etc.
	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.
	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 powder 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.

Group	Category Name	Description
	Gravel	Course Aggregate greater than 1/4" and commonly less than 1 1/2" in size.
	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.
	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.
	Hand Float	It is 4 to 5 inches wide and 13 inches long. Floats are used for rough finishing.
	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.
	Finishing Trowel	The finishing trowel is made of steel and is 4 inches wide by 14 inches long.
	Fresno Trowel	This large finish trowel also has a long detachable handle.
	Concrete Edger	The ends may be curved up slightly. Used to finish the edges of concrete.
	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 grooves in concrete slabs.
	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.
	Mortar Hoe	It also has a 5 1/2 foot handle and holes in the hoe to aid mixing.
	Mud Pan	Used mostly with small trowels or putty knives.
	Hawks	The size is 13 x 13 inches square. Use to carry mortar.
	Star Drill	It is operated by striking with a hammer while rotating by hand.
	Masonry Bit	Used to drill in brick, block, and concrete. The tip is treated with tungsten carbide to resist heat and wear.
	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.
	Brick Chisel	Blade is 3 1/2 inches wide, overall length is 7 inches.
	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.
	Brick Trowel	It is pointed and measures 4 3/4 inches by 11 inches.
	Reinforcing Bar	Available in 20, 30, and 40 foot lengths. Common sizes (diameter) of 3/8" to 1" are use in small construction projects.

Group	Category Name	Description
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 or Burring Reamer	This type of reamer is made with bit brace shank, round shank, or "T" handle.
	Flaring Tool	Used to make flared ends for soft tempered tubing.
	Pipe Cutter	Too much pressure on the handle may cause the cutting wheel to break.
	Teflon Tape	Used for sealing threads on metal and PVC pipe and on valves.
	Pipe Die	Pipe dies should not be used for bolt threading as they are tapered.
	Pipe Die Stock	Operates as a ratchet in both directions. Hold the pipe die.
	Copper Fitting Brush	Used to clean metal parts to be soldered or welded and for cleaning pipe threads.
	Copper Tube Cleaning Brush	A wire brush used to clean copper pipe or tubing for soldering. Comes in sizes 1/2" to 1".
	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
	Propane Torch	A propane/air torch that develops temperatures suitable for soldering.
	Solid Solder	It is available in 1 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.
	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.
	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	User to clean and soften PVC pipe before applying cement. Generally recommended for pipe 1" and larger.

Group	Category Name	Description
	SxT Street Ell.	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 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 Reducer Bushing	Used to connect PVC pipe to a smaller diameter threaded pipe.
	SxT 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.
	PVC Pipe	Used for cold water purposes, sizes range from 1/2 to 2 inch and it comes in 20 foot lengths.
	SxS Reducer Bushing	Used to connect PVC pipes of different diameters.
	S Cap	Used to stop the flow on PVC pipe. Slip cap is shown, but can be threaded.
	SxS Coupling	Used to connect two pieces of pipe together in a straight line.
	SxS Elbow	Comes in 45 and 90 degree angles.
	SxS Street Ell	Used to connect two pieces of PVC pipe at an 90 degree angle. One end is male and other is female.
	Compression Coupling	Can be used on steel or PVC pipe. Usually used for repair or temporary connections. Seals with a neoprene gasket.
	Male Adaptor	The PVC slip end is female and the threaded end is male thread.
	Female Adaptor	Used to connect PVC pipe to threaded pipe, has female ends.
	SxSxT 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.
	Threaded Cap	Used to stop the flow on threaded pipe.
	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 Pinch Clamp	Use to fasten PEX pipe to barbed fittings. Used with a cinch tool. Made of stainless steel.
	PEX Crimp Ring	Used to hold the PEX pipe on the barbed fitting. Used with a crimp tool. Commonly made of copper.
	PEX Coupling	Couples PEX pipe.
	PEX Tee	A barbed tee fitting used with PEX pipe systems. Commonly described by the size of each opening such as 1/2" x 1/2" x 3/4" (end, end, middle).
	PEX Elbow	A 90 degree barbed elbow used with PEX systems
	PEX Female Adapter	An adapter from the PEX barbed system to female iron pipe threads.
	PEX Male Adapter	An adapter from the PEX barbed system to male iron pipe threads.

Group	Category Name	Description
	PEX Stubout	An adapter to copper pipe. Commonly used to with shutoff valves with compression fittings for water supply lines.
	Copper Pipe and Fittings	
	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 the 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.
	Paste Flux	Flux is used in soldering to clean pipe allowing solder to flow easily.
	CxC Coupling	Used to connect two copper pipes together.
	CxC Elbow	Comes in 45 and 90 degree angles.
	CxT Adaptor or Male Adapter	Used to connect copper pipe to threaded pipe.
	CxC Reducing Coupling	Used to connect copper pipes of different diameters.
	CxCxC Tee	Used to connect three pieces of copper pipe together.
	CxCxT Tee	Used to connect two copper pipes to a threaded pipe.
	CxT Female Adapter	Used to adapt to female threads
	Steel Pipe and Fittings	
	90 Degree Elbow	A elbow that changes direction by 90 degrees. Both ends are female threads.
	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.
	Cross	It is shaped like a cross and is threaded inside at the four ends.

Group	Category Name	Description
	Pipe Plug	The end is square to accommodate a wrench.
	Bell Reducer	Similar to a coupling, but changes pipe sizes.
	Street Ell	An elbow with male thread on one end and female threads on the other. Available in 90 and 45 degree angles.
	Tee	Used to connect lateral branches of a pipe.
	Close Nipple	A nipple that is as short as possible (threads touch).
	Cap	Used to screw over the threaded end of a pipe to seal the opening.
	Pipe Clamp	For 1/2 to 2 inch pipe. Used for repairing small leaks in steel pipe.
	ABS Pipe and Fittings	
	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	
	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.
	Gate Valve	The flow is stopped when the wedge or gate is lowered into the seat.
	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.
	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.

Group	Category Name	Description
	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.
Continuity Tester	A device used to the continuity of a circuit.
Multi-Tester or Volt-Ohm Meter	An analog or digital meter that commonly will measure AC volts, DC volts, Ohms, and milli-amps.
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.
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.
NM Cable Cutter	A cutter for cutting Type NM cable.
Conduit Bender	This enables an electrician to make accurate 45 and 90 degree bends. Bender may be designated for EMT or rigid conduit.
Non-Metallic Cable Ripper	Made of a thin “U” shaped metal piece.
Long Nose Pliers	Also used for stripping wire, making eyes in wire and holding wire in place while inserting screws.
Wire Stripper And Crimping Tool	Used for stripping wire, cutting wire and crimping wire terminals on stripped wire ends.
Fuse Puller	Made of plastic to prevent electrician from being shocked while installing or removing fuses.
Knockout Punch	Sizes range from 1/2 to 2 1/2 inches. Used to create a hole in panel for connecting conduit.
Fish Tape	Fish tapes come in 25, 50 and 100 foot lengths.
Hickey	The Hickey or bender is used for short radius bends.
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.
Soldering Gun	It is fitted with a replaceable tip and operates on 115-volt AC. Used primarily for soldering wires.

Electrical Supplies

Armored Cable	This cable must run from box to box without splices.
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.

Group	Category Name	Description
	Circuit Breaker	Used to protect the wire in a circuit. Rated in amps.
	Wire Nut	Used to connect AC wires. Color coded to denote capacity.
	Solderless Connector	Used where a permanent connection is desired. Connectors can be insulated or un-insulated. Commonly used for wiring on mobile equipment.
	Ground Rod	It is connected to the electrical service box or meter can by a shielded ground wire and a ground clamp.
	Friction Tape	Used over rubber insulating tape on wire Splices and is used to replace the outer braid.
	Plastic Tape	It is used alone without friction tape.
	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.
	Electric Cord	A flexible cable used for extension cords and connecting power tools. May be plastic (e.g. Type xx) or rubber covered (e.g.. Type SJ)
	Conduit Straps	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.
	Cartridge Fuse	It is a cylinder shaped like a cartridge case and has metal ferrules at each end and a soft fusible element inside.
	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.
	Core Solder	It is available in spools. Rosin core is used to solder wires and acid core to solder sheet metal.
	Conduit Drive Strap	Made of die cast zinc, it is driven into wood with a hammer with conduit resting in curved end.
	Non-metallic Cable Staples	Staples used to secure type NM cable to wood.
	Non-Metallic Clamp	The cable is secured by means of a bracket tightened with screws. Used to secure a NM cable to a box.
	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.
	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
	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.
	Rubber Tape	Used on high voltage connections. It is covered with friction tape or plastic tape.
	Service Entrance Panel (SEP)	Used to distribute power in a building. Contains a main disconnect and circuit breakers.

EMT & Flex Conduit

Group	Category Name	Description
	Flexible Conduit	It consists of a heavily zinc coated steel strip wound spiraling, with interlocked construction permitting greater flexibility.
	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 indoor use.
	EMT Sweep	The difference being, it is made of thin wall conduit and has no threads.
	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.
	Ridged Entrance Ell	Has female thread on each end and has removable cap for access to wire for splicing or pulling.
	Ridged Conduit	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.
	Service Entrance Cap	Made of cast aluminum or PVC.
	PCV Conduit	
	PVC Conduit	PVC conduit is used inside, outside or underground. Gray in color. Glued connections make it waterproof.
	PVC Conduit Coupling	Used to connect PVC conduit, must be glued and once connected cannot be removed.
	PVC Elbow or Sweep	It has a long radius and is connected by gluing couplings on elbow and pipe.
	PVC Conduit Male Adaptor	Adapts PVC conduit to a threaded fitting for connecting to a box, panel , etc.
	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)
	Boxes and Devices	
	Cord Cap	It is some times called a male plug. Used on extension cords and power tool cords.
	Cord Connectors	This connecting body is designed to accommodate the cord cap and is sometimes called a female plug.
	Lampholder	A plastic or porcelain device that holds a lamp.
	Duplex Receptacle	Receptacles may be installed in outlet boxes flush with the wall or in surface mounted boxes or junction boxes.
	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.

Group	Category Name	Description
	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.
	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. May configurations are available.
	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.
	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
	Toggle Switch	When the toggle switch is pushed up the service is on and off when pushed down.
	Three-Way Toggle Switch	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 Wrenches	Available in 3/8, 1/2 and 3/4 inch drive.
Compression Gauge	Ranges from 0 to 300 pounds.
Battery Pliers	Used for removing battery terminals. The end clearance prevents cell-cover damage.
Power Timing Light	Operates on 6 or 12 volt DC producing a blue-white flash for reading of timing mark.
Spark Plug Gauge Set	Usually ranges from .020 to .040 thick wire sizes.
Retaining Ring Pliers	User for remove and install internal and external retaining (snap) rings.
Torque Wrench	Comes in 1/4, 3/8, 1/2, and 3/4 inch drives.
Tachometer	Useful for checking speed on tools, machines, and engines.
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

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.

Group Category Name	Description
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. Lens shades typically 10-12
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.
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,
Arc Welding Electrodes	
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
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

Group	Category Name	Description
	Hard Facing Electrode	Hard facing 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 Cutting Tip	Available in 1/16 to 3/16 inch diameter and 36 inches long. The larger center hole is for pure oxygen to oxidize or cut the metal.
	Oxygen Regulator	The threads on the hose connector are right hand. Commonly a two stage regulator.
	Tip Cleaner	It consists of several needle-like round files of different sizes.
	Torch Handle	Quite often called a torch butt.
	Welding Goggles	Used to protect the eyes from harmful rays and from spatter when using the welding torch.
	Welding Tip	The tips come in various sizes.
	Cutting Torch	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.
	Acetylene Regulator	The threads on the hose connector are left hand.
	Flux Coated Brazing Rod	Generally available in 1/8 inch diameter rod.
	Brazing Rod	Available in 1/16 to 3/16 inch diameter and 36 inches long.
	Other Welding Equipment	
	Spot Welder	Used for welding sheet metal.
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	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	This mask is disposable and should not be reused.

Group Category Name	Description
Filter	Used to filter foreign material from paints, particularly those used in paint guns.
Glass Cutter	Pressure applied on the glass from beneath the scratch or tapping gently will cause it to break cleanly along the cutter line.
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.
Steel Wool	Comes in 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.
Paint Roller And Pan	Special rollers are available for painting corners and trim.
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
Respirator	This filter system is far superior to the dust mask.
Sandpaper	Comes in various grits from very fine to very coarse.
Spray Gun	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.