

2026 EDITION

v1.2

AGRICULTURAL MECHANICS

Tool & Supply Identification Manual

Published in Partnership by the Arizona National Livestock Show and Arizona FFA

ARIZONA NATIONAL Livestock Show

INTRODUCTION

About the Organizations

Arizona National Livestock Show

The Arizona National Livestock Show (aznational.org) is the largest livestock show in the Southwest and an annual Phoenix tradition since 1948. Held between Christmas and New Year's on the Arizona State Fairgrounds, the show draws exhibitors and families from over 39 states. Participants compete across divisions including cattle, sheep, swine, goats, horses and ranch rodeo. Arizona National is also an educational platform for agricultural youth, offering livestock judging, public speaking, and agricultural mechanics contests alongside scholarships, internships, and direct engagement with industry professionals. Our mission extends well beyond the show ring, we are committed to developing the next generation of agricultural leaders.

For more information, contact Tyler Grandil at information@aznational.org

Arizona FFA

Arizona FFA (azffa.org) is a youth organization dedicated to developing premier leadership, personal growth, and career success through agricultural education. Organized across eight regions statewide, Arizona FFA connects thousands of students to hands-on learning that brings classroom knowledge into real-world practice. Career Development Events are a cornerstone of that experience, challenging members to demonstrate technical skills across disciplines including agricultural mechanics, animal science, and agribusiness. Arizona FFA is affiliated with the National FFA Organization, which has prepared students for careers in agriculture since 1928 and today encompasses more than 300 career pathways spanning everything from agriscience to biotechnology. Through competition, community, and classroom, Arizona FFA builds the whole student.

For more information, contact Bethany Matos at bethany.matos@azed.gov

> *These two organizations serve distinct but overlapping communities of Arizona youth. Many Arizona National exhibitors are also FFA members, and both organizations share a commitment to agricultural mechanics education as a foundational career skill.*

INTRODUCTION

About This Manual

This manual is the official study resource for Agricultural Mechanics Tool and Supply Identification contests in Arizona, including:

- The Arizona National Livestock Show Ag Mechanics Tool Identification Contest
- The Arizona FFA Greenhand Tool and Supply Identification Career Development Event
- The Arizona FFA Advanced Tool and Supply Identification Career Development Event

It is designed for use by students, coaches, FFA advisors, and contest coordinators across all three competitions.

The Contests at a Glance

All three contests share the same core format: participants rotate through stations with 10 seconds to identify each item, recording answers on a provided answer sheet.

	AZ National Livestock Show	AZ FFA Greenhand	AZ FFA Advanced
Eligibility	Exhibitors 19 and under	First-year ag students	All ag students
When Held	Arizona National Livestock Show	FFA Spring Conference	FFA Spring Conference
Items	50 tools + 50 supplies	50 tools	50 tools + 50 supplies
Total Points	100	50	100
Time per Station	10 seconds	10 seconds	10 seconds
Answer Format	Multiple choice scan sheet	Multiple choice scan sheet	Multiple choice scan sheet
Tiebreaker	Scenario completion	10-tool scenario	10-tool scenario

INTRODUCTION

How to Use This Manual

This manual is organized by category. Each entry includes a photograph and the accepted identification name to be used in competition. Use the exact names provided -- contest judges score based on the names listed in this resource. Categories include:

- Hand Tools
- Power Tools
- Measuring and Layout Tools
- Plumbing Tools and Supplies
- Electrical Tools and Supplies
- Fasteners and Hardware
- Welding Tools and Supplies

Whether you are preparing for the Arizona National Livestock Show, an FFA region event, or the State FFA Spring Conference, everything you need to study is in this manual. Start early, work with real tools whenever possible, and use available flashcard and quiz resources at aznational.org/tool-identification to reinforce what you learn here.

DIGITAL STUDY RESOURCES

FREE TO STUDENTS

To support your preparation, we have developed a companion study guide and flashcard system using **Knowt**, a free study platform available on iOS, Android, and the web. The Knowt deck includes all tools and supplies from this manual organized by category, with flashcard and practice quiz modes to help you build and test your knowledge before competition day. Use of the study system is completely free.

Download Knowt — iOS
App Store

Download Knowt — Android
Google Play

JOIN THE TOOL ID CLASS

Once the app is installed, tap the **Classes** icon and select **Join Class**. Enter the class code below:

1gujna
Knowt Class Code

A NOTE FOR COACHES AND COORDINATORS

Contest items may be real tools, supplies, or photographs. Items may come from contest coordinator collections, school ag shops, hardware store purchases, tool company donations, or photographs. All items will be drawn from the lists contained in this manual.

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Common Tools

Axes



Double Bit Axe

Used for cutting small trees and trimming logs or tops. Features two cutting edges (avoid vertical storage for safety) and a straight, oval 36-inch handle.



Hand Axe

A compact cutting tool with a single-bladed head and 16–18 inch handle, designed for sharpening stakes, trimming brush and small limbs, and driving survey stakes.



Single Bit Axe

A versatile tool for building fences, cutting small trees, and general construction. Not for striking wedges or iron stakes. Typically has a balanced, oval 36-inch hickory handle.

Pliers



Battery Pliers

A specialized gripping tool with angled jaws and end clearance, designed to remove terminal connections safely while preventing damage to covers in confined spaces.



Diagonal Cutting Pliers

Feature curved, lap-jointed handles and angled cutting jaws, designed for cleanly cutting wire, small pins, or soft metal in tight or hard-to-reach spaces.



Fence Pliers

Multi-function fencing tool with gripping jaws and leverage handles used to pull, stretch, and tighten wire securely against fence posts.

Common Tools

Pliers cont.



Locking Pliers

Hand tool with a toggle-lock mechanism that clamps securely onto objects, maintaining a firm hold until released, ideal for gripping, fastening, and repair tasks.



Retaining Ring Pliers

A specialized hand tool designed to install and remove internal and external circular retaining fasteners by controlled expansion or compression for precise mechanical assembly and disassembly.



Slip Joint Combination Pliers

General-purpose hand tool with adjustable jaw positions for gripping flat or round materials and cutting soft wire, offering versatility for everyday maintenance and repair tasks.



Water Pump Pliers

Adjustable hand tool with jaws opening up to 2 inches, providing a secure grip on pipes and fittings of various sizes for plumbing, repair, and maintenance tasks.

Common Tools

Punches



Center Punch

Manufactured in various sizes and lengths, it is used to mark precise drill points on metal and other materials.



Drift Punch

Tapered shank tool used to align holes and adjust parts, and to drive out pins or fasteners during assembly.



Hole Punch

Hand tool designed to create clean, precise holes in gaskets, leather, belts, and other materials, making it ideal for fabrication, repair, and fitting tasks.



Leather Punch

Hand-operated tool with opposing handles designed to create clean holes in soft materials such as leather, rubber, and similar materials .



Pin Punch

Hand tool with a long straight shank sized by diameter, used to drive out pins and bolts during disassembly and maintenance.



Prick Punch

Sharp-pointed tool ground to a 30-degree angle, used to lightly mark precise layout points before drilling or further machining.

Common Tools

Screwdrivers



Clutch Driver

Specialty fastening tool designed to engage specific screw heads found in mobile homes, boats, recreational vehicles, and electric motors.



Driver Bits

Interchangeable driving attachments used with power tools to tighten or loosen fasteners, available in various head types such as Phillips, slotted, Torx, and hex.



Nut Driver

Commonly used in electrical and sheet metal work, this tool tightens or loosens hex fasteners with a hollow shaft for accessibility.



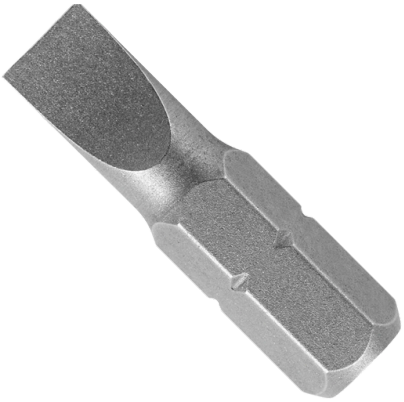
Offset Screwdriver

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



Phillips Screwdriver

Used to drive cross-shaped fasteners; selecting the correct size ensures proper fit, prevents stripping, and improves control, efficiency, and safety during use.



Screwdriver Bits

Interchangeable tips for power drivers, available in slotted, Phillips, square, and Torx styles; hexagonal shank allows secure fit and quick changes.

Common Tools

Screwdrivers



Security Bits

Tamper-resistant driver attachments designed with specialized head patterns, used with compatible tools to install or remove fasteners in equipment, electronics, and assemblies.



Slotted Screwdriver

Used primarily in woodworking, this tool drives flat-head fasteners, providing control and precision when tightening or loosening screws.



Square Recess Screwdriver

"A hand tool with a square-shaped tip designed to drive square-shaped fasteners, providing strong engagement, reduced cam-out, and secure fastening and removal."



Stubby Screwdriver

Short-handled tool with 1 1/4 to 1 1/2 inch blade, available in slotted and Phillips, designed for tight or confined spaces.



Torx Head Screwdriver

Screwdriver with a star-shaped tip used to drive tamper-resistant fasteners in appliances, electronics, and equipment, providing strong grip and reduced cam-out.

Common Tools

Wrenches



Box End Wrench

A hand tool with an enclosed end in 6- or 12-point configurations, designed to securely grip hex fasteners for tightening or loosening bolts and nuts.



Combination End Wrench

A hand tool featuring open and enclosed ends, providing versatility to tighten or loosen hex bolts and nuts during mechanical assembly, maintenance, and repair tasks.



Open End Wrench

A hand tool with two open ends of different sizes, used to tighten or loosen nuts and bolts in various applications.



Tubing Wrench

Six-point box-end hand tool designed to grip nuts on tubing fittings securely, providing access in tight spaces where standard tools cannot reach effectively.



Deep Socket

Extended attachment for accessing recessed fasteners, available in multiple wall thicknesses and drive sizes, designed for secure engagement with 6- or 12-point fasteners in confined spaces.



Eight Point Socket

Designed for square nuts commonly found on farm machinery, providing secure grip and efficient torque transfer.

Common Tools

Wrenches cont.



Flex Socket

Allows fastening or loosening bolts at various angles, providing flexibility in tight or obstructed spaces where straight alignment with fasteners is not possible.



Six Point Socket

Attachment tool with six internal contact points designed to securely fit hexagonal nuts, providing strong grip and reducing fastener rounding during tightening or loosening tasks.



Twelve Point Socket

Thin-walled tool designed for tight spaces, engaging twelve-point fasteners to deliver efficient torque for tightening and loosening applications in mechanical assemblies.



Breaker Bar

Long, non-ratcheting handle used with sockets to apply high torque, helping loosen stubborn or tightly fastened bolts and nuts without damaging tools.



Extension Bar

Connecting accessory used between a socket wrench and ratchet handle, providing working clearance and extended reach, typically available in lengths from 3 to 20 inches.



Flex Handle

Short-handled hand tool with a compact 1¼–1½ inch blade, available in slotted or Phillips styles, designed to reach and fasten or loosen screws in tight, confined, or hard-to-access spaces.

Common Tools

Wrenches cont.



Ratchet Handle

Hand-operated drive tool with an internal reversing mechanism that speeds fastening work, commonly available in 1/4-inch to 3/4-inch drive sizes for socket applications.



Slide Bar Handle

Sliding drive tool used as a “T” or “L” grip in combination with an extension, providing leverage for tightening or loosening fasteners.



Speed Handle

Hand tool with a crank-style rotating handle and ratcheting socket drive that allows fast tightening or loosening of nuts and bolts.



Socket Adapter

Converts between different drive sizes, allowing larger drive sockets to be used with smaller drive ratchets or handles for greater tool compatibility.



Universal Joint

Flexible coupling that allows power transfer at an angle between tools and sockets, identifiable by its pivoting, cross-shaped joint design.



Adjustable Wrench

Hand tool with movable jaw that adjusts to fit various fastener sizes, commonly sized by overall length in inches for gripping and turning applications.

Common Tools

Wrenches cont.



Chain Wrench

Hand tool with a chain loop that wraps around cylindrical objects to grip and turn them, commonly used on pipes and round fittings.



Hex Key

L-shaped hand tool made from hexagonal stock with one end bent at 90 degrees, used to tighten or loosen internal hexagon fasteners.



Strap Wrench

Hand tool with an adjustable strap that wraps around smooth or irregular surfaces, providing a non-marring grip for turning pipes, filters, and cylindrical objects securely.

Common Tools

Bars



Crow Bar

Long prying tool, typically four to five feet, with a tapered round end and a chisel point for leverage tasks.



Flat Pry Bar

A contoured, flat hand tool with beveled nail slots at both ends, designed for prying, lifting, and removing nails with controlled leverage.



Pry or Fitting Bar

A long, tapered hand tool with a rounded end and curved hook, designed for levering, aligning, and adjusting heavy components during installation or repair.



Ripping Bar

Heavy-duty octagon-shaped tempered steel bar used for demolition, prying materials apart, and removing large nails, also known as a wrecking bar.

Common Tools

Brushes



Bench Brush

A 16-inch hand cleaning tool designed to sweep debris from workbenches and other work surfaces, helping maintain a clean, safe, and organized workspace.



Parts Brush

A wood-handled cleaning tool with black bristles and a metal-sealed end, designed to float in solvent for cleaning small components while preventing loss in tanks.



Push Broom

Wide-floor broom with long 4–5 ft handle and stiff, dense bristles mounted in a rectangular head, used for sweeping large surface areas.

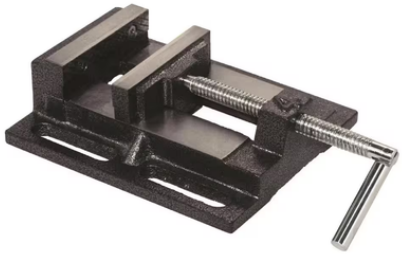


Wire Brush

Hand tool with stiff steel or brass bristles mounted in a block or handle, used to remove rust, slag, and debris from metal surfaces before welding or finishing.

Common Tools

Vises



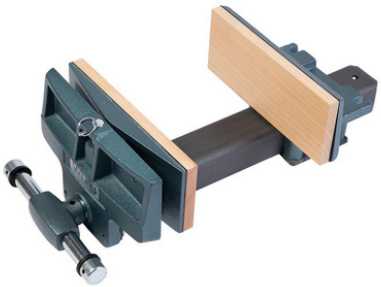
Drill Press Vise

Clamping fixture with two adjustable jaws and mounting base (often with bolt slots) used to hold workpieces securely during drilling.



Machinist's Vise

Bench-mounted clamping device with a swivel base and replaceable jaws, designed to securely hold metal workpieces for machining, cutting, and assembly, not for hammering or bending.



Woodworker's Vise

Flat, smooth jaws open up to 12 inches and are often lined with wood to protect workpieces during clamping.

Clamps



Bar Clamp

Long bar-style tool with sliding jaw and screw mechanism that quickly adjusts and tightens to apply strong pressure for securely holding workpieces during assembly or glue-up tasks.



"C" Clamp

C-shaped screw tool with adjustable threaded mechanism and swivel pad, designed to apply strong, focused pressure on workpieces ranging from 2 to 12 inches.



"C" Clamp Locking Pliers

Adjustable hand tool with curved C-shaped jaws and screw adjustment mechanism, designed to quickly secure irregular shapes firmly during welding, fastening, and fabrication tasks.

Common Tools

Clamps cont.



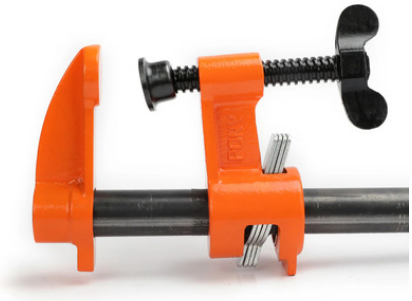
Corner Clamp

Tool with 90-degree angled jaws designed to hold cabinet frames and similar materials securely in place during assembly, gluing, and precise right-angle joining.



Locking Welding Clamp

Adjustable tool with curved jaws and screw mechanism designed to securely hold two workpieces side-by-side or at right angles during welding and fabrication.



Pipe Clamp

Tool system that uses a steel pipe as a bar to hold and secure workpieces together, providing strong adjustable pressure for woodworking and assembly tasks.



Spring Clamp

Spring-loaded hand tool with pivoting handles that maintain constant tension, enabling quick, temporary gripping of flat or round objects during assembly, repair, or positioning tasks.



Strap Clamp

Hand tool using a fabric strap that tightens around large or irregular projects, providing secure, even pressure for holding items during assembly, gluing, or repair tasks.

Common Tools

Shovels, Rakes, Picks, and Post Hole Diggers



Irrigation Shovel

Digging tool featuring a 16 × 5-inch nearly straight blade aligned to the handle, designed for efficient soil penetration, digging, and trenching in irrigation and landscaping applications.



Round Point Shovel

Digging tool featuring a 16 × 6-inch pointed, angled blade and long handle, designed for breaking, moving, and shaping soil in landscaping,



Scoop Shovel

Wide-blade digging tool designed for efficiently moving loose materials such as soil, gravel, or grain, available with short ferrule handle or 54-inch long handle.



Square Point Shovel

Used for scooping and moving loose materials such as sand and gravel, featuring a wide, flat rectangular blade with a straight cutting edge and typically a 50-inch handle.



Trench Shovel

Narrow, long-bladed digging tool designed for creating deep, straight-sided ditches, efficiently removing soil in confined, linear spaces for drainage and utility installation tasks.



Bow Rake

Garden tool with 15 pointed tines set at 90 degrees on a 5-foot handle, designed for breaking soil, leveling ground, and spreading materials efficiently.

Common Tools

Shovels, Rakes, Picks, and Post Hole Diggers cont.



Landscape Rake

Rigid, straight-toothed garden tool designed for leveling soil, spreading gravel, and smoothing surfaces, ensuring even ground preparation for landscaping, construction, and finishing applications.



Lawn Rake

Wide-headed garden tool with flexible tines designed for gathering leaves, grass clippings, and light debris from outdoor surfaces, maintaining clean and tidy yard spaces.



Clay Pick

Heavy digging tool with pointed/chisel head used to break hard soil or clay; handle is 32 inches long and thicker near the head for strength.



Cutter Mattock

Tool with blades rotated 90 degrees and a central oval handle hole (handle sold separately) for cutting roots and breaking hard ground.



Pick Mattock

Dual-ended digging tool with one sharp pointed end and one blade, designed for breaking hardpan and excavating very hard soil in construction and landscaping tasks.



Post Hole Auger

Hand-operated tool that rotates a digging head to bore deep, narrow holes for posts in soil.

Common Tools

Shovels, Rakes, Picks, and Post Hole Diggers cont.



Post Hole 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



Air Compressor

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



Anvil

Heavy steel surface ranging from 20 to 200 pounds, used for shaping and forming hot or cold metal during forging work.



Bolt Cutter

The toggle and lever joints develop great mechanical advantage, allowing it to shear through heavy metal fasteners and similar rigid stock such as chain and reinforcing bar.

Common Tools

Miscellaneous cont.



Chain Saw

Powered cutting tool using gas or electric motor with a rotating chain, designed for cutting trees, logs, and heavy wood materials efficiently.



Contractor's Wheelbarrow

Heavy-duty material transport cart with a deep, reinforced steel tray and a single pneumatic tire, designed for moving soil, gravel, concrete, and other construction materials over rough terrain.



Cut-off Saw

Powered abrasive cutting tool that uses disposable cutting wheels to rapidly sever steel bar, pipe, and other heavy metal stock in construction and fabrication work.



Extension Ladder

Adjustable access equipment that extends to reach higher surfaces, designed for safe use in exterior work and elevated tasks requiring stable vertical support.



Face Shield

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



Hammer Tacker

Impact-operated fastening tool that drives staples with a striking motion, used for installing insulation, builder's paper, roofing felt, and similar construction materials efficiently.

Common Tools

Miscellaneous cont.



Hog Ring Pliers

Hand-operated tool with slotted jaws designed to hold and close metal rings, used for fastening wire mesh, fencing, and similar assembly applications securely.



Impact Driver

A battery or AC-powered handheld tool available in various sizes, featuring variable speed and reversible operation for driving screws, fastening, and drilling.



Oscillating Multi-Tool

A compact handheld tool with a small side-to-side moving blade attachment, used for cutting, sanding, scraping, and precise material removal in tight spaces.



Roller Stand

Adjustable support device with a rolling top surface designed to hold and guide long materials during cutting, measuring, or assembly tasks for improved stability and control.



Rotary Hammer

Heavy-duty, pistol-grip power tool with SDS chuck and vibration-dampening side handle, used for drilling concrete and masonry or chiseling with carbide-tipped bits.



Safety Glasses

Eye protection covering eyes with side shields to reduce impact from debris, dust, and particles.

Common Tools

Miscellaneous cont.



Safety Goggles

Eye protection that fully covers the eyes and fits over glasses, helping shield against dust and debris during work.



Sawhorse

Support frame with a wide, inverted “V” or “A”-shaped design and cross bracing, used in pairs to hold lumber or materials steady during cutting, sawing, or construction tasks.



Staple Gun

Tool available in heavy-duty and light-duty models, driving 3/16 to 1/2 inch staples for fastening materials securely.



Step Ladder

Self-supporting A-frame folding access tool designed to provide safe elevation for indoor and outdoor work, allowing users to reach higher areas securely during maintenance or construction.

Measuring, Layout, and Surveying

Measuring and Marking Tools



Fiberglass Tape

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



Measuring Wheel

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



Micrometer

Precision measuring tool with sizes ranging from 0–1 inch up to 12 inches, used for accurate thickness or diameter measurements.



Steel Tape

Flexible steel measuring tool used for accurate length measurements in construction and layout work, requiring cleaning after use and maintenance to prevent rust.



Combination Square

Measuring and marking tool with a beam containing a level and scribe, used to check angles, depth, and alignment.

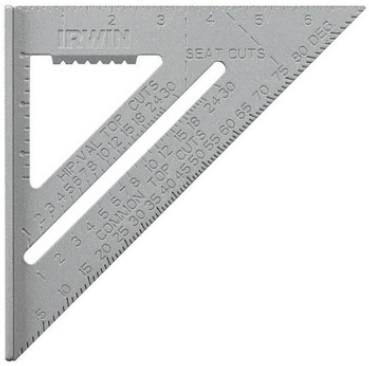


Framing Square

L-shaped layout tool marked in twelfths of an inch, often including rafter tables, used for carpentry measuring, marking, and precise framing layout work.

Measuring, Layout, and Surveying

Measuring and Marking Tools cont.



Rafter Square

Triangle-shaped aluminum layout tool marked for rafters and angles, used to guide saw cuts and assist in layout work, fitting conveniently in a nail pouch during carpentry tasks.



Try Square

Right-angle measuring and marking tool used to check squareness and guide precise layout work on woodworking and construction projects.



Depth Gauge

Tool used to measure depth of holes, grooves, or recesses, usually graduated in 32nds and 64ths for precise measurement.



Sliding T Bevel

Adjustable angle tool used to transfer and duplicate angles; once set, it functions like a square for accurate layout and marking.



Dial Caliper

Precision measuring tool used to accurately measure internal, external, and depth dimensions, with a 0 to 6 inch capacity range.



Fractional Vernier Caliper

Precision measuring tool providing direct readings in 16ths and 32nds of an inch, with accuracy down to 1/128 inch for detailed dimensional measurements.

Measuring, Layout, and Surveying

Measuring and Marking Tools cont.



Inside Calipers

Adjustable measuring tool set to an object's internal diameter, then transferred to a rule for precise measurement reading in machining, layout, and inspection work.



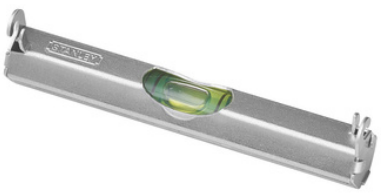
Outside Calipers

Adjustable measuring tool set to an object's external diameter, then transferred to a rule for precise measurement reading in machining, layout, and inspection tasks.



Carpenter's Level

Used for marking level lines and checking surfaces for level and plumb; typically 24–48 inches long. Longer versions used in masonry work.



Line Level

Compact bubble tube measuring device in a metal or plastic case with hooks for attaching to a line, used to check horizontal alignment accurately.



Dividers

Used for marking circles, transferring measurements, and dividing distances into equal parts during layout and drafting work.



Feeler Gauge

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

Measuring, Layout, and Surveying

Measuring and Marking Tools cont.



Sheet Metal Gauge

Component used on equipment to control depth, maintain consistent height, and stabilize movement during operation over surfaces or terrain.



Protractor

Measuring tool graduated from 0 to 180 degrees, used for determining and marking precise angles.



Chalk Line

Special container holds chalk powder and a cord wound on a spool, used for marking straight layout lines.



Marking Gauge

Woodworking layout tool used to scribe accurate lines parallel to the edge of a board, typically 8 inches long and marked in 8ths and 16ths of an inch.



Plumb Bob

Simple weighted tool attached to a string, using gravity to form a vertical plumb line for alignment in carpentry and surveying.



Carpenter's Pencil

Flat, rectangular marking tool used in woodworking and construction for drawing clear layout lines on surfaces, designed to prevent rolling during use on job sites.

Measuring, Layout, and Surveying

Measuring and Marking Tools cont.



Scratch Awl

Pointed marking tool used to scribe lines and punch small holes in light sheet metal for screw insertion and layout work.



Scribe

A slender metal marking tool with a sharp, brittle pointed tip, used to scratch layout lines on metal surfaces; tip can break if dropped or misused.



Soapstone

A solid marking material used to draw visible lines on metal, heat-resistant and cleaner than chalk, often used in pencil-style holders.

Surveying Tools



Auto Level

An optical surveying instrument used to establish or verify height differences and level planes between multiple points.



Data Collector

Handheld electronic device used to store, process, and manage survey information gathered from instruments, improving efficiency and accuracy in field operations.

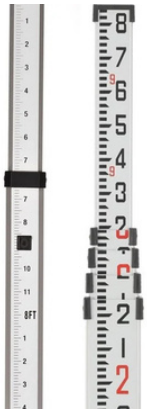


GPS Survey Receiver

Satellite-based positioning device used to determine precise geographic coordinates, enabling accurate mapping, boundary surveys, and construction layout tasks in field.

Measuring, Layout, and Surveying

Surveying Tools cont.



Level Staff

Graduated measuring rod used with leveling instruments to determine elevation differences by reading height values at various points on a site.



Marking Flags

Small colored indicators used to mark survey points, boundaries, or underground utilities, improving visibility and organization during surveying, construction, and site layout work.



Prism and Prism Pole

Reflective surveying device mounted on a staff used with total stations to accurately measure distances by reflecting the instrument's signal back for precise readings.



Ranging Rod

Tall, brightly colored pole used as a visual reference point in surveying, helping align measurements and mark positions over long distances.



Surveyor's Tape

Long measuring tape used to measure distances manually, commonly used for short measurements, offsets, or verifying electronic instrument readings in field.



Surveying Tripod

Stable three-legged stand used to support surveying instruments, providing a steady platform for accurate measurements and consistent instrument positioning in field.

Measuring, Layout, and Surveying

Surveying Tools cont.



Survey Drone (UAV)

Advanced unmanned aircraft equipped with high-resolution cameras or LiDAR sensors to rapidly collect highly accurate geospatial data.



Total Station

Telescope instrument used to check grades and levels over short distances, manually leveled with screws; auto levels require less adjustment and improve efficiency.

Fasteners

Bolts



Cap Screws

Threaded fasteners with a cylindrical head designed to be driven with a wrench or socket, used to securely join metal components in mechanical assemblies.



Carriage Bolt

A fastener with a rounded head and square neck designed to secure wood materials together (washer is not used beneath the head during installation).



Eye Bolt

Threaded fastener with a circular attachment loop on one end, used to secure cables or lift loads in rigging, anchoring, and material-handling applications.



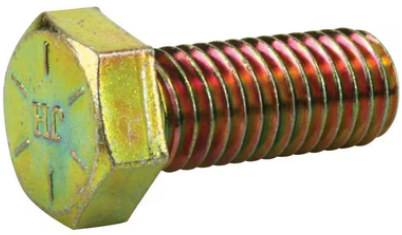
Grade 2 Bolt

A soft fastener commonly used in landscaping and similar low-strength applications, intended for securing materials where high load capacity is not required.



Grade 5 Bolt

A heat-treated medium-strength fastener marked by three radial lines, used in automotive and structural applications requiring reliable tensile strength and durability.



Grade 8 Bolt

A hardened high-strength fastener identified by six head markings, used in demanding applications requiring superior tensile strength and durability.

Fasteners

Bolts



Lag Bolt

A heavy-duty fastener with square or hex head and tapered wood screw end, used to securely join materials in construction and woodworking applications.



Machine Bolt

A fastener used with a nut for joining materials, featuring a square or hexagonal head to create secure assembly connections in construction and machinery.



Machine Screw

A slotted fastener with round or flat head used in threaded holes, typically size 4–12, for securely fastening materials in assemblies.



Plow Bolt

A fastener with a flush head designed not to require a wrench, used for securing parts in machinery and equipment applications for smooth operation.



Toggle Bolt

Fastener with spring-loaded wings that expand behind surfaces, creating a firm anchorage when the screw is tightened securely in place.

Fasteners

Nuts



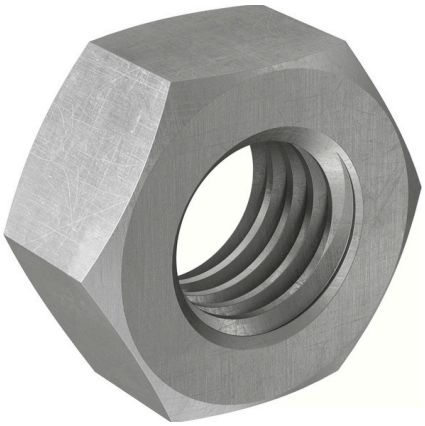
Cap Nut

A closed-end fastener covering exposed threaded ends, providing protection and a finished, safe appearance in assemblies while improving overall aesthetics and safety.



Castellated Hex Nut

A slotted fastener with a reduced upper section used with a cotter pin to prevent loosening and ensure secure, locked mechanical connections.



Hex Nut

Six-sided fastener used with bolts or screws, available with NC, NF, or metric thread types.



Self-Locking Nut

A threaded fastener with scored internal threads that grip mating threads when tightened, preventing loosening and backing off in secure assemblies.



Slotted Hex Nut

A six-sided fastener with slots for cotter pin use, lacking a stepped castle top, used to secure assemblies and prevent loosening in mechanical connections.



Square Nut

A four-sided fastener used with various threaded fasteners on farm implements, providing secure fastening for machinery and equipment applications and assemblies.

Fasteners

Nuts cont.



Wing Nut

A hand-tightenable fastener with winged sides designed for tool-free adjustment, commonly used on inspection covers and adjustable assemblies for quick secure fastening.

Washers



Fender Washer

Hardware component featuring a large outside diameter relative to its center hole, designed to distribute fastener load over a wider surface and reduce material damage.



Finishing Washer

This chrome-plated, countersunk hardware component is used with oval head wood or metal screws to provide a flush finish and distribute load effectively.



Flat Washer

Thin circular metal component placed under a bolt head or nut to distribute fastener load, reduce surface wear, and prevent embedding into softer materials.

Fasteners

Washers cont.



Lock Washer

Split or toothed circular fastener component that resists loosening under vibration, securing metal assemblies by increasing friction and maintaining bolt tension reliably.



Malleable Iron Washer

Strong, deformable metal ring that distributes high pressure on wooden structures, preventing surface damage while improving load support and fastening stability.

Screws



Deck Screw

Straight shank wood fastener with bugle head and Phillips or square drive, corrosion-resistant coating, used to securely join decking and outdoor structures.



Drywall Screw

Phillips-drive fastener with bugle-shaped flat head, used for securing drywall; hex wafer head is the main exception.



Screw Eye

Threaded fastener with ring-shaped head used to attach ropes, cables, or suspend lightweight loads securely in wood or similar materials.

Fasteners

Screws cont.



Screw Hook

Hooked fastener that screws into wood or masonry with anchors, used for hanging or securing lightweight items.



Self Drilling Screw

Fastener with a drill-point tip that eliminates pre-drilling, used for quickly joining metal or other materials.



Self Tapping Screw

Sharp-pointed, coarse-threaded fastener that cuts its own mating threads when driven into a smaller pre-drilled hole, securing materials without pre-threading.



Set Screw

Threaded fastener without a head; cup point bites into a shaft to secure collars and prevent vibration loosening.



Sheet Metal Screw

Threaded fastener designed for joining thin metal sheets, featuring sharp threads that cut into material to create secure, tight, vibration-resistant connections.



Torx Head Screw

Six-point star-drive fastener designed for high torque transfer, reducing cam-out and stripping while providing secure, efficient installation in various materials.

Fasteners

Screws cont.



Wood Screw

Tapered fastener with coarse threads and round, oval, or flat head that cuts its own thread into wood, securing joints firmly.

Nails



Aluminum Roofing Nail

Corrosion-resistant fastener used to secure exterior building materials, typically 1 to 1½ inches long, providing durable holding power in outdoor applications.



Blued Plasterboard Nail

Short coated steel fastener used to secure interior wallboard to wood framing in construction, typically 1 to 1½ inches long.



Box Nail

Thin-shank fastener sized 2d to 16d with reduced diameter to prevent wood splitting, used in light construction and framing applications.

Fasteners

Nails cont.



Cement Coated Nail

Fastener with an adhesive-enhanced surface for improved holding power, typically green, used in 2d–16d sizes to provide stronger grip in wood framing applications.



Common Nail

Standard construction fastener with thick shank that resists bending, used in wood framing; sized 2d–20d, with larger sizes known as spikes.



Cut Nail

Rectangular, tapered fastener cut from metal stock, designed for flooring and masonry applications, providing strong holding power in dense construction materials.



Duplex-Head Nail

Double-headed fastener with sharp point designed for temporary fastening and easy removal in construction, commonly used in 6d, 8d, and 16d sizes.



Finish Nail

Thin, small-headed fastener used for trim and finish work, driven below surface for smooth appearance; sizes range from 2d–20d.



Furring Nail

Fastener used to secure wire reinforcement to walls, allowing plaster to bond firmly and remain supported on surfaces for durable interior finishes.

Fasteners

Nails cont.



Galvanized Nail

Corrosion-resistant steel fastener with galvanized coating, hot-dipped or electro-plated, designed for exterior use and long-lasting protection against rust in weather-exposed applications.



Galvanized Roofing Nail

Large-headed, corrosion-resistant fastener used for roofing applications, featuring about ½-inch head and lengths from ¾ to 2 inches for secure weatherproof attachment.



Galvanized Shingle Nail

Corrosion-resistant roofing fastener used to secure shingles, typically 3d size, ensuring strong attachment and long-lasting weather durability in exterior roofing applications.



Lead-Head Nail

Roofing fastener with a sealing washer head that helps prevent oxidation and leakage, ensuring a watertight seal when securing galvanized roofing materials.



Ring Shank Nail

A fastener with annular ridges designed to provide superior holding power and resist withdrawal in wood and other structural applications.



Spiral Shank Nail

Twisted fastener designed for strong holding power in wood, commonly used in pallet construction, repairs, wagon beds, and trailer re-nailing applications.

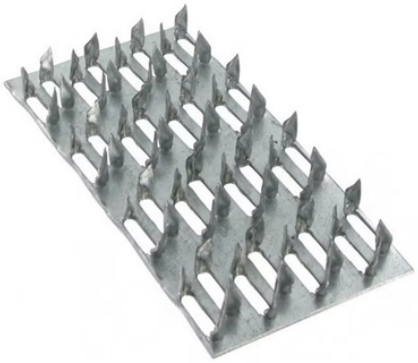
Fasteners

Nails cont.



Wire Brad

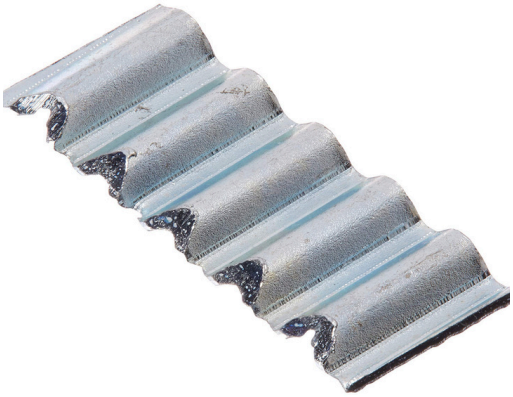
Thin gauge wire fastener, typically 1/4 to 1½ inches long, used for light trim and delicate woodworking where minimal surface damage is required.



Nail Plate

Metal plate with embedded teeth used to reinforce and connect wood joints, commonly in trusses and structural framing assemblies.

Miscellaneous Fasteners



Corrugated Fastener

Small wavy metal fastener with 2–7 corrugations, 1/4–1 inch deep, used to securely join and reinforce wood joints.



Cotter Pin

Split metal fastener inserted through a drilled hole in a pin or bolt, then bent to secure components and prevent loosening during operation.



Pop Rivet

Blind fastening device installed with a specialized tool to permanently join thin materials together, providing secure, tamper-resistant attachment when access is limited.

Fasteners

Rivets



Pop Rivet Tool

Adjustable hand tool used to install blind fastening devices of various diameters, forming strong permanent joints in thin materials during assembly work.



Rivet Set

Steel tool with drilled hole and cupped end used to form and shape rivet heads during installation.



Soft Iron Rivet

Malleable fastener made of soft iron, sized by length and diameter, used to permanently join materials through deformation.

Hardware

Hinges



Barrel Bolt

Sliding bolt fastener that locks into a separate eye piece, commonly used to secure doors, gates, and enclosures.



Butt Hinge

Standard door mounting hardware with fast or loose pin, made of brass or steel, used to attach doors and panels for smooth pivoting movement.



Continuous Hinge

Long strip pivoting hardware ranging from 8 inches to 8 feet, cut to length with a hacksaw, used to support long doors and panels for smooth continuous movement.



Strap Hinge

Long-strap pivoting hardware measured from pin to strap end, used to support and mount heavy doors or gates securely with strong stability.



T Hinge

T-shaped strap pivot hardware measured from pin to end, commonly used for gates, securely fastening doors to posts and frames for stable support.



Gate Latch

Hook-and-eye fastening mechanism used to secure gates, providing simple, reliable closure by inserting a hook into an eye screw for stable holding.

Hardware

Hinges cont.



Hinge Hasp

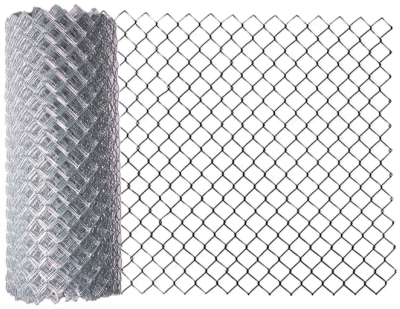
Foldable strap-style fastening device with slotted end that closes over an eye or staple, allowing a padlock to securely lock doors or gates.

Fencing and Supplies



Barbed Wire

Twisted metal fencing material with sharp protrusions, supplied in 80-rod spools, used to contain livestock and secure property boundaries effectively.



Chain Link Fencing

Woven steel diamond mesh barrier available in 36–60 inch widths and 50–100 foot lengths, used to provide secure boundary and property protection.



Come-Along

Ratchet cable tool used to tighten and pull loads by moving a sheave block toward a ratcheting spool.

Hardware

Fencing and Supplies cont.



Electric Fence Gate Handle

Insulated gripping device used on energized fencing systems to safely release tension and disconnect current for controlled entry through openings or access points.



Nail On Electric Fence Insulator

Plastic mounting component attached to wood posts, designed to hold energized conductors about one inch away, preventing grounding and maintaining fence performance.



Poultry Wire Netting

Light metal mesh enclosure material used for containing poultry, available in rolls 50–150 feet long and 1¼–4 feet wide.



Smooth Galvanized Wire

Smooth, corrosion-resistant metal strand available in various gauges, used for fencing, securing materials, tying applications, and general-purpose construction projects.



Staples

U-shaped metal fasteners used to secure fencing wire to wood posts, providing strong, durable attachment in fence construction.



Steel Fence Post

Round steel support with an anchor plate positioned 12 inches from the bottom, used to stabilize fencing systems in 3–6 foot lengths.

Hardware

Fencing and Supplies cont.



T Post

T-shaped steel support with attached anchor plate for added stability, commonly 5–8 feet long, used to securely hold fencing in place.



T Post Driver

Heavy cylindrical hand tool with welded handles and enclosed top, used to drive fencing supports into the ground through repeated impact force.



T Post Insulator

Plastic clip-style mounting component that snaps onto metal fencing supports, holding energized conductors away from metal surfaces to prevent grounding.



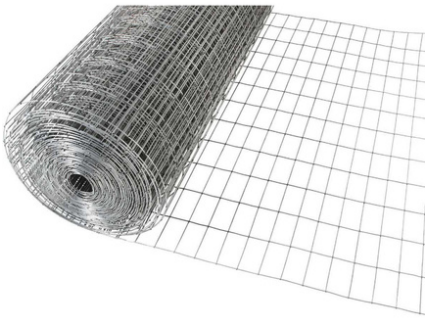
T Post Puller

Lever-style hand tool that grips fencing supports and uses mechanical advantage to lift and extract embedded components from the ground efficiently.



Turn Buckle

Adjustable metal tensioning device with a central body and opposing threaded ends that tighten or loosen to apply or release tension in cables or wires.



Welded Wire Fence

Galvanized 16-gauge welded mesh material with 2×3 inch openings, used for animal enclosures, garden protection, and secure perimeter boundaries.

Hardware

Fencing and Supplies cont.



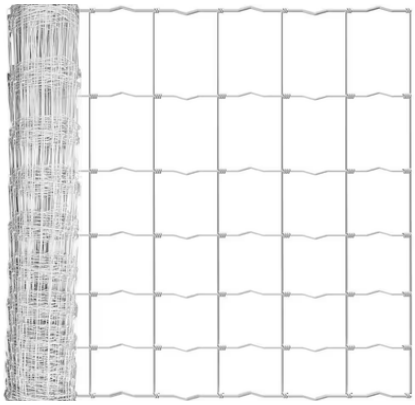
Wire Grip

Steel or malleable iron fencing tool with serrated jaws and leverage handles designed to clamp, pull, and tension fencing wire securely during installation.



Wire Stretcher

Tensioning tool with two double-sheave blocks, hooks, locking mechanism, wire clamp, and rope, used to pull and tightly tighten fencing during installation.



Woven Wire Fencing

Interlaced wire mesh sold in 20-rod rolls, typically 32–47 inches wide, used for enclosing livestock and securing property boundaries.

Springs



Compression Spring

Coiled mechanical component designed to resist being pushed together, exerting force when compressed and returning to its original shape when pressure is released.



Tension Spring

Coiled metal component with tightly wound loops and hooked ends that exerts force when stretched, returning to its original length to maintain pulling force in mechanical systems.



Torsion Spring

Helical coil component with extended arms that applies torque when twisted, storing energy and resisting rotational movement in mechanical systems.

Rope and Chain

Chains, Lashing Straps, and Accessories



Load or Chain Binder

Tightening device with handle, offset links, and grab hooks used to secure cargo by pulling the handle to tension fastening chains safely.



Double Loop Chain

Lightweight linked metal suspension material with repeating loop pattern used for tethering, swings, hammocks, and other light-duty support applications.



Proof Coil Chain

Welded low-carbon steel link assembly sized by link diameter, used for tie-downs, towing, logging, and general utility securing applications.



Repair Link

Metal connector used to join or repair broken segments and attach hooks or rings, featuring an open-and-close design for quick, secure field repairs.



Sash Chain

Lightweight metal suspension material with closely linked oval or round loops, sold by the foot, used for hanging light fixtures and other suspended loads.



Twist Link Chain

Twisted metal link assembly designed to move smoothly over surfaces without snagging, used in applications requiring free travel and reliable movement.

Rope and Chain

Chains, Lashing Straps, and Accessories cont.



Eye and Eye Swivel

Connector made of two chain links joined by a riveted pin, allowing rotation to prevent twisting in chains or cables.



Clevis or Shackle

U-shaped forged metal connector with a removable pin or bolt across the open end, used to secure chains, cables, or implements for pulling and lifting.



Grab Hook

Forged steel fastening component with deep curved throat and narrow opening designed to catch a single link, holding securely under tension when tightened.



Slip Hook

Round fastening component attached to log chain, allowing it to slide along for adjustable positioning and secure load handling during transport operations.



Lashing Straps

Polyester or nylon tie-down assemblies used to secure loads, typically 10,000–20,000 lb strength, tightened with winches for safe cargo restraint.



Winch

Ratcheting device used to tighten ropes or lashing straps, providing controlled tension for securing and moving heavy loads.

Rope and Chain

Chains, Lashing Straps, and Accessories cont.



Chain Hoist

Manual lifting device using chain mechanism to raise heavy loads, available in capacities ranging from 1/2 to 5 tons.

Rope



Cotton Rope

Soft natural fiber cord with relatively low strength compared to synthetic options, used for light-duty tying, bundling, and general-purpose securing applications.



Manila Rope

Twisted natural fiber cord made in three or four strands, stronger than cotton but weaker than synthetic options, used for general-purpose tying and securing.



Nylon Rope

Synthetic cord made in twisted or braided construction, stronger than polypropylene, durable for heavy-duty applications but not suitable for hand braiding.

Rope and Chain

Rope cont.



Rope Thimble

Curved metal groove-shaped fitting placed inside a rope eye loop, used to reinforce and protect cable or rope from wear while maintaining a secure loop under load.



Twisted Polypropylene Rope

Synthetic cord that softens near heat, commonly called trucker's cord, typically black with an orange stripe, used for light to medium tie-down applications.



Wire Rope

Steel cable made of twisted wires, coiled or uncoiled like a hoop, used for lifting, towing, and heavy-duty rigging applications.



Wire Rope Clamp

Clamping device used to secure wire strand ends, available as U-bolt with cleat or bolt-style fitting, forming secure loops for lifting and rigging.

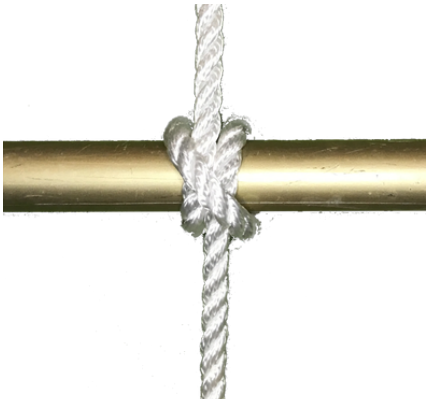
Rope and Chain

Knots, Hitches, and Splices



Bowline

A reliable knot that creates a fixed loop at the end of a rope, commonly used for securing, lifting, or rescue applications.



Clove Hitch

A simple hitch used to secure a rope to a hook, post, or rail, providing quick attachment and adjustment.



Eye Splice

A rope-splicing technique that creates a permanent loop in a laid rope, providing strong, secure attachment points.



Sheet Bend

A dependable knot used to join ropes of different diameters, creating a secure connection for extending or combining lines.



Square Knot

A common and versatile knot used for joining two ropes, creating a secure and balanced connection under light loads.



Trucker's Hitch

Rope-tying method that creates mechanical advantage for tightening and securing loads, allowing high tension to be applied and maintained during transport.

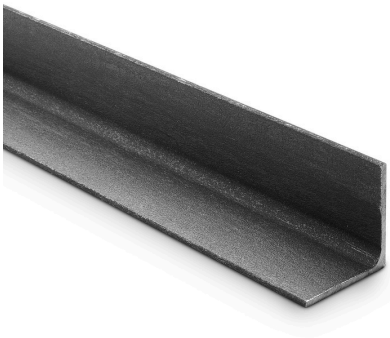
Metal Working

Metals



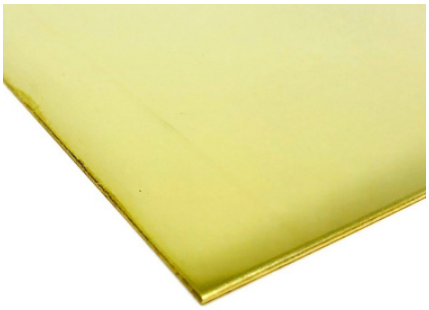
Aluminum

Lightweight, corrosion-resistant metal used for fabrication and construction, sold by square foot, piece, or pound for structural and repair applications.



Angle Iron

L-shaped steel structural bar with equal or unequal legs and varying thickness, sold by weight, used for framing, bracing, and general construction support.



Brass

Corrosion-resistant copper-zinc alloy with a yellow-gold appearance, sold by piece or pound, used for plumbing fittings, decorative work, and mechanical components.



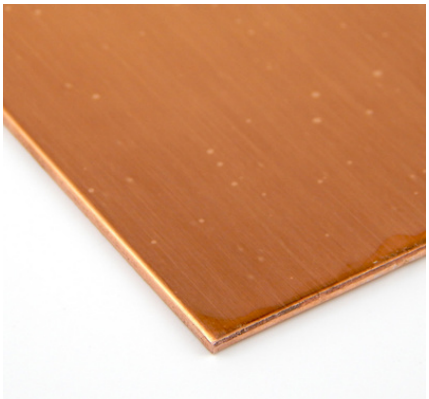
Cast Iron

Iron alloy used for castings like engine blocks, housings, gears, pulleys, pipe fittings, and agricultural equipment components.



Channel Iron

U-shaped structural steel stock ranging from 1/2×1 inch to 4×12 inches used for framing and support applications.

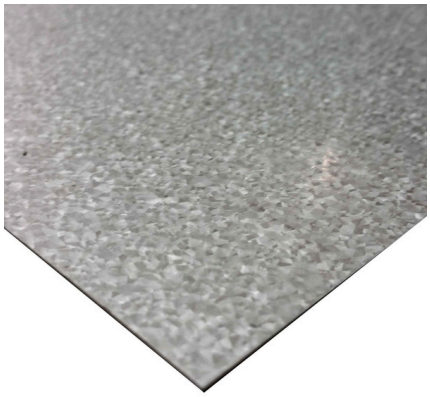


Copper

Malleable metal sold by the piece, running foot, or pound, commonly used for electrical wiring and plumbing applications.

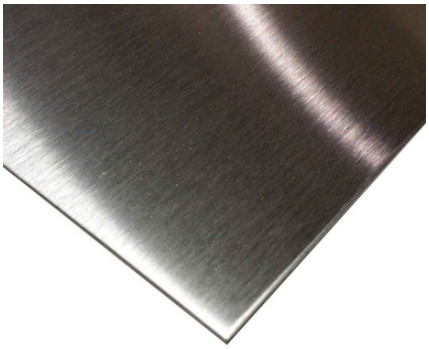
Metal Working

Metals



Galvanized Steel

Metal coated with a protective zinc layer to prevent rust, available in varying coating thicknesses for outdoor exposure and plumbing applications requiring durability.



Stainless Steel

Chromium or nickel alloy metal designed to resist oxidation and corrosion, used in environmental and industrial applications requiring long-lasting durability and protection.



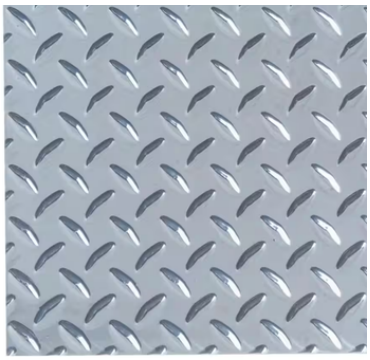
Cold Rolled Steel

Metal processed at room temperature to improve strength, dimensional accuracy, and surface smoothness, used for precision fabrication and structural applications.



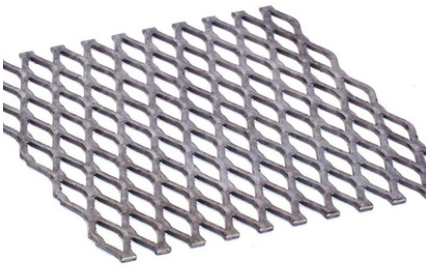
Hot Rolled Steel

Metal shaped at high temperatures for ease of forming, producing a rough, scaled dark surface finish used in structural and general fabrication applications.



Diamond Plate

Textured metal sheet with raised pattern, typically 1/8–1/4 inch thick, used for flooring, ramps, and safety surfaces requiring slip resistance.



Expanded Metal

Cut and stretched sheet material formed into mesh, sold by gauge thickness in 4–5 foot widths and 8–12 foot lengths for structural screening applications.

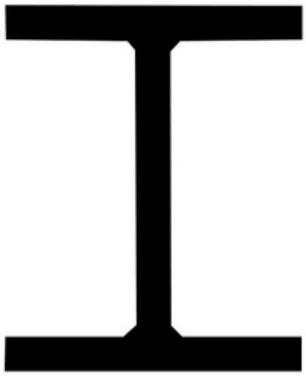
Metal Working

Metals



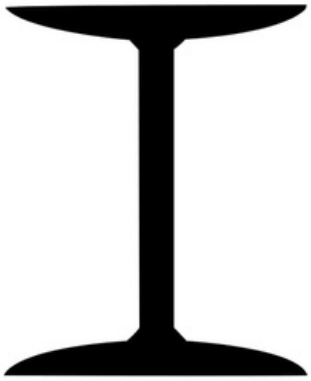
Flat Bar

Solid structural stock material at least 3/16 inch thick, available in various widths, used for fabrication, reinforcement, and general structural applications.



H Beam

H-shaped structural member with equal width and height dimensions, such as 4×4 inch profile, used to provide strong construction support and load-bearing capacity.



I Beam

I-shaped structural member used horizontally to support loads in buildings, typically available in 20–40 foot lengths for construction and structural reinforcement applications.



Rectangular Tubing

Hollow structural member with rectangular cross-section, such as 2×4 inches, with wall thickness from 0.080 inches to 1/2 inch, used for framing applications.



Round Tubing

A hollow cylindrical product with a specified outside diameter and wall thickness, primarily used for structural, mechanical, and architectural applications.



Square Bar

Solid four-sided metal stock with equal cross-section, sized 1/8 inch and larger, used for fabrication, reinforcement, and structural construction applications.

Metal Working

Metals



Square Tubing

Hollow metal profile with equal sides and 90-degree corners, offering a high strength-to-weight ratio for load-bearing, framing, and structural applications.



Steel Pipe

A hollow cylindrical product with a specified inside diameter, primarily designed to transport fluids, gases, or slurries under pressure.



Strip Iron

Thin flat metal stock ≤1/8 inch thick, available in various widths and often sold in coils, used for strapping, fabrication, and general metalwork.

Boring Tools (Metal)



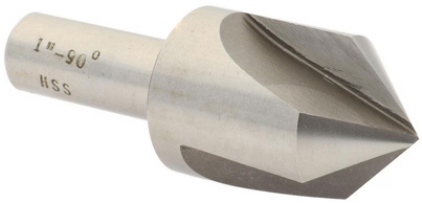
Chuck

Device that holds a drill bit in a drill press or motor, available in keyed or keyless types for secure bit tightening.



Chuck Key

Tool used to tighten or loosen a drill's bit-holding mechanism, securely clamping or releasing drill bits during operation.



Countersink

Tool with 1/4-inch shank used in hand or power drills to create conical recesses for screw heads.

Metal Working

Boring Tools (Metal) cont.



Drill Drift

Flat tapered steel wedge tool inserted into drill press slots, used to drive out Morse taper sleeves and tapered shank drills for removal.



Morse Taper Sleeve

Conical adapter used to fit tapered-shank tools into larger machine spindles, ensuring secure alignment, accurate centering, and stable machining operation.



Reduced Shank Drill

Cutting tool with a reduced mounting end that fits standard chucks, enabling drilling of holes larger than the chuck's normal capacity.



Straight Shank Twist Drill

Cylindrical high-speed steel cutting tool with a uniform mounting end, used in drill presses or chucks for drilling hard materials with heat-resistant cutting edges.



Taper Reamer

Multi-fluted cutting tool with gradually increasing diameter, used to enlarge and finish holes accurately for fitting pins in mechanical assemblies.

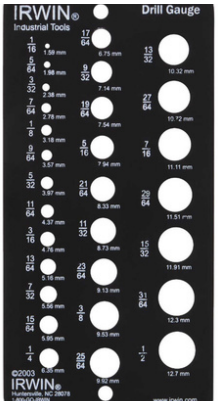


Tapered Shank Twist Drill

Helical cutting tool with a conical shank designed for direct installation into machine spindles, providing secure alignment and efficient hole-making operations.

Metal Working

Boring Tools (Metal) cont.



Drill Bit Gauge

A measuring tool used to identify and verify drill bit sizes, ensuring accurate selection, proper fit, and precision.

Chisels



Cape Chisel

Hand cutting tool with a long, narrow body, tapering sides, and a thin rectangular cutting edge, used for cutting keyways and grooves in tight spaces.



Cold Chisel

A heavy-duty hand cutting tool with a flat, wide cutting edge and hexagonal body, used for cutting and shaping metal; size is determined by cutting edge width.



Diamond Chisel

Hand cutting tool with a narrow pointed cutting edge and tapered sides, used for cutting keyways and grooves in tight spaces; sized by edge width.

Metal Working

Chisels cont.



Round Nose Chisel

A hand cutting tool with a rounded cutting edge and flattened shank sides, used for cutting semicircular grooves and oil channels; size determined by cutting edge width.

Hammers (Metal)



Ball Peen Hammer

Machinist's striking tool with a flat face and rounded end, used for shaping metal, forming surfaces, and driving punches accurately.



Blacksmith's Hammer

Forging tool with a flat or slightly crowned striking face, used for shaping, forming, and working hot metal in fabrication applications.



Dead Blow Hammer

Striking tool with a shot-filled head and rubber or plastic coating, designed to reduce rebound and deliver controlled, non-marring impact force.

Metal Working

Hammers cont.



Engineer's Hammer

A heavy, short-handled striking tool used for driving chisels, punches, wedges, and stakes, as well as shaping metal and performing light demolition work.



Hand Drilling Hammer

Compact striking tool with a short handle and 2–4 lb head, used for driving punches and chisels in confined spaces requiring precision.



Sledge Hammer

Heavy-duty striking tool weighing 6–12 lb with a long handle, used for demolition, driving stakes, and delivering powerful impact in metalworking.

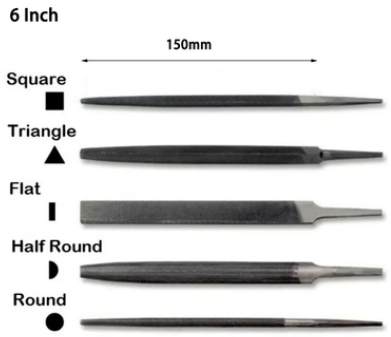


Tinner's Hammer

Lightweight sheet metal forming tool with a flat face and tapered or rounded peen, used for shaping, flattening, and working thin materials.

Metal Working

Files, Threading, and Cutting Tools



Metal File

Handheld steel tool with ridged teeth used to shape and smooth metal, available in various shapes and coarseness with single or double-cut patterns.



Tap Wrench

A T-shaped hand tool with an adjustable chuck, used to hold and turn taps for cutting internal threads in metal and other materials.



File Card

A small wire brush tool used to clean metal files by removing debris and filings from the teeth.



Bottoming Tap

A threading tool designed with a nearly full-length cutting profile, used to complete internal threads close to the bottom of blind holes.



Plug Tap

A threading tool with a tapered cutting end, commonly used to start and form internal threads in machine operations before finishing with other taps.



Taper Tap

Threading tool with a gradually narrowed cutting end, used to start internal threads in holes and guide alignment before final thread cutting.

Metal Working

Files, Threading, and Cutting Tools cont.



UNC(SAE and USS) Tap

A threading tool designed for cutting Unified National Coarse threads, used in machine operations to create strong, widely spaced internal threads in metal.



UNF(SAE and USS) Tap

A threading tool designed for cutting Unified National Fine threads, used in machine operations to produce fine, closely spaced internal threads in metal.



Die Stock

T-shaped hand tool designed to hold and turn threading cutters, used to create or repair external threads on bolts, rods, and similar fasteners.



UNC(SAE and USS) Die

Threading tool used to cut Unified National Coarse external threads on rods and bolts, producing strong, widely spaced threads for secure fastening applications.



UNF(SAE and USS) Die

Threading tool used to cut Unified National Fine external threads on rods and bolts, producing closely spaced, precise threads for accurate fastening applications.



Hack Saw

A handheld cutting tool with a pistol-grip handle and a tensioned fine-tooth blade, used for cutting metal rods, pipes, and small stock materials.

Metal Working

Files, Threading, and Cutting Tools cont.



Round File

Cylindrical metal shaping tool used to enlarge circular holes and smooth curved surfaces, available in various lengths and diameters for precise material removal.



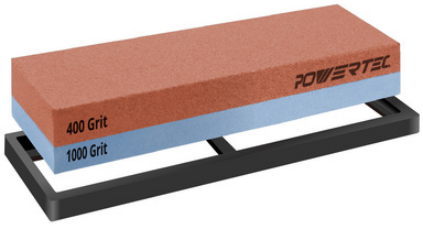
Screw Extractor

A hardened threaded tool used to remove broken bolts or studs by drilling a pilot hole and turning counterclockwise to grip and extract the fastener.



Single Cut File

Metal finishing tool with a single row of parallel teeth used for smoothing and refining surfaces, available in bastard, second cut, and smooth grades.



Whetstone

A rectangular sharpening stone made of natural or synthetic abrasive material such as novaculite or aluminum oxide, used to sharpen cutting tools to a fine edge.

Metal Working

Sheet Metal Tools



Adjustable Trammel Points

Marking tools mounted on a bar used to scribe circles or arcs at variable radii, enabling precise layout work in drafting and fabrication.



Aviation Snips

Sheet metal cutting tools available in straight, left, or right types, featuring compound action and serrated jaws for easier, controlled cutting.



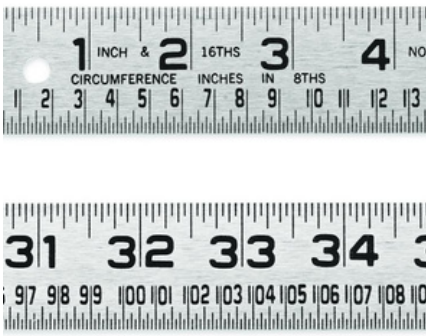
Flat Leg Pattern Dividers

Two-legged precision layout tool with flat metal arms and pointed ends, used to scribe, transfer measurements, and mark distances accurately between patterns or layouts.



Shear

Motorized hand tool with reciprocating or rotary cutting blades used to quickly and cleanly cut sheet metal, typically up to 12-gauge thickness.



Sheet Metal Layout Rule

Measuring tool for sheet metal layout with circumference scales on the reverse side for accurate marking and fabrication.



Tin Snips

Hand tool for cutting sheet metal, available in straight, left curved, right curved, and duckbill types for precision cutting.

Metal Working

Sheet Metal Tools cont.



Wing Divider

Adjustable measuring tool with tips spread by loosening a set screw, used for marking and transferring precise distances.

Power and Stationary Tools



Angle Grinder

Portable power tool available in 2–9 inch sizes, used with grinding, sanding, or wire brush wheels for metalwork.



Abrasive Flap Disc

Circular angle grinder attachment made of overlapping coated flaps mounted on a backing plate, used for grinding, blending, and finishing metal surfaces.



Abrasive Wire Cup Brush

Cup-shaped rotating wire brush attachment for an angle grinder, used to remove rust, scale, and paint from metal surfaces.

Metal Working

Power and Stationary Tools cont.



Cut-off Disc

Thin, reinforced circular abrasive wheel mounted on an angle grinder, used for quickly cutting metal, bolts, and other materials.



Diamond Saw Blade

Circular cutting attachment with an industrial mineral-coated rim, used for making precise cuts in concrete, masonry, stone, tile, and other hard materials.



Grinding Disc

Circular abrasive wheel attachment for an angle grinder, used for cutting, shaping, and removing material from metal or masonry surfaces.



Non-woven Abrasive Wheel

Synthetic fiber finishing attachment containing embedded cutting particles, used for cleaning, blending, deburring, polishing, and refining metal surfaces without excessive material removal.



Resin Fiber Sanding Disc

Circular fiber-backed grinding attachment coated with cutting minerals, used for rapid material removal, weld blending, deburring, and surface preparation on metal.



Wire Wheel Brush

Rotating circular brush attachment made of steel or brass wire mounted on an angle grinder, used to remove rust, paint, and surface debris from metal.

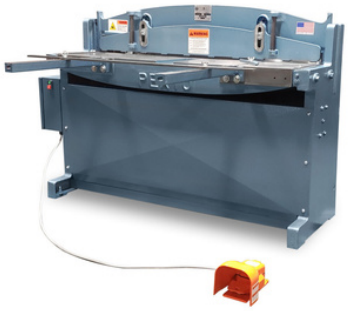
Metal Working

Power and Stationary Tools cont.



Bending Brake

Stationary or portable metalworking machine with clamping bar and bending leaf used to form sheet metal into precise angles, bends, and channels.



Hydraulic Shear

Hydraulic-powered cutting machine with rigid frame and blade or punch system using pressurized fluid force to cut flat stock, angle iron, and form holes.



Plate Roller

Machine with three or more heavy cylindrical rollers that bend and curve sheet metal as it is fed through, with adjustable rollers controlling the radius of the finished shape.



Sheet Metal Shear

Foot-operated cutting machine with heavy frame, lever, and sharp upper blade that cuts thin metal against a fixed lower blade with controlled force.



Bench Grinder

Electric motor–driven tool with rotating abrasive wheels used for sharpening and removing material by grinding surfaces using stones classified by grit and coarseness.



Drill Press

Stationary drilling machine that uses a vertical spindle for precise, controlled drilling in metal and other materials.

Metal Working

Power and Stationary Tools cont.



Magnetic Chuck

Workholding device that uses attraction force to securely hold ferrous metal pieces during grinding or machining operations.



Wheel Dresser

Handheld or mounted abrasive tool with diamond or star wheels used to clean, true, and reshape grinding wheels.



Portable Band Saw

Handheld power cutting tool with a continuous blade loop, used for cutting metal, pipe, and structural materials directly at job sites.



Gas Forge

Fuel-fired heating chamber lined with refractory material, used to heat metal to high temperatures for shaping, bending, drawing, and other metalworking operations.



Tongs

Long-handled metal holding tool with shaped jaws, used to securely grip, position, rotate, and transport heated workpieces during metalworking operations.

Wood Working

Wood



Cedar

Softwood known for natural decay resistance and distinctive aroma, commonly used for fencing and outdoor construction.



Birch

Hardwood with light color and fine, even grain, used for cabinets, doors, and veneers in solid or panel form.



Douglass Fir

Strong softwood commonly used for structural framing, valued for its high strength and load-bearing capability.



Particle Board

Engineered wood panel made from sawdust and resin, used for subflooring where high shear strength is not required.



Plywood

Engineered wood made of cross-laminated sheets for strength, used in flooring, roofing, and shear walls, graded by face quality.



Pressure Treated Lumber

Decay-resistant lumber treated with chemicals, typically fir, identifiable by green tint and used for outdoor construction.

Wood Working

Wood cont.



Oak

Hardwood with strong, open grain and prominent ray fleck patterns, commonly used for cabinets, furniture, and veneers.



Oriented Strand Board (OSB)

Engineered wood panel made from compressed wood particles, used for shear walls and roof sheathing, providing structural support in construction applications.



Redwood

Naturally decay-resistant wood with distinctive reddish-brown color and straight grain, commonly used for decking and landscaping.

Hammers (Wood)



Curved Claw Hammer

Handheld carpentry tool with a bent prying end for driving and removing fasteners, rounded striking face for finish work, typically weighing 13–16 oz.



Mallet

Soft-faced striking tool with interchangeable heads made of wood, plastic, rawhide, or rubber, used to strike surfaces without causing damage.



Shingler's Hatchet

Roofing hand tool combining cutting and striking functions with adjustable gauge for shingle exposure and nail-pulling slot, used for installing and trimming roofing shingles.

Wood Working

Hammers (Wood) cont.



Straight Claw Hammer

Striking tool with a nearly straight prying end and 16–28 oz head, used for pulling fasteners and framing work in construction and demolition applications.



Tack Hammer

Lightweight striking tool with small magnetic face used to hold and start short fasteners, allowing precise placement in upholstery and light woodworking.

Saws and Accessories



Back Saw

Fine-toothed cutting tool with reinforced back, used horizontally for precise woodworking cuts and joinery, providing accuracy and control in detailed carpentry work.



Coping Saw

Thin-bladed cutting tool with U-shaped frame, operating on pull stroke for detailed curved cuts in woodworking, enabling precise shaping and intricate patterns.



Hand Cross Cut Saw

Designed for cutting across wood grain, this manual woodworking tool typically measures 26 inches long and features 8–12 teeth per inch for smooth, clean transverse cuts.

Wood Working

Saws and Accessories cont.



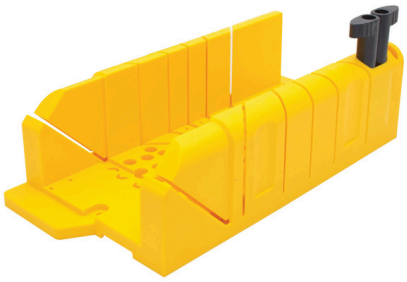
Hand Rip Saw

Designed for cutting along wood grain, this manual woodworking tool features chisel-shaped teeth with 4–7 teeth per inch for fast, aggressive material removal.



Keyhole or Compass Saw

Featuring a narrow blade, pointed tip, and fine teeth, this cutting tool creates curves and interior openings, easily starting cuts through pre-drilled access holes.



Miter Box

Guided cutting frame, often made of wood or metal, that holds a workpiece steady while a saw is used to make precise angled cuts for trim and woodworking joints.



Panel Saw

Large woodworking cutting tool designed for sizing sheet materials such as plywood, breaking them into smaller, manageable pieces for construction and fabrication projects.

Wood Working

Power Tools



Belt Sander

Power tool that uses a continuous abrasive loop for rapid material removal, coarse surface smoothing, and shaping of large woodworking or construction surfaces.



Circular Saw

Portable power tool with a rotating blade designed for cutting wood, while interchangeable blades enable efficient cutting of metal, stone, and other materials.



Circular Saw Blade

Rotating cutting accessory sized by diameter, designed for efficiently cutting wood, metal, and other materials when mounted on compatible power tools.



Disc Sander

Stationary power tool featuring a rotating 6–12 inch abrasive surface, designed for smoothing, shaping, and refining wood surfaces with precision.



Electric Drill

Portable power tool used for drilling holes, often featuring variable speed control for wood, metal, and other materials.



Finishing Sander

Power tool that uses a vibrating abrasive surface to smooth wood and other materials, creating an even texture and preparing surfaces for coating.

Wood Working

Power Tools cont.



Jig Saw

Handheld power tool with a reciprocating blade designed for cutting curves, patterns, and intricate shapes in wood, plastic, and other soft materials.



Miter Saw

Mounted power cutting tool with a pivoting base, designed to produce precise angled cuts and joints for framing, trim work, and woodworking projects.



Nail Gun

Power tool used for rapidly driving nails into wood or other materials, where nails are automatically fed from a loading chamber and fired by pulling the trigger.



Planer

Portable power tool designed for smoothing and leveling wood surfaces by shaving thin layers, improving flatness, thickness consistency, and overall surface quality.



Reciprocating Saw

Heavy-duty power tool with a back-and-forth blade motion, designed for demolition work and cutting through wood, metal, and piping materials efficiently.



Router

Handheld or table-mounted power tool with a flat base, motor housing, and spinning bit that cuts wood edges, grooves, and decorative profiles with adjustable cutting depth.

Wood Working

Boring Tools (Wood)



Auger Bit

Screw-tipped wood boring tool with a straight shank, used in power drills to quickly create deep, clean holes in wood materials efficiently.



Expansive Bit

Adjustable woodworking boring tool with square taper shank for brace use, designed to create holes of varying diameters in wood materials efficiently.



Forstner Bit

Wood boring tool with a flat cutting face and rim, designed to create clean, flat-bottomed holes ranging from 3/8 to 2 inches.



Hole Saw

Cylindrical cutting tool used in drills to cut round holes, typically 3/4 to 2 1/2 inches in diameter.



Spade Bit

Flat wood-boring tool with a hex shaft, used in power drills or drill presses for fast, efficient hole cutting in wood materials.

Wood Working

Woodworking Tools



Cat's Paw

Nail-pulling tool with curved, split claws for extracting embedded nails, also called a nail bar.



Hand Screw Clamp

Wooden holding tool with opposing threaded handles, designed to securely grip and align workpieces during woodworking, ensuring stability during cutting or assembly.



Nail Puller

Hand tool with a forked metal head and long handle designed to extract fasteners such as nails, staples, and brads from wood or drywall surfaces.



Nail Set

Small metal tool with a hollow tip used to drive nail heads below the wood surface for finishing work.



Block Plane

Small hand tool used for trimming end grain and fine woodworking, typically 5½–7 inches long, offering precise control for detailed shaping and smoothing.



Jack Plane

General-purpose hand tool used for rough shaping and smoothing wood along the grain, featuring a tail behind the handle for improved control and stability.

Wood Working

Woodworking Tools cont.



Smooth Plane

Handheld woodworking tool with a flat metal body and adjustable blade used to refine and finish surfaces, typically 5½–10 inches long and 1¼–2⅜ inches wide.



Surform Tool

Handheld rasp-like tool with a perforated blade used to shape and smooth material, available in flat, round, and half-round forms.



Wood Chisel

Hand tool with a single-beveled cutting edge sharpened to about 25–30 degrees, used for carving, shaping, and cutting wood.



Wood Rasp

Coarse hand tool used to shape and smooth wooden surfaces, available in types such as 4-in-hand and horse variants for detailed material removal and finishing.

Wood Working

Construction



Drywall Saw

Tapered hand cutting tool with a pointed tip, designed for creating openings and shapes in drywall during installation, repair, and construction tasks.



Drywall Trowel

Flexible flat metal blade with a handle, used to spread and smooth drywall compound and perform finishing passes



Utlility Knife

Sharp cutting tool designed for slicing materials such as drywall, roofing felt, and similar construction materials, offering precise control for general-purpose cutting tasks.

Stationary Power Tools



Band Saw

Stationary cutting machine with a continuous loop blade used for cutting curves and irregular shapes in wood and other materials with precision and control.



Drill Press

Stationary woodworking machine used for precise, vertical drilling of holes in wood with controlled depth and accuracy.



Lathe

Machine tool that rotates a workpiece around a central axis while a stationary cutting or shaping tool is applied to it.

Wood Working

Stationary Power Tools cont.



Radial Arm Saw

Versatile woodworking cutting machine with a sliding arm, designed for crosscuts, rip cuts, and compound angled cuts in various wood materials.



Table Saw

Stationary woodworking machine with a circular blade protruding through a flat table surface, used for accurately ripping lumber and cutting sheet materials.

Concrete

Concrete Tools and Supplies



Bull Float

Large concrete finishing tool with long handle, typically 8 inches wide and 36–48 inches long, used to smooth and level freshly poured concrete surfaces.



Concrete Edger

Hand tool with slightly curved edges used to smooth and finish the edges of freshly laid concrete.



Concrete Tampers

Concrete finishing tool with tubular handle used to compact and settle concrete, also called a jitterbug.



Corner Trowel

V-shaped concrete finishing tool sized about 2½ by 2½ by 6 inches, used for shaping inside or outside edges in curbs and steps.



Finishing Trowel

Flat, rectangular, steel concrete finishing tool about 4 inches wide and 14 inches long, used to smooth and polish laid concrete.



Fresno Trowel

Large steel finishing tool with detachable handle and curved ends, used to smooth and level concrete surfaces during finishing work for a uniform surface.

Concrete

Concrete Tools and Supplies cont.



Groover

Finishing tool used to form control grooves in freshly laid concrete, typically 2⅞ by 6 inches with ½-inch ridge depth and width.



Hand Float

Hand tool for rough concrete finishing, typically 4–5 inches wide and 13 inches long, used to smooth and level surfaces.



Hawks

A handheld, flat board with a perpendicular center handle used to hold and carry mortar, plaster, or concrete joint compound.



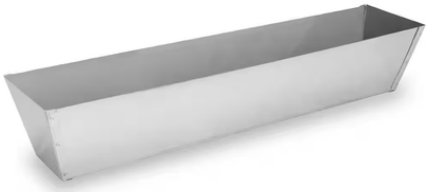
Masonry Bit

Carbide-tipped drilling tool designed for heat and wear resistance, used to bore into brick, block, and concrete materials with power drilling equipment.



Mortar Hoe

Long-handled mixing tool with perforated blade used for blending mortar, typically with a 5½-foot handle.



Mud Pan

Shallow tray used to hold and carry joint compound or plaster when working with small trowels or putty knives.

Concrete

Concrete Tools and Supplies cont.



Reinforcing Bar

A solid steel rod with a ribbed surface, used to reinforce concrete in construction; commonly 3/8" to 1" diameter and supplied in 20–40 foot lengths.



Sponge Rubber Float

Hand finishing tool with a soft foam-like pad, used for smoothing plaster or grout; must be kept wet during use to prevent material from sticking.



Star Drill

A hardened steel drilling tool with a five-point cutting tip, used for boring holes in masonry by striking with a hammer while rotating by hand.



Brick Chisel

A heavy-duty cutting tool with a wide 3½-inch blade and short body, used for cutting and shaping brick, block, and masonry materials.



Brick Jointer

Metal finishing tool with both ends bent about 20 degrees, used to smooth and shape mortar between bricks while one end serves as a handle for control.



Bricklayer Hammer

Masonry tool with a wedge-shaped cutting end and flat striking face, used for scoring, cutting, and tapping bricks into position during construction and repair work.

Concrete

Concrete Tools and Supplies cont.



Brick Trowel

A pointed, triangular steel blade hand tool measuring 4¾ inches by 11 inches, used for spreading, shaping, and applying mortar when laying brick and masonry units.

Plumbing Tools and Supplies

Plumbing Tools



Acid Brush

Small applicator tool with a tubular metal handle used to spread pipe joint compound and flux when soldering threaded and copper pipe connections.



Fitting Cleaning Brush

Hand tool with stiff metal bristles, often cylindrical or cup-shaped, used to clean pipe interiors, fittings, and threads before soldering for proper bonding.



Flaring Tool

Hand tool with a clamping yoke and cone-shaped forming die used to expand and shape soft copper tubing ends for leak-free plumbing connections.



Pipe Cutter

Hand tool with a rotating cutting wheel used to score and cut pipe, requiring controlled pressure to avoid damaging the blade.



Pipe Die

Circular hardened steel cutting tool with internal threading edges, used with a holder to form external threads onto pipe ends for secure fittings.

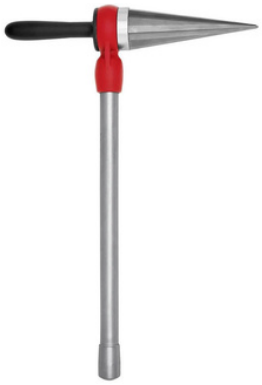


Pipe Die Stock

Ratchet-style handle used to hold and rotate a circular threading cutter, enabling controlled, reversible threading of pipe ends during plumbing installation and repair.

Plumbing Tools and Supplies

Plumbing Tools cont.



Pipe or Burring Reamer

Hand tool with a conical cutting head and brace, round, or T-handle shank used to remove burrs and smooth pipe ends after cutting.



Pipe Tap

Thread-cutting tool with tapered, fluted hardened steel body used to cut internal threads in pipe fittings.



Pipe Vise

Bench-mounted holding tool with V-shaped jaws and screw mechanism, used to securely grip pipe during cutting, threading, and other plumbing operations.



Pipe Wrench

Adjustable gripping tool with serrated jaws and pivoting head used to securely turn pipe, conduit, or round stock, typically available in multiple sizes for plumbing work.



Propane Torch

Handheld heating tool with trigger handle and nozzle that mixes propane with air to produce a focused flame for soldering and light metalwork.



Solder

Soft metal filler supplied in 1 or 5 lb spools, used to join copper pipes in plumbing; lead-free types are required for domestic water systems.

Plumbing Tools and Supplies

Plumbing Tools cont.



Teflon Tape

Thin white PTFE sealing wrap applied to threaded pipe or fittings to prevent leaks and ensure tight, reliable plumbing connections.



Tubing Cutter

Compact hand tool with a cutting wheel and adjustable knob used to score and cut copper or aluminum tubing.

Plumbing Tools and Supplies

Copper Pipe and Fittings



Copper Pipe

Rigid metal water-supply pipe with thin to thick wall types (M, L, K), typically ½–2 inches, joined using soldered fittings for plumbing systems.



Copper Tubing

Flexible water-supply tubing available in ¼–2 inch O.D. sizes, used in plumbing systems with soldered, flared, or compression fittings for connections.



C Cap

Domed copper fitting that fits over the end of a pipe to seal it, stopping the flow of liquid or gas.



CxC Coupling

Straight cylindrical copper fitting with two female ends, used to connect two copper pipes in a continuous line.



CxC Elbow

L-shaped copper fitting with two female ends, available in 45° and 90° angles, used to change direction of copper piping runs.



CxC Street Ell

L-shaped copper elbow fitting with one male and one female end, used to change pipe direction and form custom angles when paired with CxC elbows.

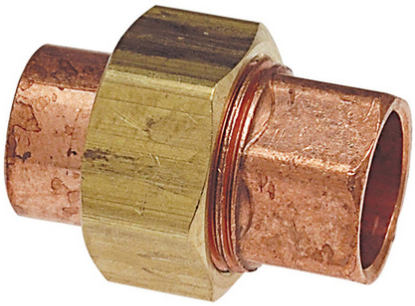
Plumbing Tools and Supplies

Copper Pipe and Fittings cont.



CxC Reducing Coupling

Straight copper fitting with two female ends of different sizes, used to connect and transition between copper pipes of varying diameters.



CxC Union

Three-piece copper fitting with a threaded nut and two mating ends, used to join copper pipes that cannot be rotated or moved for assembly.



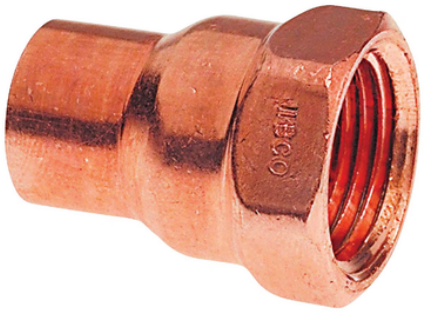
CxCxC Tee

T-shaped copper fitting with three female ends, used to join three copper pipes and split or combine flow.



CxCxF Tee

T-shaped copper fitting with two female copper ends and one threaded outlet, used to connect copper piping to a threaded pipe or fixture.



CxF Female Adapter

Copper fitting with solder socket and female threaded end, used to connect copper pipe to male-threaded fittings or fixtures.



CxM Adapter or Male Adapter

Copper fitting with solder socket and male threaded end, used to connect copper pipe to female-threaded plumbing components.

Plumbing Tools and Supplies

PEX Equipment and Fittings



PEX Clamp/Cinch Tool

Ratcheting hand tool used to tighten stainless steel bands around tubing fittings, creating a secure mechanical connection.



PEX Clamp/Cinch Ring

Stainless steel locking ring used with a specialized compression tool to secure PEX tubing onto fittings by tightening evenly around the connection point.



PEX Crimping Tool

Hand tool with long handles and ratcheting or squeeze-action jaws used to compress metal fastening rings onto tubing fittings for secure connections.



PEX Crimp Rings

Circular metal ring, typically copper or stainless steel, placed over tubing and fittings, then compressed with a specialized tool to create a secure plumbing connection.



PEX Cutter

Handheld cutting tool with a ratcheting handle and sharp V-shaped blade designed to produce clean, square cuts on flexible plastic plumbing tubing without deformation.



PEX Expansion Coupling

Barbed plastic or brass fittings designed for tubing that has been enlarged, which contracts around the fitting to form a tight seal.

Plumbing Tools and Supplies

PEX Equipment and Fittings cont.



PEX Expansion Tool

Handheld ratcheting tool with interchangeable cone-shaped heads that expands flexible plumbing tubing, allowing fittings to be inserted before it contracts to form a tight seal.



PEX Push-to-Connect Fittings

Tool-free plumbing connectors with internal gripping ring and O-ring seal that allow tubing to be pushed in for quick, secure, leak-resistant water system connections.



PEX Tubing

Flexible cross-linked polyethylene plumbing line used to transport water, valued for durability and flexibility, produced in three manufacturing types for different installation methods and performance.

ABS Pipe and Fittings



ABS Pipe

Black plastic sewer drainage pipe used in plumbing systems, joined with solvent-cemented spigot and hub fittings, commonly supplied in standard lengths and sizes.



Adapter-Spigot X Female Pipe

Plastic drainage fitting with male slip end and female threaded end used to connect drainage piping to threaded pipe systems, commonly used in cleanout assemblies.



Double Wye Hub

Plastic drainage fitting shaped like a double Y junction, used to connect two branch lines into a main pipe at 45-degree angles for smooth flow transitions.

Plumbing Tools and Supplies

ABS Pipe and Fittings cont.



Female Adapter-Hub X Female

ABS drainage fitting with solvent-weld socket and female threaded end used to connect plastic pipe systems to threaded pipe in clean-outs and transitions.



Long Sweep ¼ Bend Hub

Long-radius ABS 90-degree elbow drainage fitting with solvent-weld ends, designed to reduce flow resistance and allow easier cleaning with augers or plumbing snakes.



Male Adapter-Hub X Male Pipe

ABS drainage fitting with solvent-weld socket and male threaded end used to connect plastic piping to female-threaded pipe systems for transitions and cleanout connections.



P Trap Hub with Union

ABS drainage fitting with curved water-seal section and union connection that traps water to block sewer gases while allowing easy disassembly for cleaning.



Wye Hub

ABS drainage fitting shaped like a Y, used to connect a branch line into a main pipe at a 45-degree angle for smooth flow changes.

Plumbing Tools and Supplies

Valves



Ball Valve

Quarter-turn flow control device with a rotating ball and internal bore operated by a handle, used to quickly open or shut off water flow.



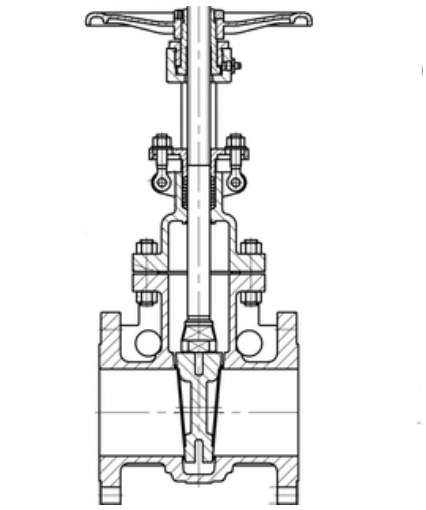
Check Valve

One-way flow control device that allows liquid to move in a single direction while automatically preventing reverse flow and protecting plumbing systems.



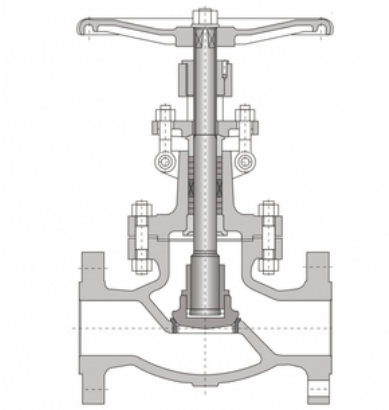
Cock Valve

Manual shutoff device, also called a stopcock, used to start or stop liquid or gas flow in a pipe using a rotating plug or handle.



Gate Valve

Handwheel-operated flow control device with rising or non-rising stem that lowers a wedge-shaped gate to fully stop or allow liquid passage in piping systems.



Globe Valve

Handwheel-operated flow control device with a rounded body and internal disc that seats to regulate or stop fluid flow through a pipe.



Hose Bibb

Outdoor faucet with threaded pipe connection and coupling outlet, used to control and supply water for garden and utility water distribution.

Plumbing Tools and Supplies

Misc Plumbing



Drain Auger

Flexible coiled cable tool with crank handle and cutting tip, used to rotate and feed into drains to break up and remove pipe blockages.



Pipe Hanger Strap

Galvanized flexible steel strap with pre-punched holes used to wrap around and support piping, cut to length and fastened with screws or nails for secure installation.



Pipe Joint Compound

Paste-like sealing compound applied to threaded pipe fittings to prevent leaks, available in formulations for plastic or metal piping systems.

Electrical

Electrical Tools



Digital Multimeter

A handheld electronic instrument with a digital display that measures AC/DC voltage, resistance, and current by using test probes to analyze electrical signals.



Non-Contact Voltage Tester

A pen-shaped device used to safely detect live electrical wires and outlets without contact, using sensors to identify electric fields.



LED Circuit Tester

Handheld electronic diagnostic tool with probes or leads used to test circuits for voltage, continuity, and proper polarity in electrical systems.



Circuit Breaker Finder

A kit with a plug-in transmitter and a handheld receiver with lights or beeps, used to locate breakers and trace wires.



Conduit Bender (EMT Bender)

Long-handled tool with a curved metal head, used to form accurate 45° and 90° bends in electrical raceways for routing electrical wiring.



Fish Tape

Long, flexible steel or fiberglass pulling tool stored in a reel, used to route electrical wires through conduit and enclosed spaces.

Electrical

Electrical Tools cont.



Insulated Screwdrivers

Hand tools with metal shafts coated in thick plastic insulation and rubberized handles, designed to safely tighten or loosen screws.



Knockout Punch

A metal cutting tool with dies and a draw bolt that pulls a cutting head through panels, creating clean holes for conduit connections.



Non-Metallic Cable Ripper

A thin U-shaped metal hand tool used to safely slit NM cable sheathing without damaging internal conductors.



Electricians Scissors

Compact, heavy-duty metal cutting tool with sharp notched blades and insulated handles used to cut wire, cable, and strip insulation during electrical work.



Linesman Pliers

Heavy-duty hand tools with flat gripping jaws and cutting edges, used for twisting and cutting wire.



Long Nose Pliers

Slim, pointed hand tools with elongated jaws, used for gripping tight spaces, stripping wire, forming loops, and holding wire.

Electrical

Electrical Tools cont.



Cable Cutters

Heavy-duty, scissor-like hand tools with sharp, curved blades designed to cleanly cut thick insulated conductors and large-gauge wiring.



NM Cable Cutter

Compact, scissor-like hand cutting tool with sharp blades designed to cleanly sever sheathed wiring assemblies during installation or modification work.



Wire Stripper (with Crimping Function)

Multi-purpose hand tool with notched jaws, used to remove insulation, cut wire, and attach terminals securely.

Electrical

Electrical Supplies



Circuit Breaker

Protective electrical device rated in amps, housed in a panel, that automatically trips to interrupt current flow and protect wiring from overloads or short circuits.



Cartridge Fuse

Cylindrical electrical protection device with metal end caps and internal fusible element, designed to melt under overload and interrupt current flow to protect circuits.



Knife Fuse

High-amperage electrical protection device with flat blade contacts, rated 60–600 amps, designed for heavy service panels to interrupt current during overload conditions.



Conduit Straps

Metal fastening hardware used to secure electrical tubing to surfaces, available in single or double foot designs that wrap around EMT, rigid, or PVC raceways.



Core Solder

Spool-wound metal joining wire with internal flux used to bond metals, with rosin types for electrical wiring and acid types for sheet metal work.



Insulated Staple

Plastic-coated fastening device used to secure low-voltage electrical wiring to surfaces, commonly for doorbells or controllers, and not rated for 120-volt circuits.

Electrical Supplies cont.



Non-Metallic Cable Staples

Plastic or insulated fastening devices used to secure non-metallic electrical cable to wood framing, holding wiring safely in place without damaging insulation.



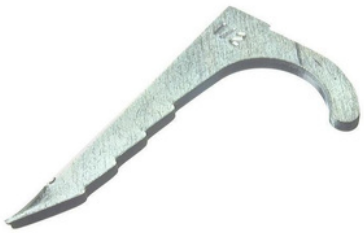
Non-Metallic Clamp Connector

Screw-tightened bracket used to secure non-metallic (NM) electrical cable to a junction or outlet box, providing strain relief and cable protection.



Solderless Connector

Crimp-style electrical joining device used to connect wires without soldering, available insulated or uninsulated, commonly used for durable mobile equipment wiring connections.



Strap Nail Drive

Die-cast zinc fastening strap driven into wood with a hammer, featuring a curved cradle that holds conduit securely in place.



Wire Nut

Twist-on electrical connector used to join AC wires, with color coding to indicate wire capacity and ensure safe, secure connections.



Service Panel

Main electrical distribution unit that receives incoming power and routes it through circuit breakers, providing overcurrent protection and control for building circuits.

Electrical

Electrical Supplies cont.



Friction Tape

Cloth-based adhesive electrical wrapping used over rubber insulating layers on wire splices, providing abrasion protection and replacing outer braid insulation for electrical safety.



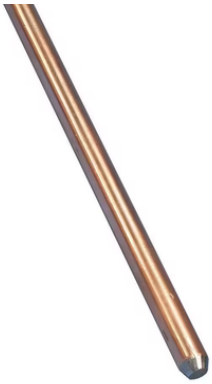
Plastic Tape

A vinyl electrical insulating wrap available in various colors, used to protect wire splices and connections while providing moisture resistance and electrical insulation.



Rubber Tape

Self-fusing insulating wrap used to protect high-voltage electrical connections, typically layered beneath outer coverings for added sealing, insulation, and moisture protection.



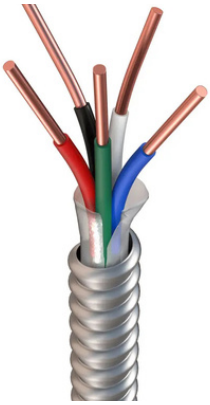
Ground Rod

Metal electrode driven into the earth to provide electrical system grounding, connected to service equipment with a conductor and clamp for safety.



Ground Rod Clamp

Metal clamp used to securely attach a conductor to a buried electrode, reinforcing bar, or metal water pipe, ensuring safe electrical grounding.



Armored Cable

Electrical wiring assembly with flexible metal casing surrounding insulated conductors, designed to run continuously from box to box without splices for protection.

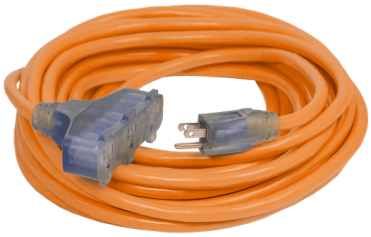
Electrical

Electrical Supplies cont.



Electric Cord

Flexible insulated electrical wiring used for extension assemblies and portable tools, available in plastic or rubber jackets for durability, safety, and reliable power delivery.



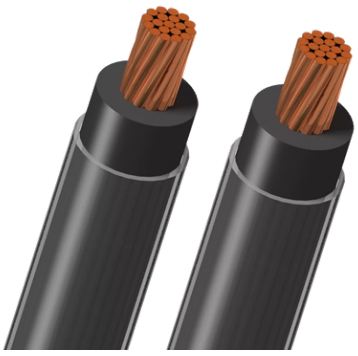
Extension Cord

Flexible insulated electrical lead with plug and receptacle ends, used to extend power supply from an outlet to portable tools or devices safely.



Non-Metallic Cable

Plastic-sheathed conductors used for residential indoor branch circuits, containing 2–4 conductors in common sizes 14–6 for safe power distribution.



Plastic Covered Electric Wire

Insulated conductor with protective plastic coating used in circuits, where gauge size indicates thickness; higher numbers represent smaller conductors for electrical distribution.



Single Conductor

Single insulated electrical wire, solid or stranded, with thermoplastic insulation (e.g., TW or THHN), used in conduit wiring from 14 to 0 AWG sizes.



UF Cable

Moisture-resistant electrical assembly with solid plastic insulation and protective jacket, designed for direct burial and outdoor wiring applications.

Electrical

EMT & Flex Conduit



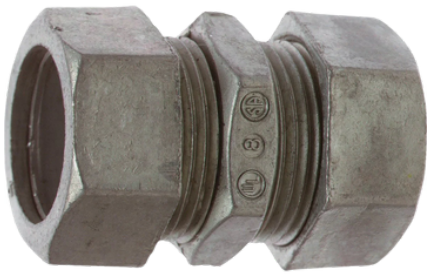
Electrical Metallic Tubing

Thin-walled, rigid steel conduit with smooth interior, sold in 10-foot lengths and ½–2 inch sizes, joined with fittings to protect indoor electrical wiring.



EMT Connector

Small cylindrical metal fitting with a threaded or set-screw end and locknut, used to join EMT conduit to electrical boxes or panels.



EMT Coupling

Short cylindrical metal fitting with compression or set-screw ends used to securely join two EMT conduit sections, maintaining alignment, continuity, and electrical grounding.



EMT Sweep

Pre-bent, smooth-radius EMT conduit section with no threads, used to change direction of wiring runs while maintaining cable protection and easy wire pulling.



Flexible Conduit

Flexible raceway made of interlocked, heavily zinc-coated steel strip wound in a spiral, used to protect and route wiring where movement or bending is required.

Electrical

Rigid Conduit



Rigid Conduit

Heavy-duty steel raceway with threaded female ends, available in galvanized or enamel finishes, used to protect wiring in exposed or harsh environments.



Rigid Coupling

Threaded steel fitting used to join two sections of rigid conduit, ensuring a secure, grounded, and continuous protective path for electrical wiring.



Rigid Elbow or Sweep

Threaded male rigid metal conduit fitting with a curved 90-degree or sweep bend, used to change wiring direction while maintaining protection and alignment in conduit runs.



Raintight Hub

Cast aluminum conduit fitting with mounting flange and threaded inlet, used to securely attach conduit to panels while providing a weather-resistant seal.



Service Entrance Elbow

Threaded rigid conduit elbow with female ends and removable cap, used to change direction and provide access for wire pulling or splicing.

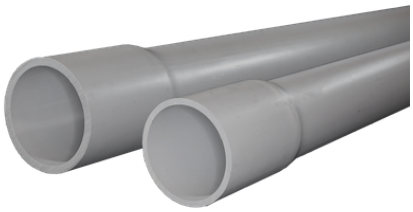


Service Entrance Cap

Weatherproof hooded fitting made of cast aluminum or PVC, used to terminate service entrance raceways and protect conductors from moisture intrusion.

Electrical

PVC Conduit



PVC Conduit

Rigid gray plastic raceway used indoors, outdoors, or underground, joined with solvent cement to provide waterproof protection and routing for electrical wiring.



PVC Coupling

PVC fitting used to join two sections of conduit, solvent-welded with cement to create a permanent, waterproof, and rigid electrical conduit connection.



PVC Elbow or Sweep

Curved PVC conduit fitting with long radius bend, solvent-welded to pipe sections, used to smoothly change wiring direction while reducing cable stress.



PVC Male Adapter

PVC conduit fitting with solvent-weld end and male threaded end, used to connect PVC conduit to boxes, panels, or other threaded electrical components.

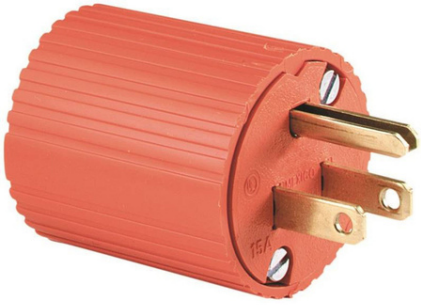


PVC Pull Elbow

PVC 90-degree conduit elbow with removable cover for wire pulling or splicing access, solvent-welded to conduit and identified by LB or LR configurations.

Electrical

Boxes and Devices



Cord Cap

Male electrical plug attached to the end of extension or power tool cords, used to connect flexible cords to receptacles for power supply.



Cord Connector

Female electrical coupling device designed to receive a male plug, providing a safe connection point for extension assemblies and power tool power supply.



Duplex Receptacle

Wall-mounted electrical outlet with two sockets, installed in flush or surface boxes, providing convenient power access for standard plug-in devices.



GFCI Receptacle

Electrical outlet with test and reset buttons that monitors current flow, automatically shutting off power to prevent shock from ground faults in wet or hazardous locations.



Junction Box

Metal enclosure, typically square or octagonal, used to house and protect electrical wire connections and splices.



Round Box

Round electrical enclosure used for ceiling fixtures or light installations, designed to house and protect wire connections while supporting lighting devices.

Electrical

Boxes and Devices



Switch Box

Metal or plastic enclosure with knockouts for raceways or nonmetallic wiring assemblies, used to house switches and protect wiring connections safely.



Single-Pole Toggle Switch

Basic on/off control device with two terminals and a single toggle, used to control one circuit from one location by opening or closing the connection.



Three-Way Toggle Switch

Three-terminal control device with one common and two traveler screws, used to operate a circuit from two locations by routing current between connections.

Power Mechanics

Power Mechanics Tools



Adjustable Reamer

Hand tool with replaceable blades that slide along a taper, allowing manual adjustment to enlarge and smooth holes within a specific size range.



Expansion Reamer

Adjustable hole-finishing tool with tapered cutting blades and expansion mechanism that compensates for wear by slightly increasing diameter for precise hole sizing and smoothing.



Compression Gauge

Dial-type pressure measuring device with threaded fitting, used to test fluid or pressure levels ranging from 0–300 psi in mechanical systems.



Impact Wrench

Power tool with pistol-grip body and square drive anvil (3/8", 1/2", 3/4") that delivers high-torque impacts to quickly loosen or tighten fasteners.



Power Timing Light

Handheld pistol-grip diagnostic tool with trigger, cables, and strobe lamp that connects to 6V or 12V ignition systems to flash timing marks for adjustment.



Spark Plug Gauge Set

Set of wire or feeler tools used to measure and adjust electrode gaps, typically ranging from 0.020 to 0.040 inches for ignition system tuning.

Power Mechanics Tools cont.



Tachometer

Handheld measuring instrument with dial or digital display used to measure rotational speed (RPM) of engines, tools, or machinery during operation.



Torque Wrench

Precision hand tool with long metal handle, ratcheting or beam-style head, and 1/4", 3/8", 1/2", or 3/4" drive used to tighten fasteners to a specified rotational force.

Grease Guns and Fittings



Pneumatic Grease Gun

Portable air-powered lubrication tool that connects to an air line, using compressed air to deliver grease under pressure for servicing fittings and machinery.



Lever Action Grease Gun

Hand-operated lubrication tool, filled by hand, cartridge, or pump, used to manually apply grease under pressure to fittings and machinery.



Zerk Grease Fitting

High-pressure lubrication port with ball check valve that allows secure grease gun attachment, enabling controlled lubrication of mechanical components without backflow.

Welding

Arc Welding Tools



GMAW Machine

Constant-voltage welding system that feeds continuous wire electrode with shielding gas, producing efficient semi-automatic welds for metal fabrication and repair applications.



Plasma Cutter

Handheld cutting tool that uses an electric arc and compressed gas to create a high-temperature plasma stream for cutting and gouging metal materials.



Welding Power Supply

Electrical device that converts AC power into controlled welding current, supplying constant current for SMAW/GTAW or constant voltage for GMAW welding processes.



Electrode Holder

Insulated clamp device connected to a welding cable that securely holds a consumable welding rod for Shielded Metal Arc Welding (SMAW) operations.



GMAW Welding Gun

Handheld tool used in gas metal arc welding that feeds continuous wire and shielding gas through a nozzle to create controlled arc welds.



Ground Clamp

Conductive clamp that attaches a welding cable to the workpiece or table, completing the electrical circuit.

Welding

Arc Welding Tools cont.



GTAW Torch

Handheld welding tool that holds a non-consumable tungsten electrode and delivers shielding gas to protect the weld area during precise arc welding operations.



Chipping Hammer

Welding cleanup tool with pointed and chisel-shaped head used to remove slag and scale from welds, also known as a slag removal tool.



Contact Tips

Replaceable copper components in GMAW guns that transfer electrical current to the welding wire while guiding it through the nozzle.



GTAW Foot Pedal

Foot-operated control device used in GTAW welding to regulate amperage output in real time, allowing precise heat adjustment while welding without using hands.



Leather Gloves

Heat-resistant leather gauntlet-style protective wear used in welding to shield hands and forearms from sparks, heat, and molten metal exposure.



Welding Nozzle

A tapered, heat-resistant attachment that directs shielding gas and concentrates heat around the weld area, protecting the molten weld pool and improving weld quality.

Welding

Arc Welding Tools cont.



Switchable Magnet

Magnetic positioning device with an on/off switch used to temporarily hold and align metal pieces at set angles during welding or fabrication work.



Welding Pliers

Multi-purpose welding tool with insulated handles and forged steel jaws used to cut wire, remove spatter, clean nozzles, and grip hot materials safely.



Welding Magnet

Magnetic holding tool used to temporarily position and align metal pieces at fixed angles, helping maintain accuracy before permanent joining.



Welding Helmet

Protective headgear with tinted lens that shields eyes and face from welding arc radiation, with auto-darkening models adjusting shade when arc is struck.

Welding

Arc Welding Electrodes



Hardfacing Electrode

Specialized SMAW welding rod made with alloyed metal and wear-resistant coating, used to deposit hardened, abrasion-resistant layers for surface reinforcement applications.



SMAW Electrode

Consumable shielded metal arc welding rod coated with flux, classified by codes like E6010, where “E” means electrode, “60” equals 60,000 psi strength, “1” all-position use, and “0” cellulose sodium coating for DCEP.



Solid Welding Wire Electrode

Solid GMAW filler wire classified as ER-70S-4, where “ER” indicates electrode/rod, “70” equals 70,000 psi strength, and “S” denotes solid wire with shielding gas compatibility.



Tubular Wire Electrode

Flux-cored tubular welding wire containing internal flux for shielding, used without external gas, with classification indicating strength and welding position capability.



Tungsten Electrode

Non-consumable tungsten rod used in GTAW (TIG) welding to create and maintain an arc without melting during the welding process.

Welding

Oxyacetylene Welding & Cutting Tools



Acetylene Regulator

Pressure-control device used to manage acetylene flow from a cylinder to a torch, featuring left-hand threaded hose connections for safe operation.



Oxygen Regulator

Two-stage pressure-control device used to manage oxygen flow from a cylinder to a torch, featuring right-hand threaded hose connections for safe operation.



Cutting Tip

Replaceable oxy-fuel torch component with central oxygen orifice and surrounding preheat holes, used to direct oxygen flow that oxidizes and cuts metal.



Cutting Torch

Handheld oxy-fuel tool with valves that mix oxygen and acetylene, plus a lever releasing high-pressure oxygen for efficient metal cutting.



Heating Tip

Multi-orifice oxy-fuel torch attachment, also called a rosebud, used to distribute a broad flame for evenly heating and bending metal.



Torch Handle

Central body of an oxy-fuel tool, often called the torch butt, used to control gas flow and attach cutting or welding attachments.

Welding

Oxyacetylene Welding & Cutting Tools cont.



Welding Tip

Replaceable oxy-fuel torch attachment with a small orifice for controlled flame output, available in various sizes to match material thickness and heat requirements.



Flint Spark Lighter

Handheld ignition tool used to safely light oxy-fuel torches, producing ignition sparks when squeezed to ignite gas without using matches or other ignition sources.



Tip Cleaner

Set of small, needle-like round files in various sizes used to clean and maintain torch orifices.



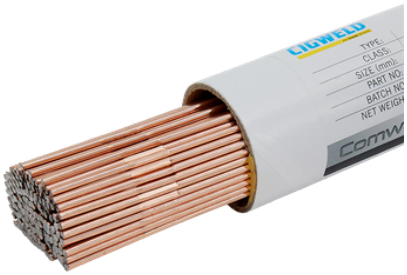
Welding Goggles

Protective eyewear with shaded lenses used in oxy-fuel welding to shield eyes from harmful radiation, bright flame glare, and flying sparks or spatter.



Brazing Rod

Filler metal material used in brazing, typically 1/16–3/16 inch diameter and about 36 inches long, melted to join metals without melting the base material.



Copper Coated Mild Steel

Filler material, typically 1/16–3/16 inch diameter and 36 inches long, used for welding or brazing with improved conductivity and corrosion resistance.

Welding

Oxyacetylene Welding & Cutting Tools cont.



Flux-Coated Brazing Rod

Filler metal, typically 1/8 inch diameter, used to join metals by brazing while its coating cleans and protects the joint during heating.

Other Welding Equipment



Spot Welder

Stationary or pedestal-mounted resistance welding machine with two copper electrode tips that clamp overlapping sheet metal and apply pressure and electrical current to form localized welds.

Painting

Painting and Glazing Equipment



Airless Paint Sprayer

High-pressure paint system with hose, gun, and positive displacement pump that forces coating through a tip without air atomization, requiring no thinning and producing minimal overspray.



High Volume Low Pressure Sprayer

Spray gun system with cup and air cap that atomizes paint, giving finer control and less overspray than airless sprayers.



Spray Gun

Handheld compressed-air coating tool with trigger, fluid cup or hose feed, and nozzle that atomizes paint into a fine mist for smooth, even application.



Drop Cloth

Protective covering made of disposable paper or plastic or reusable canvas or cotton, used to shield surfaces from paint, dust, and debris.



Paint Filter

Mesh or paper device used to remove debris and contaminants from paint before spraying, ensuring smooth application and preventing clogging in spray equipment.



Masking Tape

Light adhesive strip used to temporarily cover paper, glass, walls, and metal during painting, easily removable without leaving residue after use.

Painting

Painting and Glazing Equipment cont.



Mixing Paddle

Drill-mounted mixing attachment with spiral or paddle-shaped blades used to blend paint and other liquids evenly when spun by an electric drill.



Paint Brush

Handheld painting tool with natural or synthetic bristles used to apply paint; natural bristles for oil-based paints, synthetic for water-based, available in 1–6 inch widths.



Paint Roller and Tray

Paint application system consisting of a cylindrical applicator and reservoir, used to evenly apply coating to large surfaces, with specialty versions available for corners and trim.



Paint Scraper

Hand tool with a rigid metal blade used to remove paint, putty, or debris from surfaces by scraping.



Caulking Gun

Hand-operated dispensing tool used to apply sealants or adhesives from 1–2 lb cartridges, commonly used for caulking joints, sealing gaps, and finishing construction work.



Glass Cutter

Hand tool with hardened wheel used to score glass, allowing it to break cleanly along the scored line when pressure or tapping is applied.

Painting

Painting and Glazing Equipment cont.



Glazier Points

Small, flat, triangular, or diamond-shaped pieces of metal used to hold glass panes securely in wooden window sashes or within picture frames



Putty Knife

Hand tool with a flexible or rigid blade, typically 1–12 inches wide, used to apply spackle, seal windows, and scrape surfaces during finishing work.



Dust Mask

Disposable respiratory face covering used to filter airborne particles, designed for single use to help protect the lungs during work.



Respirator

Protective breathing device with replaceable filters that removes dust, fumes, and vapors from inhaled air, providing superior protection compared to disposable dust masks.



Emery Cloth

Flexible abrasive material coated with emery grit, used for polishing and smoothing metal surfaces in fine to coarse grades for finishing applications.

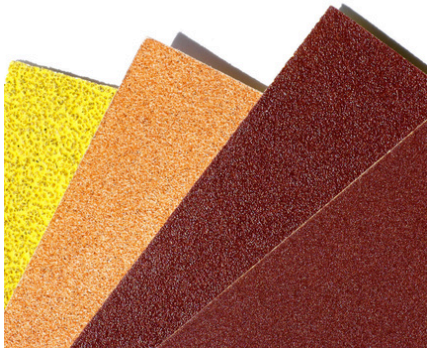


Non-woven Abrasive Pads

Plastic fiber cleaning and finishing pad used for scuffing and preparing metal surfaces, non-rusting, washable, and commonly known as Scotch-Brite material.

Painting

Painting and Glazing Equipment cont.



Sandpaper

Abrasive material available in grits ranging from very fine to very coarse, used to smooth, shape, or finish wood, metal, and other surfaces by hand or machine.



Steel Wool

Abrasive cleaning material made of fine steel fibers, sold in pads or rolls and graded from 4/0 (finest) to 4 (coarsest), used for cleaning, smoothing, and finishing surfaces.

Irrigation

PVC Pipe and Fittings



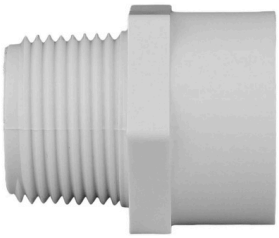
Compression Coupling

Mechanical repair fitting with nuts and rubber seal used to join steel or PVC pipe without solvent welding, creating a watertight connection.



Female Adapter

PVC conduit fitting used to connect PVC pipe to threaded pipe or components, featuring a female threaded end.



Male Adapter

PVC conduit fitting with a solvent-weld (slip) end and a male threaded end, used to connect PVC pipe to boxes, fittings, or threaded components.



PVC Cement

Solvent adhesive used to permanently bond PVC pipe and fittings by chemically softening the surfaces; applied to both parts before joining and twisting for a strong, watertight seal.



PVC Primer

Chemical solution used to clean and soften PVC pipe and fittings before cementing, improving adhesion and creating a strong, leak-proof solvent-welded joint.



PVC Pipe

Rigid plastic pipe used in irrigation systems to distribute water to sprinklers and drip lines, typically available in 1/2–2 inch sizes and supplied in 20-foot lengths.

Irrigation

PVC Pipe and Fittings cont.



PVC Pipe Cutter

Handheld ratcheting tool with a sharp blade designed to cleanly cut PVC pipe, producing smooth, square cuts for proper fitting and solvent welding.



S Cap

PVC end fitting used to seal the end of a pipe, stopping water flow and providing a closed termination.



SxS Coupling

PVC solvent-weld fitting with socket ends on both sides, used to join two straight sections of pipe.



SxS Elbow

PVC fitting used in irrigation systems to change pipe direction, available in 45° and 90° angles for solvent-weld connections.



SxS Reducer Bushing

PVC fitting used in irrigation systems to connect pipes of different diameters, allowing a secure solvent-weld transition between sizes.



SxS Street Ell

PVC fitting used in irrigation systems to change pipe direction, featuring one slip (socket) end and one spigot end for compact solvent-weld connections.

Irrigation

PVC Pipe and Fittings cont.



SxSxS Tee

PVC three-way fitting with socket ends on all openings, used to connect three pipe sections and split or combine water flow in plumbing systems.



SxSxT Tee

PVC three-way fitting with two socket ends and one threaded outlet, used to connect pipe runs and transition to a threaded branch at an intersection.



SxT Elbow

PVC fitting with one socket (slip) end and one threaded end, used to connect PVC pipe to threaded components while changing direction at 45° or 90°.



SxT Reducer Bushing

PVC fitting with socket and threaded ends used to connect PVC pipe to a smaller diameter threaded pipe, allowing a secure size transition.



SxT Street Ell

PVC fitting with one slip (socket) end and one threaded end, used to connect PVC pipe to threaded components at a 45° or 90° angle while saving space.

Irrigation

Sprinkler Irrigation



Backflow Preventer

Plumbing device with valves and check mechanisms installed in irrigation systems to prevent reverse flow, stopping contaminated water from entering the potable water supply.



Irrigation Control Valve

Electrically operated valve that regulates water flow to zones, opening and closing automatically based on signals from the controller.



Pop-Up Spray Head

Sprinkler head that rises above ground when active, spraying a fixed pattern of water evenly across small lawn or landscape areas.



Rotary Nozzle

A sprinkler device with a rotating nozzle mechanism, used to distribute water in a circular or adjustable pattern over landscaped areas for efficient irrigation coverage.



Rotor Sprinkler Head

Sprinkler head that rotates streams of water in arcs, providing longer distance coverage for larger areas compared to fixed spray heads.



Sprinkler Pressure Regulator

Inline irrigation device with spring-loaded or diaphragm body that reduces and stabilizes incoming water pressure.

Irrigation

Sprinkler Irrigation cont.



Valve Box

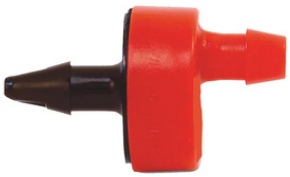
Protective underground enclosure that houses irrigation valves, keeping them accessible for maintenance while shielding them from dirt, damage, and weather conditions.

Drip Irrigation



Barbed Drip Irrigation Fittings

Small plastic connectors with ridged ends used to join, split, or change direction of drip tubing in irrigation systems securely.



Button Drip Emitter

Small inline irrigation device with a rounded body that attaches to tubing and releases water at a controlled slow rate directly to plant roots for efficient watering.



DISC FILTER SCREEN FILTER

Drip Filter

Inline filtration device installed in drip systems to remove debris and prevent clogging, available as disc filters (stacked grooved discs) or screen filters (fine mesh screen element).

Irrigation

Drip Irrigation cont.



Drip Pressure Regulator

Inline irrigation device with spring or diaphragm housing that reduces incoming water pressure to safe levels for drip systems.



Inline Drip Tubing

Flexible tubing with built-in emitters spaced evenly, delivering consistent water output along its length for efficient irrigation of rows.

Irrigation Tools



Drip Tubing Insertion Tool

Handheld plastic or metal tool with tapered or forked tip used to push barbed fittings into drip tubing, reducing strain and ensuring secure, leak-free irrigation connections.



Hole Punch Tool

Handheld plastic or metal device used to create clean, precise holes in drip tubing, allowing secure insertion of emitters or fittings.



Riser Extractor Tool

Handheld metal device with threaded or gripping head used to remove broken or stuck sprinkler risers from underground fittings without damaging threads.

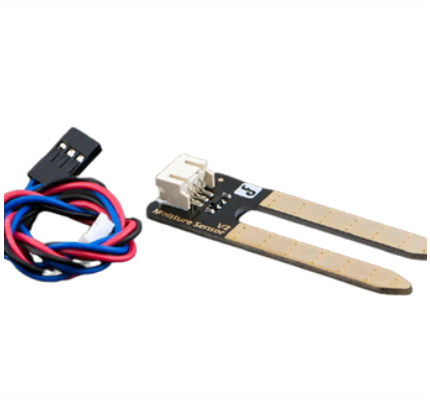
Irrigation

Irrigation Tools cont.



Smart Irrigation Controller

An electronic irrigation device with programmable and sensor-based controls, used to automatically adjust watering schedules based on weather, soil conditions, and plant needs.



Soil Moisture Sensor

Electronic sensing device with probe electrodes inserted into ground, used to measure water content and signal irrigation systems to adjust watering based on ground conditions.



Sprinkler Adjustment Tool

Handheld plastic or metal tool used to modify sprinkler heads, allowing control of spray pattern, arc, and radius for precise water distribution in irrigation systems.



Wire and Valve Locator

Handheld electronic diagnostic device with transmitter, receiver, and probe antenna used to trace buried irrigation control wires and identify underground valves.

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