PRODUCT KNOWLEDGE TRAINING

Learn the common features and uses of each product.

PK DESCRIPTIONS

1. Power Drill

• Available in different chuck capacities, such as 1/4", 3/8" or 1/2". For example, 1/4" means that is the largest diameter shank that will fit the chuck. The speed of the drill also increases with the size.
• Motor load limit can be light-, medium- or heady-duty. The higher the amp rating, the more powerful the drill. Drills rated at 2 amps are generally considered light-duty drills, while 5-amp drills are considered heavy-duty.
• Tighten the drill bit in place with a chuck. A keyed chuck uses a rotary key to tighten and loosen the chuck. A keyless chuck is operated by hand.
• Another feature on some drills is variable speed. They allow the operator to control the drill's revolutions per minute, usually by varying pressure on the trigger switch. Some models also allow the user to vary the torque. Higher torque is better for driving screws, and higher speed is better for drilling holes.
• A good quality 1/4" drill can drill through concrete, metal, plastic and other materials. Better for high speed and not high torque. Better for sanding and buffing than 3/8" or 1/2" drill sizes.
• A 3/8" drill has more speed, but less power than a 1/2" drill. They are usually built with a double-reduction gear system. Can perform most of the drilling jobs a 1/4" drill can, and can handle a larger range of drill bits.
• A 1/2" drill has high torque and slow speed which is ideal for making large holes in metal and wood. Best drill for use with hole saws.

2. Cordless Drill

• Operates with a rechargeable battery, with sizes ranging from 9.6 volts to 24 volts.
• Most portable drill and popular among consumers and pro customers.
• Lower-voltage drills cannot handle more heavy-duty drilling jobs.
• An important feature is an adjustable clutch. This lets the user select the degree of force applied to the drill. This helps prevent the motor from stalling and overheating, which can damage the battery.

3. Hammer Drill

• Used to drill quickly through concrete, stone, block and brick.
• While the drill turns, the drill vibrates the chuck back and forth or side-to-side to help the bit chip the material while it is drilling.
• Many models have a mode selector, allowing the operator to choose rotation only, like a conventional drill, and hammer drill, which combines the drill and hammer action. Better models might offer a hammer only option for chisel and scraper attachments.
• Do not confuse with a rotary hammer, which can accommodate core bits up to 6" in diameter. These tools have unique bit drive and retention methods rather than the conventional geared chuck.
• Manufacturers will measure speed by rpm (revolutions per minute), and the hammer action by bpm (blows per minute).

4. Angle Drill

• Has an angled head designed for tight fits and close-quarter drilling.
• Available in 3/8" or 1/2" sizes.
• Some models feature an angle attachment that rotates the drill into any position, while a side handle allows one-hand operation and easy control.

5. Power Screwdriver

• A common type is a variable-speed, reversible drywall screwdriver. It is designed for driving drywall, decking and other self-drilling screws. They offer higher speeds than a power drill.

• A cordless, in-line screwdriver is handy for light-duty household applications. They have less power and speed than a power drill, but are easier to handle.

OTHER TRAINING TIPS

Designed to give you confi - dence on the salesfloor!
This section is for retail skills training specific to this core product category.

ANATOMY OF A DRILL

The **Chuck** tightens to hold the drill bit. The **Motor Housing** is usually made from a double-insulated plastic or cast alloy, while the **Air Vents** help to keep the motor from overheating. To reverse the direction of the drill bit, use the **Reversing Switch**. To lock the **Switch** in the on position, press the **Lock-On Button**. The **Adjustable Handle** provides extra leverage for a second hand.

FAQs

Q: If I buy a cordless drill, what volt model should I buy?
A: A 12-volt model will handle the needs of most d-i-yers. For bigger projects, a 14-volt or higher model is a good choice. For lighter duty, a 9.6-volt model should be sufficient. For extended use, you should get two battery packs.

Q: What type of drill do you recommend for do-it-yourself projects?
A: Most consumers use a 3/8" model that reverses, has variable speed and has a keyless chuck. You should get one that draws at least 3.5 amps.

UPSELLING

- When selling a drill, tell customers that gear construction is a key factor in determining quality. Less expensive drills have plastic gears. More expensive models have metal gears and will have longer life. However, some high-end models use high-impact plastic, which is lightweight and just as durable as metal.
- Better drills have convenient features such as a built-in level or an electric brake that stops the drill as soon as the trigger is released. Some drills might have a D-handle or a pistol grip mounted on the housing to improve leverage.
- Better drills also have variable speed and a reversing action.

ADD-ON SALES

- Drill Chuck
- Drill Bits
- Extension Cord
- StudFinder
- Extra Battery
- Ear Plugs
- Safety Glasses
- Dust Mask

SAFETY TIPS

- Always use safety glasses and ear protection when using a power drill.
- Double-insulated drills do not require a three-wire grounding cord and the user is protected in the event of an electrical short.
- Always make sure the drill bit fits tightly into the chuck before operating the drill.
- Never drill a hole that is larger than the rated capacity for the drill.
- Don't force the drill. If the drill begins to slow down, relieve the pressure so the drill bit can continue cutting smoothly. Forcing a drill can cause the motor to overheat and damage the drill bit.
- If the drill binds in the material, release the trigger immediately, unplug the drill and remove the bit from the material. Never use a "lock-on" feature if you are drilling in a material you suspect could cause the bit to bind. A bound up bit can cause the entire drill to rotate instead of the bit and pose a danger to the user.
- Unplug the drill before changing bits.
- Always have firm footing when drilling. Brace and position yourself carefully when drilling on a ladder or scaffolding.
- When drilling blindly, (when you don't know what might be behind the surface you are drilling into) always check for possibility of electrical wire and water lines. Use a scanner to find out for sure.

PRO CORNER

- Tradesmen will likely want a 1/2" drill.
- Power screwdrivers are the best choice for the pro who will be hanging a lot of drywall. This tool is lighter than a drill and a clutch on the tool prevents the user from driving a screw past the paper on the drywall. Battery-powered models do not last long enough to be useful on large jobs.
- Pros might be looking for high-quality features such as ball and needle bearings. Other quality features include built-in fans, welded connections and encased triggers that protect the switches by sealing out dust.

MERCHANDISING

- Power tool users, especially pros, are likely to be highly brand loyal. Stock three or four brands and make them equally prominent in the display.
- Display a sample model out of the box so customers can hold it in their hands. Display the rest in security cages below.

PRODUCT KNOWLEDGE TRAINING

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PK DESCRIPTIONS

1. Twist Drill Bit

• Used in both wood and unhardened metals to make clearance holes for bolts, screws, etc., and to make holes for tapping.
• Bits marked HS (high speed) or HSS (high speed steel) are suitable for drilling in metals or wood.
• Bits made of carbon steel should be used only in wood and not in metal. They are more brittle and less flexible than HSS bits

2. Hole Saw

• Cup-shaped blade with a bit in the middle, called a mandrel.

• Used for cutting holes in wood, plastic, plaster and light metals.
• Available in a range of diameters.

3. Brad-Point Bit

• Used for wood drilling only.
• Tip has a screw-type point leading the drill flute that prevents drill walking.
• Helps prevent splintering, as the brad point is the first part of the drill to emerge, allowing the user to back the drill out of the hole and finish from the other side of the material.

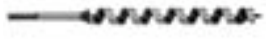
4. Spade Drill Bit

• Used in electric drills and drill presses for fast drilling of holes in wood.
• Bits have a forged, flat paddle with a point and cutting edges on one end.
• Bits are heat treated and cutting angles finish ground.
• Electricians use them for drilling clearance holes for wire in floor beams.

5. Countersink Bit

• Widens holes so flat-head screws may be flush mounted below the surface for a finished appearance.
• The counterbore is another version that makes a straight-walled hole so there's room for a wooden plug.

6. Auger Drill Bit



• Most commonly used with a brace for drilling holes in wood.
• Length varies from 7" to 10".
• Dowel bits are short auger bits from 5" long.
• Long (ship) auger bits range from 12" to 30".

7. Expansion Bit

• Takes the place of many larger bits.
• It is adjusted by moving the cutting blade in or out by a geared dial or by a lockscrew to vary the size of the hole.

8. Masonry Bit

• Also known as carbide-tipped bits.
• Used in electric drills, drill presses or hand drills for drilling holes in brick, tile, cement, marble and other soft masonry materials.
• Some versions have a titanium nitride-coated tip.
• Features two machined-in spiral threads, one for each cutting edge, to provide passageways for all dust and cuttings from the bottom of the hole.
• Diameters of carbide tips are the same as the full diameter of the body.

9. Tile Bit

• Used for drilling ceramic tile and glass.
• Has a ground tungsten carbide tip.

• Best if used with a variable speed power drill at a low speed.

10. Step Bit

• Has a graduated design so that various sized holes can be cut without changing bits.

• Designed for use with power drills and has self-starting tips eliminating the need for center punching. Can be used on all materials, but especially designed for use on metals.

11. Forstner Bit

• Used for drilling flat bottom holes in wood. Helps avoid the danger of the bit wandering.
• Available in sizes ranging from 3/8" to 2" and larger.
• Great for drilling holes in cabinet doors with concealed hinges.

12. Abrasive Attachments

• There are a wide variety of attachments for drills that can be used for shaping or finishing metal. Others can be used for sanding and cleaning a variety of materials.
• Buffers polish metal or furniture.
• Abrasive discs can be used for grinding or sanding.
• Wire wheels remove rust and paint, and some types can clean concrete, asphalt and plaster.
• Disc and drum rasps quickly complete coarse sanding jobs.

13. Circle Cutter

• Also known as a fly cutter.
• Has a cutting blade attached to a horizontal arm. It can cut holes up to 7" in diameter.
• Primarily used on a drill press.

14. Drill Guide

• Functions as a portable drill press.
• Has a bracket to hold a portable drill and allows the user to drill perfectly angled or perpendicular holes.

15. Chuck Key

• A small T- or L-shaped tool used to tighten and loosen the chuck on electric drills and drill presses.
• Available in various sizes, as well as universal models.

16. Drill Bit Sharpener

• Extends the life of drill bits and drills, since sharper bits put less strain on the drill.
• Provides consistent sharpenings for a variety of drill bits, including standard, masonry, carbide, titanium nitride, cobalt and left-handed.

OTHER TRAINING TIPS

Designed to give you confidence on the salesfloor!

This section is for retail skills training specific to this core product category.

ANATOMY OF AN AUGER BIT

The **Flute** is spiraled to carry debris away from the drill point. The **Lead Screw**, a feature of certain types of drill bits, sets the bit into the material and helps prevent wandering of the bit. The **Drive Shank** attaches the bit to the drill at the chuck.

FAQs

Q: How does the number on the shank of a drill bit relate to its size?
A: Bit diameters are usually marked by a single number—the numerator of a fraction. For example, an auger bit, which is marked by 16ths of an inch, with a number 8 would stand for 8/16" or 1/2". Twist bits are usually marked in the same manner by 64ths of an inch. Thus a No. 8 bit would stand for 8/64" or 1/8".

Q: Can I drill a hole in concrete?
A: Yes a high-speed masonry bit is used on concrete, concrete block, cinder block, brick and stone.

Q: What drill bits do you recommend for general use?
A: For drilling smaller holes in a variety of materials, choose a high-speed steel twist bit. These can drill holes from about 1/16" to 1/2" in wood, soft metal and other materials.

Q: I need to drill a 1" hole in a piece of wood. What bit do I need?
A: For drilling medium-sized holes in wood, a spade bit is a good choice. Common sizes range from 1/4" to 1-1/2". They can also be used on chipboards and floorboards.

Q: What's an auger bit used for?
A: It primarily used for cutting deep holes in all types of wood.

Q: I'm drilling in some wood, where I will probably hit some hidden nails. What bit should I use?
A: A spade bit is a good choice because it is relatively inexpensive and you can resharpen it with a file.

Q: What type of drill bit should I use for cutting a large hole for a new door lock?
A: For larger holes, use a hole saw. It ranges in size from about 1" to 4" and has a pilot bit and a saw-toothed circular rim.

UPSELLING

• Especially for the d-i-y customer who may just be starting his tool collection, suggest buying a whole set of drill bits rather than just one. This will greatly expand his versatility.
• If you are doing a lot of drilling with small bits, you might want a couple of extras, as they break easily.

ADD-ON SALES

- Power Drill
- Toolbox
- Extension Cord
- Safety Glasses
- Clamps
- Drill Bit Sharpener

SAFETY TIPS

- When drilling with hole saws or large capacity bits, use a drill press or clamp the material to the table. If this is not possible, beware that the drill bits can bind in the material if the drill is not held exactly level with the hole. If the drill bit binds, it may stop moving, but the drill may continue to move, taking your hand with it.
- Avoid burning the workpiece by drilling at slower speeds when using a hole saw or large capacity cutter.
- Never try to free up a jammed drill bit by stopping and starting the drill.
- Always unplug the drill before changing bits and accessories.
- Always have secure footing when drilling. Carefully brace yourself when drilling on a scaffolding or ladder.
- Always make sure the drill chuck is securely tightened around the spindle of the drill bit.

PRO CORNER

- Have a chart that matches the exact size of the screw you are drilling a hole for to the size of drill bit you need.
- High speed steel drill bits will last longer, are more efficient and versatile than carbon steel bits.

MERCHANDISING

- Drill bit sets are highly visible and can fetch a good margin. Display them off the power aisle.
- Use a shop and compare strategy down the aisle so customers can compare brands and prices.

PRODUCT KNOWLEDGE TRAINING

Learn the common features and uses of each product.

PK DESCRIPTIONS

1. Sidewinder Circular Saw

• Designed to make straight cuts on materials that are difficult to cut with a handsaw.
• Can make cuts on a variety of materials, and different types of materials generally require different blades.
• More compact than a worm drive saw. Has the motor mounted on the side of the blade.
• Requires less maintenance than worm-drive saws and does not have an oil-filled crankcase.
• The size of the saw tells you what is the largest size blade that you can use with it. Generally, blade sizes range from 5-1/2" to 10" in diameter. 5-1/2" and 7-1/4" are the most popular. The larger the blade, the thicker material it will cut.
• Rated by amperage. Better tools have higher amp and rpm ratings.
• Cordless models are popular, but offer less speed and power than corded models.
• A popular feature is an ejector chute that directs dust away from the work and a tilt base that allows the user to cut a variety of angles.

2. Worm Drive Circular Saw

• Designed to make straight cuts on materials that are difficult to cut with a handsaw.
• Can make cuts on a variety of materials, and different types of materials generally require different blades.
• The motor is inline with the handle and at a right angle to the blade arbor. It also has an oil-filled crankcase.
• The worm gear style of power transmission means this saw has plenty of torque, which keeps it from stalling in wet or pinched lumber.
• Quieter operation than sidewinder saws, but heavier, usually 14 to 19 lbs.
• It has better sightlines than a sidewinder style saw.
• Most common blade size is 7-1/4". Also available are 6-1/2" and 8-1/4" blades.

3. Beam Saw

• A circular saw with a high capacity, usually with blades 10" and larger. Can cut through 4" material.
• Used for cutting heavy timbers or for crosscutting or mitering angles on large, thick stock.

4. Trim Saw

• Small circular saw used to cut sheet goods, moldings and trim.
• Designed to make straight cuts on materials that are difficult to cut with a handsaw.
• Can make cuts on a variety of materials, and different types of materials generally require different blades.
• Easy to handle and lightweight.
• Some models can adapt to cut glass and ceramic tile.

5. Cordless Saw

• Most portable of all saws. Cordless versions of circular, sabre and reciprocating saws are available. Very popular among both pro and consumer customers.
• Operate off of a rechargeable battery, which is available in a wide range of voltages.
• Used for finish work and the larger capacity batteries have sufficient power for large framing or carpentry jobs.
• Usually feature an electronic brake to stop the brake instantly and avoid accidents.

6. Sabre Saw

• Also known as a jig saw.

• Cuts with an up and down motion and is ideal for cutting curves and irregular lines.
• Usually can cut through 1" hardwood and 1-1/2" softwood. More powerful models can cut up to 2-3/4" thick in wood and 3/4" in aluminum and some can cut thin steel.
• Quality machines operate at approximately 3,000 strokes per minute.
• Generally, better machines also have longer strokes, often 1".
• The scrolling feature on some saws allows the user to turn the blade by means of a knob on the top of the tool instead of turning the whole tool.
• Good quality jigsaws will also have features on the base that allow them to cut at an angle. An antisplintering insert is a removable plastic piece that sits in front of the blade and reduces the splintering of the material.
• Another quality feature is a blade guide.

This is a disk that sits behind the blade and supports it, keeping it on a straight path and resisting deflection. It provides for a more accurate cut and helps prevent blade bending and breaking.
• Better models have orbital action for more aggressive cutting.

7. Bayonet Saw

• Operates similar to a sabre saw.
• Some models have a worm gear and a large blade orbit to make it suitable for metals, plastics, thin wood and laminate.

8. Reciprocating Saw

• Commonly used for demolition, framing and rough-in work. Good for cutting in tight quarters.
• Used on a variety of materials, depending on the type of blade used. Some blades can cut through wood and metal, which is ideal when cutting through wood that might have nails in it.
• Uses a straight blade that operates with a back and forth motion. Some saws may have an orbital action, and some models may let you choose between orbital and linear action. A third option is a swing action, which offers a smoother and faster cutting action.
• Blade action usually goes to about 2,000 strokes per minute, but some pro models go higher.

OTHER TRAINING TIPS

Designed to give you confidence on the salesfloor!
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ANATOMY OF A CIRCULAR SAW

To change a blade, loosen the **Arbor Nut**. The **Blade Guard** covers the blade and follows it through the cut to protect the user from injury. The **Tilt Adjust** allows for beveled cuts. The **Sole** should be made of metal and allows the saw to glide smoothly and evenly across the material while keeping the blade at the desired angle for a cut. When changing the **Blade**, make sure you take note of the way the teeth are pointed and mount the new blade in the same way. The **Motor Housing** can be made of double-insulated plastic or die-cast aluminum.

FAQs

Q: What does the amp rating mean on power tools?
A: Generally, more amps translate into more power for electric tools.

Q: Do I need a special blade to cut plywood with my circular saw?
A: Yes, a plywood blade has small teeth that provide a clean cut and reduce splintering.

Q: How do you recognize a quality circular saw?
A: Look for amperage and types of bearings—top quality saws pull 12 or 13 amps and run on ball bearings. Lower-quality saws use roller or sleeve bearings and are rated about 9 or 10 amps. While plastic housings are not a sign of inferior quality, make sure the saw has extruded or cast metal base plates. Stamped metal plates can warp.

Q: What is a worm drive circular saw?
A: Unlike standard circular saws, these have the motor mounted parallel to the saw blade. In addition, they usually have a larger motor. These features make for more powerful, stronger tools that are preferred by pros looking for heavy-duty, long-term use.

Q: What can I cut with a circular saw?
A: With the proper blade, it can cut wood, metal, plastic, fiberglass, cement block, slate and brick.

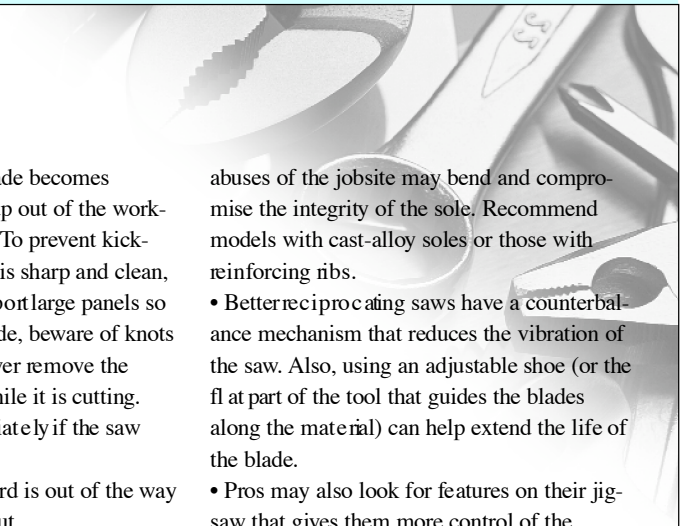
Q: What are other features that I should look for on a circular saw?
A: How easy it is to see where the blade is cutting, is it easy to change the blade, will it cut bevels, can you use a vacuum attachment and can you attach a rib fence guide?

Q: I need to make an accurate cut with a circular saw, but it is difficult to keep straight.
A: You can get more accurate cuts by using a guide or fence that helps you stay on the right path.

Q: Can I use my circular saw to cut masonry?
A: Yes, if you use an abrasive wheel, which looks like a thin grinding wheel. It can also be used to cut fiberglass and light metal.

Q: What should I look for when buying a saber saw?
A: Look to see if the mechanism for adjusting the base plate is sturdy. On less-expensive models these are weak and will eventually wobble, making it difficult to cut accurately. Look for a model that draws 3 amps and has variable speed.

Q: What factors are important when choosing a reciprocating saw?
A: Generally, the higher the amp rating, the



more cutting power. These saws range in size from about 4 amps to 11 amps. Other features include cordless options, orbital action that cuts more aggressively, an adjustable shoe to change the depth of the cut and variable speeds.

UPSELLING

• For circular saws, encourage models with additional features that will make the tool more versatile and easier to use. A tilting platform allows the user to cut at a variety of angles. Also, a saw with a clear view of the blade makes it easier to make an accurate cut. Better yet, some models have a laser that points to exactly where the blade is headed. An electric brake makes a saw safer.
• If a customer intends to make a variety of both straight and curved cuts, suggest buying both a sabre saw and a circular saw. While a sabre saw can make straight cuts, because it has a smaller blade and slower speed than a circular saw, it is not well-suited for this task.
• Dust extraction systems help contain the dust created by a saw. Some saw models have built-in ports that attach to hoses that carry away the sawdust.

ADD-ON SALES

• Safety Glasses
• Ear Plugs
• Saw Blades
• Extension Cord
• Ripping Guide
• Dust Extraction System

SAFETY TIPS

• Always wear eye protection. Chips from material can fly into your face, or the blade can break.
• Avoid loose clothing, jewelry and anything that could get caught in the saw. Tie back long hair.
• Use both hands on the saw and make sure you are in full control of it. Avoid cutting above shoulder height.
• Always make sure you are using the proper blade for the material you are cutting.
• Make sure the workpiece is secure before cutting. Never hold a workpiece in your hand or across your lap.
• Don't overreach. Keep a stable footing.
• Don't force the tool. Don't exceed the capacity of the tool.
• Double-insulated saws do not require a three-wire grounding cord and the user is protected in the event of an electrical short.
• Always unplug the tool before changing blades.
• Beware of kickback when using a circular saw, which is when the blade becomes pinched and the saw lifts up out of the workpiece and toward the user. To prevent kickback, make sure the blade is sharp and clean, do not let it overheat, support large panels so they will not pinch the blade, beware of knots or sap in the wood and never remove the blade from the material while it is cutting. Release the switch immediately if the saw stalls or binds.
• Always make sure the cord is out of the way and not in the line of the cut.
• Do not leave plugged-in tools unattended, especially if there are children nearby.

PRO CORNER

• Since they may be using a saw in heavy-duty applications, pros may want worm-drive saws with the motor at the rear of the blade.
• Pros may want sabre saws with heavy duty features such optional orbital action mode, a roller support behind the blade and counter balancing.
• Other saw features pros may appreciate are ergonomic grip handles and quick-change blade systems that allow them to change the blade without tools.
• The sole of the circular saw is the flat part of the tool that allows it to glide across the material being cut. The occasional drops and abuses of the jobsite may bend and compromise the integrity of the sole. Recommend models with cast-alloy soles or those with reinforcing ribs.
• Better reciprocating saws have a counterbalance mechanism that reduces the vibration of the saw. Also, using an adjustable shoe (or the flat part of the tool that guides the blades along the material) can help extend the life of the blade.
• Pros may also look for features on their jigsaw that gives them more control of the blade's movement. An electronic variable speed feature allows the user to control the speed of the blade. Some saws have an adjustable orbit motion, for more efficient use of the blade during different types of cuts.

MERCHANDISING

• Power tool users, especially pros, are likely to be highly brand loyal. Stock three or four brands and make them equally prominent in the display.
• Display a sample model out of the box so customers can hold it in their hands. Display the rest in security cages below.
• To encourage woodworking projects, merchandise a few how-to woodworking books nearby.

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• The worm gear style of power transmission means this saw has plenty of torque, which keeps it from stalling in wet or pinched lumber.
• Quieter operation than sidewinder saws, but heavier, usually 14 to 19 lbs.
• It has better sightlines than a sidewinder style saw.
• Most common blade size is 7-1/4". Also available are 6-1/2" and 8-1/4" blades.

3. Beam Saw

• A circular saw with a high capacity, usually with blades 10" and larger. Can cut through 4" material.
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• Commonly used for demolition, framing and rough-in work. Good for cutting in tight quarters.
• Used on a variety of materials, depending on the type of blade used. Some blades can cut through wood and metal, which is ideal when cutting through wood that might have nails in it.
• Uses a straight blade that operates with a back and forth motion. Some saws may have an orbital action, and some models may let you choose between orbital and linear action. A third option is a swing action, which offers a smoother and faster cutting action.
• Blade action usually goes to about 2,000 strokes per minute, but some pro models go higher.

OTHER TRAINING TIPS

Designed to give you confidence on the salesfloor!
This section is for retail skills training specific to this core product category.

ANATOMY OF A CIRCULAR SAW

To change a blade, loosen the **Arbor Nut**. The **Blade Guard** covers the blade and follows it through the cut to protect the user from injury. The **Tilt Adjust** allows for beveled cuts. The **Sole** should be made of metal and allows the saw to glide smoothly and evenly across the material while keeping the blade at the desired angle for a cut. When changing the **Blade**, make sure you take note of the way the teeth are pointed and mount the new blade in the same way. The **Motor Housing** can be made of double-insulated plastic or die-cast aluminum.

FAQs

Q: What does the amp rating mean on power tools?
A: Generally, more amps translate into more power for electric tools.

Q: Do I need a special blade to cut plywood with my circular saw?
A: Yes, a plywood blade has small teeth that provide a clean cut and reduce splintering.

Q: How do you recognize a quality circular saw?
A: Look for amperage and types of bearings—top quality saws pull 12 or 13 amps and run on ball bearings. Lower-quality saws use roller or sleeve bearings and are rated about 9 or 10 amps. While plastic housings are not a sign of inferior quality, make sure the saw has extruded or cast metal base plates. Stamped metal plates can warp.

Q: What is a worm drive circular saw?
A: Unlike standard circular saws, these have the motor mounted parallel to the saw blade. In addition, they usually have a larger motor. These features make for more powerful, stronger tools that are preferred by pros looking for heavy-duty, long-term use.

Q: What can I cut with a circular saw?
A: With the proper blade, it can cut wood, metal, plastic, fiberglass, cement block, slate and brick.

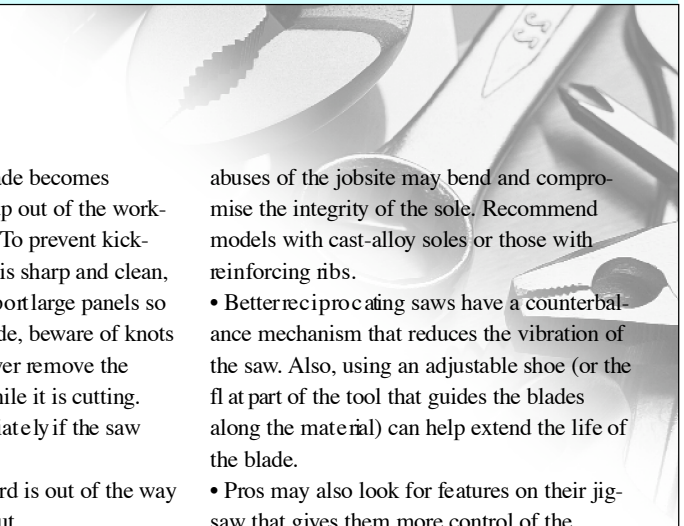
Q: What are other features that I should look for on a circular saw?
A: How easy it is to see where the blade is cutting, is it easy to change the blade, will it cut bevels, can you use a vacuum attachment and can you attach a rib fence guide?

Q: I need to make an accurate cut with a circular saw, but it is difficult to keep straight.
A: You can get more accurate cuts by using a guide or fence that helps you stay on the right path.

Q: Can I use my circular saw to cut masonry?
A: Yes, if you use an abrasive wheel, which looks like a thin grinding wheel. It can also be used to cut fiberglass and light metal.

Q: What should I look for when buying a saber saw?
A: Look to see if the mechanism for adjusting the base plate is sturdy. On less-expensive models these are weak and will eventually wobble, making it difficult to cut accurately. Look for a model that draws 3 amps and has variable speed.

Q: What factors are important when choosing a reciprocating saw?
A: Generally, the higher the amp rating, the



more cutting power. These saws range in size from about 4 amps to 11 amps. Other features include cordless options, orbital action that cuts more aggressively, an adjustable shoe to change the depth of the cut and variable speeds.

UPSELLING

• For circular saws, encourage models with additional features that will make the tool more versatile and easier to use. A tilting platform allows the user to cut at a variety of angles. Also, a saw with a clear view of the blade makes it easier to make an accurate cut. Better yet, some models have a laser that points to exactly where the blade is headed. An electric brake makes a saw safer.
• If a customer intends to make a variety of both straight and curved cuts, suggest buying both a sabre saw and a circular saw. While a sabre saw can make straight cuts, because it has a smaller blade and slower speed than a circular saw, it is not well-suited for this task.
• Dust extraction systems help contain the dust created by a saw. Some saw models have built-in ports that attach to hoses that carry away the sawdust.

ADD-ON SALES

• Safety Glasses
• Ear Plugs
• Saw Blades
• Extension Cord
• Ripping Guide
• Dust Extraction System

SAFETY TIPS

• Always wear eye protection. Chips from material can fly into your face, or the blade can break.
• Avoid loose clothing, jewelry and anything that could get caught in the saw. Tie back long hair.
• Use both hands on the saw and make sure you are in full control of it. Avoid cutting above shoulder height.
• Always make sure you are using the proper blade for the material you are cutting.
• Make sure the workpiece is secure before cutting. Never hold a workpiece in your hand or across your lap.
• Don't overreach. Keep a stable footing.
• Don't force the tool. Don't exceed the capacity of the tool.
• Double-insulated saws do not require a three-wire grounding cord and the user is protected in the event of an electrical short.
• Always unplug the tool before changing blades.
• Beware of kickback when using a circular saw, which is when the blade becomes pinched and the saw lifts up out of the workpiece and toward the user. To prevent kickback, make sure the blade is sharp and clean, do not let it overheat, support large panels so they will not pinch the blade, beware of knots or sap in the wood and never remove the blade from the material while it is cutting. Release the switch immediately if the saw stalls or binds.
• Always make sure the cord is out of the way and not in the line of the cut.
• Do not leave plugged-in tools unattended, especially if there are children nearby.

PRO CORNER

• Since they may be using a saw in heavy-duty applications, pros may want worm-drive saws with the motor at the rear of the blade.
• Pros may want sabre saws with heavy duty features such optional orbital action mode, a roller support behind the blade and counter balancing.
• Other saw features pros may appreciate are ergonomic grip handles and quick-change blade systems that allow them to change the blade without tools.
• The sole of the circular saw is the flat part of the tool that allows it to glide across the material being cut. The occasional drops and abuses of the jobsite may bend and compromise the integrity of the sole. Recommend models with cast-alloy soles or those with reinforcing ribs.
• Better reciprocating saws have a counterbalance mechanism that reduces the vibration of the saw. Also, using an adjustable shoe (or the flat part of the tool that guides the blades along the material) can help extend the life of the blade.
• Pros may also look for features on their jigsaw that gives them more control of the blade's movement. An electronic variable speed feature allows the user to control the speed of the blade. Some saws have an adjustable orbit motion, for more efficient use of the blade during different types of cuts.

MERCHANDISING

• Power tool users, especially pros, are likely to be highly brand loyal. Stock three or four brands and make them equally prominent in the display.
• Display a sample model out of the box so customers can hold it in their hands. Display the rest in security cages below.
• To encourage woodworking projects, merchandise a few how-to woodworking books nearby.

PRODUCT KNOWLEDGE TRAINING

Learn the common features and uses of each product.

PK DESCRIPTIONS

1. Belt Sander

• Sands using a continuous belt or abrasive material.
• Used for aggressive removal of stock.
• Uses two pulleys, a drive pulley that drives the belt and an idler pulley that guides it.
• Two handles allow the user to push or pull the machine with little effort.
• Comes in sizes of 2-1/2" to 4" wide belts; 3" wide is the most common size.
• Some models have dust collection systems to help control the dust from sanding.
• Most models have an adjustment feature that automatically maintains the belt in the center of the pulley during operation to eliminate belts that wander off the pulleys.
• When using, take care not to gouge or ripple a soft wood surface. This sander can remove material rapidly.
• Use open-coat sandpaper as it is less likely to clog.

2. Narrow Belt Sander

• Has a belt that is narrower than a typical belt sander, making it ideal for sanding in tight places.
• Easy to maneuver.
• With a bench stand accessory, it can mount on a table top and is good for sanding smaller pieces.

3. Disc Sander

• Used mostly for metal sanding or grinding, but also capable of removing stock in plastics, wood or concrete when used with the proper accessory stone, disc or wheel.
• Aggressively removes stock but leaves scratches in the material.
• Available in two styles: the angle head where the disc runs parallel to the motor, and the vertical style where the disc runs in a plane perpendicular to the motor.
• Polishers are another variation of this sander, but they operate at lower speeds than a sander. A sander should not be used for polishing as the high speed could burn the paint.

4. Random Orbit Sander

• Uses a round disc of sandpaper to sand in both a circular and back-and-forth motion, which reduces swirl marks.

• Common sizes are 5" and 6", but smaller and larger sizes are available.
• Sands in all directions, both against and with the grain.
• One of the biggest differences in these sanders is the grip style a manufacturer may use. Some have grips at the front of the sander, while others have handlebars that can be attached at either side of the sander.
• Another important feature is variable speed for slower, delicate work or faster, heavy work.
• Most use a dust bag to collect sanding dust.

5. Palm Sander

• Also known as a finish sander.
• Sandpaper attaches to a rectangular pad on the bottom of the sander. The motor moves the pad in small, circular orbits.
• Easy to handle.
• Can use regular sandpaper, and measures its size by the portion of a standard 9"x11" sheet of sandpaper it uses. A 1/4 size uses a 1/4 of a regular sheet, a 1/3 uses a 1/3 sheet and a 1/2 uses a 1/2 sheet.
• The holes on the bottom of the sander help to remove the dust from the material as you are sanding.
• Some models have a sandpaper piercing plate that allows you to transform a standard sheet of sandpaper into one with holes designed to fit on the bottom of the sander.
• Good for sanding corners and finish work. However, it may leave some scratches as it sands both with and against the grain.
• Some models incorporate a triangular pad extension for sanding in tight corners.

6. Detail Sander

• Used for sanding detail work and in tight spots.
• Easy to handle.
• Can accept a variety of attachments for particular applications.
• Some models have orbital action sanding, while others use a pivot drive that moves the pad in a small arc.

7. Profile Sander

- Used for sanding details and profiles, not general sanding tasks.
- The head can accept a variety of attachments for a variety of tasks.
- Good for sanding moldings, shaped wood edges and panels.

8. Rotary Tool

- Often called a Dremel, after a manufacturer of a popular version of the tool.
- Available in corded or cordless versions. Some have variable speed settings.
- Small tool that is highly versatile and can be used with a variety of attachments.
- Attachments can be used to sand, drill, grind, cut and carve on a small scale.
- Bits used with these tools include a variety of grinders, sanders, cutters, routers, cleaners and polishers.

9. Sanding Belt

- Used with belt sanders.
- Available in a variety of grits and weights.
- Good quality belts should resist tearing and stretching.

10. Sanding Discs

- Most often used with disc sanders and random orbit sanders.
- Available in a variety of grits and weights.
- One style is PSA. PSA stands for pressure sensitive adhesive, so sandpapers of this type have a sticky backing. Generally, this type is used for sanding jobs where you will use the sandpaper until it is worn out. Not for tasks where you will be changing sandpaper frequently.
- Another style is hook and loop, which attaches to the sander like Velcro. It is removable and good for jobs that require frequent changing of the sandpaper.
- Holes in the sandpaper enable dust extraction to reduce buildup of dust on the abrasive.

11. Sanding Sheets

- Most often used with orbital sanders and other types of profile and finishing sanders.
- Square or triangular in shape, depending on the type of sander they are to be used with.
- Available in a variety of grits and weights.
- One style is PSA. PSA stands for pressure sensitive adhesive, so sandpapers of this type have a sticky backing. Generally, this type is used for sanding jobs where you will use the sandpaper until it is worn out. Not for tasks where you will be changing sandpaper frequently.
- Another style is hook and loop, which attaches to the sander like Velcro. It is removable and good for jobs that require frequent changing of the sandpaper.
- Another, more economical alternative to PSA and hook and loop sandpaper are sanders that use clamps to hold the sandpaper to the sanding pad. In this style, standard sheet sandpaper can be used. A paper punch tool is usually included with the sander to poke the holes in the paper to aid in dust extraction.

OTHER TRAINING TIPS

Designed to give you confi - dence on the salesfloor!

This section is for retail skills training specific to this core product category.

ANATOMY OF A BELT SANDER

The **Tracking Knob** helps keep the sanding belt running straight by changing the angle of the front roller. The rear **Roller** provides the drive for the sanding belt while the front **Roller** is idle.

FAQs

Q: What are the advantages of a finish sander?
A: Rather than orbiting, it moves the sandpaper back and forth and should be used where it is absolutely necessary that the sandpaper moves in a single direction. A finish sander often uses square sheets of sandpaper, which also makes it easier to get into corners.

Q: What is the difference between an orbital sander and a random orbital sander?
A: An orbital sander moves only in a circular motion while the random orbital sander also moves back and forth. As a result of the two separate motions, it leaves less of a swirl pattern on the wood.

Q: I have accidentally gouged some wood with my random orbital sander. How do I avoid this in the future?
A: It's best to put the sander onto the surface before you start it. In addition, when using an orbital sander, don't press down too hard on the tool. Let its weight do the work.

Q: What's the difference between PSA sandpaper and hook-and-loop sandpaper?
A: PSA has a sticky back and is good for large jobs that are likely to wear out the sandpaper. Hook-and-loop paper uses a fuzzy backing that sticks to the bottom of a sander. It can be pulled off and reused before the abrasive on the paper wears out.

UPSELLING

- Dust collection systems will collect more dust than the cloth bag supplied with most sanders. Suggest the customer try one and realize the sander may need a hose-converter fitting to attach it to the hose.
- The belt-release lever on the sander keeps

the belt tight and lets the user loosen it for removing and changing the belt. Cheaper handles are difficult to use. Better designs are often plastic and require very little effort to move.

ADD-ON SALES

- Sandpaper
- Safety Glasses
- EarProtection
- Gloves
- Dust Mask
- Dust Collection System

SAFETY TIPS

- Always wear eye and ear protection when operating power sanders. Always wear respiratory protection. Do not wear loose clothing or jewelry and put up long hair.
- Always use adequate ventilation when using a sander. Recommend using appropriate dust collection systems.
- Never force a sander. The weight of the tool should provide adequate pressure on the workpiece. Forcing can cause overheating, kickback, stalling or burning of the workpiece.
- Always secure the workpiece securely before using a portable electric sander.

PRO CORNER

- Those who pay close attention to the details of their sanding task may want an orbital sander with an orbit adjustment. Choosing a smaller orbit is best for a finer finish, while a larger orbit is best for aggressive stock removal.
- Pros also may want to use accessories such as a stand that transforms a portable sander into a stationary sander mounted on a table. Another option is a special frame that guides the sander along a flat surface to produce a surface that is truly flat.

MERCHANDISING

- Always display sandpaper near the sanders.
- Brand loyalty among consumers is strong in power tools. Stock three or four brands with equal prominence.
- Display a sample tool out of the box so the customer can touch it, then place the boxed tools below in a locking security cage.
- Make power tools visible from the power aisle of the store, as this can provide a striking visual effect and draw in shoppers.

PRODUCT KNOWLEDGE TRAINING

Learn the common features and uses of each product.

PK DESCRIPTIONS

1. Fixed Base Router

• Used for beading, routing, grooving, fluting and many types of decorative carving that could take hours to do by hand. Achieve different shapes of cuts by using different shaped bits.
• Has a motor that raises and lowers with a rack and pinion and a bit that protrudes at a set depth.
• Most economical type of router and highly portable.
• Standard and light-duty routers have 1/3 to 1/2 hp motors; commercial heavy-duty routers are 3/4 hp and higher.

2. Plunge Router

• Similar to a fixed-base router, but the motor is mounted on two posts and can be retracted from and lowered into the workpiece.
• Required depth of cut can be set so it's the same every time.
• Versatile and good for use in joinery.
• Plunge depth is the deepest cut that can be made by a router.

3. Production Router

• High horsepower router for heavy-duty work or hours of router table work.
• Available in fixed base and plunge models.
• Somewhat heavy and awkward for topside routing.
• Adjustable speed is a common feature.

4. Laminate Trimmer

• A lightweight mini router.
• Designed for trimming thin plastic countertop materials, but also useful for small routing jobs.
• Highly portable and can be used with one hand.

5. Router Bit

• Attaches to a router to create a variety of shapes and cuts.
• Use carbide bits for cutting laminates and harder composite materials.
• Use high speed steel bits for general purpose cutting in wood and aluminum.
• Generally grouped into three types: grooving bits, edging bits and specialty bits.
• The standard d-i-y bit uses a 1/4" shank.
• Available in an anti-kick-back or chip-limiting design that helps protect the piece of work where the router is being used by preventing the bit from lurching forward and biting into the material.

6. Router Table

• A table built to accommodate a router mounted underneath.
• Provides a smooth surface for routing, and a fence for guiding the material.
• Another version is a horizontal table that holds the router horizontally.

7. Plate Joiner

• Also called a biscuit joiner.
• Used for making strong plate joints, or biscuit joints, that join separate pieces of wood together.
• The tool is plunged into the workpiece to cut a slot that accepts various size biscuits. Most models come with different blades to create various slot sizes. The slots of one piece of wood are then aligned with the slots of the other piece being joined. These slots share the same biscuit.
• Has top-mounted or side-mounted sliding switches and comes with a dust bag or an adapter for hook-up to a shop vacuum.
• Good joiners will have adjustable fences for making a joint at a variety of angles.

8. Rotary Cutting Tool

• Uses a blade that looks similar to a drill bit. It rotates and cuts through material without the ripping motion of the sabre or jigsaw blade.
• Allows user to plunge directly into the center of material and eliminates the need for pilot holes.
• Can cut material up to 1" thick.
• Many different bits are available for cutting in a variety of materials.
• Lightweight and easy to control. The spinning motion of the blade reduces the ripping, binding and potential jumping of the tool.
• Typically used to cut sink openings in countertops, for cutting and replacing ceramic wall tiles and cutting openings in drywall.

9. Power Planer

• Smoothes and reduces the surface of wood to achieve a flat surface.

• Operates with a pair of replaceable knives that can adjust to various depths.
• Features include an edge fence for edge trimming.
• Another feature on most models is a safety foot that prevents damaging a surface if the user sets down the tool before the cutter has stopped spinning. A safety foot drops down to raise the plate and keep the blade from cutting into the surface.

10. Vacuum

• For picking up dirt, sawdust, metal shavings and other materials an ordinary vacuum cannot.
• Wet/dry vacuums are designed for use anywhere and can suck up water as well as dirt.
• Sizes range from 1 gal. to 50 gal., and motors can be 1 hp to 5 hp.
• Many models incorporate a blower feature by attaching the hose to a separate blower port on the motor.
• Newer designs include a backpack vacuum that is battery operated.

11. Generator

• A portable source for electricity that runs on gasoline, diesel fuel, LP gas or natural gas.
• Wattage outputs range from 1,850 to 8,000 watts.

• To select the right generator for your customer, total the wattage of the items they need to run at the same time. This will be the minimum wattage needed in a generator.
• Most models usually include two or three different outlets or receptacles to operate 12V DC and 115V AC current as well as 240V AC current.

12. Welder

• For the d-i-yer who wants to experiment with welding, there are several consumer-level welding setups available.
• Arc welders are for welding iron to thin metals up to 1/4".
• Wire feed welders, also known as Mig welders, are used for hobby, workshop, home and farm repairs.

13. Air Compressor

• Used to power pneumatic tools such as nailers, sprayers and pressure washers.
• Rated on cubic feet per minute of air volume output (cfm), pounds per square inch of air pressure input (psi) and horsepower (hp). The higher the ratings on any of these, the more versatile the compressor.
• The most important rating is the cfm, because it indicates the amount of air volume needed to operate various tools. Match the cfm rating on the compressor to the cfm rating on the tool when buying a compressor.
• Compact or portable compressors use a diaphragm-type compression pump powered by an electric motor. They are best used for light applications such as inflation or light spray painting.
• Piston-type compressors use an electric or gasoline motor to drive the pump unit. They offer durability and high work capacity.

14. Nailer

• Available in different types according to the type of application, such as roofing, drywall, concrete, finish and framing.
• **Framing nailers** can use stick nails or coil nails. Nail sizes range from 1-1/2" to 3-1/2".
• **Roofing nailers** can be used to fasten asphalt and fiberglass shingles, siding or insulation board.
• **Finish nailers** can be used to install molding, trim, paneling, door and window casings and cabinets.
• **Brad nailers** are for firing brads, which is a tapered nail with a small head or a slight side projection instead of a head. They range in size from 5/8" to 2".
• **Palm nailers** are for work in tight spaces. Instead of firing nails, it operates like a pneumatic hammer to drive conventional nails with a repetitive series of blows.
• Available in pneumatic, electric and cordless versions.

OTHER TRAINING TIPS

Designed to give you confidence on the salesfloor!

This section is for retail skills training specific to this core product category.

ANATOMY OF A ROUTER

Using the **Handle**, the user guides the router along with the **Base Plate** sliding along the surface of the material. The **Router Bit Collet** holds the router bit and the **Adjustable Depth Housing** moves up or down to adjust the depth of the bit in the material.

FAQs

Q: What is the difference between a professional power tool and a consumer tool?
A: A pro tool is designed to withstand heavier workloads and as a result they have more power. They also have motors that are able to withstand use for a long period of time without burning up the motor.
Q: What type of router do I use with my router table?
A: You can use either a fixed base or a

plunge router with a table. The most common and easiest one to use is a fixed base. A plunge router may require a special attachment to use the plunge features with a table.

Q: How does a biscuit joiner work?
A: A biscuit joiner uses a special horizontal blade that plunges into a piece of wood to create a slot for a biscuit. A biscuit is a football-shaped piece of compressed wood that helps join together two pieces of wood. To use a biscuit joiner, align the joiner on the piece of wood and push the handle forward. Make a similar cut in the second piece of wood at the place where the two will adjoin.

Q: What size shop vac should I buy?
A: If you will be using it mainly for quick clean-up jobs, a small 1.5 hp model will do just fine. They are also easy to store. Medium sizes, such as the 6 gallon size, are still easy to maneuver and they will hold more debris than the smaller versions. Models below 10 gallons tend to be louder and easier to tip. The large models, those more than 10 gallons in capacity, are best if you want something for your garage or workshop and will be cleaning up large spills. While they take up more storage space, their larger capacity means they don't have to be emptied as often.

UPSELLING

- If someone is buying a router, encourage him to buy a set of bits so he can be versatile and experiment with several different types of cuts.
- Anyone buying a rotary tool should buy a variety of cutting and grinding bits to experiment with the many different functions of this tool.
- A quick-release chuck, sometimes sold as an add-on accessory, can make changing bits on a router fast and easy.
- Better generators, while more costly, have Overhead Valve (OHV) engines, as they start easier, run quieter, last longer and produce lower emissions than non-OHV models. A good generator should also have a cast iron sleeve and ball bearing instead of needle bearings.

ADD-ON SALES

- Extension Cord
- Router Table
- Sandpaper
- Safety Glasses
- Ear Protection
- Gloves
- Dust Mask
- Nails for Pneumatic Nailers
- Replacement Vacuum Filters
- Dust Collection System
- Welding Mask
- Welding Electrodes
- Woodworking How-To Books

SAFETY TIPS

- Always wear eye and ear protection when operating power tools. If the project will create a lot of dust, wear respiratory protection. Do not wear loose clothing or jewelry and put up long hair.
- Routers operate at a speed 15 to 20 times greater than a drill. Keep a firm grip on the tool as you are using it. Losing control could cause damage to the workpiece and personal injury.
- Always disconnect the plug before changing a router bit. Use the wrench provided with the tool by the manufacturer. Also, a bit that has just been used will be hot enough to burn you. Let it cool before touching it.
- Always secure the workpiece securely before using a portable electric tool.
- For pneumatic tools, always use the fasteners recommended by the equipment manufacturer.

PRO CORNER

- Variable speed and soft start are features of a quality router, and become even more important on larger, more powerful routers.
- The power-to-weight ratio is a key detail in power tools, and professional tools are engineered for maximum power with minimum tool weight. Motors with copper wire instead of aluminum wire are likely to be more expensive, but minimize the size and weight of the motor.
- Professional tools feature motors with a resin coating on the motor wire to protect from grit and dust, ball bearings to reduce vibration and gears made of heat-treated wrought steel. They also have a tough plastic housing to withstand impact and to function as a superior electrical insulator.
- Pros looking to buy a nail gun will consider features such as ease of leading, ease of freeing a nail jam, nail-depth adjustment, whether it has a magazine with a clear view, a rafter/belt hook, an adjustable exhaust hood (to keep the exhaust away from the user) and an offset handle (for easy top loading).

MERCHANDISING

- Rental centers can help whet the consumer's appetite for higher quality, pro tools. Typically, rental centers stock the heavy-duty professional tools. Once a d-i-yer uses one of these tools, he may be more tempted to choose a higher-quality tool next time he goes to buy one.
- Brand loyalty among consumers is strong in power tools. Stock three or four brands with equal prominence.
- Display a sample tool out of the box so the customer can touch it, then place the boxed tools below in a locking security cage.
- Especially with tools like routers, merchandise a few how-to woodworking books nearby.
- Make power tools visible from the power aisle of the store, as this department can provide a striking visual effect and draw in shoppers.
- Use peg hooks to place router bits directly above the routers and rotary tool bits above the rotary tools.

PRODUCT KNOWLEDGE TRAINING

Learn the common features and uses of each product.

PK DESCRIPTIONS

1. Carbide-Tipped Saw Blade

- Circular blade used for working with plywood or hardwood.
- Lasts up to 10 times longer than regular blades.
- Do not use on masonry or material with nails.

2. Combination Blade

- Most commonly used circular blade.
- Used for cross-cutting, ripping and mitering in hardwood, softwood, veneer and plywood.
- Does not leave a smooth finish.

3. Abrasive Cut-Off Wheel

- Circular blade used for cutting ferrous metals, masonry, glazed materials and ceramic tile.
- Must match the type of wheel to the type of material being cut.
- Only use with saws that have an aluminum or magnesium guard.

4. Diamond Blade

- Circular steel disc with a diamond-bearing edge.

- Used to cut tile, marble, slate, quarry tile, granite, stone, limestone and porcelain tile.
- Can have either a segmented, continuous rim or turbo rim configuration.

5. Plywood Blade

- Circular blade used for cutting plywood.
- Has small teeth to resist splintering and resist the abrasion of plywood glue.

6. Dado Head Blade

- Consists of two kinds of blades in one assembly: two small and thicker-than-normal circular blades on the outside and blades called cutters on the inside.
- Use to cut grooves or slots across boards.
- Used on a table saw.
- An alternative type is an adjustable dado, which consists of a single blade.

7. Sabre Saw Blade

- A carbon steel blade used for cutting most woods and some plastics.
- The high-speed steel blade is used for cutting metal, fiberglass and abrasives and thin plastics.

8. Reciprocating Saw Blade

- Carbon steel blade used for soft woods and plastics. Do not use for material with nails.
- Carbon-tipped blades are best for nail-free wood, nonferrous metal, plastic and fiberglass.
- High speed steel blade is used for most metals, plastics and fiberglass. Blades are brittle and easily broken.
- Bimetal blades combine carbon steel and high speed steel. They last as much as three times longer than other blades.

9. Rip Fence

- Provides a guide for a circular saw that allows it to rip large sheets of plywood.
- Usually made to fit a specific brand and model of saw.

10. Beam-Saw Attachment

- An attachment for a circular saw that looks like a chain saw and gives the standard circular saw a 12” cutting capacity.
- Used to rip, crosscut or notch heavy girders or planks.

11. Edge Cutting Guide

- Attaches to a jigsaw.
- Used as a guide to making straight cuts.
- Some models come with a pivot knob that guides the saw in a circular cut.

OTHER TRAINING TIPS

Designed to give you confi - dence on the salesfloor!
This section is for retail skills training specific to this core product category.

ANATOMY OF A CIRCULAR SAW BLADE

Kerf is the width of the slot cut by the blade. The **Arbor Hole** joins the blade to the saw. The **Gullet** provides clearance for the material being removed. The **Shoulder** strengthens and supports the tip. The **Expansion Slots** create an outlet for heat build up that may occur during the cutting process.

FAQs

Q: What's the advantage of a carbide-tipped circular saw blade?
A: The cutting edges are made from extra-hard carbide steel that will last up to 20 times longer, and it is good for cutting materials of different hardnesses.

Q: Do I need a special blade to cut plywood with my circular saw?
A: Yes, a plywood blade has small teeth that provides a clean cut and reduces splintering.

Q: What do the teeth-per-inch numbers mean on sawblades?
A: The numbers indicate the number of points per inch on a saw blade.

Q: What type of blade should I use when I am cutting wood across the grain?
A: A crosscut blade has a series of evenly spaced, medium-sized teeth that are bent alternately from the left to the right.

Q: What type of blade is designed to cut along the wood grain?
A: A rip blade also has teeth bent to the left and right, but its teeth are on the top of the blade, not on the inside. They are like chisels that scoop out the wood as the saw moves along the grain.

Q: Do I need to buy both a crosscut and rip blade?
A: For general use, you can, but a combination blade incorporates the features of both rip and crosscut blades.

Q: Can I use my circular saw to cut masonry?
A: Use an abrasive wheel, which looks like a thin grinding wheel. It can also be used to cut fiberglass and light metal.

Q: My saber saw blades seem to dull quickly.
A: That's common, but make sure you are using the right blade for the material you are cutting—wood, tile or metal.

Q: What is a good blade for general-purpose woodwork?
A: Use a combination blade.

UPSELLING

- If someone is buying a new saw, encourage them to buy a new saw blade, rather than just going with the blade that comes with the saw. Higher quality saw blades will provide a better performance and longer life from the saw.
- Encourage a shopper to buy a variety of saw blades for their saw instead of just a basic blade. Buying at least a couple of different blades gives you the option of heavy ripping or cutting thinner wood.
- Manufacturers have many different blade designs with features to reduce friction, reduce heat buildup on the blade and for keeping the blade sharp. Make sure you know the features of the blades you stock so you can recommend a better blade.

ADD-ON SALES

- Safety Glasses
- Ear Protection

SAFETY TIPS

- Always wear safety glasses and ear protection when using a saw.
- Only use an abrasive blade if you have an aluminum or magnesium guard for protection.
- Always make sure you are using the proper blade for the material you are cutting.
- Beware of kickback when using a circular saw, which is when the blade becomes pinched and the saw lifts up out of the workpiece and toward the user. To prevent it, make sure the blade is sharp and clean, do not overheat, support large panels so they will not pinch the blade, beware of knots or sap in the wood and never remove the blade from the material while it is cutting. Release the switch immediately if the saw stalls or binds.
- A self-retracting guard that closes over the blade as it cuts is a good safety feature on portable saws.

PRO CORNER

- Pros will be your biggest buyers of saw blades and are likely to be brand loyal, especially when they find a blade that stays sharp for a long time. Be sure to have plenty on hand all the time.

MERCHANDISING

- Use a shop-and-compare strategy down the aisle so shoppers can compare brand and quality.

PRODUCT KNOWLEDGE TRAINING

Learn the common features and uses of each product.

PK DESCRIPTIONS

1. Miter Saw

• Also known as a chopsaw.
• Used for making repeated straight or miter cuts.
• Uses a circular blade that is pivoted to the correct angle, then dropped onto the material, which is clamped stationary on a turntable.
• The turntable has a large compass scale that is marked in degrees to show the degree of the cut.
• The simplest miter saw available.

2. Compound Miter Saw

• Uses a circular blade that is pivoted to the correct angle then dropped onto the material, which is clamped stationary on a plate.
• In addition to a simple pivot action, the blade tilts to make compound cuts.
• Good for cutting moldings and trim.
• The turntable has a large compass scale that is marked in degrees to show the degree of the cut.
• Most models tilt in only one direction, but better models tilt both to the left and to the right.

3. Sliding Compound Miter Saw

• Uses a circular blade that is pivoted and/or tilted to the correct angle, then dropped onto the material, which is clamped stationary on a plate.
• Also has a sliding action that allows it to cut wider material than a standard miter saw.
• Good for cutting complex trim and moldings.
• Most models tilt in only one direction, but better models tilts both to the left and to the right.

4. Radial Arm Saw

• Gradually being replaced by the popularity of miter saws.
• Uses a circular saw blade, but instead of the blade dropping onto the material, sliding the saw moves across it along a track.
• Used for a variety of cuts, including crosscuts, rips and miters. When used with accessories, the saw can perform dados, sanding, shaping, sabre sawing, surfacing and routing.
• The length of the arm, usually 24" or less, limits the length or width of the cut.
• Cuts by rotating the blade toward the operator. Thus, it develops its own pull through the cut so that the operator may end up holding the saw back rather than pulling it through the cut.

5. Bench Band Saw

• Has a band or loop-like blade that comes in various widths and strengths for different cutting purposes.
• Used for making irregular cuts in thick material (6" or more).
• Best for light tasks, not thick hardwoods.
• Uses blades up to 1/2" wide.
• Some models have tables that can be tilted for angled cutting.
• Sanding attachments and sanding loops are available for sanding on irregular or curved surfaces.

6. Floor Band Saw

• Has a band or loop-like blade that comes in various widths and strengths for different cutting purposes.
• Mounts on the floor and usually has wheels sized from 12" to 36" in the industrial models.
• For sawing heavier and thicker materials.
• Some models have tables that can be tilted for angled cutting.
• Sanding attachments and sanding loops are available for sanding on irregular or curved surfaces.

7. Scroll Saw

• Has a small, thin blade activated by a far-reaching arm that permits handling wide material.
• Operated by an up-and-down motion of the blade at more than 1,000 cutting strokes per minute.
• Cuts intricate patterns in wood, plywood, light metal and plastic.
• Table can tilt for angled cuts.
• Safe, inexpensive and lightweight.

8. Contractor Table Saw

• More portable than a cabinet table saw, but bulky and originally intended for temporary use at a jobsite.
• Has a circular saw blade extending up through a slot on a flat table. Motor and drive mechanism is located under the table.

• Blade can be raised, lowered or tilted depending on the cut needed.
• Used for ripping large pieces of wood.
• Power of the saw's motor determines the thickness of material that can be cut and how efficiently the saw will perform.
• To operate, the material is fed onto the blade, unlike the miter saw where the blade moves across the material.
• Rip fence capacity is important for determining a saw's quality. The rip fence mounts on the table and adjusts to guide the material being cut.
• A common accessory is a miter gauge that allows angled cuts.
• Typical sizes are 1-1/2 to 3 hp.

9. Cabinet Table Saw

• A professional-grade table saw where the saw motor is housed in a cabinet.
• Has a circular saw blade extending up through a slot on a flat table. Motor and drive mechanism are located under the table.
• Blade can be raised, lowered or tilted depending on the cut needed.
• Used for ripping large pieces of wood.
• A heavier, bulkier machine reduces vibration from the saw.
• Power of the saw's motor determines the thickness of material that can be cut and how efficiently the saw will perform.
• To operate, the material is fed onto the blade, unlike the miter saw where the blade moves across the material.
• The rip fence mounts on the table and adjusts to guide the material being cut. Best used for permanent placement in a workshop.
• A common accessory is a miter gauge that allows angled cuts.
• Sizes can range from 2 to 5 hp.

10. Benchtop Table Saw

• Most portable and lightweight table saw.
• Has a circular saw blade extending up through a slot on a flat table. Motor and drive mechanism are located under the table.
• Used for ripping wood.
• Blade can be raised, lowered or tilted depending on the cut needed.
• Power of the saw's motor determines the thickness of material that can be cut and how efficiently the saw will perform.
• To operate, the material is fed onto the blade, unlike the miter saw where the blade moves across the material.
• The rip fence mounts on the table and adjusts to guide the material being cut.
• A common accessory is a miter gauge that allows angled cuts.
• Most models use a 10" saw blade.

11. Tile Saw

• Also known as a wet saw.
• Used for cutting tile and stone.
• Uses a diamond-tipped circular saw blade cooled by a continuous stream of water contained in a reservoir.
• Some saws operate similar to a radial arm saw, while others are set up like a table saw.

OTHER TRAINING TIPS

Designed to give you confi - dence on the salesfloor!

This section is for retail skills training specific to this core product category.

ANATOMY OF A TABLE SAW

The **Miter Gauge** guides the workpiece at an angle to cut a miter. The **Blade Guard** helps prevent kickback. The **Rip Guard** allows safe, accurate cuts that are repeatable. The **Blade Height Adjustment** raises and lowers the blade to control the depth of the cut.

FAQs

Q: What is a good tool to begin building my collection of tools for a woodshop?
A: A table saw or a bandsaw might be the most useful tool you can have in your woodshop and should be your first major purchase. We recommend a drill press as the second major purchase.

Q: What is kickback?
A: Kickback usually occurs when the workpiece pinches the blade of the saw. In stationary power tools, the result can be that the workpiece suddenly lurches back toward the user. Power tools should come with an anti-kickback device that helps control this potentially dangerous situation.

Q: What is the difference between a band saw and a scroll saw?
A: The band saw blade makes a continuous loop and cuts by spinning in a circle It can handle thick pieces of material, up to 6" thick. A scroll saw can only handle thinner pieces and uses a small blade that moves up and down.

Q: Does it matter what kind of blade I buy for my bandsaw?
A: There are different types of blades for different types of cuts, but here are a few blades that will give you versatility. A 1/4" wide

blade is a good, all-purpose blade. A 4-tpi 1/4" size is good for quick curved cuts, or try a 6-tpi 1/4" blade for slower speeds and smoother cuts. The 1/2" hook-tooth blade is best for long straight cuts. For joinery or tight cuts, use a 1/8", 14-tpi blade.

Q:Does it matter what kind of blade I buy for my scroll saw?
A: There are different types of blades for different types of materials and cuts. Blades with larger numbers (7, 10, 12) are best for cutting thick materials. Blades with smaller numbers (0000, 00, 2) are best for cutting thin materials.

UPSELLING

- Better table saws have larger ripping capacities. The rip fences will accurately lock into place and be made of durable materials. To extend the usefulness of a table saw, use extension rails that extend the reach of the rip fence past the reach of the table.
- Dust collection systems can help control the immense amount of sawdust produced by saws. Better saws have a port where a hose can be connected to eliminate dust.
- A variable speed scroll saw may be more expensive, but it will add versatility for cutting different types of materials.

ADD-ON SALES

- Safety Glasses
- Ear Protection
- Floor Stand
- Saw Blades
- Sanding and Grinding Attachments
- How-To Project Books

SAFETY TIPS

- Always use ear protection and wear safety glasses when operating a power tool.
- When replacing a blade, always make sure it is set to rotate in the proper direction.
- Avoid loose clothing, jewelry and anything that could get caught in the saw. Tie back long hair.
- Don't force the tool. Don't expect a small tool to do the job of a heavy-duty tool.
- Always use the anti-kickback safety devices that come with saws.
- For table saws, use a push stick to help feed the material onto the blade and to keep your fingers out of the way.
- Use the correct blade for the material you are cutting. Keep blades sharp and look out for overheated or vibrating blades.
- Unplug the tool before changing blades and making adjustments.
- A self-retracting guard that closes over the blade as it cuts is a good safety feature on a miter saw.
- Blade brakes are excellent safety features on saws.

PRO CORNER

- A pro may be interested in a floor stand with rollers to complement his table saw. This serves as an extra hand by continuing to support the material after it has left the table.
- Even though these tools are stationary, pros may be moving them from one job site to another. They will want tools that are easy to set up and light enough to be moved by one person.
- Oversized on/off switches make shutting off the saw easy and quick, a feature much appreciated in an emergency situation.
- Many of the cuts a pro will make are square or 45° cuts, and having a simple miter saw as a second saw can help save a lot of wear and tear on their compound or sliding compound saw.
- Sliding compound miter saws are the elite of miter saws and are an essential tool for trim carpenters.
- For the pro in a cabinet or frame shop doing many cuts of the same length, an important accessory for the miter saw is an auxiliary cutoff fence. This provides a stop for the board at a preset length for many consistent cuts.

MERCHANDISING

- Rental centers can help whet the consumer's appetite for higher quality, pro tools. Typically, rental centers stock the heavy-duty professional tools. Once a d-i-yer uses one of these tools, he may be more tempted to choose a higher-quality tool next time he goes to buy one.
- Display the tools in a tool corral, assembled and available for the customer to touch.
- Tools like bandsaws will inspire project ideas in your do-it-yourself customers. Merchandise a few how-to woodworking and project idea books in this section.
- There are plenty of accessories that can accompany power saws. Either merchandise them close by or be sure to tell the customer you can special order them.

PRODUCT KNOWLEDGE TRAINING

Learn the common features and uses of each product.

PK DESCRIPTIONS

1. Planer

• Used to square up, resize or smooth wood in width or thickness. Best for larger flat surfaces.
• Performs the job of a hand plane, but faster and better.
• A variation is a planer-jointer, which performs additional operations such as tapering, beveling and grooving. The planer finishes edges.

2. Jointer

• Used to smooth the edges of wood and help remove warps.
• Can cut flat surfaces.
• Size is determined by length of the tool's knives. Most common size is 6".
• Often combined with a planer.

3. Lathe

• Used for wood turning applications to create spindles, miniatures, bowls and plates.

• Consists of a track or bed, headstock, tailstock and a tool support or rest.
• The tool locks in a piece of wood, with the headstock turning the piece and the tailstock supporting the other end.
• Different types of tools shape the wood as it is spinning.

4. Grinder

• Used to cut and grind metal, concrete and masonry, for sharpening all tools, cutting into corners and tight spots, polishing, buffing and wire brushing.
• Consists of a motor powering one or two grinding wheels, often mounted on a workbench.

5. Drill Press

• Used for boring holes in precise, repetitive cuts. With the appropriate accessories, the drill press can also shape, carve, sand, grind, buff and polish.
• Consists of a base and a column rising upward to a head holding the motor and drill. A radial arm holds a worktable that adjusts vertically. A feed handle enables the user to direct the drill chuck up and down.
• On a radial drill press, the head rotates 360° around the column and can drill at an angle or horizontally.

OTHER TRAINING TIPS

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ANATOMY OF A DRILL PRESS

The **Table** adjusts up or down along the **Column.** The **Chuck** holds the drill bit. After turning on the drill at the **Power Switch**, the **Feed Lever** lowers the drill onto the material.

FAQs

Q: What are some features to look for on a good planer?
A: Convenient features on a planer include a dust hood to collect dust, reversible knives that are often inexpensive and disposable, infeed rollers to grab stock and help feed it through the machine and preset depth stops to make it easier to set to a desired thickness.

Q: What are some attachments besides drill bits I can use on my drill press?
A: You can use rotary rasps, sanding attachments and even a rotary planer for small pieces.

Q: I want a basic lathe. What size should I buy?
A: A 36" or 40" lathe is big enough to make stairway balusters and most legs for chairs and other furniture.

UPSELLING

• Quality planer-jointers have three or four blades. Lower-quality tools have only two.

ADD-ON SALES

• Safety Glasses
• Ear Protection
• Floor Stand
• Drill Bits
• Sanding and Grinding Attachments
• Lathe Turning and Cutting Tools
• Woodworking How-To Book

SAFETY TIPS

• Always use ear protection and wear safety glasses when operating a power tool.

• Avoid loose clothing, jewelry and anything that could get caught in the saw. Tie back long hair.
• Don't force the tool. Don't expect a small tool to do the job of a heavy-duty tool.
• For planers, use a push stick to help feed the material onto the blade and to keep your fingers out of the way.
• Use the correct blade for the material you are cutting. Keep blades sharp and look out for overheated or vibrating blades.
• Unplug the tool before changing blades and making adjustments.
• Never operate a joiner or planer without the belt guards or cutter head guards in place.

PRO CORNER

• A pro may be interested in a floor stand with rollers to complement a planer. This serves as an extra hand by continuing to support the material after it has left the table.
• Even though these tools are stationary, pros may be moving them from one job site to another. They will want tools that are easy to set up and light enough to be moved by one person.

MERCHANDISING

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