

Powermatic 3520B Lathe

Designed to provide wide-ranging capabilities bolstered by ultimate durability, stability and control, the Powermatic 3520B Lathe makes liberal use of our long history of building high-value machines. Whether you are a beginner or a seasoned veteran, the Powermatic 3520B Lathe will handle your turning needs today and long into the future.



With all of the features you need and built to operate for decades, the Powermatic 3520B is an exceptional value for your shop.

Based on precisely machined, thick-walled iron castings, the Powermatic 3520B Lathe is both rigid and stable. At 682 lbs, the Powermatic 3520B Lathe feels exceptionally solid in use and effectively resists vibrations caused by out-of-balance work pieces without the addition of space-robbing sandbags or weights.

Capacity



(Left) The 20" swing capacity and 2 Hp motor of the 3520B makes turning large projects effortless.

(Right) Add the 18" extension kit in the lower mounting holes and projects over 35" in diameter are possible!

The Powermatic 3520B Lathe features a 20" swing and 34 1/2" between center capacity to accommodate a huge range of project sizes. If more spindle capacity is needed, adding the 18" extension kit (#6294727B, includes a solid steel tool rest extension) is a simple bolt-on procedure. This extension can be mounted to extend the primary bed rails or in a second set of mounting holes 9" lower to create a classic bowl-style machine capable of turning material up to 38"

in diameter! Another benefit of this "off the end" configuration is being able to work directly in front of the bowl or platter.

Need even more spindle capacity? A 50"-long bed extension (kit #6294726B) can be bolted up to provide a whopping 84 1/2" between centers!

Despite its large capacity, the 44" spindle centerline height (from the floor) makes long turning sessions comfortable. In its standard configuration, the Powermatic 3520B Lathe has a 50"-long by 24"-deep footprint at the legs!

Power and Control

Driven by a 2 Hp, 220-volt (6.2 Amp) TEFC (totally enclosed fan cooled) motor, the Powermatic 3520B Lathe has plenty of power to take advantage of its 20" swing capacity. Equipped



With a stout 2Hp and variable speed control, the Powermatic 3520B can handle large and small projects with ease.

with an inverter, the Powermatic 3520B Lathe can operate with either a single phase or 3 phase input. The motor itself is 3 phase and receives single phase current from the inverter for high torque at low end and maintenance free operation.



All controls and belt access are on the front of the headstock. The door on the right side of the housing provides easy access for changing speed ranges.

The motor power is delivered through a pair of finely machined, two-range, multi-groove pulleys connected by a Poly V-belt. This belt design is known for its durability and the ability to prevent surging that is commonly associated with conventional V-belts and pulleys. Changing between the 50-1200 and 125-3200 RPM ranges is fast, easy and tool-free using the front-mounted tension levers and access door.

All motor controls are mounted on the front panel of the power head to be easily accessible.

Controls include a toggle switch for forward and reverse, a speed control dial that offers infinite RPM control over forward and reverse modes in both speed ranges. An easy to read digital (LED) display shows real time spindle RPM and allows setting the desired speed with unmatched precision. A pull ON, push OFF switch starts and stops the Powermatic 3520B Lathe. This inverter incorporates a safety feature designed to prevent unexpected starting of the lathe should electrical power be restored after being interrupted during operation. If the electrical power goes out while the lathe is running, the On/Off switch must first be pushed into the Off position before the Powermatic 3520B Lathe can be turned on.



The front corner of the 3520B headstock is beveled to make turning the back side of bowls and other objects easier and safer.

The power head can be positioned anywhere along the bed so the user can work in the most comfortable position. An easy to use locking lever is located on the rear of the power head to keep it out of the way yet easy to access.

The Powermatic 3520B Lathe features a spindle locking mechanism in the form of a spring-



The handy tool caddy (left) and cast-in shelving brackets in the legs help keep your tools organized and the shop less cluttered. Note the large leveling feet for stability on uneven floors.

loaded button on the front of the headstock that engages one of two locking detents (180-degrees apart) for installing and removing accessories that screw onto the 1 ¼” by 8 spindle threads. A special pin can be screwed into three holes on the spindle housing to provide up to 24 indexing positions for drilling hole patterns, routing flutes or other equally spaced decorative features on

spindle projects. A special, brass-tipped slide hammer knockout rod is included for removing the included drive spur or other accessories that engage the #2 Morse Taper in the spindle.

Because we designed the Powermatic 3520B Lathe to remain in service for decades, high-quality spindle bearings are standard equipment. The wide power head allows spacing the bearings nearly 12" apart for maximum spindle stability. To keep your Powermatic 3520B Lathe running perfectly an easy bearing endplay adjustment is built in, located behind the hand wheel. Bend up the locking tab, turn the adjustment nut in slightly to eliminate endplay and then bend the next available tab down to lock in the adjustment. In years to come when a little endplay develops, you can make the adjustment quickly without having to ship the power head or wait for a service technician!



An adjustable bearing, located behind the hand wheel allows the user to tune out endplay should it develop in years to come, saving a trip to the service center and lots of potential downtime.

To support the large work pieces that can be turned on the Powermatic 3520B Lathe the tailstock is also made from a heavy iron casting. A storage compartment, complete with hinged access door is built into the tailstock casting to provide a handy place to keep smaller often-used tools and equipment.

The 1 3/8" diameter ram has 4 1/2" of travel, operated by a large 5 7/8" diameter cast iron hand wheel equipped with a free wheeling speed handle. The ram has a laser-etched scale along its top that makes boring precise depth holes easy. Like the spindle, the tailstock ram has a #2 Morse taper to accept a wide range of accessories. When retracted fully, the tailstock ram automatically ejects whatever accessory is in the Morse taper.



(Left) A heavy-duty, multi-bearing live center with cone adaptor is standard equipment. Note the laser engraved scale on the ram.

(Right) Because the tailstock lock is at the front edge, it can be locked down with the rear edge partially off the bed to maximize between center capacity.

The clamping disk that locks the tailstock to the bed is located at the headstock end of the casting. This prevents small deflections of the tailstock ram when pressure is applied to the work piece or during boring operations. It also allows up to half of the tailstock base to extend off the edge of the bed to increase between center capacity. An oversized

handle makes locking the tailstock in position easy and exceptionally secure.

A multi-bearing live center is included with the Powermatic 3520B Lathe and features a removable center point to access the 3/8" diameter through hole for lamp boring and similar operations. Through hole boring requires complete removal of the live center, the cone can be removed to expose the smaller center point and cup ring. A screw-on 1 11/16" diameter cone is

included for supporting projects with center holes such as peppermills. Because this cone screws onto the live center, a special pin is included that temporarily locks the assembly for installing and removing it.

We designed the tool rest base (also called the “banjo”) to handle the widest range of project sizes with the ultimate in vibration-free support. Made from cast iron, the tool rest base is 18¾”-long by 3½”-wide but only 2¼”-tall to minimize interference with large diameter wood.



(Left) The 14” ductile iron tool rest is designed for safe, accurate use.
 (Right) Though bored for a 1”-diameter post, the special groove makes it possible to use smaller tool rests and still lock them securely.

The boss for the tool rest post is offset towards the headstock to further reduce potential interference with the material being turned. The locking handle for the tool rest can be installed in any of three pre-threaded holes to make using it easier for left and right handed operators or to insure clearance between it and odd-shaped work pieces. Though bored for 1”-diameter tool rest posts, a special broached groove allows securing tool rests with smaller post diameters that may work better for the job at hand. When used with smaller tool rests, the locking handle is installed in the threaded hole directly opposite of the broached groove so the tool rest post is pushed against the broached groove for maximum locking power.

Comparator



(Left) The Comparator mounts are standard and make turning sets of duplicate projects much easier.
 (Right) Being able to locate a sample directly behind the piece being turned makes it easy to match diameters and shapes to produce virtually identical turnings.

A pair of mounts, one on the rear of the power head and another on the rear of the tailstock, serves two purposes. When the included points are installed, they make up the unique Comparator assembly that lets the operator mount a sample spindle in easy view when turning multiple pieces. When mounted in the Comparator, the sample piece is within reach for measuring key points when duplicating them on subsequent pieces such as a set of table legs.

The Comparator mount on the power head is also used to secure the included safety cage. This heavy wire cage offers another layer of safety for the operator, particularly when working with large pieces. A spring-loaded release pin locks the safety cage in the down or raised position.

Other accessories supplied with the Powermatic 3520B Lathe include a 3"-diameter faceplate, a heavy-duty forged iron wrench for installing/removing the faceplate, spindle indexing pin and a handy tool caddy that mounts to the leg assembly below the power head for easy access.

If you are a veteran looking to expand your wood turning capabilities or a novice wanting to maximize your tool dollars by getting all of the capabilities you will ever need, the Powermatic 3520B Lathe is for you.



The Adjustable Dust Port accessory does a great job of removing fine sanding dust from the work area.