

Powermatic 701 Benchtop Mortiser



Oversized, precision castings
Insure a long, accurate life.

Mortiser will be a cherished tool for generations.

The design criteria for the (#1791310) Powermatic 701 Benchtop Mortiser was very clear – accuracy, durability and user-friendly operation. The design process was further guided by a list of the features and concerns frequently expressed by woodworkers. The result is the groundbreaking Powermatic 701 Benchtop Mortiser you see here.

Accuracy and durability are based on oversized iron castings that form the base, column, head and fence. These crucial pieces are precisely cast and machined to create a super-stable platform that supports an industry-leading array of features.

This foundation also means that the Powermatic 701 Benchtop

The interaction between the head and column is precisely controlled by a Gibb screw system that eliminates deflection at the bit while insuring smooth movement of the head. From the quick initial setup to fine tuning many years from now, this easy to adjust Gibb screw system means your Powermatic 701 Benchtop Mortiser will always perform smoothly and accurately.

The plunge action of the head is driven by a true rack and pinion gear system, operated by a large, 23"-long, solid steel arm. Effort is drastically reduced which means mortising in the toughest of woods with the precision you need has never been easier.



Moving the operating arm from the right
To left sides is simple and tool free.

To make the Powermatic 701 Benchtop Mortiser equally comfortable for left and right-handed operators, the lever arm can be mounted on the left or right side of the head by simply removing a finger-operated knob and moving the assembly to an identical spline on the other side. Both splines have ten positions so the lever arm can be quickly located for the best range of motion.



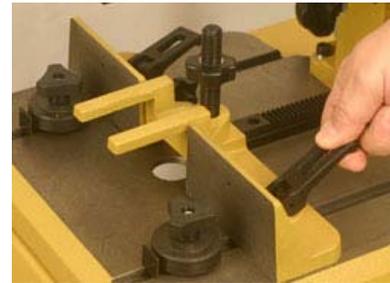
Mounting the depth stop directly
In the line of force prevents
deflection of the bit.

Despite the 5" total plunge capacity with the Powermatic 701 Benchtop Mortiser in standard configuration and the optional 2" riser block (#1791312), we wanted to be sure that it could handle oversize jobs. To mortise very large pieces, the entire column and head of the Powermatic 701 Benchtop Mortiser can be turned 90-degrees (the table must be securely fastened) to

work off of the table.

Most mortisers have their depth stop located to the side or ahead of the line of force where it can induce racking of the head and deflection of the bit. That deflection drastically increases lateral friction on the bit and compromises accuracy. To eliminate this problem, we put the Powermatic 701 Benchtop Mortiser depth stop on the column, directly on the line of force.

While ½ Hp motors are the norm, we equipped the Powermatic 701 Benchtop Mortiser a true ¾ Hp (1725 rpm) motor with plenty of power and torque to drive the largest chisel and bit combinations in the toughest woods without a whimper. That additional power also means that the Powermatic 701 Benchtop Mortiser runs easier and cooler, extending its life considerably.



Even the fence is locked in position with finger-operated levers.

Positioning and securing the wood are crucial to accuracy so we added a heavy cast iron fence. The 2 ½"-tall faces are machined square to the huge, 12 ¾"-wide by 8 ½"-deep (fully useable surface) cast iron table. The fence is adjusted front to back with another rack and pinion gear drive, operated by large knobs on either side of the column. A pair of lever-operated cam locks makes securing the fence an easy, one-handed operation. Each side of the fence has a pre-drilled hole that can be used to attach auxiliary faces or shop-built jigs when special mortising operations are encountered.



The material hold down is designed for ease of use and efficiency. Note the locking knob above the hold down that prevents loosening when the chisel is retracted.

Even the material hold-down clamp incorporates new thinking and is designed to work with stock thicknesses of 0" to 5". The hold-down can be easily reversed on its post using a finger-operated knob rather than the traditional setscrew. To eliminate the frustrating tendency of hold-downs to loosen when the chisel is withdrawn from sticky wood species we added a simple but effective dial that is turned down against the hold-down clamp to lock it in place.

To make keeping the stock firmly against the fence easier a pair of roller clamps are included. A finger operated knob locks and releases each roller clamp to make positioning them fast, easy and toolless. These roller-type clamps not only keep the stock against the fence, they make it easy to reposition it for cutting long mortises quickly and precisely.

We also gave the Powermatic 701 Benchtop Mortiser a unique hollow chisel and bit mounting system that makes it compatible with a wide range of bit set sizes. To accommodate both long and short-shanked auger bits, we include a specially machined chuck extension. Two bushings are also included to fit hollow chisels with 5/8" and ¾" bosses.



Roller-style material clamps keep the wood against the fence but allow repositioning for the next cut.

The offset between the hollow chisel and the tip of the auger bit is critical to performance. To simplify this important setup step, we designed a unique, built-in, two-leaf spacing system that lets you get this spacing right the first time without tools or having to find a spacer or coin. When installing chisel/auger sets ½" or less, use the top spacer leaf only, for chisel/auger sets larger than ½", use both spacer leaves. Fast, simple and totally tool free.

To maintain optimum performance, the hollow chisels must remain sharp. The Powermatic 701 Benchtop Mortiser comes with a diamond-encrusted sharpening cone installed at the top of the column so it is always handy and ready for use. A few quick turns before installing will keep your chisels cutting clean and easy.



The special bushing spacer leaves (left) make setting the drill/chisel offset fast, easy and tool free. To keep the chisels sharp, a diamond encrusted sharpening point (right) is mounted on the column.



A handy tool rack is built onto the column to make sure everything you need is always close at hand.

We even added a handy tool storage rack that holds the included chisel bushing, chuck extender and chuck key. There are also spaces for your favorite chisel/bit sets so everything you need to work is close at hand.

Because most woodworkers use one or two hollow chisels for their projects, we do not include a set with the Powermatic 701 Benchtop Mortiser. That lets us keep the price down while allowing you to invest in the sizes you really need and use.

Though designed as a benchtop tool, open and closed bases are available for the Powermatic 701 Benchtop Mortiser for when a floor-mounted configuration best fits your shop.

If you are considering a mortising machine, take a hard look at the Powermatic 701 Benchtop Mortiser. If accuracy and long-term durability are important, the Powermatic 701 Benchtop Mortiser was designed especially for you.



Other features include reversing the head for handling oversized projects off of the table (left) A 2" riser block for more over-table capacity (center) and an extra long, solid steel arm (right) That makes using the Powermatic 701 Benchtop Mortiser far less tiring.