

POWERMATIC 15HH, 15" Planer

The ability to accurately dimension wood with parallel faces is crucial to virtually any woodworking task. Producing an ultra smooth, tear out-free surface at the same time is just as important. The POWERMATIC 15HH has been designed to handle these tasks with the accuracy, durability and repeatability you need. Robust construction, a powerful motor, precision cut depth adjustments and the legendary Byrd® helical cutterhead are just some of the reasons the POWERMATIC 15HH is setting the standard for modern planers.



The Powermatic 15HH brings the durability and performance you expect from a quality woodworking machine.

Built around a fully enclosed, welded steel base cabinet, the POWERMATIC 15HH uses numerous precisely machined iron castings to insure durability and precise, repeatable operation. A heavy-duty caster system built into the base makes moving the 517-lb POWERMATIC 15HH around the shop easy. A foot-operated brake locks the casters to keep it stationary during use.

Should lifting the POWERMATIC 15HH be necessary, four pull-out rods are built into the cast iron base. These rods provide safe lifting points for straps or forklift arms.

A powerful 3HP, (continuous duty rating) 1PH, 230V TEFC (totally enclosed fan cooled) motor is mounted within the base cabinet. Power is transmitted to the fixed cutterhead assembly by three v-belts that turn precision-machined pulleys. A full-length belt cover is easily removed for maintenance by spinning off a pair of finger-operated knobs. The motor is operated and protected by a true magnetic switch mounted on the head assembly within easy reach.

Byrd® Helical Cutterhead



The Powermatic 15HH comes with a genuine Byrd cutterhead.

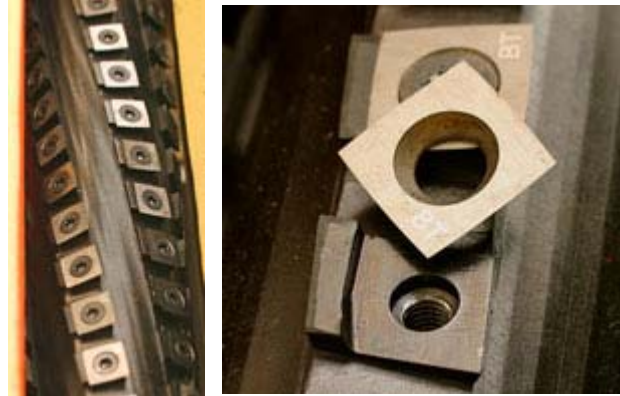
There are many cutterhead designs that carry the helical moniker, including simple straight blades broken into segments and dispersed around the cutterhead cylinder. However, despite the name, they retain many of the liabilities of the long blade designs. While designing the POWERMATIC 15HH we wanted to incorporate the finest cutterhead available to insure the unmatched performance of a true segmented, shear-cutting helical head. That criteria meant the choice was very simple. POWERMATIC teamed with Tom Byrd and installed his famous, US-made Byrd® helical cutterhead in the POWERMATIC 15HH as standard equipment.

The Byrd® cutterhead is made from a billet of exotic “stress proof” steel that insures unrivaled durability. The Byrd® cutterhead is so effective because its 74 carbide inserts are arranged in spiral-shaped rows. The inserts have a 4” radius ground into them and are mounted so they approach the wood at a 14-degree angle. That creates a true shear cut that eliminates much of the impact and the resulting fiber disturbance other cutterhead designs deliver to the wood.

The Byrd® cutterhead cuts so efficiently that it makes surprisingly little noise when cutting wood. In fact, it is so quiet, new POWERMATIC 15HH users often think it is not cutting wood at all - until they see the results. The shearing effect of the Byrd® cutterhead produces a remarkably smooth surface on even heavily figured wood.

The Byrd® cutterhead inserts are precisely machined from solid high-grade carbide, each with four identical cutting edges. If an edge eventually goes dull, you simply index it to the next cutting edge! Each insert has a marking at one edge that makes indexing all or any number of them the same way very easy, though needing to do that is unlikely.

Because the inserts themselves and the seats into which they fit are so precisely machined, there is no adjustment or “fitting” necessary. Indexing or replacing an insert takes just seconds. Simply loosen the T25 Torx screw (wrench included), turn the insert to its new position and tighten the screw.



The spiral layout of the Byrd cutters (left) insures a true shear cut that is exceptionally clean while reducing stresses imparted on the wood. Each carbide insert (right) has four identical edges, substantially increasing the useful life of an already extraordinarily tough cutter.

The durability of the carbide combined with the low impact, shear cutting action mean the Byrd® inserts have an extremely long life, far exceeding that of straight blades. The potential life span of these carbide inserts means that many workers may go years before having to index them. Should a hidden piece of metal be encountered and actually damage a few of the carbide inserts only those need to be indexed or replaced. Just in case you accidentally plane a metal object, we include a package of ten spare inserts and a wrench with the POWERMATIC 15HH.

Feed & Rollers



A special serrated infeed roller keeps the stock moving consistently under the cutterhead. A smooth steel outfeed roller helps the wood exit without damage to the freshly planed surface.

The POWERMATIC 15HH has two material feed rates –20 FPM (Feet Per Minute) used primarily for rough dimensioning and 16 FPM to increase the cuts-per-inch to create a silky-smooth surface. A push/pull knob shifts between the feed rates on the fly. The rollers are driven by a gear and chain drive with an automatic chain tensioner, housed in a cast iron case. The gear section runs in an industrial style oil bath for maximum control over long-term wear.

For the ultimate in dependability, we designed a serrated steel infeed roller and a smooth steel outfeed roller. Both rollers and the chip breaker are precisely set at the factory but have user accessible adjustments that allow the user to keep the POWERMATIC 15HH perfectly tuned in years to come. We also provide infeed and outfeed roller spring tension adjusters that are accessible without having to disassemble the cutterhead

covers. The operators' manual included with the POWERMATIC 15HH has a full set of illustrated instructions for making these adjustments.

To enhance operator safety, we added a row of closely spaced anti kickback fingers. These steel fingers are gravity operated and require no adjustment. They automatically engage the wood as it enters the cutterhead and help prevent it from being kicked out.

While the POWERMATIC 15HH is capable of 3/16"-deep cuts on most stock widths, a limiter plate at the center of the cutterhead limits full-width cuts to 1/8" or less. Controlling full-width cut depth avoids applying excessive strain to the machine but also prevents damaging the wood. Deep cuts are far more likely to produce chipping and tearout because of the extraordinary stress applied to the wood fibers.

Dust Collection

The POWERMATIC 15HH generates large quantities of dust and chips that must be evacuated to maintain performance at the cutterhead. The efficiency of the POWERMATIC 15HH doesn't reduce that quantity though its cutting action does tend to produce smaller particles than a long knife machine. We recommend a 500-600CFM (cubic feet per minute minimum) dust collector to handle the flow of chips properly.



The dust chute angles the 4"-diameter port to the side so the hose does not hang in the way of the wood as it exits from under the cutterhead.

An all-metal dust hood comes with the POWERMATIC 15HH that creates a short, direct path for the debris directly from the cutterhead. The hood terminates with a 4"-diameter port that is angled to the side so the dust collector hose does not interfere with the stock as it exits.

Table and Adjustment



Table height is adjusted with a large (left) cast iron handwheel with a spinner knob. A pair of locking knobs (right) one at each end of the table locks it in position firmly. These locking knobs can be moved to the opposite side of the 15HH if space is an issue.



The main and extension cast iron table surfaces are precision ground for precise planing. The main table surface is 20"-long by 15"-wide and is fully captured on four round, 2"-diameter, precision ground steel posts. Each corner of the table is locked onto a lead screw within its post that controls the up and down movement. The lead screws are driven by a single chain through a gear drive. A large 6"-diameter cast iron handwheel with spinner handle drives the height adjustment mechanism. Each full

revolution of the handwheel produces just over 1/16" of change to make the ultra fine adjustments necessary to hit a specific thickness easy to achieve. Though unlikely, the lead screws can be adjusted individually should the table ever get out of alignment.

The table is locked in place by a pair of knobs each securing both lead screws at that end. The locking handles can be moved to either side of the POWERMATIC 15HH to make them more easily accessible if one side has limited access.

A pair of rollers set into the primary table surface below the cutterhead help maintain smooth movement of rough stock through the POWERMATIC 15HH. The above table height of the rollers is easily adjustable.



The cast iron extension tables have setscrew adjusters built into their mounts that make leveling them to the primary table simple and fast.

We also include a pair of 14"-long by 15 3/4"-wide cast iron extension tables rather than the roller types. When installed they bring the overall surface to 48" in length.

The smooth surface of cast iron extension tables makes it easier to introduce wood into the machine, particularly when "training" one piece against the end of the one before it. They also eliminate the possibility of pinching a finger between the stock and a roller as the stock exits the machine.



A pair of rollers on the top of the 15HH makes returning heavy stock for a second cut simple and safe.

The cast iron extension tables mount to the primary table with bolts but have set screws below each of them that allow fine-tuning their surface to the primary table. This is a far more efficient system than trying to shim the extension tables to bring them into alignment with the primary table surface.

Top Rollers

To make moving the stock from one side of the POWERMATIC 15HH to the other for repeat cuts easier we added a pair of material rollers to the cutterhead. The iron rollers are spaced above the cutterhead, putting the often-heavy stock at a comfortable 43 1/2" above the floor.

Accessories

Digital Scale

We offer a digital scale (DRO Retrofit Kit #708520) that brings true digital accuracy and flexibility to your POWERMATIC 15HH. The DRO kit installs easily with its included hardware and precise calibration is a snap.

The DRO has built-in modes that make many planning tasks easier and dead on accurate. It can also be changed to display inch or



Adding the Digital Readout Scale brings a new level of precision to the 15HH.

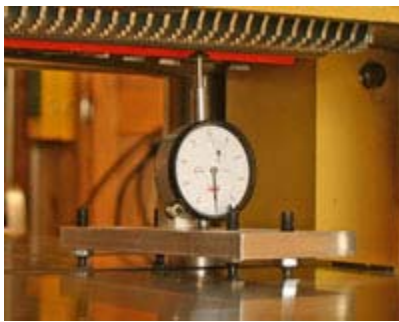
metric dimensions with the push of a button. The SET mode is used to program in a dimension and makes “dialing” the DRO in very easy. Plane a board and measure its thickness, preferably using digital calipers. Enter that dimension into the DRO and it is dead on accurate.

The Absolute mode (most commonly used) shows the precise distance from the cutterhead to the table with a resolution of thousandths of an inch! Switch to the Relative mode and the DRO considers the present thickness to be zero and shows precisely how much material a table height change will remove.

The HOLD mode retains the current setting and allows moving the table to clear a damaged or jammed piece of wood. The table can then be returned to that exact dimension to continue planing.

The DRO also has a Tolerance mode that is more specialized and while not often used in woodworking, is fully described in the POWERMATIC 15HH manual.

Bed and Feed Roller Gauge



Our specially designed Bed and Feed Roller Gauge makes setting and checking these important systems very easy and precise.

The specially designed Bed and Feed Roller Gauge (#2230002) is an ultra precise instrument that makes setting the POWERMATIC 15HH bed and feed rollers exactly with a level of confidence possible only with a dial indicator. When 0.001” either way makes a difference, the Bed and Feed Roller Gauge is the tool you need.

The Bed and Feed Roller Gauge kit includes a specially designed base with four legs arranged to clear the bed rollers while measuring the feed rollers above. The legs also straddle the bed rollers when measuring them.

The quality dial indicator can be aimed downwards, its probe passing through a hole in the base to set up the bed rollers. It can also be aimed upwards on the same mount to set the infeed and outfeed rollers. Because the Bed and Feed Roller Gauge stands on its own, your hands are free to make the adjustments without accidentally influencing the dial indicator.