

Technology And Woodworking

NOVA 18" Voyager DVR Drill Press

By Woodworker's Journal Staff

Computer-controlled DVR motor is poised to revolutionize woodworking drill presses.



Unlike typical drill presses, this one is truly smart, and its DVR "brain" brings many benefits. For instance, instead of a jolt of electricity at startup, which creates heat that shortens the life of a typical AC induction motor, DVR dials down the magnetic field so the motor starts quietly and cool, with no power surge or energy wasted. The solid steel rotor has no wire windings, brushes, permanent magnets or electrical connections to moving parts, so there's little that will develop heat during use or wear out over time.

Notice another big difference on top: the typical hinged case, pulley clusters and grimy rubber belts are gone — DVR makes a mechanical drive system obsolete. To change speeds infinitely between 50 and 5,500 rpm, just twist a dial and tell the computer the speed your job requires. It will set that rpm precisely and hold it there without fluctuating chuck speeds. DVR perpetually maximizes the motor's torque efficiency.

On a typical belt-driven drill press, you follow a chart to set the approximate speed range for the bit size and the material you're drilling into. But, it's a guesstimate at best. Maybe you're uncertain about what that speed should be. With Voyager, you don't

What would you change about a drill press to make it better? That's the question the folks at NOVA Teknatool took seriously when they developed the all-new Voyager 18" Drill Press, available through dealers this month.

While the machine has a 16½"-square cast-iron table that's easy to clamp to, a 5/8" chuck and 6" of quill travel for deep drilling, those are just side benefits. It's what's on top that's revolutionary: Voyager includes NOVA's 1.75hp DVR magnetic motor and LED screen CPU to control it — it's a proven and user-friendly drive system that's powered NOVA's DVR wood lathes for many years.

DVR stands for Digital Variable Reluctance — in effect, the computer constantly monitors the motor's spinning rotor and feeds it just the right amount of magnetic field to meet its needs for rotation speed and torque.



Full-range variable speed control is at your fingertips by twisting a dial — there are no dirty belts and pulley clusters to fiddle with. Voyager's CPU will maintain the exact speed you want.



Uncertain of the correct speed for a task? Just select the bit or cutter style, its diameter and the material type you're drilling into. The drill press will determine the optimal speed instantly.



Want to drill a hole that's exactly 4.388" deep, or any depth up to 6"? Tell the computer those parameters, and Voyager will beep to alert you when you reach it, then turn off automatically.

need a physics degree to figure it out. Just click through to the speed chart on the LED screen and choose the bit type and size you plan to use — the machine knows all the common options, from twist bits and brad points to Forstners, hole saws and fly cutters. Select a bit graphic, then its diameter and what you're drilling into. DVR will set the proper drilling speed.

Ever wished for a more precise depth stop system? Voyager has that covered, too. There's a threaded mechanical post/ruler stop if you prefer to set drilling depth the old way, but it's really unnecessary. Instead, you can toggle over to another screen on the display to let the computer set drilling depth. Then lower the bit until it touches the workpiece, zero it out on-screen, and tell the drill press how deeply you want to drill. As you pull the quill handle, Voyager will begin to beep to alert you that you're getting close. And

when it reaches the preset depth, plus or minus .05", the chuck stops. You can't under- or over-drill. Or, set Voyager to slow down and reverse direction at that point to clean out the debris.

The CPU provides many other unique features, too. You can tell the machine to start spinning when you pull the quill handle and stop when you retract the handle. Or, set Voyager for drilling pilot holes — the feature starts the chuck at a low speed to keep the bit from wandering, then ramps up when it senses full engagement with the material for an accurate, centered pilot hole. There's a tapping feature for cutting threads in metal, and another feature that enables you to save up to four of your favorite bit and speed combos for drilling tasks you commonly do.

Safety measures are built in here, as well. If the drill press should tip, or if a workpiece suddenly comes loose

while you're drilling it, the CPU will sense the torque change and stop drilling. You can even set a password to prevent unauthorized use.

A USB port makes Voyager's CPU programmable, and NOVA plans to provide software updates over time with more or improved features.



Clearly, this isn't grandpa's drill press! NOVA has made a machine for our times. And \$1,499.99 will put one in your shop. Learn more about DVR at dvrsmartmotor.com.

MORE ON THE WEB
For a quick video of Voyager's speed chart and depth stop functions, please visit woodworkersjournal.com and click on "More on the Web" under the Magazine tab.

A spacious 16½" cast-iron table that tilts 45° left or right should suit most any woodworking drilling situation.