

Woodworking Vacuum Solutions

 **DEKKER**
VACUUM TECHNOLOGIES



DEDICATED. DEPENDABLE. DYNAMIC. DEKKER.

The DEKKER difference means reliable performance, maximum efficiency, custom solutions and the longest warranties in the vacuum industry.

The one problem nearly every wood manufacturing application has in common is sawdust. You can never completely eliminate it, so your vacuum pump or system should be sawdust tolerant. No one makes tougher vacuum pumps and systems than DEKKER.

The Perfect Solution:

The Vmax oil-sealed liquid ring vacuum pump system with the Titan liquid ring pump at its heart can handle some carryover of soft solids without damage to the internal parts of the pump, because it features grease-lubricated external bearings isolated from the pumping chamber and no metal-to-metal contact inside the pumping chamber. For cost-effective ways to maximize efficiency and reduce operating costs, consider the Vmax system with Variable Frequency Drive (VFD).

Call DEKKER for a FREE Vacuum Performance Assessment

At DEKKER, our wide range of vacuum pumps and system configurations provide solutions for every high-demand application in the woodworking and furniture-making industries. Whatever your application, we can design custom vacuum pump systems that work in your environment. One consultation with our vacuum experts will demonstrate the DEKKER difference. We will find vacuum solutions that improve performance and deliver a rapid payback on investment due to reduced downtime and decreased maintenance.



Vacuum Solutions for Woodworking



Vmax & Vmax^{VFD}

Oil-Sealed Liquid Ring Vacuum Pump Systems

(Capacities ranging from 35 - 5,400 CFM)

The air-cooled pump system that gives you ultimate reliability under the toughest conditions, from the people who pioneered the first oil-sealed liquid ring vacuum pump system.

- Rugged, high quality, industrial systems, providing years of trouble-free operation
- Durable, long life Titan liquid ring vacuum pump(s)
- Patented DX-5 and DX-7 separators eliminate oil carryover concerns
- Only system on the market with a full 3-year warranty
- Extended life seal fluid (10,000+ hours) is not used as a lubricant
- Extremely low operating noise level
- Carryover of minimal amounts of soft solids does not cause damage
- ControlDEK® – Programmable Logic Controller

Vmax^{PLUS}

Next Generation of Liquid Ring Technology

Our oil-sealed liquid ring vacuum pump system is ideal for CNC routing and other woodworking applications that require deep vacuum and powerful hold-down force.

- Ultimate hold-down force eliminates parts slippage
- Compact design, small footprint
- Extremely low operating noise level
- Sawdust tolerant
- Available in duplex models, stacked upright for space-savings



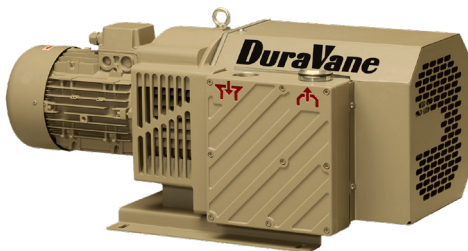
DuraVane

100% Oil-Free (Dry) Rotary Vane Vacuum Pumps and Systems

Air-cooled, heavy-duty, non-lubricated pumps in capacities ranging from 2 – 100 CFM.

These are heavy-duty, motor-mounted units that are extremely reliable, low maintenance pumps for industrial applications.

- Long-life graphite composite vane material
- Built-in inlet filter for models of 1HP and higher
- Direct drive
- Low noise level
- Compact design



DEKKER Pumps are the heart of every Vmax System

Titan Series

High-Efficiency Liquid Ring Vacuum Pumps

available in single-stage (capacities ranging from 35 to 2000 CFM). For larger capacities, please ask about our Maxima-K series pumps up to 39,000 CFM.

- No metal-to-metal contact
- Low noise levels – only 70-80 dBA
- Bearings mounted external to the pumping chamber
- Designed for heavy-duty applications
- Only one moving part



VFD Technology

The benefits of Variable Frequency Drive Technology

CNC routers have maximum-hold control on work pieces with custom solutions that use the liquid ring oil-sealed vacuum pump systems. Variable speed technology allows equipment to respond more precisely to different loads with varied motor speed to match changing machine and usage requirements. The net result is better control and operation at up to 50% reduced horsepower—saving considerable energy and reducing waste due to part slippage caused by insufficient flow or vacuum level.

Vmax^{VFD} with Variable Frequency Drive provides:

- Control of power consumption
- Control of current inrush
- Control of vacuum
- Control of material damage and waste
- Control of costs and ROI



DEKKER TIP:

Explaining Vacuum as a Holding Force on CNC Routers

Determining how much vacuum is needed to hold down parts on your CNC router is a very important step when preparing to purchase a vacuum pump or system.

Vacuum Level and Hold-Down Force are Critical

The purpose of this explanation is to demonstrate the relationship between vacuum level and hold-down force. These are two important factors for CNC router users who typically use one or more vacuum pumps to hold down work pieces on the router table. In general, the smaller the work piece, the more leakage through the MDF board, which requires a larger vacuum pump capacity to achieve the required vacuum level. In addition, the leakage will increase as more parts are routed and more of the MDF board is exposed. Determining the proper hold-down force therefore is critical. The hold-down force depends on the type and quality of the router tools and the force generated by the depth of cut and feeding speed. As a rule of thumb the average hold-down force on a single piece should be around 2000 lbs.

Ask a DEKKER vacuum expert to assist you as you consider these other application variables:

Altitude: Altitude has an effect on the hold-down force and must be taken into consideration, especially on smaller parts.

Leaks: Minimizing of leaks and regular cleaning of the table will improve performance

Inlet Filtration: Dusty operating conditions require efficient and proper inlet filtration and proper maintenance with regular cleaning