Important Information Regarding Operation of Weinig PowerLock Cutterheads #538 and Powermat Moulders

General Instructions:

For safety reasons, the maximum adjustment of re-ground knives must not exceed four corrugations (1/4") from the bottom. There is a line on the cutterhead that indicates the maximum outward adjustment.
Knives and clamping wedges must have the same thickness, and MUST be balanced within 0.1 gram (0.0035 oz.) of each other for proper performance. This is very important, as performance of the moulder and the finished surface of the wood depend on the smooth running of balanced tools.

Caution: With some PowerLock heads, the gibs and knife pockets are inscribed with a "1" and "2". In this case, the gibs have been balanced with the head and MUST be used in the same head and in the same numbered knife pocket. DO NOT rebalance these gibs and use them ONLY in the same head and in the same pocket!!!!!

Weinig Double-Back Carbide system is certified to run up to 12,000 rpm in Weinig PowerLock cutterheads. Different clamping wedges are required when used in 4-knife heads.

Never exceed the maximum speed specified on the tool.

Cleanliness is extremely important between the PowerLock shank and receiver. Perform frequent visual inspections for burrs or damage on the tool taper, as tool breakage can occur if there is contamination. Use of PowerLock taper cleaning device #006-03226 is recommended on EVERY cutterhead exchange.

Maximum tool weight when running at 10,000 and 12,000 rpm is 30 pounds. This tool is required to be an integrated one-piece tool (no adapters or tool-holders allowed), as technically specified by Weinig.

When using PowerLock adapters for conventional tools, the cutting tool dimensions and weights must not exceed the limits specified below. Note that minimum spindle adapter size is 1.5".

6000 RPM	77 lbs.	240mm tool length
8000 RPM	44 lbs.	240mm max. tool length on 122mm OD tools 180mm max. tool length on 137mm OD tools 150mm max. tool length on 150mm OD tools
10,000 RPM +		Use of spindle adapters prohibited.

Remember never to exceed the maximum speed stamped on the tool.

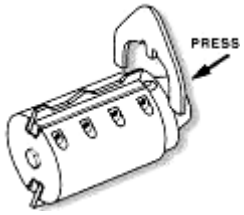
Use of non-certified tooling is not recommended. Custom-tooling manufacturers must be able to furnish a tool-speed test AND balance certificate. Call Weinig for the current list of approved and certified manufacturers.

Corrugated Knife Installation Instructions:

Remove dirt and resin from the clamping wedges and cutterhead serrations.

Insert the corrugated knife (16-60º corrugations) and clamping wedge.

Mount the setting device (Weinig #507-330001) on tool as shown, and axially press against the shoulder.
Axially position the corrugated knife and clamping wedge against the setting device and tension the middle clamping screw.
Remove the setting device.



Check the knife to insure proper fit into the cutterhead corrugations.

Tighten the clamping bolts from the middle bolt outward (example: For a cutterhead slot requiring five bolts, tighten in the bolt number sequence 3, 2, 4, 1, 5). The required tightening torque on clamping bolts is 22-24 ft/lbs. Make sure each knife is torqued to equal clamping pressure. Do not over-tighten.
When using knives that are more than 3/4" (20mm) shorter in length than the cutterhead, either use a clamping wedge according to the length of knife (and remove exposed gib screws) or install a filler strip in the open area of knife slot. Never use fewer than two clamping bolts to clamp knives, filler strips and wedges.

Install knives successively opposite each other.

Maximum profile depth when using Type #538 PowerLock tools is 1 3/8" (35mm), when using 70mm corrugated knife steel. Do not exceed this limit, as the clamping capacity of the tool cannot safely operate outside this limitation.

To remove the knife, release the tension from the clamping bolts, and then remove the knife. Protect yourself from injury by wearing gloves when handling cutterheads and knives. Always undo clamping screws away from the knife cutting edge.

Use only original Weinig replacement parts in the cutterhead.

Additional Instructions For 4-Knife PowerLock Cutterheads

NOTE: Since these tool bodies are closed on the nonclamping end for strength and stability, loose knife
placement and removal is slightly different from the 2-knife version.

There are four holes in the non-clamping end of the tool body. These are sightholes, allowing you to see the bottom of the knife and ensure that the corrugations are in proper alignment in the pocket with all other installed knives.

These holes also are used to ensure that the knives are not beyond the maximum adjustment area. If the bottom edge of the knife is not visible through the sight hole, then the knife must be moved down in the pocket or a new knife is required.

These holes also are used for cleaning purposes, directing airflow off the face of the knife and out through the end of the tool body. This helps keep wood dust and resin from accumulating within the knife pockets.

Before removing knives and wedges, it is important to first use compressed air to blow out all accumulated wood dust. It is also good practice to clean thoroughly with Weinig Cutter-Guard.

Afterward, place the tool body in a secure holder such as a setup or measuring stand. Back out all clamping wedge screws until they are past the inside surface of the knife pocket area. Remove the clamping wedge, pulling it straight up and out of the tool. Then remove the knife in the same way.

After all knives and wedges are removed, thoroughly clean the knife slots, corrugations and wedges with a non-abrasive brass brush.

In order to mount new knives in this style of closed tool, first place the knife into the pocket and locate it into the proper corrugation. Then install the clamping wedge and follow the same alignment, tightening sequence and clamping-wedge screw tension procedures as previously listed.