

Varimac 10/20

Automatic Reversing Single Spindle Tapping Machine

OUR MOST VERSATILE MACHINE

Capability

- Nut tapping up to M20 (VA20), M12 (VA10)
 - Through Holes
 - Blind Holes
 - BSW & NPT pipe Threads
 - Special thread pitches
- Parts can be up to 70mm long and up to diameter 50mm (VA20), 25mm (VA10)
 - Adaptation to accept parts up to 90mm may be possible
 - Materials
 - Steel
 - Stainless Steel
 - Brass
 - Aluminium
 - Plastic
 - Cut and Rollform tapping
 - Drilling and Reaming



Feeding Systems

- Vibratory Bowl
- Rotary Drum
- Both can be installed for companies with a large variety of products.



Machine Control

- Varimac machines use a Siemens HMI touch screen and PLC
 - TP900 Comfort HMI
 - S7-1500/ET200SP PLC
- The HMI stores up to 100 different parameter sets for specific jobs
- Advance motion can be customized with 14 different settings



Panel Compartments

Left Side – Behind Machine



Right Side – Behind Machine



Servo-drive

- Servo-drive Frequency Controller
 - Accessible from side under spindle housing



Connectivity

- Network and Wifi Connection for integration with factory data systems and remote support

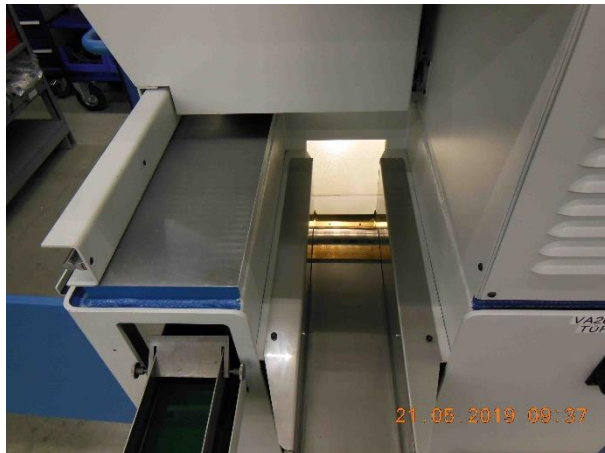


Chip Separation

■ Magnetic Chip Separator

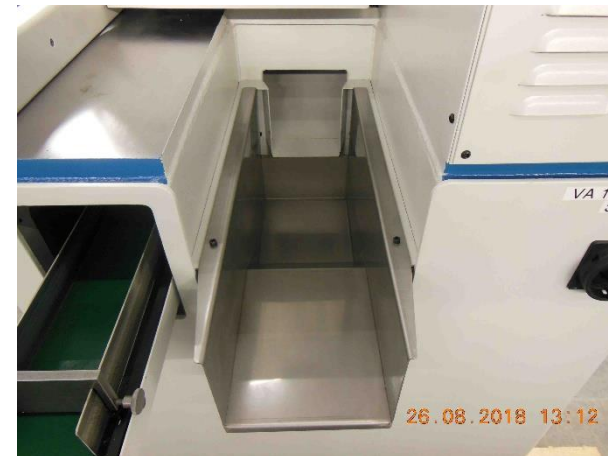
A magnetic drum rotates during automatic operation bringing steel chips up where they can be easily removed.

Oil flows under the drum and returns to the tank.



■ Basket for Non-Magnetic Materials

This perforated collection basket replaces the magnetic chip separator when processing materials like stainless steel and aluminum.



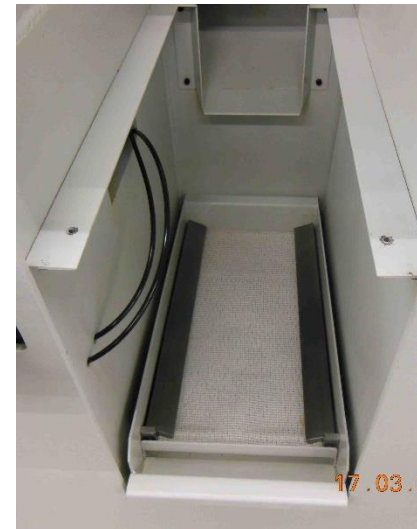
Automatic Chip Conveyor

- Conveyor operates continuously during automatic operation for easy removal of all materials.



Filtration Drawer

- Filtration fabric can be placed under the magnetic chip separator, basket or conveyor to help maintain clean tapping oil.
- The drawer slides out so the filter medium can be changed easily.



Oil Tank

- Tank Capacity is 150 liters.
- Oil level is visible from the outside through the sight glass.



Customized for External Equipment

- Varimac machines can be customized to work with other equipment such as overhead feeding systems and carousel collection boxes.
- These options will be discussed on an individual basis.



Finished Parts Conveyor

OUTPUT LEFT

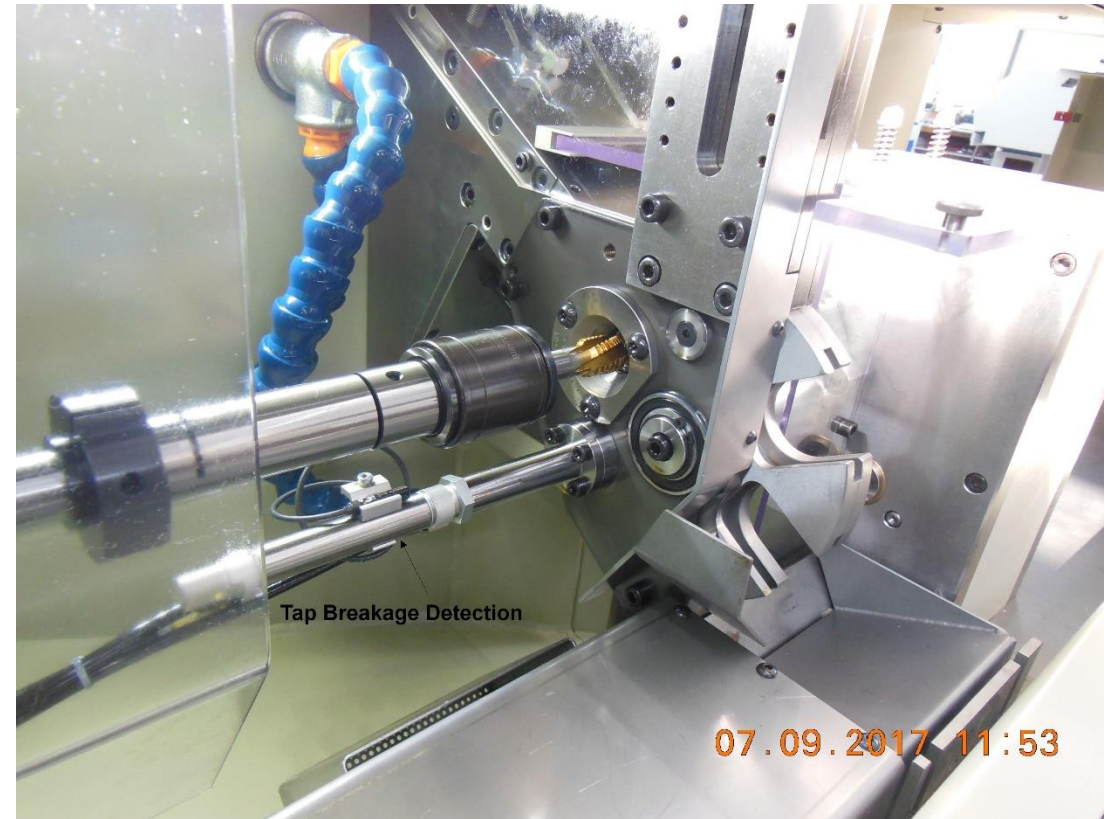


OUTPUT RIGHT



Working Area – Standard Spindle

- The standard spindle comes equipped with a Bilz style quick release tap holder.
- All Varimacs for nut tapping are fitted with a tap breakage detection mechanism.
 - During each cycle a pin is projected into the tapped hole. When the pin is not able to go as far as it should, the control knows the tap broke and is stuck in the hole.



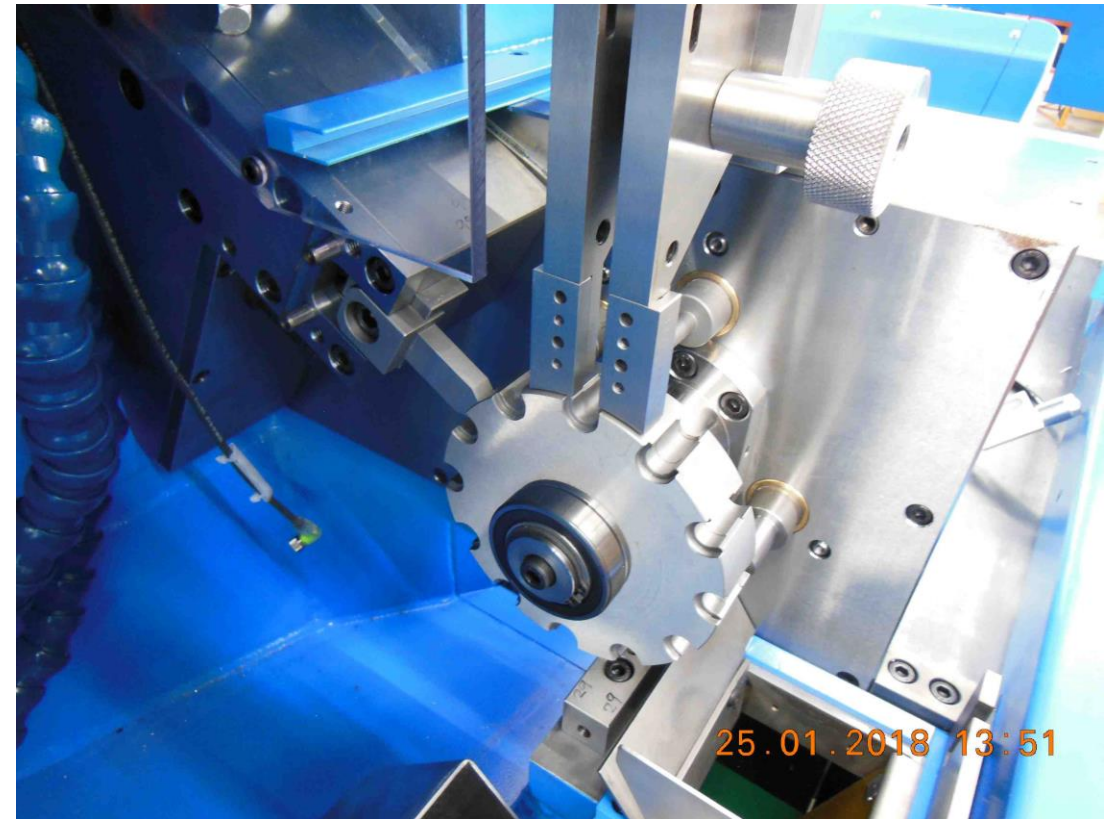
Working Area – Transfer Disk

- Varimac 10 uses a 12 position disk
- Varimac 20 uses a 6 position disk

The transfer disk moves counter-clockwise in the view shown.

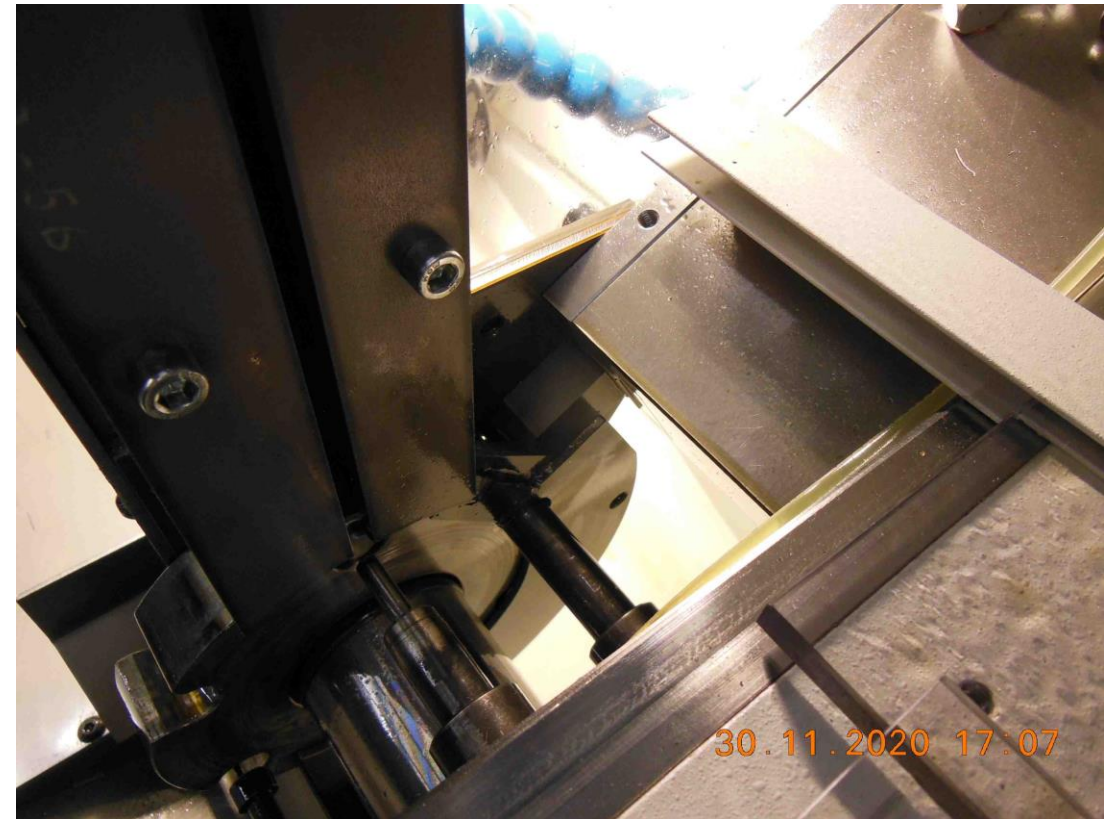
The functions relative to clock position are:

- 12: Part drops into disk from feed track
- 10: Part is clamped for tapping
- 8: Breakage detection checks hole
- 4: Part is ejected onto finished parts conveyor



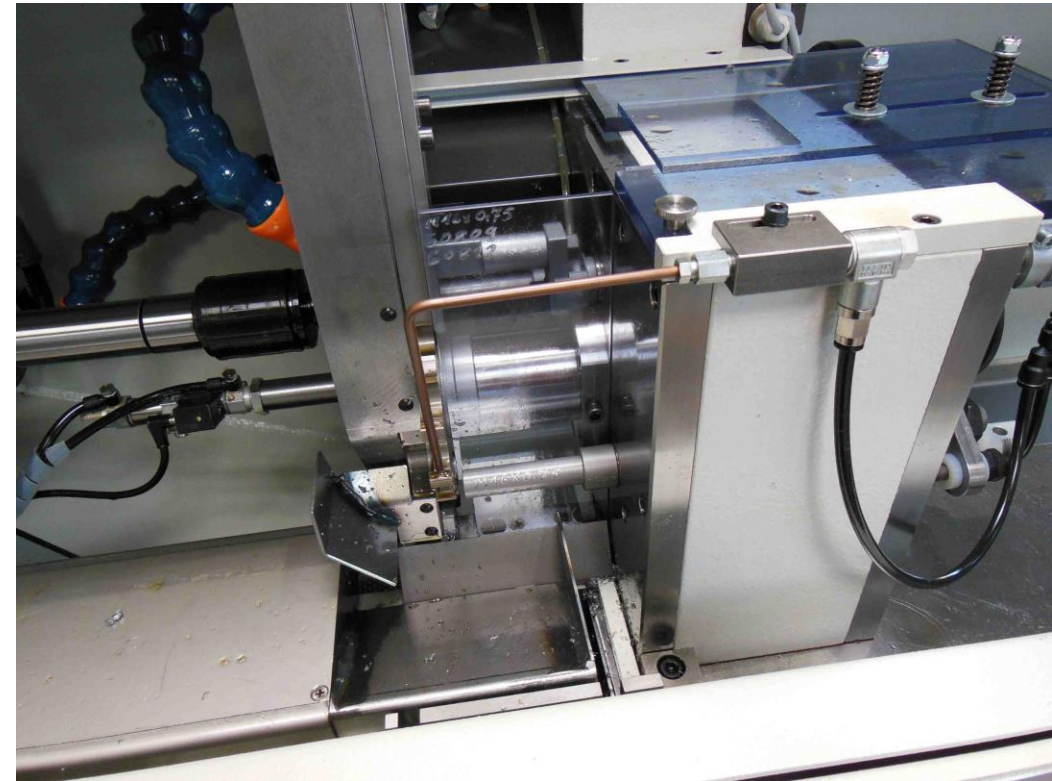
Working Area - Clamping

- The parts are radially clamped via a toggle clamp mechanism.
- They are also clamped axially by a pusher from behind.
- The sequence of clamping can be customized on the control screen.



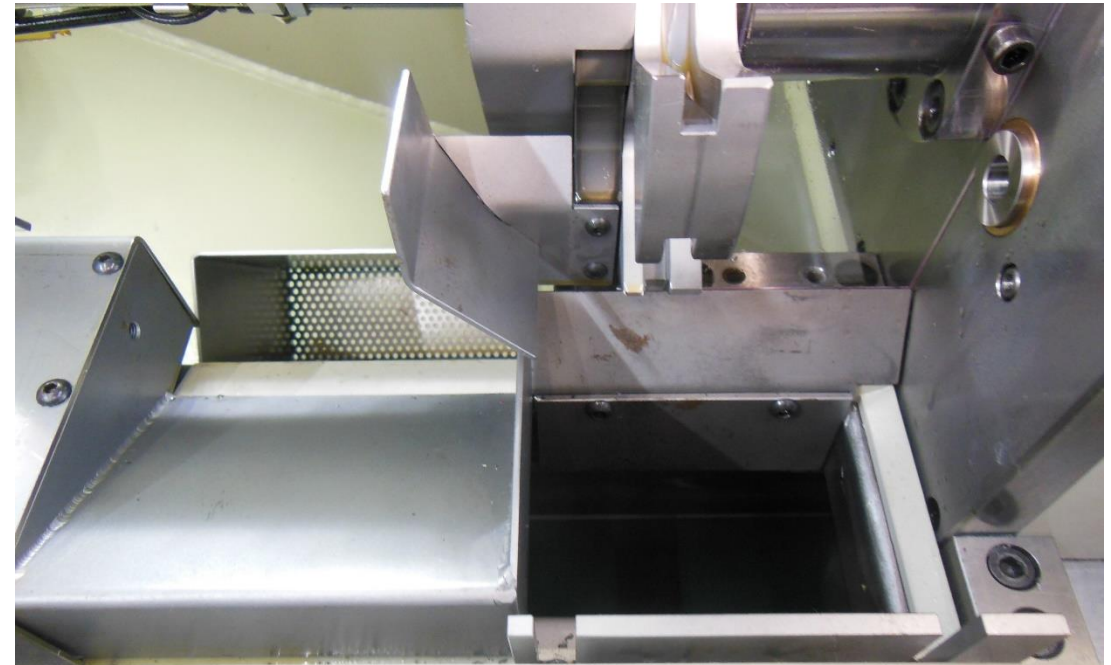
Working Area – Part Kickout, Cleaning

- A kickout is extended to make sure parts come out of the transfer disk when they should
- A timed air nozzle is sometimes used to ensure chips are cleared from the transfer disk slots before a new part enters



Working Area – Good/Suspect Part Door

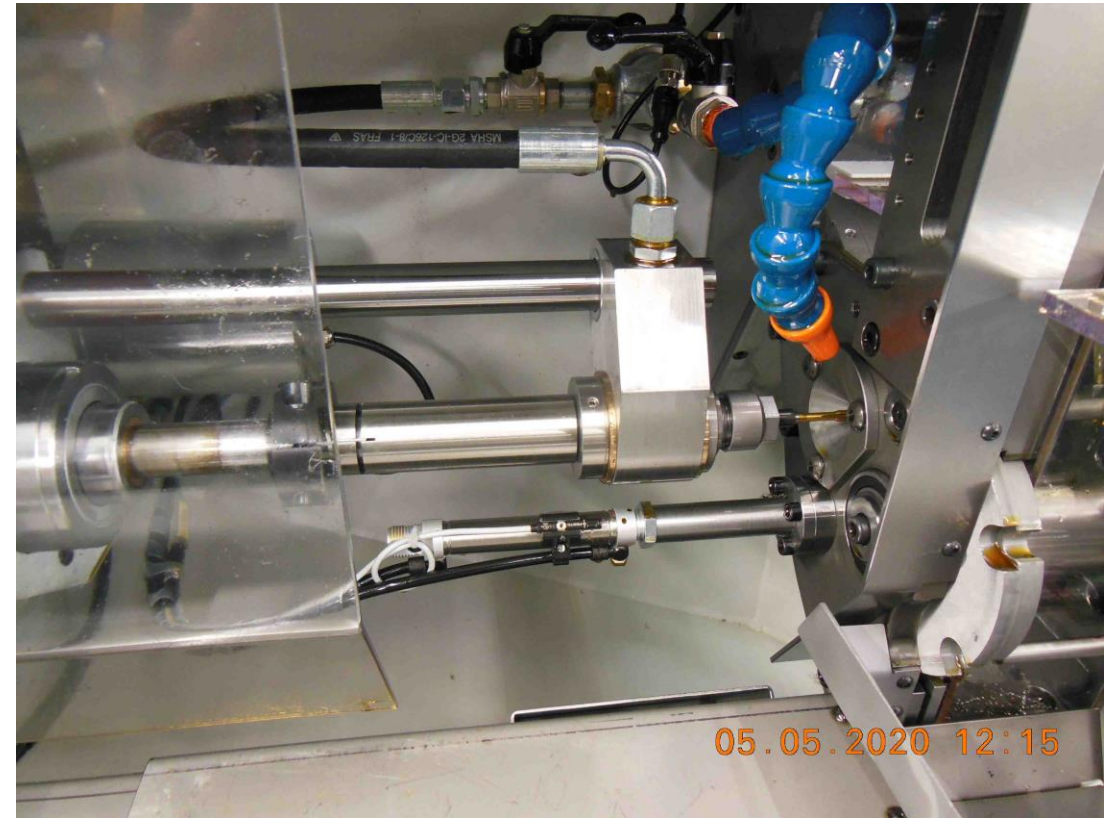
- The door slides to the right to close the finished part outlet when first starting the machine for first article inspection.
- It will also close if a problem is detected.



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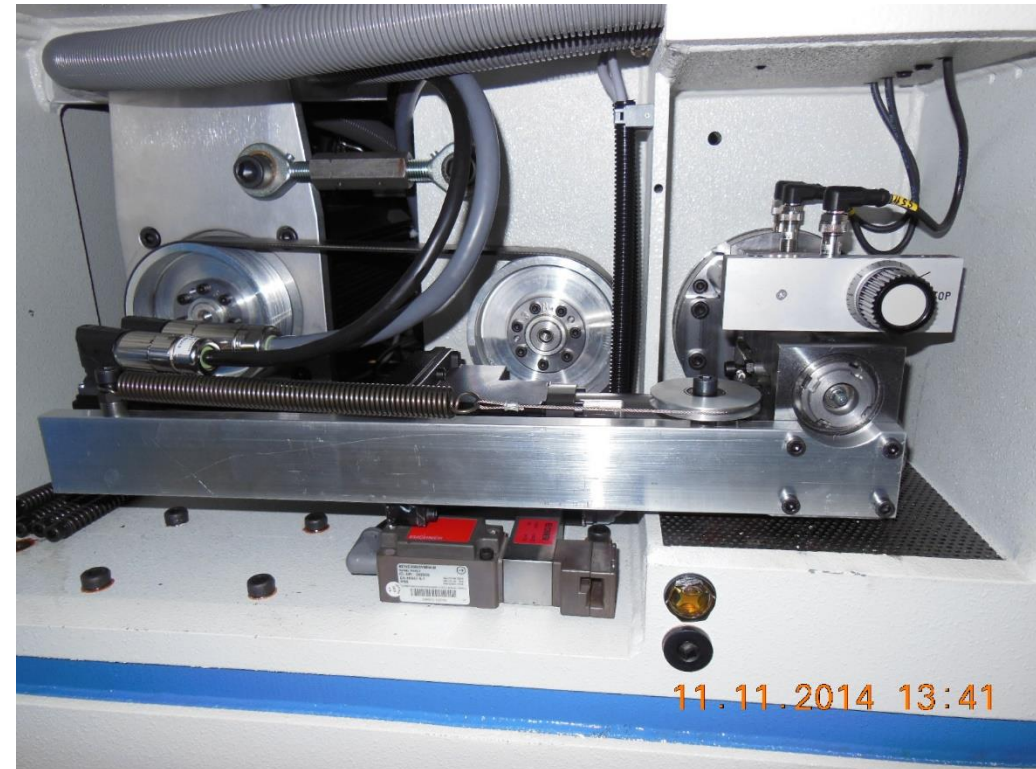
Working Area - Through Oil Spindle

- Through oil attachment available
- Extra oil filtration required for this option



Spindle Housing – Drilling Option

- A servo controlled drilling and reaming attachment is available
- This unit can also be used for pointing and other special operations



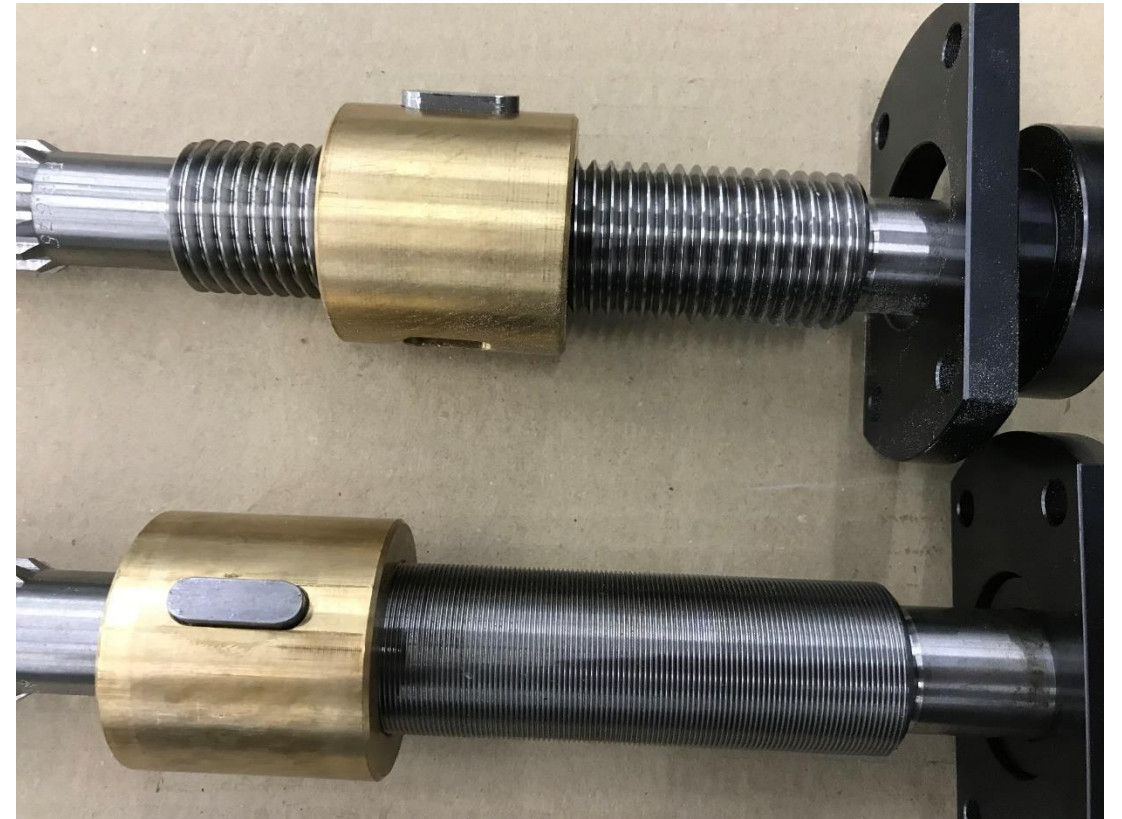
Spindle Housing – Lead Spindle

- Tap advance is controlled by lead spindle with exact pitch of tap being used.



Spindle Housing – Lead Spindle

- Lead spindles can be made to any metric or inch thread as well as non-standard custom pitches



Optional Oil Filtration

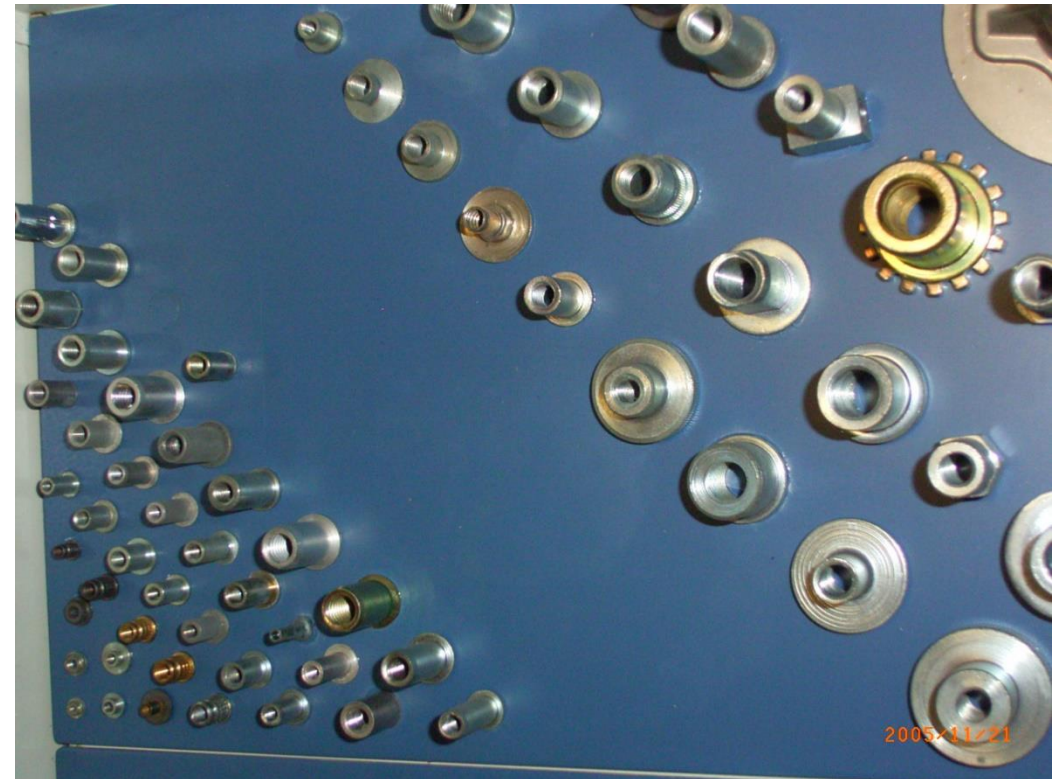
- Magnetic Oil Filter
- Standard Element Filters
- Pressure Monitoring
- Stronger Oil Pump

Required with:

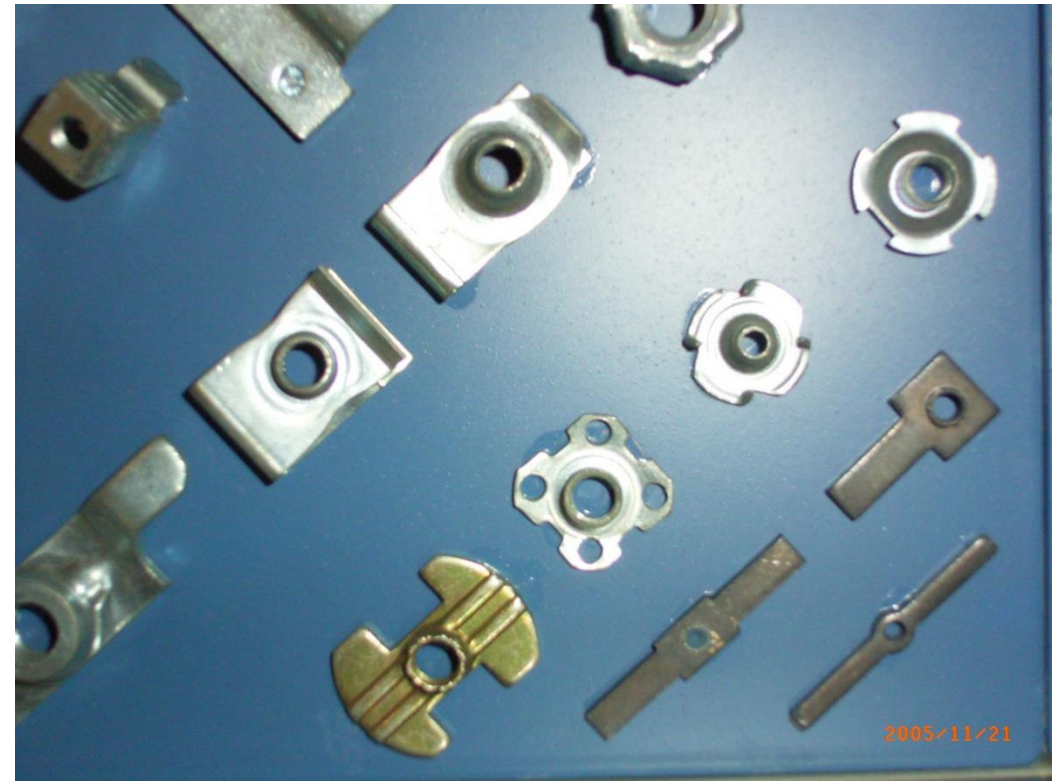
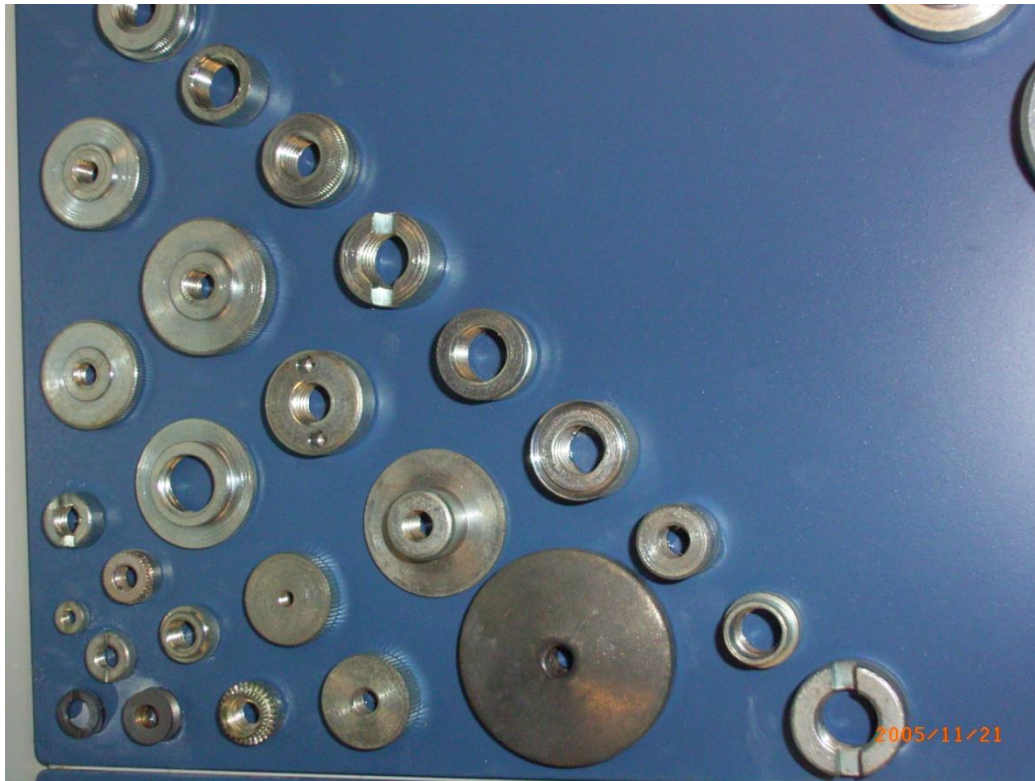
- Through Oil Attachment
- Drill/Ream Attachment



Product Variety



Product Variety



Product Variety

