

FOR IMMEDIATE RELEASE

## Rollomatic Highlights 6-axis CNC Grinding Machine for Taps and Threading Tools - the universal tap grinding solution -

Mundelein, June 2021. Rollomatic, a leading machine tool manufacturer based in Le Landeron, Switzerland, maintains its global leadership position in the field of multi-axis CNC grinding by presenting a variety of tool holding and software solutions for the production grinding of taps, threadmills and forming taps. The GrindSmart® 630XW is a modular tool grinding machine that provides ultimate versatility through customizable options. The ShapeSmart® NP50 is a pinch/peel grinding machine which is used for the blank preparation of these threading tools both in carbide, HSS and stainless.

Rollomatic has developed and refined several grinding processes that allow short and long batch grinding of threading tools where external thread grinding is an essential part of the manufacturing process.



- Cutting taps in HSS and solid carbide
- Surgical taps in stainless
- Straight-flute taps
- Spiral-flute taps
- Taps with gun point and/or chamfer
- Custom threads
- Threadmills in solid carbide
- Forming taps
- Blank preparation including grinding of the shank, square and male centers



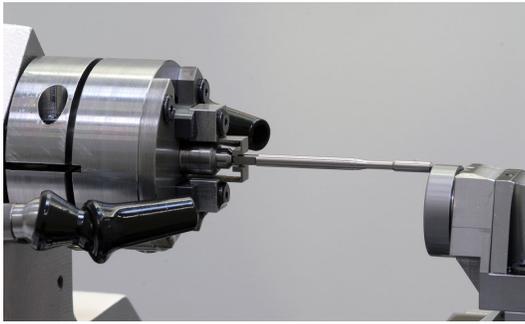
### GrindSmart® 630XW 6-axis tool grinding machine:

- With 6-station wheel and nozzle changer
- Automatic tool loader/unloader
- Linear motion technology for improved surface finish
- Universal workhead with high-speed capability to combine high-accuracy cylindrical grinding and geometry grinding
- Large variety of workholding and tool holding solutions including custom-made fixtures
- Onboard rotary dressing included



### ShapeSmart® NP50 5-axis pinch/peel cylindrical grinding machine:

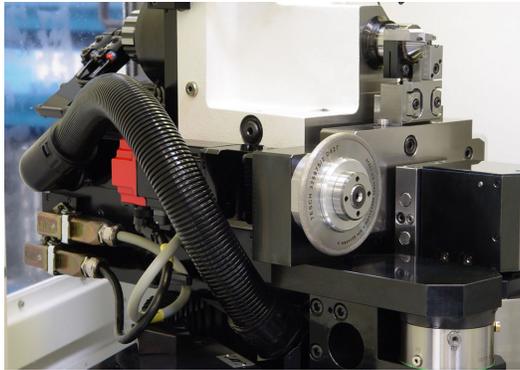
- Automatic 3-axis tool loader/unloader
- Pinch/peel grinding process in combination with V-block part support and with simultaneous grinding of roughing and finishing passes
- Multi-pass grinding for efficient heavy stock removal
- Amazingly large diameter range from 0.0008" to 1"
- Patented non-round pinch/peel grinding for all non-round shapes such as square, rectangle, oval, corner radius and any other non-round profile
- Onboard diameter gauge included



#### **Workholding:**

Different types of tool clamping and support systems are available:

- The tap can be held between centers. The centers can be male or female on both the workhead and the tailstock. The tap is driven by a square clamp that acts as driver. The concentricity is provided by the two centers and not by clamping on the square.
- The tap can be clamped on the shank by a collet and supported by the tailstock. This mimics the way the tap is engaged in the machine tool to cut the thread.



#### **On-board dressing:**

During the grinding process, the thread grinding wheel may potentially lose its profile and causes the thread dimensions to be out of tolerance. Utilizing pre-determined parameters, a rotary onboard dresser will allow the wheel to be conditioned for optimal grinding performance, while truing and restoring the form simultaneously. Here are diamond dressing rolls that can be used to dress diamond and CBN threading wheels including vitrified bonds:

- CVD or natural diamond rolls, hand-set or random-set
- Impregnated diamond rolls (sintered)
- Plated diamond rolls



#### **Automatic loading/unloading:**

The Rollomatic-designed high-speed tool loader which is integrated into the basic machine has been developed with rapid setup speed in mind, using pre-calibrated cassettes and a gripper design that allows holding different diameters without having to reset the gripper positions. The Rollomatic automatic loaders are known to be the most reliable in this industry. Mechanical quick-release clutches allow a rapid and easy recovery from any setup error.



#### **The difference between cutting taps and forming taps:**

As the name suggests, cutting taps produce threads by progressively cutting away the space between threads into which the fastener's external threads will fit. Forming taps, by contrast, remove no material. Instead, they move or displace material inside the hole to build up the threads and dig into the grooves.

#### **The difference between taps and threadmills:**

Thread milling uses helical interpolation for cutting the thread, while a tap is advanced into the workpiece in line with the center of the tool.

Rollomatic provides outstanding service/support from its North American headquarters in Mundelein, IL, and satellite offices in CA, FL, IN, MA, TN, WI. For more information visit: [www.RollomaticUSA.com](http://www.RollomaticUSA.com) or e-mail [solutions@RollomaticUSA.com](mailto:solutions@RollomaticUSA.com).



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