

**NUT TAPPING MACHINES FOR  
THE FIXTURES AND FIXING  
COMPONENTS INDUSTRY**

**FOR MORE THAN 80 YEARS**

## Portrait

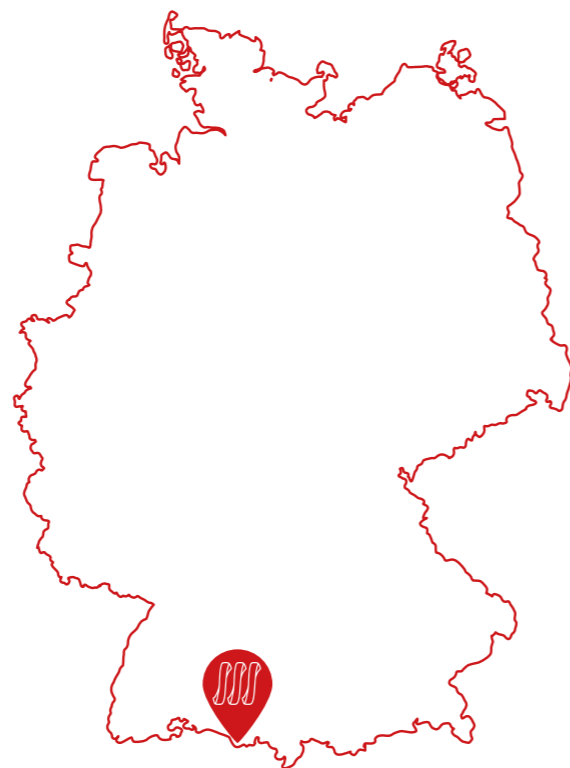
Streicher Maschinenbau GmbH is a medium-sized family business based in Kressbronn on Lake Constance. For over 80 years Streicher is one of the world's leading manufacturers of tapping machines for the fastener and automotive supply industry and automotive supply industry. The machines are among the top international products and are constantly being further developed. Specialised employees and state-of-the-art production technology guarantee our customers the highest quality. Over 2,000 Streicher machines are sold in more than 70 countries.

From our wide range of different machines and technologies for thread production we select the most suitable one in each case and to specific customer requirements. With a strong partner network, an established market position and leading technology, we will continue to offer our customers the best technical and the best solution for the production of internal threads.

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# TOP-CUT

## AUTOMATIC NUT TAPPING MACHINE

The machines in the Top-Cut series are designed for the production of internal threads according to the overflow principle. This machine type is characterised by high output rates at low acquisition costs, which means that it pays for itself quickly. The machine is suitable for the efficient tapping of standard, flange and round nuts. The blanks can be turned, punched or pressed. The three machine sizes TOP-CUT 10D, TOP-CUT 16D and TOP-CUT 33D cover a thread range from M4 to M33, as well as corresponding inch threads, regardless of whether they are right-hand or left-hand threads.

### Operation

The compact design makes the machine easy and safe to operate. The illuminated and clearly structured work area minimises changeover time. All drive elements and tools are visible and can be changed or adjusted without special tools. The work process can be closely monitored via the large viewing windows.

### Thread production

Standard nuts are pushed against the tap by a pusher. During the drilling process, the nuts are guided in a ground prism during the drilling process and secured against twisting. Flange and round nuts drop from the channel into a mechanically actuated holder, which is mounted on a carriage. In this, the nuts are axially and secured radially against rotation. The carriage then moves forwards against the tap. As soon as the tapping process is completed, the clamping is released mechanically, the nut is released and the carriage returns to the original position. Electrical proximity switches control the clamping movements. The feed movement is controlled by a cam and depends on the spindle speed and the thread pitch. The feed rate therefore always corresponds exactly to the thread requirement without damaging longitudinal forces on the thread flanks. The result is the best thread qualities. To effectively protect the tool and machine from damage the feed disengages in the event of a collision and the machine switches off immediately. The cutting process is monitored by a finely adjustable torque measuring device, which switches off automatically if the tool is blunt.



### Parts feeding

Sorted by the drum feeder, the parts to be processed are transported downwards in the correct position via the feed channel to the insertion or drop-in position. If parts become jammed during sorting, an adjustable mechanical clutch moves out and releases the jam. Proximity switches ensure that there is a sufficient supply of nut blanks. If this is no longer the case, the machine switches off and a signal lamp lights up.

### Drive

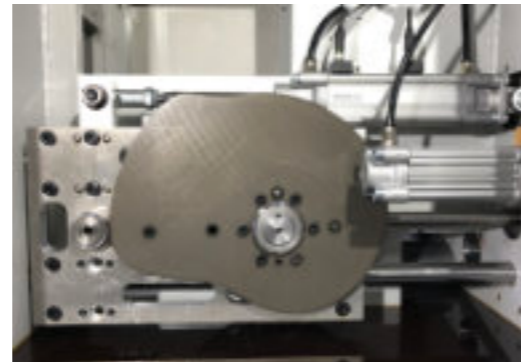
An infinitely variable spindle drive enables a wide speed range. This makes it possible to set the ideal cutting speed for both large and small thread dimensions. The feed movement is driven directly by the tapping spindle. The number of cycles is therefore in fixed ratio to the spindle speed. An easily interchangeable gear set allows the adjustment of any ratios. For set-up operation, the feed rate can be controlled step by step.

### Coolant preparation, parts output, maintenance

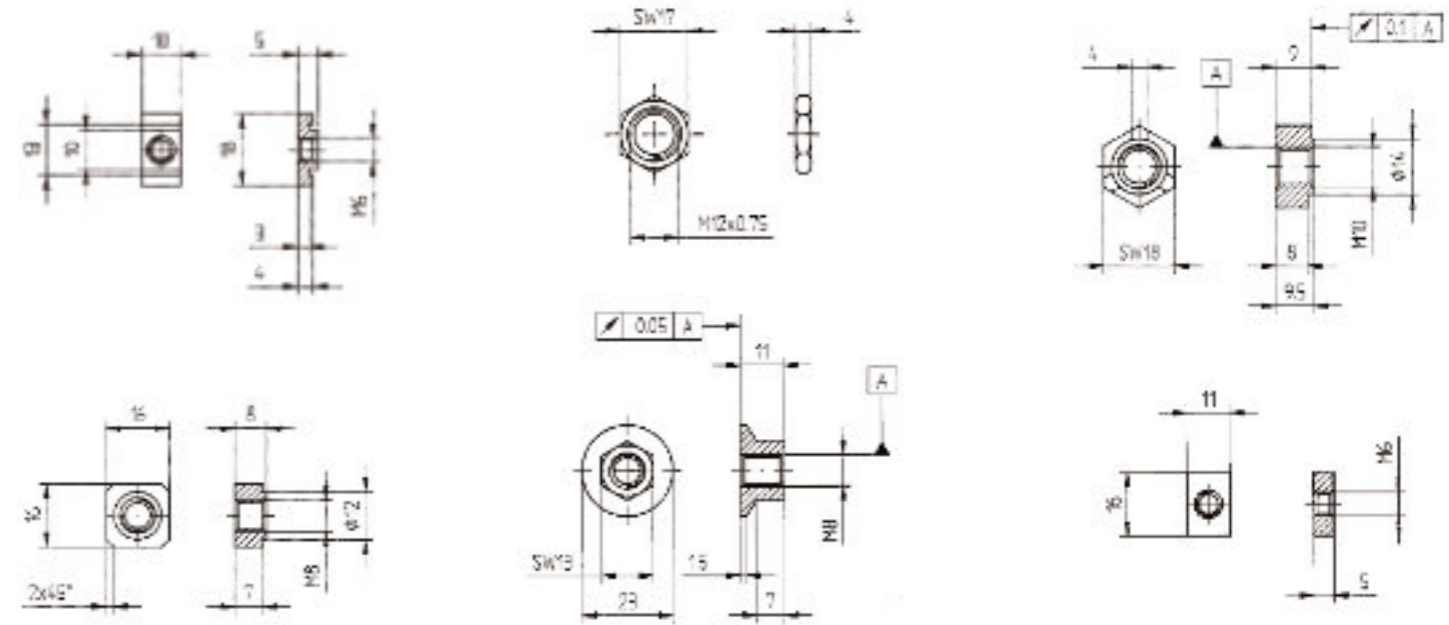
The large coolant reservoir in the lower part of the machine base ensures a consistently low coolant temperature of the coolant even during multi-shift operation. A magnetic roller separates the chips produced during tapping. Via a discharge channel, the almost dry chips automatically get out of the machine. Opposite, the finished machined nuts are transported out of the machine largely oil-free. All sliding mechanical parts and bearing points are lubricated in an oil bath or lubricated for life. Maintenance of these components is therefore no longer necessary.

## ADVANTAGES

- Highest output quantity
- Wobble accuracy of less than 0.1 mm
- Precise incline specification through cam feed
- Checking the core hole and drill breakage
- Optimum tool service life and consistent thread quality through torque monitoring
- High availability and productivity thanks to short set-up times
- High process reliability and quality thanks to mechanical control and electrical monitoring systems
- No maintenance of mechanical parts thanks to oil bath lubrication and lifetime grease filling
- Protection of man and machine through mechanical and electrical safety devices
- Automated mechanical troubleshooting during parts feeding
- Ergonomic operation



Feed curve



Machine	TOP-CUT 10 D	TOP-CUT 16 D	TOP-CUT 33 D
Thread dimension	(M4) M5 - M10	(M4) M5 - M16	M16 - M33
Number of spindles	2	2	2
Max. outside diameter	25 mm	32 mm	60 mm
Max. width across flats (standard nut)	22 mm	27 mm	50 mm
Spindle motor	4 kW	9,7 kW	13,2 kW
Speed range	400 - 5.000 rpm	400 - 5.000 rpm	200 - 1.600 rpm
Maschine control system	Mechanical/ PLC	Mechanical/ PLC	Mechanical/ PLC
Max output (square/hex nuts)	19.700 pcs/h	19.700 pcs/h	5.950 pcs/h
Max. output (flange nuts)	11.090 pcs/h	11.090 pcs/h	3.530 pcs/h
Max. output (round nuts)	8.800 pcs/h	8.800 pcs/h	3.530 pcs/h
Coolant volume	160 litres	270 litres	380 litres
Weight	1.600 kg	2.700 kg	4.600 kg
Dimensions (LxWxH)	1.495 x 1.010 x 2.019 mm	1.800 x 1.330 x 2.425 mm	2.100 x 1.520 x 2.585 mm



Working area with round nut carriage



Working area with flanged nut carriage



Interchangeable wheels for different gear ratios



# VARIMAC

## AUTOMATIC REVERSING SINGLE-SPINDLE TAPPING MACHINE

The machines in the VARIMAC series are characterized by the highest standards of variety, precision and efficiency. The machines are suitable for thread cutting and forming, drilling and countersinking all types of nuts and special parts. These can be pressed, turned or punched. The maximum length of the parts is 100 mm, the maximum diameter is diameter is 80 mm. The three machine sizes VARIMAC10, VARIMAC20 and VARIMAC30 cover a thread range from M4 to M33, as well as corresponding inch threads regardless of whether right-hand or left-hand threads, as well as blind hole or through-hole threads. The machines are available in single and twin spindle versions.

### Operation

Thanks to a clearly structured machine design, maintenance and care are kept to a minimum. The illuminated interior work area is ergonomic and clearly laid out. All tools and machine parts are easily accessible and simple to operate. Tools can be changed quickly and easily.

### Drive

The working spindle is driven by a powerful servo synchronous drive. The forward and reverse speeds can be infinitely adjusted independently of each other. In addition, different travel sets can be stored in the system. The repeat accuracy is 0.01 mm.

### Parts feeding

The parts to be processed are automatically fed in the correct position via a drum feeder or an electromagnetic vibratory conveyor. Proximity switches check that the nut blanks are fed in sufficiently; if this is no longer the case, the machine switches off and a signal lamp lights up.

### Thread production

The parts are transported from the feed channel to the clamping and working position and from there to the ejection position via a switching disk. This is driven intermittently via a stepping gear. The radial and axial clamping of the parts is carried out by limit switch-monitored pneumatic cylinders. The order of the clamping cylinders can be changed via the menu as required. The thread is fed via a guide cartridge with an exact thread pitch. The drilling process is therefore absolutely neutral, without damaging tension or pressure on the thread flanks. The wobble accuracy is less than 0.03 mm. The drill breakage check ensures that all nuts have a thread. A hydropneumatic or electromechanical feed unit is available for special applications, such as drilling into solid material. The spindle is equipped to accommodate a wide range of quick-change chucks. The movement sequences are coordinated and monitored by a control system. This also ensures that if the tool is blunt, the increase in torque is detected and the machine is switched off as a result. An interface for production data acquisition is available on request.



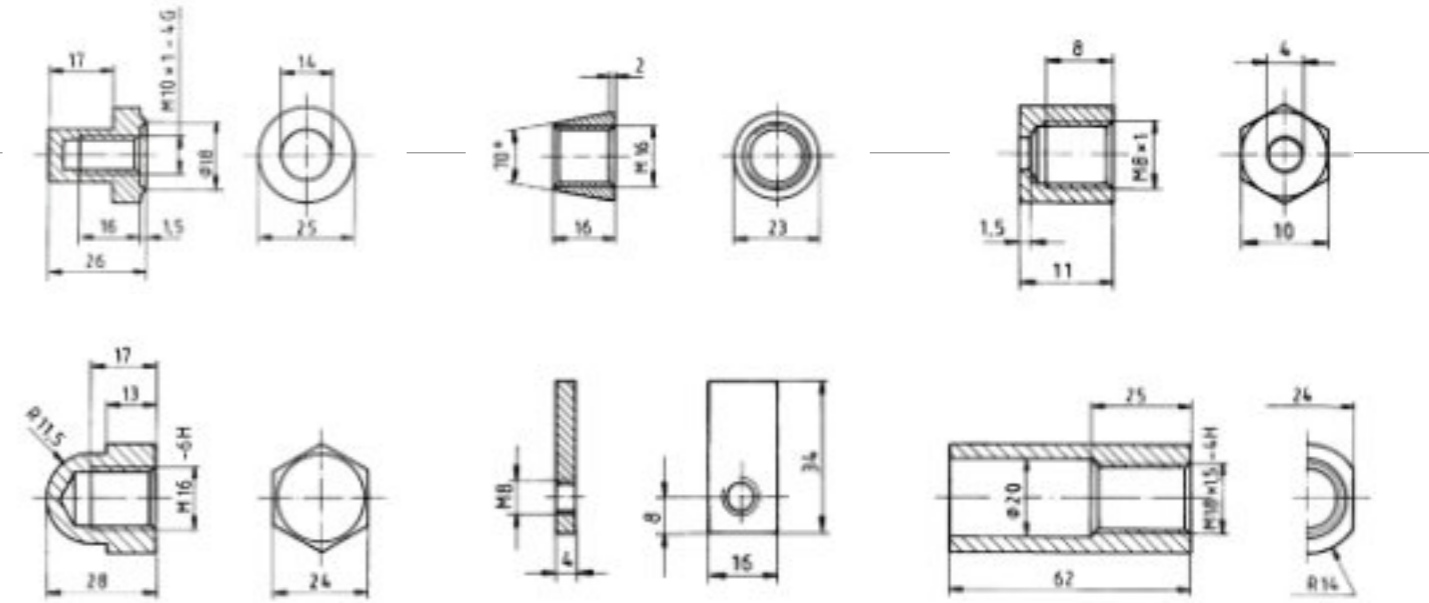
### Coolant preparation, parts output, maintenance

The large coolant reservoir in the lower part of the machine stand ensures that the coolant temperature remains consistently low, even during multi-shift operation. The chips produced are transported out of the machine almost dry using a magnetic roller. A chip container or a conveyor belt are available for non-magnetic materials such as aluminum or stainless steel. A filter system separates micro-chips and the smallest particles. This extends the service life of the tool and reduces wear on moving machine parts.

This extends the service life of the tool and reduces wear on moving machine parts. The finished parts are discharged from the machine via a conveyor belt without chips and largely oil-free. Remote maintenance is also possible.

# ADVANTAGES

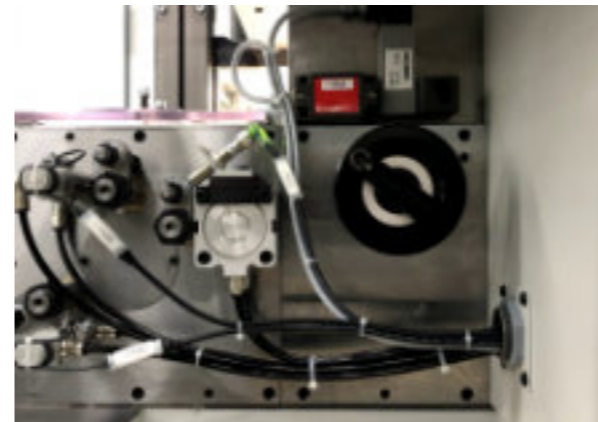
- Blind hole and through-hole thread
- Precise pitch indication due to guide cartridge
- Highest quality of the threads produced
- Repeat accuracy of 0.01 mm
- Wobble accuracy of less than 0.03 mm
- Optimum tool life and consistent thread quality by torque monitoring
- High availability and productivity thanks to short set-up times
- No maintenance of mechanical parts thanks to oil bath lubrication and lifetime grease filling
- Protection of man and machine through mechanical and electrical safety devices
- Long tool life and minimal machine wear due to efficient coolant treatment and filtration
- A wide range of parts from blanks with the most different shapes can be processed
- Ergonomic operation



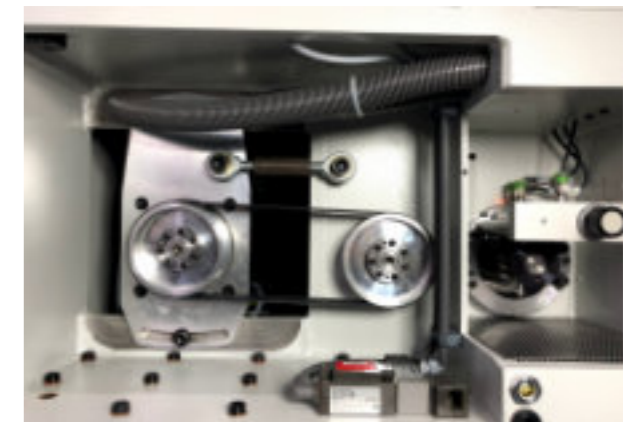
Pneumatic system



Coolant with magnetic and fine filter



Part clamping / pneumatic cylinder



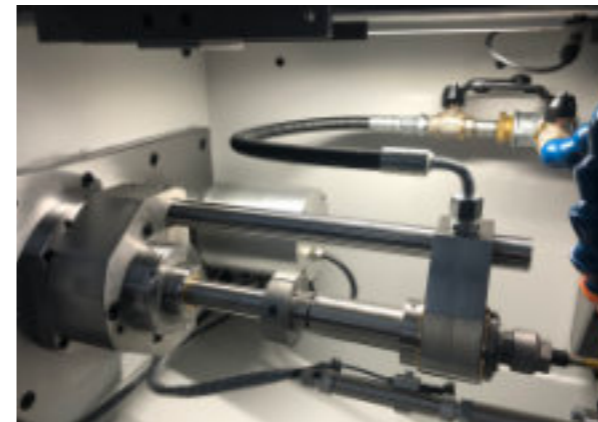
Spindle drive



Electrical cabinet with remote maintenance



Parts inserter



Working area left with internal cooling



Working area right with internal cooling



# VARIMAC 20flex

## SCHALTTELLER-AUTOMAT / AUTOMATIC INDEXING DISC MACHINE

The VARIMAC 20flex is the latest product from Streicher, developed on the basis of extensive customer requirements and experience. This innovative machine offers multiple spindles for front and rear machining and combines all the advantages and options of the proven Varimac 20.

### Operation

The well thought-out machine design with a large protective hood enables convenient and ergonomic tool set-up. The operating unit also has an intuitive user interface.

### Drive

The work spindles are driven by powerful servo synchronous drives. The forward and reverse speeds can be infinitely adjusted independently of each other. In addition, different travel sets can be stored in the system. The repeat accuracy is 0.01 mm.

### Parts feeding

Up to two vibratory conveyors are located under the optional noise protection hood, which significantly reduces noise emissions and ensures automatic and correct positioning of the parts to be processed. Proximity switches monitor the sufficient supply of nut blanks. If a shortage is detected, the machine switches off and a signal lamp lights up. As an option, an external feed for filling the vibratory conveyors can be integrated into the machine automation system.

### Thread production

In single-spindle operation, up to 3 machining spindles from the left-hand side of the machine and 2 machining spindles from the right-hand side can be used to perform a wide variety of tasks. In the maximum upgrade stage with 5 double spindle drilling heads, 10 machining spindles complete all tasks such as drilling, tapping, countersinking, chamfering, reaming, checking, face milling and much more in just a single machine cycle.

The parts are transported from the feed channel to the clamping and working position and from there to the ejection position via a switching disk. This is driven intermittently via a stepping gear. The radial and axial clamping of the parts is carried out by limit switch-monitored pneumatic cylinders. The order of the clamping cylinders can be changed via the menu as required. The thread is fed via a guide cartridge with an exact thread pitch. The drilling process is therefore absolutely neutral, without damaging tension or pressure on the thread flanks. The wobble accuracy is less than 0.03 mm. The drill breakage check ensures that all nuts are threaded.

As with the previous machines, the working area of the Varimac 20flex is completely free and the machine does not become clogged with chips. The movement sequences are coordinated and monitored by a control system. This also ensures that the increase in torque is detected in the event of a blunt tool and the machine is consequently switched off. An interface for production data acquisition is available on request.



### Coolant preparation, parts output, maintenance

The large coolant reservoir in the lower part of the machine stand ensures a consistently low coolant temperature, even during multi-shift operation. There are no coolant hoses in the working area; the coolant is fed through the radial clamping housings. Each clamping housing has 6 oil outlet openings; the medium reaches the tool via small, short steel pipes. All moving parts in the headstock and tool carrier are lubricated. The chips produced are transported out of the machine almost dry using a magnetic roller.

A chip container or a conveyor belt are available for non-magnetic materials such as aluminum or stainless steel. A filter system separates micro-chips and the smallest particles. This extends the service life of the tool and reduces wear on moving machine parts. The finished parts are ejected in an orderly manner and carried out on the conveyor belt with up to 6 lanes. This allows the quality of each spindle to be checked individually. Remote maintenance is also possible.

## ADVANTAGES

- **Variable machining options in one machine pass, single or double-spindle:**
  - Left machine side:**
    - Pre-drilling - finish drilling - forming or cutting threads
    - Drilling - reaming - forming or cutting threads
    - Reaming - Forming or cutting threads - Checking threads
    - Drilling - thread forming or cutting - thread checking
    - Forming or cutting threads 6 times simultaneously for maximum part output
    - Drill 6 times simultaneously for maximum part output
  - Right side of the machine:**
    - Drilling - Sinking
    - Chamfer - plan milling
    - Step drilling - Countersinking
    - Drilling - forming or cutting threads
- **Blind hole and through-hole tapping**
- **Ordered output of the work spindles on a conveyor belt with up to 6-lane conveyor belt**
- **Noise and oil mist-reduced design**
- **Precise pitch specification through guide cartridge**
- **Highest quality of the threads produced**
- **Repeat accuracy 0.01 mm**
- **Wobble accuracy below 0.03 mm**
- **Optimum service life and consistent thread quality thanks to torque monitoring**
- **High availability and productivity thanks to short set-up times**
- **No maintenance of mechanical parts due to oil bath or centralized lubrication or lifetime lubrication**
- **Protection of man and machine by mechanical and electrical safety devices**
- **Long tool life and minimal machine wear due to efficient coolant treatment and filtration**
- **A wide range of blanks with different shapes can be processed**
- **Ergonomic operation**

Machine	VARIMAC10	VARIMAC20 single spingle	VARIMAC20 double spindle
Thread dimension	M4 - M12 1/8" - 1/2"	M4 - M20 (M30 x 2) 1/4" - 3/4"	M2 - M16x1,5 1/4" - 1/2"
Number of spindles	1	1	2
Max. outside diameter	25 mm	50 mm	32 mm
Max. part length	70 mm	70 mm	50 mm
Spindle motor drive	5,7 kW	8 kW	8 kW
Speed range	0 - 4.000 rpm	0 - 2.000 rpm	0 - 4.200 rpm
Machine control system	ET200SP Siemens	ET200 SP	ET200 SP
Max. output	3.600 pcs/h	3.000 pcs/h	6.000 pcs/h
Cooling volume	150 litres	150 litres	150 litres
Net weight incl. feeding unit	1.900/2.180 kg	1.900/2.180 kg	3.200/2.180 kg
Dimensions with feeding device (LxWxH)	2.100 x 980 x 1.900 mm	2.100 x 980 x 1.900 mm	2.100 x 980 x 1.900 mm

VARIMAC20 flex single spingle	VARIMAC20 flex double spingle	VARIMAC30 single spingle	VARIMAC30 double spindle
M4 - M20 (M30x2) 1/4" - 3/4"	M2 - M16x1,5 1/4" - 1/2"	M16 - M33 (M64x2) 5/8" - 1.3/4"	M16 - M20 (M64x2) 5/8" - 3/4"
3	6	1	2
50 (100) mm	32 mm	80 mm	36 mm
70 mm	50 mm	100 mm	60 mm
8 (13,2) kW	8 (13,2) kW	20,3 kW	20,3 kW
0 - 2.000 rpm	0 - 4.200 rpm	0 - 1.400 rpm	0 - 3.000 rpm
ET200 SP	ET200 SP	ET200 SP	ET200 SP
3.000 pcs/h	6.000 pcs/h	1.200 pcs/h	1.400 pcs/h
300 litres	300 litres	180 litres	180 litres
3.200/3.800 kg	3.200/3.800 kg	3.200/3.600 kg	3.200/3.600 kg
2.250 x 1.352 x 2.480 mm	2.250 x 1.352 x 2.480 mm	2.700 x 1.165 x 1.540 mm	2.700 x 1.165 x 1.540 mm



# UNI-CUT

## SINGLE-SPINDLE REVERSING AUTOMATIC TAPPING MACHINE

Machines in the UNI-CUT series impress with their particularly attractive price-performance ratio combined with high precision and availability thanks to mechanical cam control. The machines are suitable for thread cutting and forming, drilling and countersinking all types of nuts and special parts. These can be pressed, turned or punched. The maximum length of the parts is 70 mm, the maximum diameter 50 mm. The two machine sizes UNI-CUT 10 and UNI-CUT 20 cover a thread range from M3 to M20 x 1.5, as well as corresponding inch threads regardless of whether right-hand or left-hand threads, as well as blind hole or through-hole threads.

### Operation

The machine is clearly laid out and compact, the work area is easily accessible, reducing set-up times to a minimum. The tooling is compatible with that of the VARIMAC 10 and VARIMAC 20.

### Drive

For maximum dynamics, a frequency-controlled, reversing three-phase motor drives the work spindle via belts and replaceable pulleys. The forward and reverse speeds can be adjusted independently of each other.

### Parts feeding

The parts to be processed are fed automatically and in the correct position is carried out via a drum feeder or an electromagnetic vibratory conveyor. Proximity switches monitor the sufficient supply of nut blanks. If this is no longer the case, the machine switches off and a signal lamp lights up.



### Thread production

The parts are transported via an indexing disk. The parts are transported from the feed channel to the clamping and working position and finally to the ejection position. The indexing gear drives the indexing disk intermittently. A pneumatic cylinder in conjunction with a toggle lever system provides the radial clamping of the parts. A cam and a spring-loaded lever are used for axial clamping. The clamping sequence (radial/axial) can be varied, the clamping positions and all actuators are monitored electrically. A possible maternal deficiency is automatically detected. The work spindle is moved either by a cam-spring combination or a guide cartridge. The drilling process is therefore absolutely neutral, without damaging pressure or tension on the thread flanks. After processing, the finished parts are ejected from the indexing disk onto a conveyor belt. The movement sequences are monitored by the machine control system. An interface to an operating data acquisition system is available on request. The manufacturing process is accompanied by a torque measuring device, which automatically switches the machine off if the tool is blunt. Broken taps and missing core holes are reliably detected.

### Coolant preparation, parts output, maintenance

The large coolant reservoir in the lower part of the machine stand ensures a consistently low coolant temperature, even during multi-shift operation. An automatic magnetic filter separates chips from the coolant flow and transports them out of the machine virtually dry. A filter system effectively and reliably separates micro-chips and the smallest particles. This extends the service life of the tool and reduces wear on moving machine parts. All sliding mechanical parts and bearing points are oil bath lubricated or lubricated for life. Maintenance of these components is therefore not required.



# DW30

## OVALISATION MACHINE

The DW30 produces all-metal locknuts by ovalizing the nut body. The machine is characterized by two opposing rotating rollers. The distance between the two rollers is smaller than the nut that is fed through. This slightly deforms the nut and changes the thread geometry. The distance between the rollers can be adjusted over a wide range, meaning that all common nut sizes can be deformed in a controlled manner with one machine type. The heavily dimensioned adjusting device keeps the rollers in their set positions even under maximum load. In order to enable force-dependent deformation, one roller unit is selectably pre-tensioned via a plastic spring. The DW30 is characterized by easy installation without additional parts, precise adjustment, robustness and high repeat accuracy.



Machine	DW30
Thread dimension	M10 - M30 3/8" - 1.1/8"
Width of deformation	0 - 80 mm
Force of deformation	0 - 120 kN
Roller diameter	300 mm
Roller speed	10 rpm
Power of gear motors	2 x 0,75 kW
Max. output quantity (depends on size of parts)	10.000 - 30.000 pcs/h



# PRECISION AND RELIABILITY

Joining processes are required wherever technical goods are produced. Threaded connections have always been an important component in all industries, such as the automotive and vehicle construction industries, the aerospace industry, the electrical industry and the furniture industry. Whether in manual or automated assembly processes, the technical requirements for secure threaded connections are constantly increasing. To meet these requirements, powerful and reliable machines are needed.

## Product features

- Clear arrangement and space-saving due to a clear and compact machine concept
- Attractive design with illuminated workspace
- Production in the low-manned shift using a torque measuring device
- Depending on the geometry of the parts to be processed, either mechanical feeders or electromagnetic vibratory feeders are used
- Wobble impact less than 0.1 mm
- Flawless thread quality

## Safety during operation

- Mechanical and electrical safety devices ensure maximum protection for man and machine
- Easy handling and quick tool change

## Quality assurance

- Curves and guide cartridge guide the tap with absolute pitch accuracy
- All machines are state of the art and meet the CE requirements of the Machinery Directive
- The large flow of coolant effectively lubricates the tap, enabling a high cutting speed with a long tool life. At the same time, it keeps all machine and tool parts clean. Chips cannot build up anywhere, even after a long running time
- A shut-off flap closes access to the parts discharge conveyor in the event of faults. This ensures that only flawless nuts enter the finished parts container
- Chips are transported out of the machine almost oil-free using a magnetic roller or conveyor belt

# OUR IN-HOUSE COMPETENCES

We pride ourselves on offering a comprehensive range of in-house skills to deliver first-class products and services to our customers. From development to assembly, we rely on our own resources to ensure quality and efficiency. At Striecher, our in-house capabilities are at the heart of our commitment to excellence and customer satisfaction.

## In-house development

Our experienced team of engineers and technicians drives innovation and develops customized solutions that meet the individual requirements of our customers. Our in-house development enables us to respond flexibly to customer feedback and continuously improve products.

## In-house design

The close link between development and design enables us to design products from the ground up, achieving the highest standards in terms of functionality, reliability and efficiency. Our design engineers use state-of-the-art technologies to create innovative designs that meet the needs of our customers.

## Spare part service

The close link between development and design enables us to design products from the ground up, achieving the highest standards in terms of functionality, reliability and efficiency. Our design engineers use state-of-the-art technologies to create innovative designs that meet the needs of our customers.

## In-house production

Thanks to our state-of-the-art production facilities, we are able to optimize production processes and guarantee consistently high quality. With a focus on precision and efficiency, we produce components and assemblies that meet the highest standards.

## Assembly

Our experienced assembly teams assemble the products with the utmost care and precision to ensure flawless functionality and durability. Our in-house assembly allows us to control the entire production process and avoid bottlenecks.

