

New product line by GSR: GSR-Silver

In this summer GSR has launched a new product line. Beside the GSR line now we launch the „silver“ line. „Silver“ as a synonym of precise matched combination of sequential manufacturing processes and modern CNC controlled grinding machines.

In this edition we start with our new range of machine taps. Moreover please read about the new coating processes!

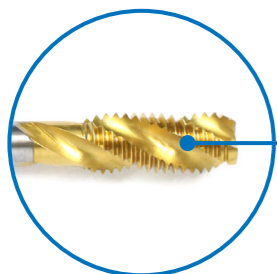
Enjoy reading!



▶ HIGH PERFORMANCE COATING

machine taps

GSR offers three kinds of coating processes. Following we provide you an overview of the most essential characteristics of each coating. All machine taps can be coated according to the customer's requirement.



TiN TITANNITRID-COATING

Since a long time TiN Titanium Nitrad coating is the most recommend choice of coating for machine taps. It's special property to resist galling caused of friction and guarantee a longer life of tools.



AlTiN ALUMINIUM TITANNITRID COATING

This coating is a special for high cutting traction .The higher hardness with the combination resistance to oxidation for bigger temperatures save the fast wear of the cutting edges. Especially for hard material. This coating is also useful for minimum lubrications or dry processing.



AlCro CHROMALUMINIUM COATING

This coating is useable for extreme high temperature application. The combination of heat resistance and ductility achieves long tool life.

COATING	TiN	AlTiN	AlCro
COLOR	gold color	Violet to Black	Blue -Grey
HARDNESS	≈ 2.300 HV	≈ 3.300 HV	≈ 2.300 HV
LAYER THICKNESS	2 – 5 µm	2 – 5 µm	2 – 5 µm
COEFFICIENT OF FRICTION AGAINST STEEL	≈ 0,67	≈ 0,37	≈ 0,35
THERMAL OXIDATION STABILITY	≈ 700 °C	≈ 900 °C	≈ 1.100 °C

PVD technology

PVD (physical vapor deposition) It's called as a surface protection technology. Under vacuum situation metal will be steamed, combined with various reagent gases. Its caused hart coating layers. This kind of coating improved the break and the flow of the chips. The heat resistance becomes higher and you get also a reducing of the traction. The result it's a longer life of tools.

▶ NEW GEOMETRY

For cutting of inner threads the teeth of the chamfer part is highly stressed. The rest of the tap is only for guiding the tool. The cutting part at the end of the tap grates at the material and can cause a jam. The new geometry reduce the jam and guarantees a longer life of the tap.

Hereby we public the new silverline tap which we are producing on modern CNC grinding machines. The stability of the cutting edges becomes also higher through CBN grinding discs we use.



ADVANTAGES OF THE NEW GEOMETRY

- reducing gates in threads
- reducing breaking risk
- better break and flow of the chips

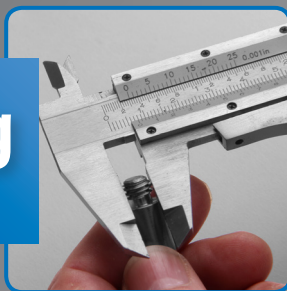
▶ GSR-Silver

also available in assortments (M3-M12)



At processing machine taps

Following we explain to make a precise and clean inner thread.



1. Measure needed dimension of the thread



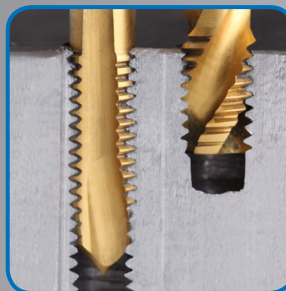
2. Fix the tapping size



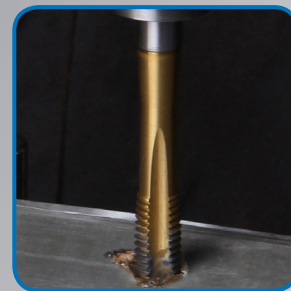
3. Tapping size drilling



4. Deburring

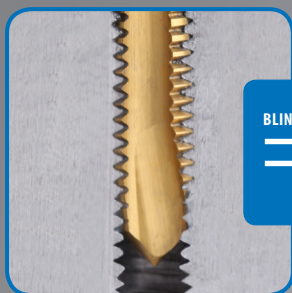


5. Choose the hole type

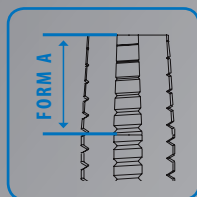


6. Cut the thread

Blind hole and through hole



BLIND HOLE



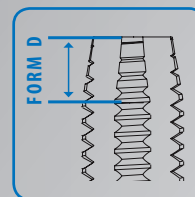
LONG CHAMFER

6-8 pitches chamfer. Advantage: homogenous distribution of power on 6-8 teeth



MIDDLE CHAMFER

3,5-5 pitches chamfer spiral pointed Advantage: for through holes the chips can be better falling out the the hole

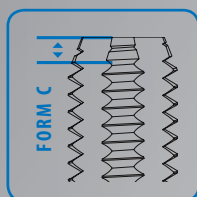


MIDDLE CHAMFER FORM D

3,5-5 pitches chamfer straight fluted Can also be used for blind holes with an extended thread

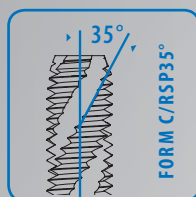


THROUGH HOLE



SHORT CHAMFER FORM C

2-3 pitches chamfer Especially for short chipped application



SHORT CHAMFER FORM C35°

for short and long chipped application in blind holes.

The kind of cutting form is depend of the tapping size hole. For through holes, (through the whole material), or for blind holes (only a part of material). In practice the following types have been proved Form **A-D**

WWW.GSR-GERMANY.DE



Industriegebiet Blaffertsberg Schmiedestraße 4 42899 Remscheid Fon 02191 / 5833 Fax 02191 / 52769 Mail info@gsr-germany.de

Precision is in the Detail. Since 1889.

THREADING TOOLS
Gustav Stursberg