

**New range of GSR  
countersinks**  
for professional applications acc. to DIN 74

counter bores with fixed pilot;  
counter sinks for different sink angle 60/90/120°



## ▶ COUNTERBORES

counter bores **with fixed pilot** are available in three versions

Counterbores, also called flatsinks, are spiral fluted to process a flat sink of 180°, according to DIN 974-1. They are mainly used for sinking of Allen screws (hexagon socket screws) acc. To DIN 912, 6912, 7984, as well as for cylindrical slotted screws acc. to ISO1207 (DIN 84), too. Counter bores are used in through holes where the screws will be connected with the nuts. Tapping sizes are used for tapping sized holes.

### i AVAILABLE IN THREE VERSIONS

- for through holes (middle)
- for through holes (fine)
- for blind holes (tapping size)



### HSS HSS COUNTERSINK

steel, alloyed and unalloyed steel up to 900N/mm<sup>2</sup> tensile strength, grey cast iron, malleable cast iron, spheroidal and die cast, sintered iron, nickel-silver, graphite, short chipped aluminium alloys, brass and bronze.

### HSSE HSSSE COUNTERSINK

hot and cold forming working tool- steels, acid and rust resistant steels (stainless steels: V2A/V4A)

## ▶ SETS IN PLASTIC CASE

Made of robust and stable PP material



**Now also CBN -  
grounded available!**  
for greater shape and dimensional accuracy

## ▶ COUNTERSINKS

The cutting lips of countersinks have a conical form. The cutting angle can vary between 60°, 90° and 120°. They are used for **sinking, deburring and chamfering**.

### APPLICATIONS

- 60° countersinks – are used for deburring  
DIN 334 form C HSS/HSSE
- 90° countersinks -are mainly used for sinking screws.  
DIN 335 form C HSS/HSSE CBN grounded version
- 120° countersinks - are mostly used for blind rivets.  
DIN 347 form C HSS/HSSE

### CUTTING ANGLE



### CBN CBN GROUNDED

GSR produce the 90° countersinks in CBN grinding process. CBN (cubic crystalline boron nitride).It guarantee a maximum precision, compared to the traditional process of grinding.



### TiN TIN - COATING

Titanium Nitrid is the most popular type for coating surfaces of cutting tools. It's effected the reducing of the friction coefficient and lower the risk of galling.

### i TIP!

We recommend TIN coating for Aluminium applications. The Aluminium chips don't stick at this surface.





# Counter bores at processing

The sinking depth will calculate as following:

Countersinking depth = Distances between tool point and the top surface of work piece + thickness of a possible use for a washer

### DETAILED MEASUREMENT

For sinking diameter 1.4 - 6 mm = 0.4 mm

For sinking diameter 6 - 20.0 mm = 0.6 mm



1. DRILLING FOR COUNTER SINK



2. MEASURING THE HEAD OF BOLT



3. CHOOSING THE RIGHT DIMENSION OF COUNTERBORE



4. GENERATE THE SINKING



5. COUNTERSINK SCREWING



6. AFTER SINKING SCREW



1. DRILLING FOR COUNTER SINK



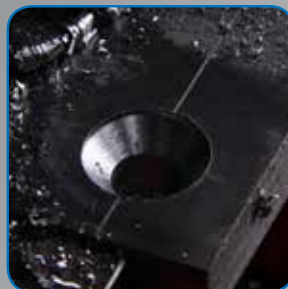
2. MEASURING THE HEAD OF BOLT



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5. COUNTERSINK SCREWING



6. AFTER SINKING SCREW

# Countersinks at processing

Normally, countersinks have 3 radial and axial relief grinded cutting lips with a sinking angle of 90 - 120°. There are made of HSS (high speed steel) or HSSE (Cobalt alloyed)

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Precision is in the Detail. Since 1889.

**THREADING TOOLS**  
Gustav Stursberg