



## TOOLS FOR THE MEDICAL AND DENTAL INDUSTRY

**Stainless and acid-resistant tools for medical industry applications**

- Drills in the diameters from 0.7 to 20 mm
- Cannula tools up to approx. 400 mm length
- Saws with different tooth profiles
- Hollow drills and milling cutters with two/three and more flutes
- Micro-precision drills with various shank forms
- Special tools with extreme diameter/length ratio



## Special tools to customer requirements

Within the framework of our comprehensive product range we manufacture highly accurate stainless and acid-resistant tools for the medical and dental industry according to your requirements. We can provide support right from the beginning, i.e. the tool development to include our many years of experience and our entire know-how.

### Our product range

Stainless steel precision tools are always special tools to customer requirements. Guhring produces drills in the diameters from 0.7 to 20 mm, cannula tools up to a length of approx. 400 mm, thread cutting tools, saws with different tooth profiles, hollow drills and milling cutters with two/three and more flutes to customer requirements. Several examples are shown on the page opposite.

### Highest demands

Highest demands and quality are vital for stainless steel tools. Generally, they are special tools to drawing and have been developed in close co-operation with our customers. Guhring has a long standing know-how in the production of tools at its disposal and knows what is required: The tool material stainless steel, extremely sharp cutting edges and highest accuracy are a matter of course to meet customer requirements.

### Guhring know-how

Stainless steels are difficult-to-machine and have a tendency to develop burrs. In addition, during manufacture the hardness of the material must be retained. Therefore, Guhring manufactures these precision tools with a special know-how, as for example, applying especially low machining temperatures. The extremely sharp cutting edges of the tools are achieved with highly accurate grinding machines. Moreover the complete heat treatment takes place in-house.

To reduce working temperatures during application, Guhring stainless steel tools are often equipped with coolant ducts.



## Tool examples for the medical industry



Hollow drills and milling cutters with or without coolant ducts and with two/three or more flutes



Drills of minimum size with extreme diameter/length ratio



Drills in larger sizes, with 2 and more flutes

## Tool examples for the dental industry



Micro-precision drills with various shank forms

# GUHRING

## Guhring oHG

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## Key Account Medical Industry

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## OUR PRODUCT RANGE:

### 1. DRILLING TOOLS IN HIGH SPEED STEEL AND CARBIDE

Twist drills  
Ratio drills  
Micro-precision drills  
Oil feed drills  
Subland drills  
Centre drills  
Core drills  
Gun drills  
Drilling systems with interchangeable inserts

### 2. THREAD CUTTING TOOLS IN HIGH SPEED STEEL AND CARBIDE

Machine taps and fluteless taps  
Oil feed taps and oil feed fluteless taps  
Hand taps  
Thread milling cutters  
Dies

### 3. MILLING CUTTERS IN HIGH SPEED STEEL AND CARBIDE

Ratio end mills  
Slot drills  
End mills  
Radius profile cutters  
Hard profile cutters  
Diesinking cutters

### 4. REAMING TOOLS IN HIGH SPEED STEEL AND CARBIDE

NC machine chucking reamers  
Machine and machine chucking reamers  
Taper pin reamers  
Hand reamers

### 5. COUNTERSINKING TOOLS IN HIGH SPEED STEEL AND CARBIDE

Countersinks, counterbores and spot facers  
Short counterbores, back spot facers  
De-burring tools

### 6. CUTTING TOOLS IN ULTRA-HARD MATERIALS

Face milling cutter PF 1000  
Cermet and ceramic tools  
PCD- and PCB-tipped tools

### 7. COATED TOOLS

A-tools, TiAlN-coated  
SuperA-tools, AlTiN-coated  
C-tools, TiCN-coated  
F-tools, FIRE-coated (allround)  
P-tools, AlCrNN-coated  
S-tools, TiN-coated (allround)  
M-tools, MolyGlide-coated

### 8. MODULAR TOOLING SYSTEMS TOOLING SYSTEM GM 300

Tool holders, clamping systems and accessories to  
ISO 12164, DIN 69893 and DIN 69871 for transfer lines,  
machining and turning centres

### FLEXIBLE TOOLING SYSTEM GE 100

a tooling system for the combined machining  
operations facing, chamfering, boring, centering etc.

### ISO INDEXABLE INSERTS, SHORT CLAMPING HOLDERS AND KV 400 CARTRIDGES

### 9. SPECIAL TOOLS

to sketch or drawing, the more complex, the better

### 10. CARBIDES FOR PRECISION CUTTING TOOLS

### 11. CARBIDE SPECIAL PARTS FOR THE FORMING, MACHINING AND WEAR PROTECTION INDUSTRY

Cold heading dies, ribbed rolls, dies, mandrels,  
drawing dies, gear cutters, etc.

### 12. TOOL RESTORATION SERVICE

Re-grinding, re-coating, tool management