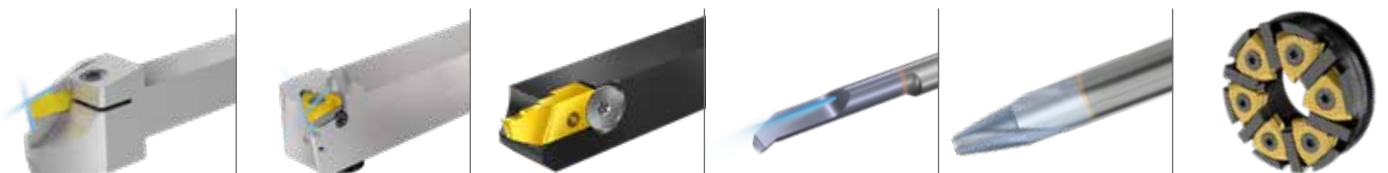


# VARGUS Medical

DENTAL | ORTHOPEDIC

Range of Threading, Grooving and Turning Solutions



**VARGUS is a world leading developer, manufacturer, and supplier of high-quality, precision threading, grooving, turning, parting-off and hand deburring tools.**



Established in 1960, VARGUS is the cutting tools division of the NEUMO Ehrenberg Group, a multinational organization headquartered in Germany.

Since the company's inception, VARGUS engineers have pioneered breakthrough tooling solutions such as the first triangular laydown threading insert, the first indexable thread milling system, and the original hand-deburring system.

This tradition of innovation continues with industry-leading solutions from the company's main product lines:

- VARDEX**      Advanced threading solutions
- GROOVEX**    Innovative grooving and turning solutions
- SHAVIV**      Leading hand-deburring solutions
- V-MILL**       Superior milling solutions **NEW**
- V-DRILL**      Accurate drilling solutions **NEW**

# VARGUS Medical

## Introducing

### VARGUS Solutions for the Medical Industry

In keeping with the demands for mass production and special tooling for the medical industry, VARGUS provides an encompassing range of solutions for the precise and detailed applications commonly used world-wide in this rapidly growing industry.

Whether it be the manufacturing of miniature dental implants, bone screws, bone plates, tulip heads, or other exact medical components, VARDEX and GROOVEX precision tools provide you with the excellent VARGUS quality so well known in the metal-cutting industry. Tailor-made tools are available on request with the added advantage of the VARGUS expertise and knowledge of more than 60 years.



#### Applications:

Parting Off  
Turning  
Grooving  
Thread Turning

Thread Milling  
Thread Whirling  
Boring  
Broaching

#### Materials and Grades:

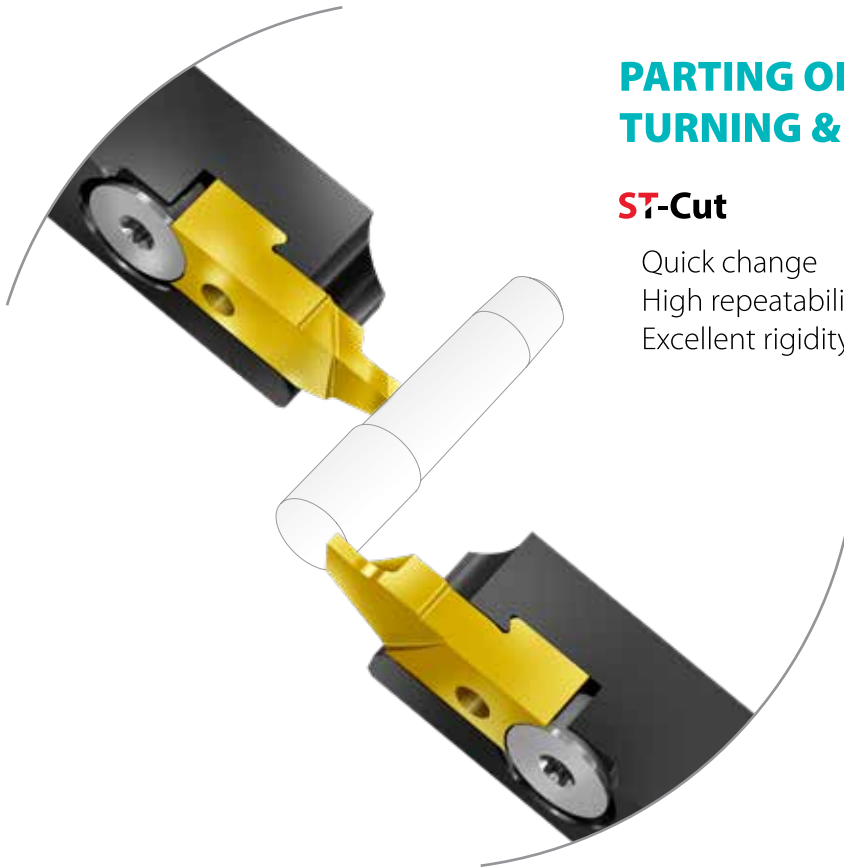
Biocompatible Titanium and Stainless Steel are the most common materials used in the medical industry. With the VARGUS knowledge and experience, our skillful engineers developed advanced grades highly suitable for the strict requirements of medical applications.

# DENTAL

## DENTAL IMPLANTS

Dental implants are increasingly used around the globe by dental surgeons. VARGUS products are designed for superior performance on the most popular materials used in the medical industry, including Titanium, Stainless Steel and others.

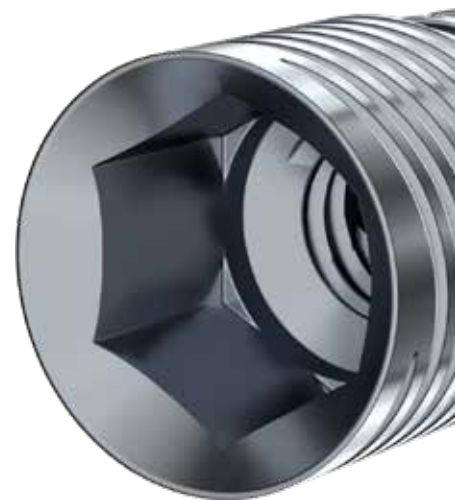
Custom-made threads for your specific applications are available on request, and manufactured according to the high-quality Vargus standards.



### PARTING OFF TURNING & GROOVING

#### ST-Cut

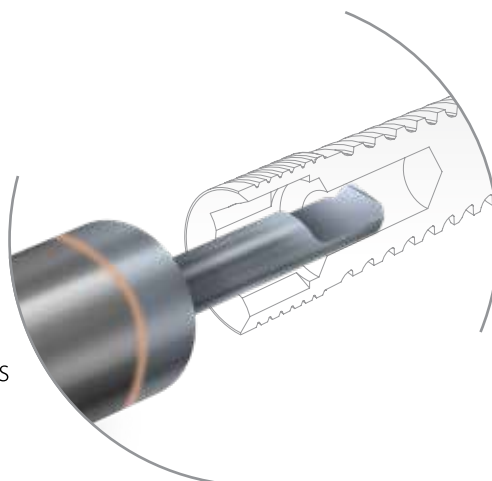
Quick change  
High repeatability  
Excellent rigidity



### BORING

#### microscope

From min. bore dia. 0.5  
Rigid design  
Precise cutting-edge locations  
Unique chip breaker for blind holes



### INTERNAL THREAD MILLING

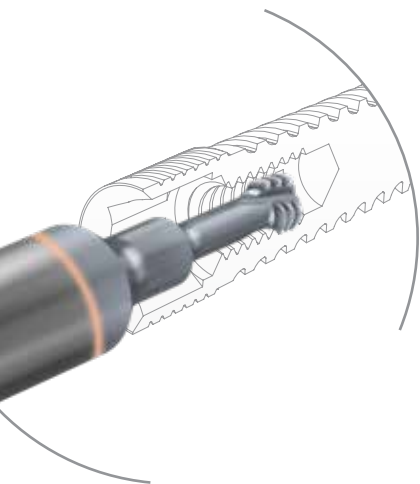
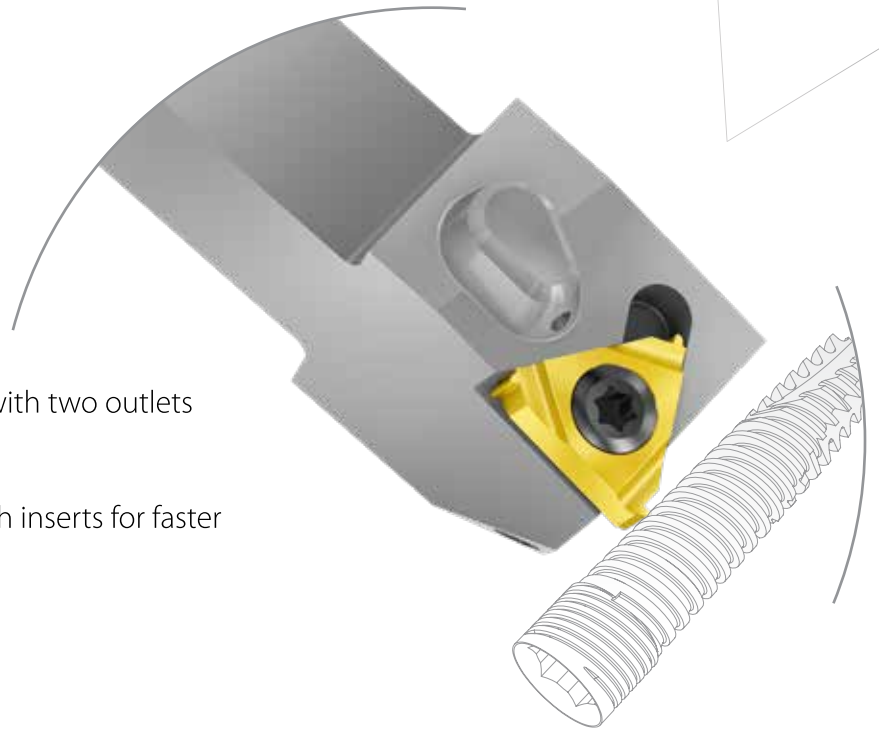
#### TM Solid Dental

3 flutes & 3 cutting edges  
Reinforced neck  
Superb tool life

## THREADING

### ALCS

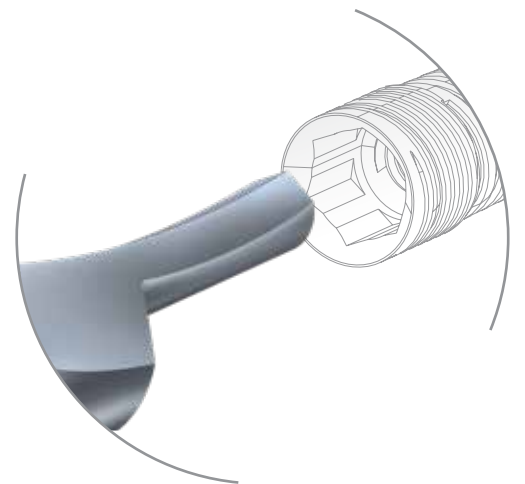
High Pressure Coolant with two outlets  
Better chip evacuation  
Better tool life  
Suitable with multi tooth inserts for faster cycle times



## BROACHING

### microbroach

Unique design  
Fits popular driven toolholders  
Standard items for Hexagon & Torx





# BONE SCREWS

Bone screws are one of the most popular medical components. With countless shapes, profiles, and lengths, the demand for fast machining of these parts is an absolute necessity. The new VARGUS tools for Swiss Type machines, including Whirling and ALCS tools, complete a comprehensive range of solutions for efficient and exact machining.

## TURNING

### GrooVical

- 3 cutting edges
- Unique design with close to shoulder machining
- Dedicated chip breaker for turning
- Positive chip breaker for soft materials

## PARTING OFF

### VG-Cut

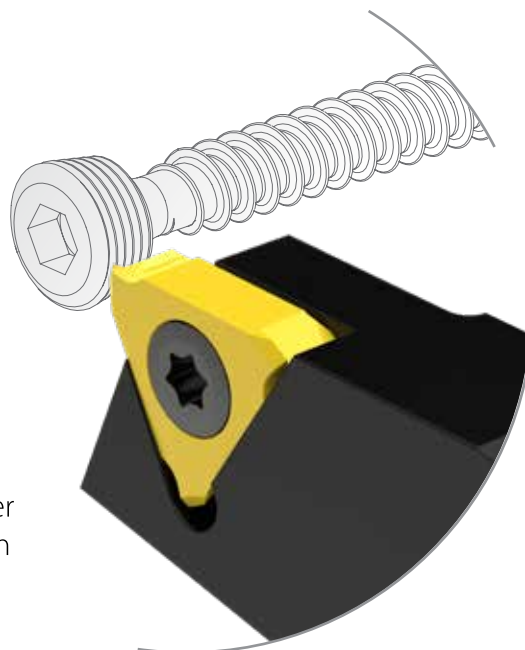
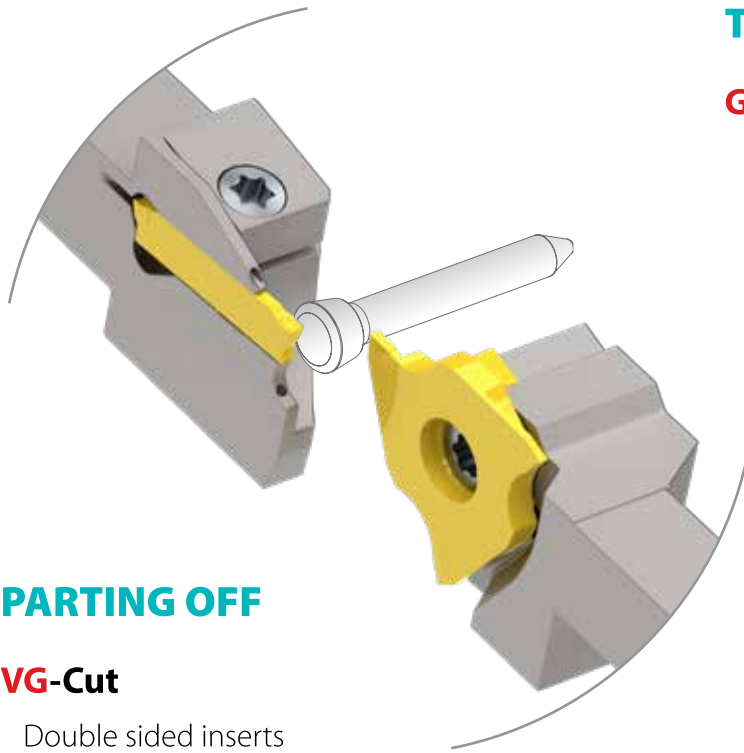
- Double sided inserts
- From width 1.5 mm
- High Pressure Coolant with two outlets
- Reinforced holder



## THREAD TURNING

### Slim Throat Holders

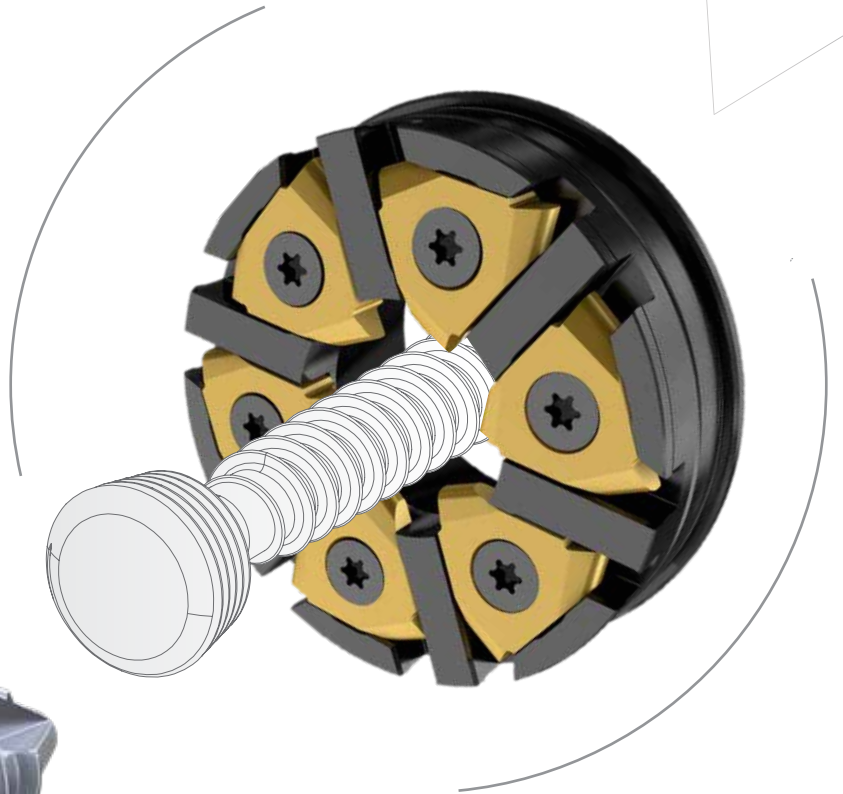
- Vertical inserts
- Multi tooth available
- Ideal to machine with bar feeder
- Optimal for machining between shoulders



## THREAD WHIRLING

### Whirling

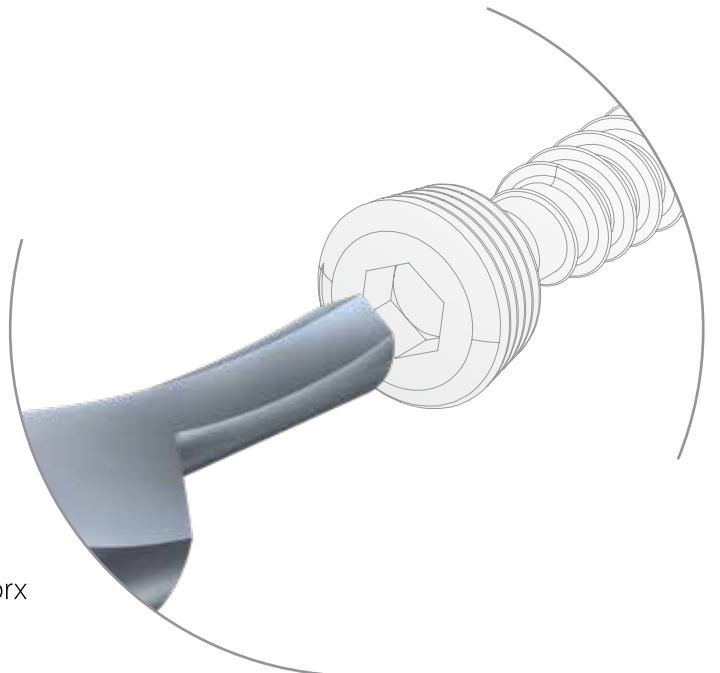
Ideal solution for long threads on small diameter components  
Inserts repeatability under 0.01 mm  
Fits popular driven toolholders on Swiss Type machines  
Fast machining  
VARGUS threading quality



## BROACHING

### microbroach

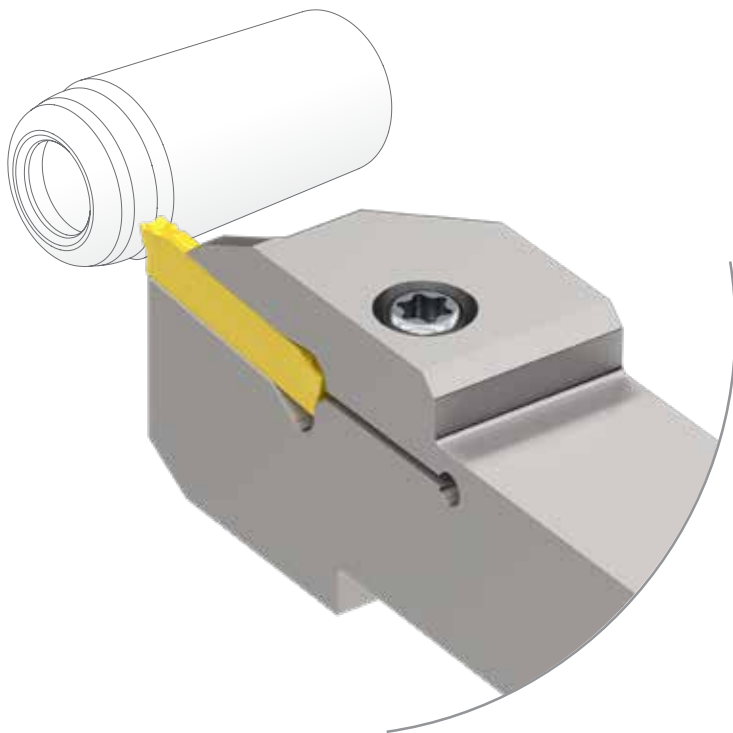
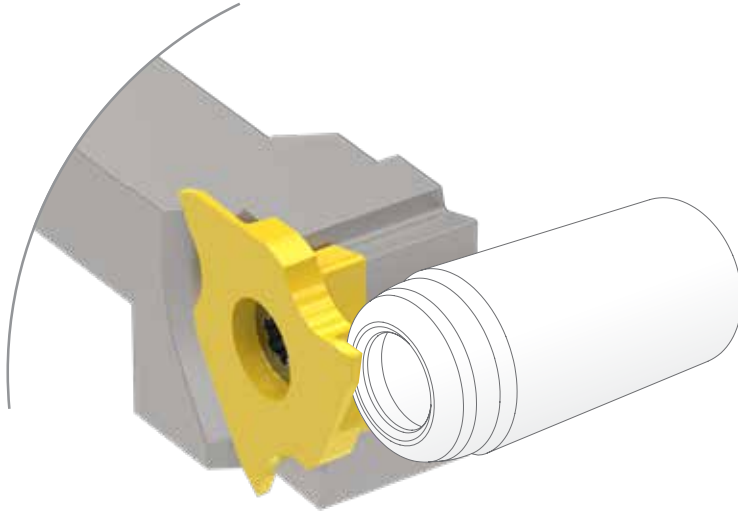
Unique design  
Fits popular driven toolholders  
Standard items for Hexagon & Torx



## TULIP HEADS

Tulip heads are crucial parts used for supportive fixation of damaged bones and spines.

The VARGUS grades are engineered to give the best results on materials such as TiAl6V4 or Stainless Steel 316 and other similar elements. The wide range of VARGUS solutions guarantees to find the most suitable tool for your requirements.



### PARTING OFF

#### GrooVical

- 3 cutting edges
- Unique design with close to shoulder machining
- Positive chip breaker for soft materials



### TURNING

#### VG-Cut

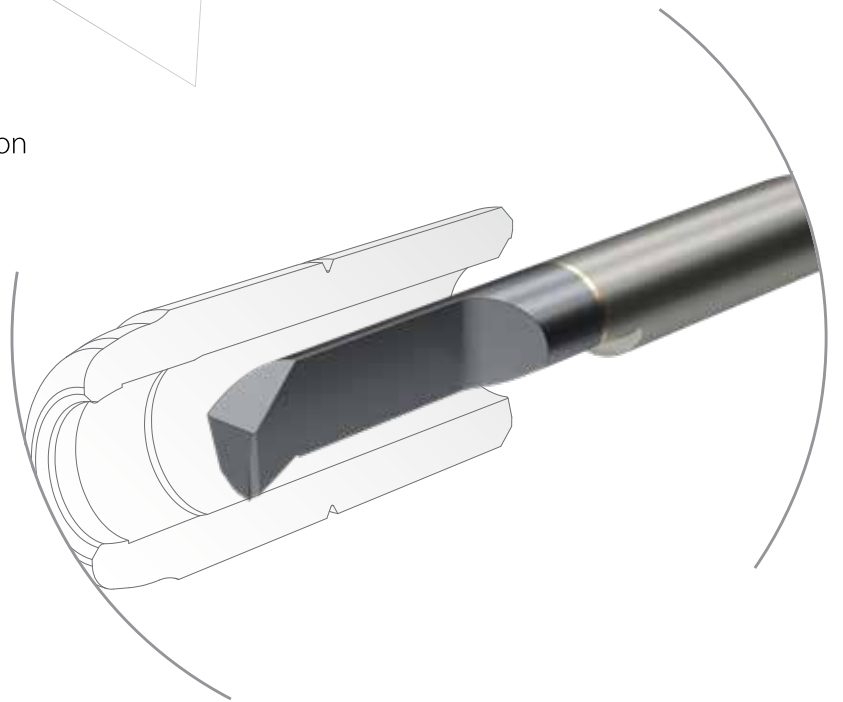
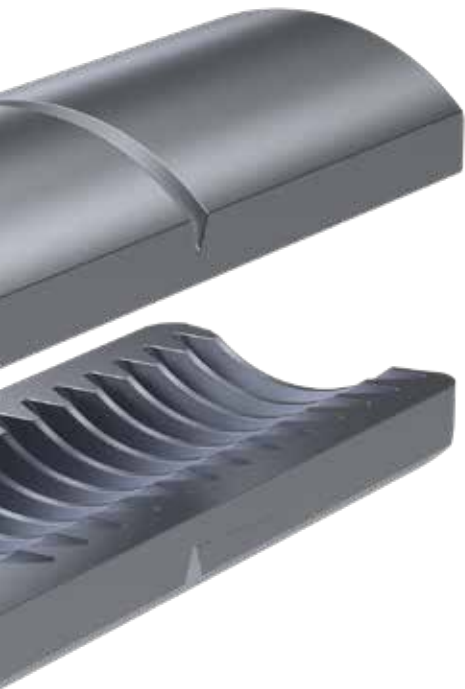
- Double sided inserts
- From width 1.5 mm
- High Pressure Coolant with two outlets



## BORING

### microscope

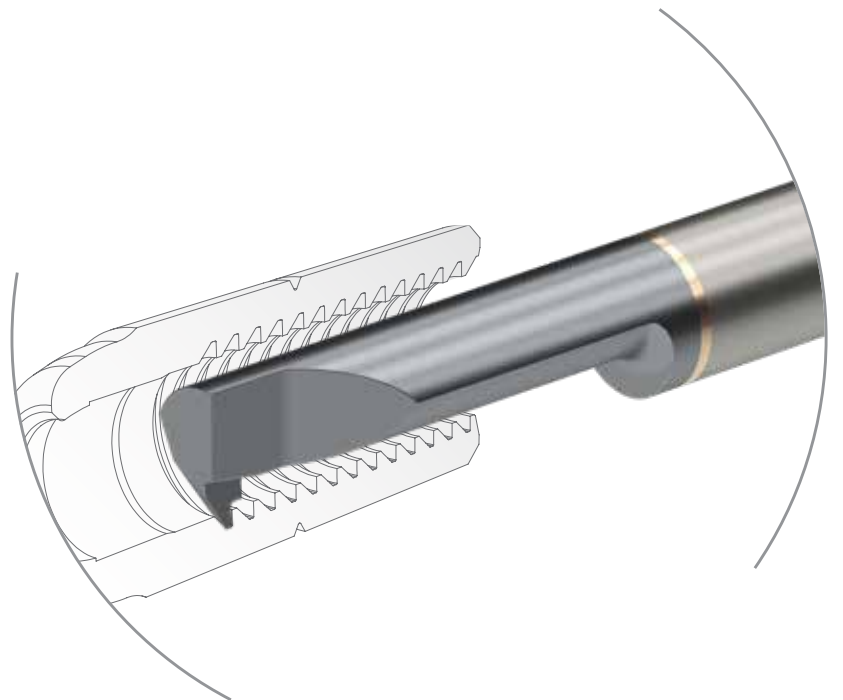
Precise cutting-edge location  
Coolant thru available  
Improved chip breaker



## THREAD TURNING

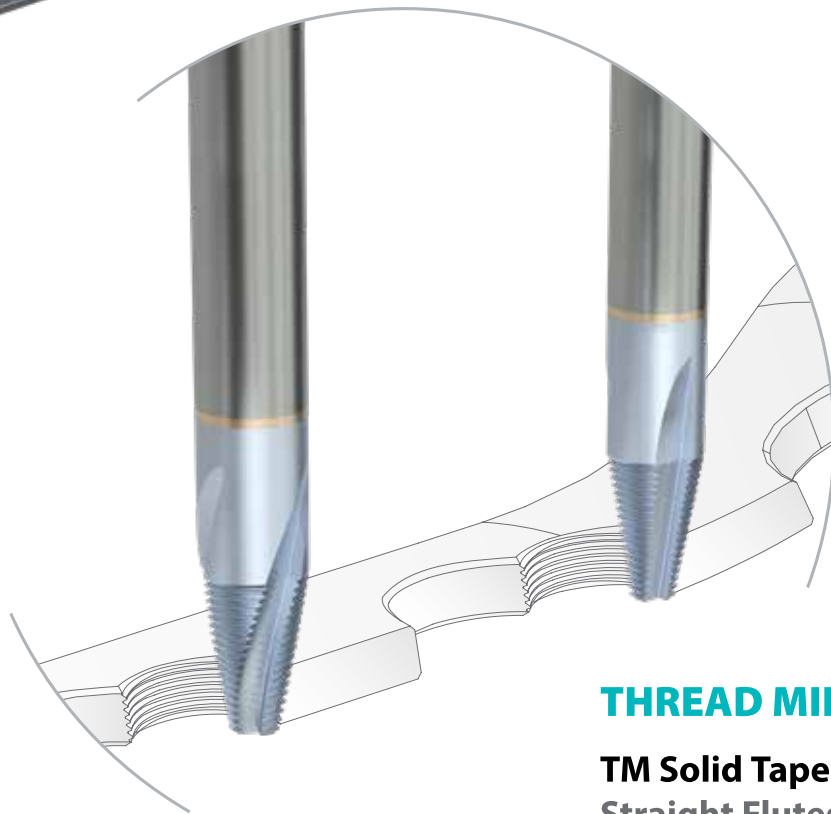
### microscope

Microscope stability  
VARGUS threading quality



# BONE PLATES

Bone plates are designed in a variety of shapes and sizes to fit the diverse types of bones in our body. As each bone plate may consist of several taper threads, it is important to machine them in an extremely accurate and efficient way. The thread's taper is typically 20 degrees and has two starts. Using the VARGUS taper tools, we complete the application in one pass.



## THREAD MILLING

### TM Solid Taper Helical Flutes

- 1 pass for 2 starts
- Standard profiles available
- From pitch 0.3 mm
- Better load distribution
- Faster cycle time

## THREAD MILLING

### TM Solid Taper Straight Flutes

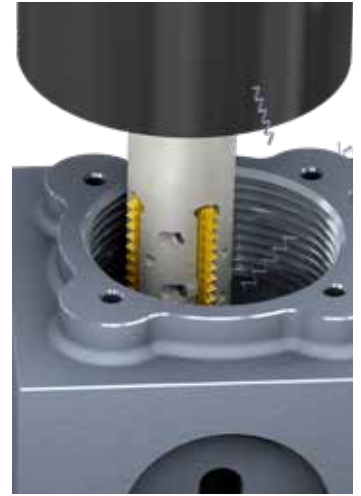
- 1 pass for 2 starts
- Standard profiles available
- From pitch 0.3 mm

**VARDEX**  
Advanced Threading Solutions

The **VARDEX** line is an industry leading provider of thousands of thread turning and thread milling tooling solutions, available from stock or tailor-made special tools.

VARDEX also provides threading solutions for the machining of small diameter parts and a large range of cutting tools for Gear Milling applications and the Oil & Gas industry.

The **VARGUS GENius™**, our tool selector and CNC program generating software, is available as an App, and Online, Desktop and Set-up versions.



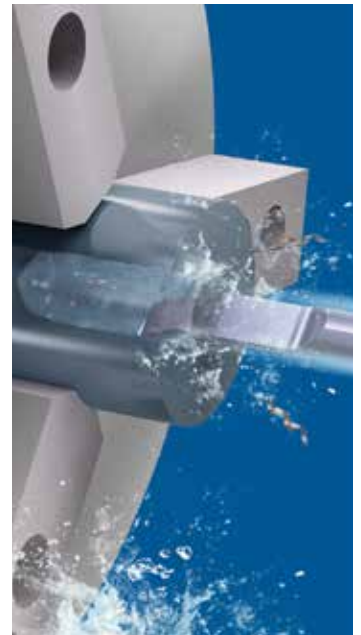
**GROOVEX**  
Innovative Grooving & Turning Solutions

The **GROOVEX** line provides innovative solutions for grooving, parting off, boring and turning in a wide range of external and internal machining applications.

External: **ST-Cut** tools - The newest Groovex line provides solutions for machining small parts on Swiss type machines.

The **VG-Cut** and **Groovical** lines offer a range of turning solutions for grooving, parting off, turning & profiling, face grooving, and threading applications, including precise shallow grooves, with accurate grounded notch.

Internal: The **Microscope** and **Mini-V** lines offer a range of micromachining solutions for boring, grooving, and threading applications from 0.5mm.

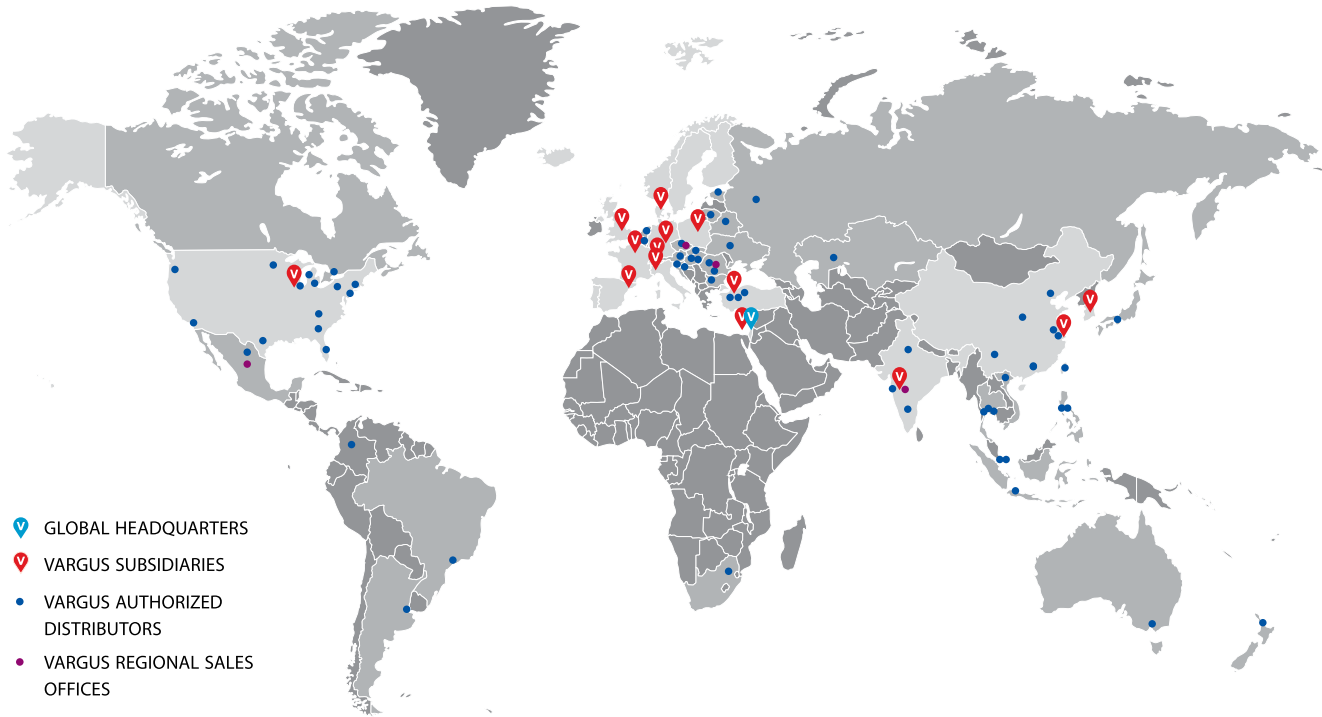


**SHAVIV**  
Leading Deburring Solutions

The **SHAVIV** line of hand-deburring tools offer professional solutions for the finishing of metal and plastic components with a full range of ergonomic handles and blades of different shapes and sizes. SHAVIV products are the choice of leading companies in the die & mold, automotive, aviation, plastics, electronics assembly, piping and other industries.



With a network of 13 international companies and hundreds of distributors, warehouses and certified ISO 9001 manufacturing facilities, VARGUS Ltd. serves customers in more than 100 countries around the globe. A customer-focused organization, VARGUS Ltd. is committed to providing innovative products and solutions of the highest quality and excellent value, and is renowned for its technical expertise and uncompromising service.



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