

## THERMO Shrink Fit tool holding





# THERMO Shrink fit tool holding system

## Key features and benefits

### High clamping force

- **Uniform force:** Shrink fit tool holders create strong and uniform clamping force 360° around tool shank. This ensures that the tool remains secure in place under heavy machining and prevents undesirable tool slippage.

### Enhanced precision and accuracy

- **Minimal runout:** Due to their design, shrink fit tool holders offer excellent runout below 0.003 mm which results in better surface finish and extends tool life by reducing uneven cutting edge wear.

### 3-in-1 Coolant solution

- **Versatile coolant solution:** Delivering coolant through the toolholder to the tool edge for better chip control and superior surface finish using coolant ports with M4 threads for 3 different configurations.

### Improved balance and vibration dampening

- **Stability in cut:** Thanks to its monoblock design, shrink fit holders reduce vibration during machining, which prevents chatter and results in smoother cuts.

### Compact & slim design

- **Slim profile:** As shrink fit tool holders have no extra clamping parts, they can be made into slim compact profile, which allows access to tight machining areas that may be challenging for other holder types.

### Low maintenance

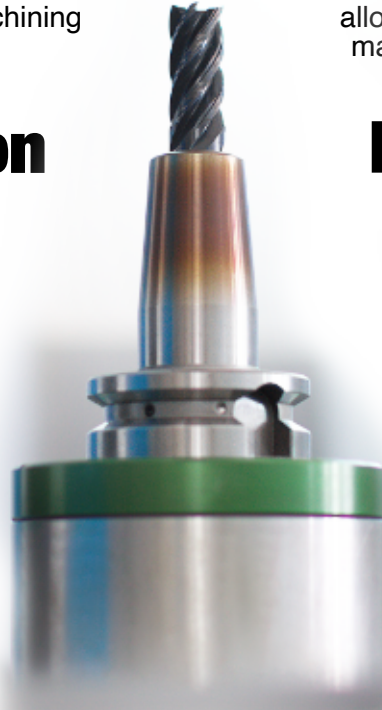
- **Streamlined setup:** With appropriate heating and cooling equipment, tool setup is quick and easy. Shrink holders require minimal maintenance as there are no moving parts like collets, nuts, and bolts, which reduces wear related issues and lowers maintenance costs over time.

### Proven quality

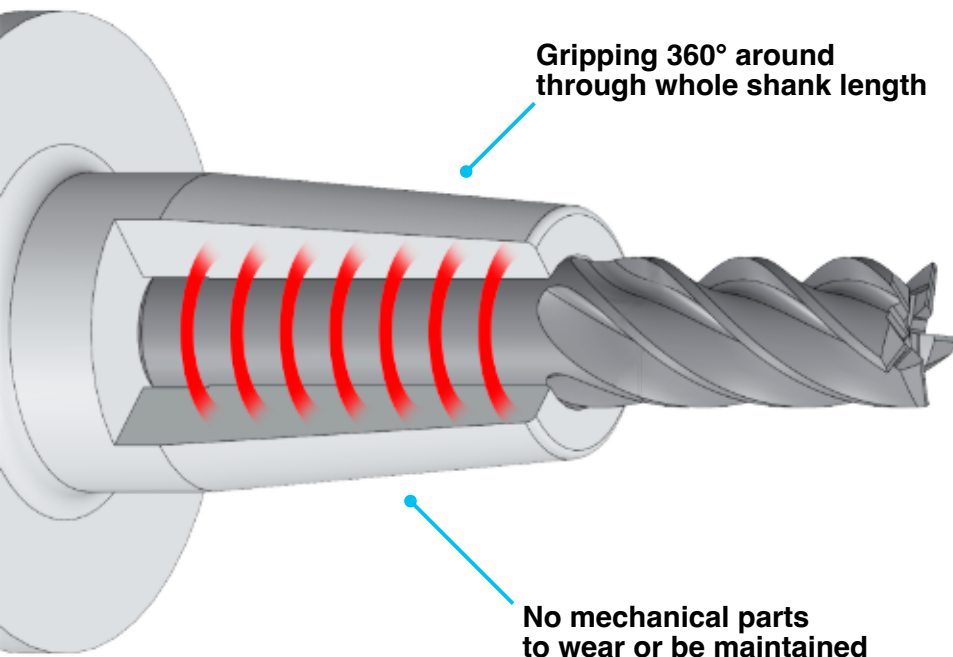
- **Decades of experience:** SAB has been supplying markets around the world with top-quality shrink fit holders for over 2 decades.

### Versatile holder sizes and profile types

- **Wide range of application:** Shrink fit holders as standard come in variety of lengths and profile types such as standard, slim profile, compact profile, through-coolant type, extension type, and other.



## High clamping force



### - Uniform force

Shrink fit chucks create uniform pressure distribution that grips the cutting tool all around the shank which enables great gripping force that prevents any moving or slipping of the cutter during cutting.

Strong force created by interference between tool shank and holder bore is critical during aggressive and high-speed machining operations.

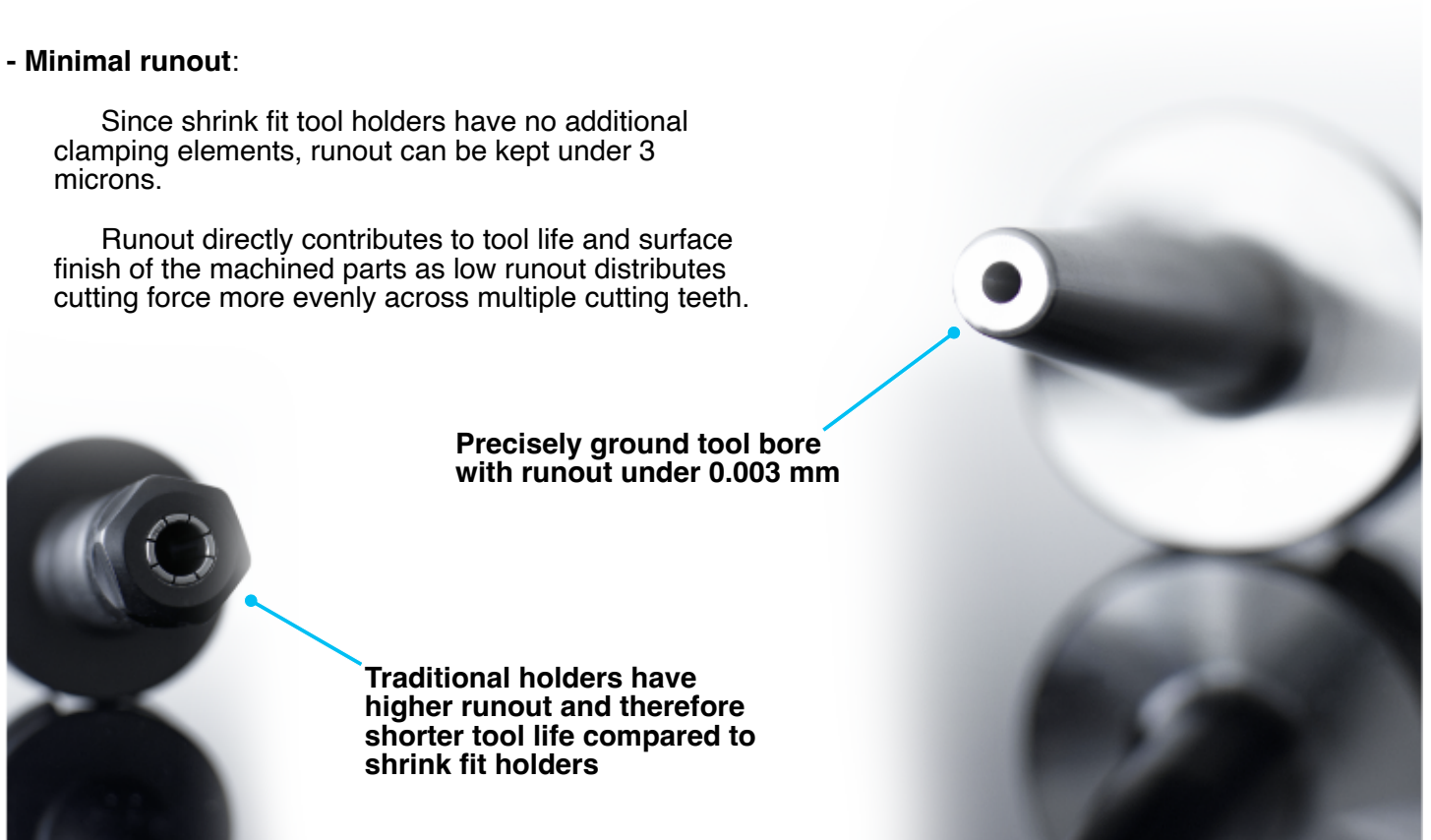
This exceptional holding power enables less chatter and smoother operation for better surface finish and longer tool life.

## Enhanced precision and accuracy

### - Minimal runout:

Since shrink fit tool holders have no additional clamping elements, runout can be kept under 3 microns.

Runout directly contributes to tool life and surface finish of the machined parts as low runout distributes cutting force more evenly across multiple cutting teeth.



## Improved balance and vibration dampening

### - Stability in cut:

Monoblock design of shrink fit tool holders enable them to have excellent vibration dampening properties.

Outer profiles of holders are hard machined and on extended lengths include tapered profile to reduce vibration during high RPM operations.

Shrink fit holders are delivered precisely balanced as standard to G2.5 at 25 000 min<sup>-1</sup>.

Hard machined outer profile

Vibration dampening tapered profile

## Compact and slim design

### - Slim profile:

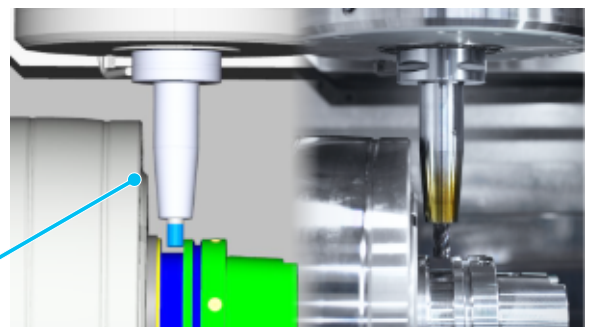
As there are no additional parts used to clamp tools with shrink fit tool holders, their profile can be made very slim.

This property makes them the first choice in aerospace, automotive, die and mould, and other industries where complicated part geometries have tough to reach areas. These are all much easily accessible with the use of shrink fit tool holders and their slim profile.

3D models for simulation are available on request.

3° Slim profile

3D models for simulation

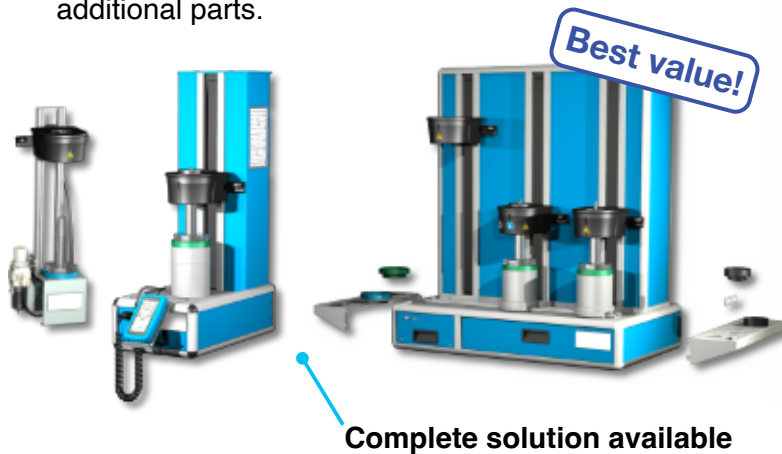


## Low maintenance

### - Streamlined setup:

Changing tools is easy with appropriate heating and cooling equipment. Shrinking machine has programmed heating and cooling cycles to make operation easy and tools can be swapped in matter of seconds.

Additionally, maintenance is minimum, as there are no additional parts.



## Versatile holder sizes and profile types

### - Wide range of application:

As standard, shrink fit tool holder range consists of 4 different profile types, 3-in-1, standard, slim, and compact:

- **3-in-1** - with through holder coolant holes and with 3 different configurations for coolant ports
- **Standard** - same outer profile as 3-in-1 holders only without coolant ports
- **Slim** - narrower 3° slim profile for accessing tight spots
- **Compact** - thicker profile for rougher operations



3-in-1



Standard



Slim



Compact

## 3-in-1 Coolant solution

### - Versatile coolant solution:

3-in-1 Shrink fit holder come with 3 threaded coolant holes at the tip of the holder. Packaging also includes 3 high-speed nozzles and 3 plugs so that the holder can be configured in 3 different coolant configurations:

- **High-speed nozzles:** these nozzles reduce diameter of coolant ports increasing the coolant velocity out of holder - useful for high-RPM machining.
- **Open:** for regular machining, wider spread of coolant.
- **Closed:** plugged holes for through tool coolant.



High-speed  
nozzles

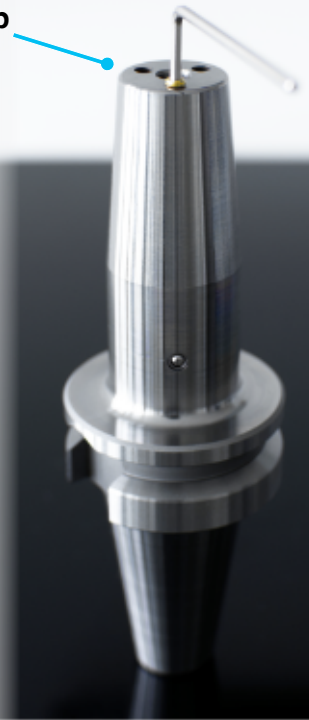


Open



Closed

Direct coolant to  
tool tip



## Proven quality

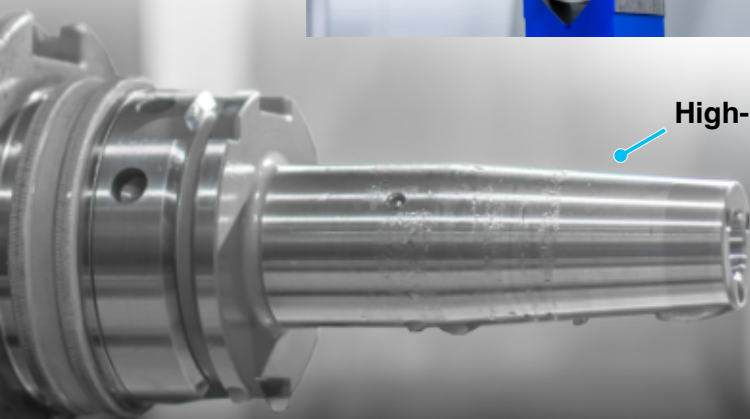
### - Decades of experience:

SAB has more than two decades worth of experience in supplying customers around the world with only top-quality shrink fit tool holders.

Each and every holder is carefully manufactured using highest quality materials in order to perform as premium holder and a right choice when quality, productivity, and cost reduction are desired.

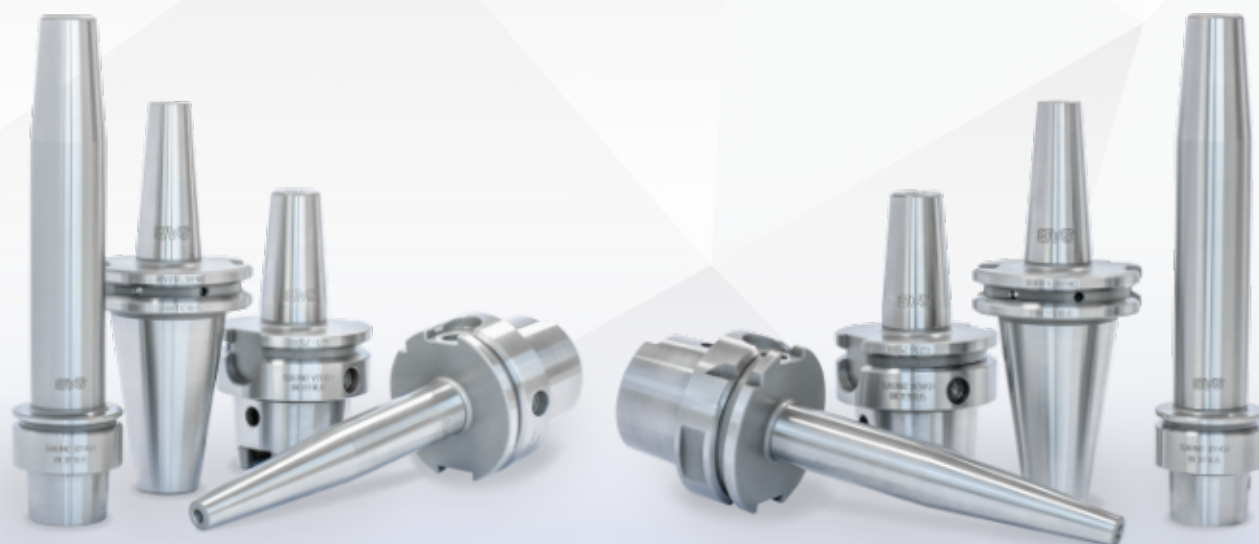
Bring your machining to the next level with the benefits of shrink fit tool holding.

High-performance alloy steel





## THERMO Shrink fit tool holding solutions



Find additional information  
and product catalogues

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