## Shrink Collets to DIN 6499

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## Accessories for Shrink units

### Setting Adaptor SKA
- Variable, mechanical height adjustment
- Precise, adjustable to the required tool length
- Suitable for all clamping sizes with suitable shrink adaptor

### Adaptors for Shrink Collets
- Minimal heat transfer, no oxidation: composite material protects the shrink collet and adaptors during use.

### Special interchangeable discs (flat)

<table>
<thead>
<tr>
<th>Designation</th>
<th>Clamping-Ø</th>
<th>ISO2200</th>
<th>ISO2200WK</th>
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### Shrink units

- ISG 2200
- ISG 3200
- ISG 2200 WK
- ISG 3200 WK

With the correct choice of clamping tool, there is a huge potential for savings in manufacturing, not only meeting increasing customer and market quality requirements but also the increasing pressure to keep production costs low. With these factors in mind, we have created TER!
The limits of conventional collet chucks

Collet chucks are widely used in manufacturing. However, due to increasing precision requirements and higher spindle speeds, this clamping concept quickly reaches its limits.

The multi-part construction and the mechanical clamping of the tool in the collet have a negative effect on holding forces and run-out. The result: less precision and higher loads on tool and chuck – higher costs due to unsatisfactory quality.

With the development of the patented TER shrink collet, we have been able to revolutionise the use of collets and collet chucks in the production process!

Using TER means profiting from the three main advantages of collet shrinking,
- Run-out < 3 μm
- Maximum holding forces
- Rigidly
- Low-wear monoblock properties

without the need to replace existing collet chucks or spindles.

The short and extremely stable tool clamping with TER achieves a run-out of < 3 μm. Tool life is considerably improved due to the precise guidance of the tool and ultra-precise change accuracy means that your length adjustment is maintained even after many cycles – with optimum results.

Nothing goes pear-shaped with collet clamping!

If the tools is not clamped cleanly, high forces are exerted on the tool and chuck through rotation. The tool begins to wobble, leading not only to a higher load and therefore increased wear on the chuck and tool, but also impairs the quality of the manufacturing result.

Using TER means that the load on the tool due to imbalance is practically eliminated. The tool is clamped precisely in the centre of the clamping bore, meaning that it runs true and, when shrunk in, forms a stable unit with the TER collet.

A perfect fit – with TER!

Facts instead of words:

Radial load analysis of the TER

The illustration shows the shrink collet TER in a radial load analysis. This clearly shows that the load on the TER collet is minimal. The forces measured are almost completely limited to the low, blue area.

Cost structure when using conventional collets

- Consumable tool costs = -3.600 €
- Material = -13.200 €
- Personnel costs = -24.000 €
- Machine and tool = -22.400 €
- Building and administration = -16.800 €

Order revenue = 80.000 €

Cost structure with TER shrink technology

- Consumable tool costs = -1.800 €
- Material = -13.200 €
- Personnel costs = -19.200 €
- Machine and tool = -17.920 €
- Building and administration = -13.400 €
- Building and administration = 14.400 €
- Profit gain = 14.900 €

Order revenue = 80.000 €

Using high performance to reduce production costs – TER to DIN 6499 makes it possible!

Rigidity, maximum holding forces and monoblock properties – three major benefits in shrink technology revolutionise conventional collet applications thanks to TER – your production will profit from them!

High-speed machining
- High transmittable torque
- Stable clamping
- Maximum holding forces
- Ultra-precise, quick tool changes (< 30s)

Increase productivity in a short period of time...
- the TER saves you time and processing costs.

Increase of tool life for cutting tools up to 300 %
- High stability of the system
- Minimum load from axial forces
- Precise clamping means less damage
- Resistant to dirt (sealed monoblock system)

Produce longer with less wear...
- low wear improves quality and quantity.

High precision and process-secure
- Excellent run-out properties (< 3 μm)
- High repeatability due to precise clamping

High quality machining for top results...
- tolerances and scrap – both low, thanks to TER!

No need to retool...
- Existing collets can still be used
- Universal toolholder for all sizes
- Wear part sealing disc is no longer required

Improving manufacturing without changing production processes...
- minimum purchasing costs with maximum benefit

ORDER REVENUE = 80.000 €