

## TER Shrink Collets and DMS Extensions

TER shrink collets have become a very popular clamping devices, not only for use on lathes. Tool life improvements of 300 % to 600 % have been achieved by many users. The TER shrink collets are now supplemented by extensions and reductions from the range of the new DMS Diebold Modular System. We also offer the perfect ShrinkFit units for shrinking of both product TER shrink collets and DMS extensions.

**Even though TER shrink collets** are not collets but one-piece shrink holders they are called shrink collets.



TER shrink collets are available in collet sizes ER11, ER16, ER20, ER25 and ER32. TER collets have a concentricity of  $<3 \mu\text{m}$ , so they are manufactured very precisely. Due to their high holding force as shrink chucks, they transmit high torque rates and they fit into every ER chuck available to the user. Because they have no slots, like classic collets, there is no contamination in the taper or the collet. Tool change in driven tools or angle milling heads can be done very quickly using TER collets. With classic collets a cutter change can easily take 20-30 minutes before switching back to automatic mode with good parts. With TER collets it takes only 2-3 minutes to exchange a cutter because the tool can be adjusted to length during shrinking with the help of a length setting adapter, making re-entry into the machine program much easier and faster. Everage time saving per tool change is approx. 20 minutes. Two tool changes per shift at two shifts per day ads to **133 hrs. more spindle time annually.**

**The video shows the difference in exchanging a cutter in slotted collets and TER collets:**

[https://youtu.be/iCvblhxBO\\_4](https://youtu.be/iCvblhxBO_4)



TER shrink collets are coolant-tight, making them ideal for use with internally cooled tools. Due to their enormous holding force and good concentricity (<0.003 mm) they often ensure a productivity increase of 300-600%. You read correctly, 600% increase in productivity is not a fabulous number, but such savings have often been proven in practice. The Diebold factory runs approx. 50 CNC machines where over 700 pieces of TER shrink collets are in use on the turn-mills and machining centers. The use of TER collets lead to a considerable productivity improvement compared to the use of classic slotted collets.

## Areas of application for TER shrink collets

- Direct clamping in spindle tapers
- In driven tools or angled milling heads
- In any ER collet milling chucks



**TER Shrink Collets now supplemented by extensions and reductions from the DMS Diebold Modular System**

Based on the good experience with TER collets the **DMS Diebold Modular System** was developed. Shrink chuck extensions and reductions with ER 20 and ER 25 taper are now available from this program.

You will find our video

“DMS in action” here::

<https://youtu.be/n3-ToNPXQAw>



DMS inserts can not only be used in the DMS Modular System but also in any collet chucks available to the user. Machining in narrow areas, pockets and cavities that are difficult to access with classic ER chucks and their large collet nuts becomes child’s play thanks to the use of DMS extensions or reductions, without having to invest in expensive special tool holders.



Simply use the modular system. The concentricity of the tool is also excellent with extensions, combined with high rigidity.

### TER shrinking made easy

Our shrink units US 1100 horizontal or US 1100 vertical are available for shrinking cutting tools into TER collets. With the appropriate adapters, TER collets can be held during the shrink fit and cooling process. For cooling, water coolers of the FKS 04 S series are available or the fully automatic shrinking units US 1100 TubeChiller™.

The cutting tools can be set to length in the TER collets during the shrinking process using a length setting adapter with an adjustable pin. This eliminates the time-consuming length setting of the tools in the turret of the machine when using slotted collets, which has always been associated with machine downtime and loss of productivity.



Length setting adapter



TER adapter for vertical use



TER adapter for horizontal use



Shrink Unit US 1100 with TubeChiller®



Chiller Unit FKS 04 S

## Customer benefits when using Diebold TER and DMS shrink collets:

1. Considerable increase in performance due to higher milling performance.
2. Significant improvement in tool life 300 % - 600 %.
3. Excellent concentricity < 0.003 mm.
4. TER collets are coolant-tight due to their closed shape, this prevents contamination of the ER clamping cone.
5. Time saving tools change, from 20-30 min. reduced to 2-3 minutes, brings an enormous amount of additional productive machine time.
6. Horizontal and vertical shrinking systems for shrinking the tools.
7. Fine-tuned parameters for shrinking in all shrinking devices.
8. Automatic shrinking with Pyrometer using TempControl.
9. Gentle shrinking, therefore no overheating of the TER collets and DMS extensions. For a long life of your shrink chuck.
10. DMS extension and reductions.
11. Use of the highest quality steel and special hardening processes for the shrink fit chucks, therefore maximum service life.
12. No tolerance increases due to artificial aging of the material.
13. Therefore better quality and longer usability of the high accuracy.



rink Units US 1100 horizontal and vertical