

STAND  
05/2023

**TRIEBEL**<sup>®</sup>  
WAFFENWERKZEUGE GMBH



**SETTING  
RELOADING DIES**

# USER MANUAL

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## About this user manual



The Triebel company accepts no responsibility for the ammunition manufactured with these tools, since we have no influence on the components used for production.

Cartridge cases can be reloaded in an absolutely safe manner with our products. To do so, you must observe all the information in this user manual.

Disregarding information in this user manual can result in serious injuries and/or property damage.

Observing all safety regulations reduces the risk of injuries and property damage to a minimum.

This user manual contains specific safety and operating instructions. The user manual must be regarded as an integral part of your equipment and it must be readily available when you work with the equipment.

If the described operation is not clear after you have read this user manual, please call us.

### **Observe the following instructions before you size cartridge cases, refill cartridge cases or seat bullets:**

- Use the tools exclusively in the manner described by the manufacturer.
- Read through this user manual thoroughly before you begin work.
- Keep all tools clean at all times.
- Collect any spilled propellant powder immediately.
- Always work calmly and without haste.
- Never work under the influence of alcohol, drugs or medication.
- Always wear safety glasses when working with propellant powder.
- Never use damaged cartridge cases. Disable and dispose of damaged cartridge cases.

## Safety instructions

### HAZARD



#### **Risk of fire and explosion due to propellant powder**

- No ignition sources or naked flames.
- No smoking.
- Keep a fire extinguisher within reach.

### CAUTION



#### **Abrasion or wear on the case holder can cause it to tear out or result in impermissible shortening of the distance between the cartridge base and the shoulder (breech distance)!**

The case could rupture when the bullet is fired!

- Instruct a specialist to correctly dimension the die.

## Safety instructions regarding the handling of propellant powder



In Germany, a permit issued in accordance with § 27 of the Explosives Act is required to purchase propellant powder (nitrocellulose powder or black powder). Outside Germany, observe the rules and regulations of the respective country when purchasing and using propellant powder.

### **Always observe the following safety instructions:**

- Store propellant powder out of the reach of children and away from heat, moisture, naked flames and electrical devices.
- Do not store propellant powder in any container other than the original container.
- Do not store larger quantities of propellant powder.
- Only use propellant powder of known origin. Dispose of propellant powder of unknown origin.
- Always close the storage containers when you are not using them.
- Always return any extra propellant powder to the original container immediately after use and close the container.

## Legal requirements for ammunition production



In Germany, manufactured ammunition is subject to the Weapons Act (WaffG). Outside of Germany, observe the rules and regulations of the respective country in respect of manufactured ammunition.

All tools and components used to reload cartridge cases are freely obtainable, but in Germany the purchase of propellants is subject to the Explosives Act and its strict controls. A permit is required to purchase propellant powder (nitrocellulose or black powder). For noncommercial use, a permit pursuant to § 27 of the Explosives Act is required; this is valid for 5 years and must then be extended. Expertise and general reliability are not sufficient here.

### Permit for loading and reloading cartridge cases

To obtain the technical expertise to manufacture ammunition, you must complete a recognized training course that concludes with an examination of expert knowledge.

To participate in such a training course you must hold a clearance certificate in accordance with the Explosives Act. This certificate is issued after the appropriate authority has checked the reliability of the applicant.

In Germany, the authorities check the Federal Central Criminal Register and the Trade Register. In addition, information is obtained from the police and the public prosecutor's office. Pending investigations and criminal proceedings, as well as relevant entries in the certificate of conduct count as reasons to doubt good conduct and deny the clearance certificate.



Different regulations may apply outside Germany. Please check with the appropriate authorities to find out which requirements you must fulfill to manufacture ammunition.

## Notes on setting reloading dies

- Small arms cartridges are usually reloaded for the purpose of individually adjusting the ammunition to the intended use.
- Observe the procedure described in this user manual. Then you will have no problems sizing cartridge cases and seating the bullet.
- To purchase propellant powder that is subject to the Explosives Act, you must have basic knowledge of legislation regarding explosives (purchasing, handling, storage, etc.) and at least basic knowledge of measurement technology and general mechanics.
- The die bodies have the standard 7/8" - 14 UNF thread or 1 1/4" - 12 UNF thread and thus fit all commercially available reloading presses. Larger calibers, e.g., 50 BMG and larger, are manufactured with 1 1/2" thread.
- Always keep the die clean and apply a preserving agent to protect it from rust when not in use.
- Clean it before use, in particular the inner contour, and apply a thin film of sizing grease.
- Arranging for the ammunition you manufacture to be inspected by a ballistics authority provides you with the assurance that the dimensions and loading data have been complied with!
- The following applies in all cases: Every reloader acts on his/her own responsibility!

**Our reloading dies are usually delivered ready for use. The following components are interchangeable, allowing you to make adjustments to meet your requirements. This allows you to respond to different case wall thicknesses or bullet shapes for instance.**

- Guide sleeves
- Bullet seater punch
- Interior sizer
- Neck sizer rings

## Sizing cartridge cases

### Full-length sizing

During full-length sizing, the cartridge case is sized to the extent that the bullets have sufficient hold and the cartridge cases can be loaded in a correctly sized chamber.

Full-length sizing is intended to bring a spent cartridge case into a condition in which it fits into a chamber and the bullet obtains a firm seat.

To this end, it is important to know that chambers of the same caliber have different dimensions, that cartridge cases have different wall thicknesses – not only in the neck area – and that bullets, in particular solids, can be slightly underdimensioned.

All of this means that a die must be calibrated to the cartridge cases and the chamber dimension. Not every combination leads to immediate success.

### Partial sizing (neck sizing)

With partial sizing, only the case neck is returned to its original condition so that the bullet has a firm hold.

Since the entire cartridge case is not stressed during partial sizing, the service life of the cartridge cases increases in comparison to full-length sizing.

Cartridge cases that are only sized in the neck area should only be used in the weapon in which they were fired.

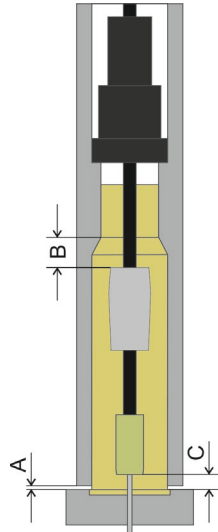
After only the neck of the cartridge case has been sized multiple times, full-length sizing must be conducted to ensure that the cartridge can be properly fed into the chamber.



## Die setting distances



To prevent damage to the dies, the following distances must always be adhered to during setting.



Die setting distances

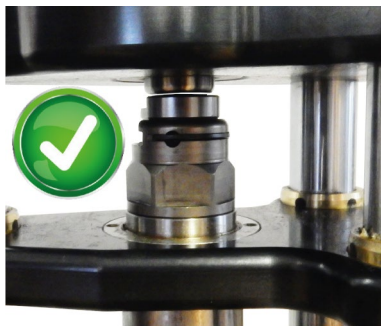
A = case holder to die

B = interior sizer (expander) to case neck

C = knurled sleeve to cartridge base

### Distance between the case holder and the die

Pressure must not be built up between the case holder and the die.



Die set correctly – The case holder does not contact the die.

### Distance between the interior sizer and the case neck

The interior sizer must not sit so far up that sizing from outside and simultaneous expanding from the inside is not possible.

**Distance between knurled sleeve/interior sizer<sup>1</sup> and cartridge base**

The knurled sleeve/interior sizer must not contact the cartridge base.



Spindle set correctly – The knurled sleeve does not extend beyond the die.



Spindle set incorrectly – The knurled sleeve extends beyond the die.

Setting the spindle for full-length dies and bench-rest neck sizer dies for calibers with short case lengths

Factory supplied with special interior sizer; the knurled sleeve is not needed.

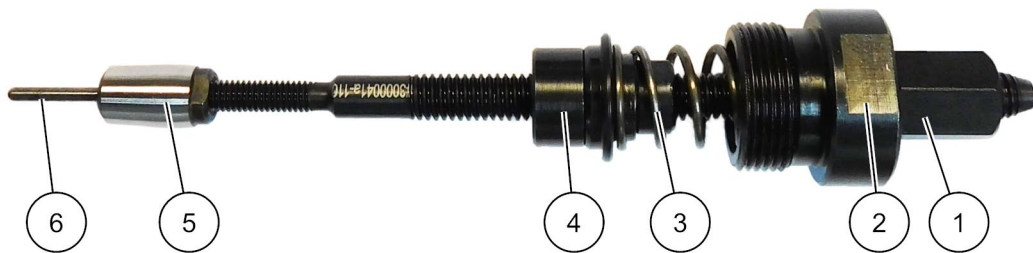


Spindle set correctly – The interior sizer does not extend beyond the die.

<sup>1</sup> The knurled sleeve is not needed for short cartridge cases

## Setting the spindle

### Setting the spindle with the counter nut with spindle and the counter nut



- |                            |                            |
|----------------------------|----------------------------|
| 1 Counter nut              | 4 Stop for neck sizer ring |
| 2 Counter nut with spindle | 5 Interior expander        |
| 3 Pressure spring          | 6 Ejector pin              |

### Setting the spindle

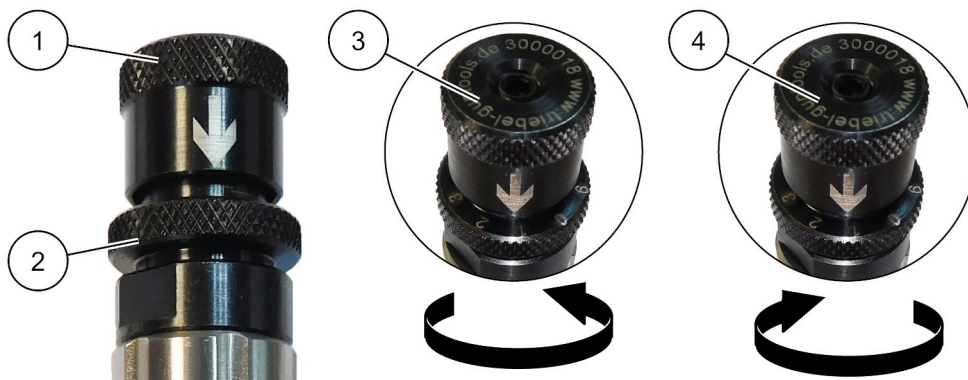
1. Screw the counter nut with spindle downward so that the knurled sleeve does not stick out beyond the die; see Die setting distances page 9.
2. Lock the setting with the counter nut.

### Setting the spindle with the fine adjuster

For setting the seating depth of bullet seater dies and bench-rest bullet seater dies.



The fine adjuster can be purchased as an option to provide simple stepless adjustment of the seating depth of the bullet.



- |   |   |
|---|---|
| 1 Upper part of fine adjuster with fixing screw | 3 Rotating the fine adjuster counter-clockwise raises the spindle |
| 2 Lower part of fine adjuster                   | 4 Rotating the fine adjuster clockwise lowers the spindle         |

### Setting the seating depth

1. Loosen the existing counter nut of the spindle from the die.
2. Screw the lower part of the fine adjuster (2) onto the spindle of the die; see Die setting distances page 9.
3. Screw on the upper part of the fine adjuster and tighten the fixing screw by hand.
4. Seat the bullet to the desired depth.

## Counter nuts for dies

The dies can be equipped with a hexagon counter nut or with a round counter nut for a hook wrench.



1 Hexagon counter nut

2 Counter nuts for hook wrench with pin



Tighten the locking screws of the counter nuts just enough so that the counter nut is fixed on the die.

Version 2 has been factory installed by default since 2020.

Matching hook wrench for version for 7/8" dies:

- Hook wrench with pin of diameter 34-36 mm as per DIN 1810 B

Matching hook wrench for version for 1 1/4" dies:

- Hook wrench with pin of diameter 45-50 mm as per DIN 1810 B

## Full-length die

The full-length die resizes the diameter of the spent cartridge case from the case neck all the way to the base.

The full-length die consists of the hardened die body and the spindle with the interior sizer (expander) and the ejector pin. The die body is hardened, and the interior surface is mirror-polished.

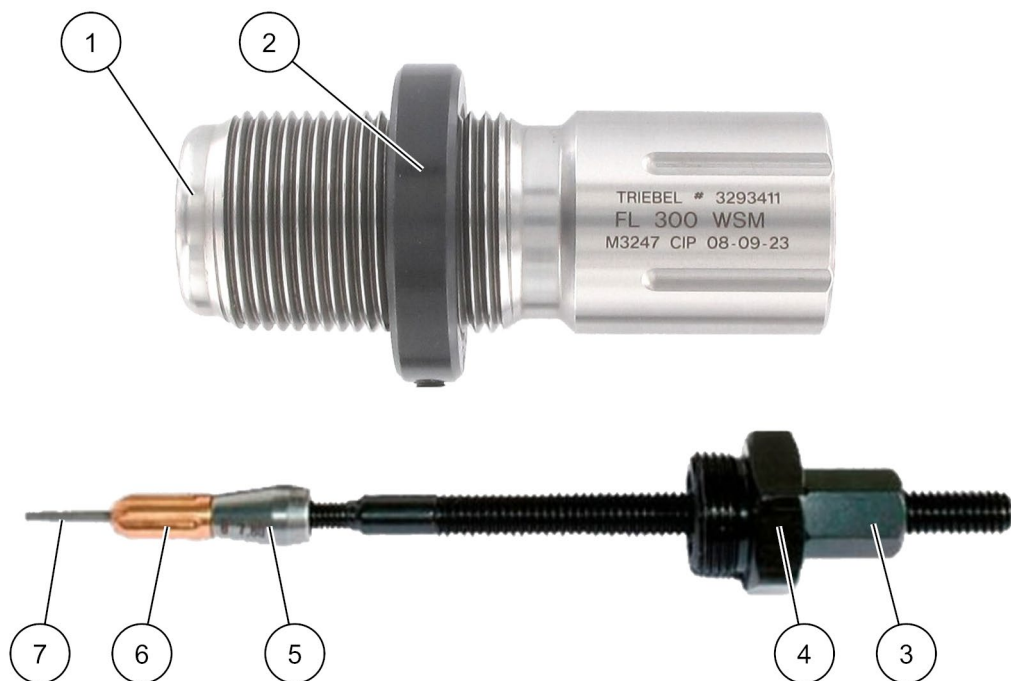
The interior sizer is made of hardened, finely ground tool steel. The complete spindle can be taken out from above, so no adjustments are needed when it is reinstalled.

The exterior is sized when the cartridge case is pressed into the die. The ejector pin presses the primer out of the cartridge case in the process.

The counter nut is used to correctly position the die in the press.

The interior of the case neck is sized when the case is removed from the die. This reestablishes the loadability of the cartridge case and achieves a consistent bullet seat.

## Individual parts of the full-length die

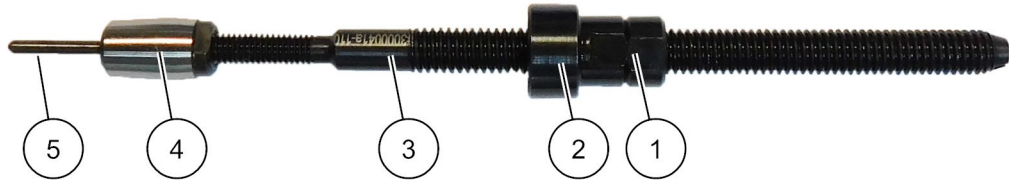


- |   |                          |   |                |
|---|--------------------------|---|----------------|
| 1 | Die body                 | 5 | Interior sizer |
| 2 | Die body counter nut     | 6 | Knurled sleeve |
| 3 | Spindle counter nut      | 7 | Ejector pin    |
| 4 | Counter nut with spindle |   |                |

### Spindle with interior expander for short cartridge cases

The knurled sleeve is no longer needed for the version for short cartridge cases.

The new interior expander performs the clamping function in this case. The interior expander for short cartridge cases has an unpolished collar.



- |   |                          |   |                   |
|---|--------------------------|---|-------------------|
| 1 | Counter nut for stop     | 4 | Interior expander |
| 2 | Stop for neck sizer ring | 5 | Ejector pin       |
| 3 | Spindle                  |   |                   |

## Setting the full-length die

Description	Notes
Set the correct case holder in the press punch.	The case holder must fit as precisely as possible. Since the edges of the cartridge cases of different manufacturers can have different dimensions, case holders that are adapted to this condition also exist. If the edge of the cartridge is not guided correctly, there is a risk of it rupturing. A considerable amount of effort is then required to remove the cartridge case. Trial and error is usually the only approach here.  <b>If an accident of this type should happen to you, please contact our customer service so that we can rescue the die with as little damage as possible.</b>
Move the press punch to the top position. Screw the Full-length die into the press until the outer die body contacts the case holder.	When the cartridge case is inserted, there must be a gap between the case holder and the die body at top dead center. This prevents a pressure buildup that could result in damage. Check the distance.
Measure the height of the cartridge base and set the spindle so that it does not contact the cartridge base.	The spindle could be damaged if there is contact with the cartridge base.
Position the spindle using the interior sizer and the ejector pin so that it is located in the center.	The spindle must not contact the cartridge base. The spindle and the knurled sleeve could be damaged.
Set the interior sizer so that it does not sit too far up on the spindle.	The interior sizer could reach into the area of the case neck, in particular on cartridge cases with a very short powder chamber. The interior sizer must be positioned so that it slides without resistance when the cartridge case moves upwards and that it expands the cartridge case only during the downward stroke.
Grease the exterior of the cartridge case and the interior of the case neck (e.g., with a grease pad) and insert it into the case holder.	Cartridge cases that have not been greased may jam in the die. Too much grease on cartridge cases can result in dents in the cartridge cases.
During initial sizing, only insert the cartridge case 5-10 mm, then retract it and size the entire cartridge.	This optimally distributes the lubrication film in the Full-length die.
Actuate the press lever to move the cartridge case upwards.	The cartridge case is inserted into the Full-length die and pressed into the Full-length die through the dead center of the press.
Move the press lever back again and remove the cartridge case.	Clean the cartridge case after sizing.
Check the dimensional accuracy of the cartridge case.	The press and the Full-length die are now set and you can size additional cartridge cases.



## Neck sizer die

The neck sizer die sizes the spent cartridge case at the case neck.

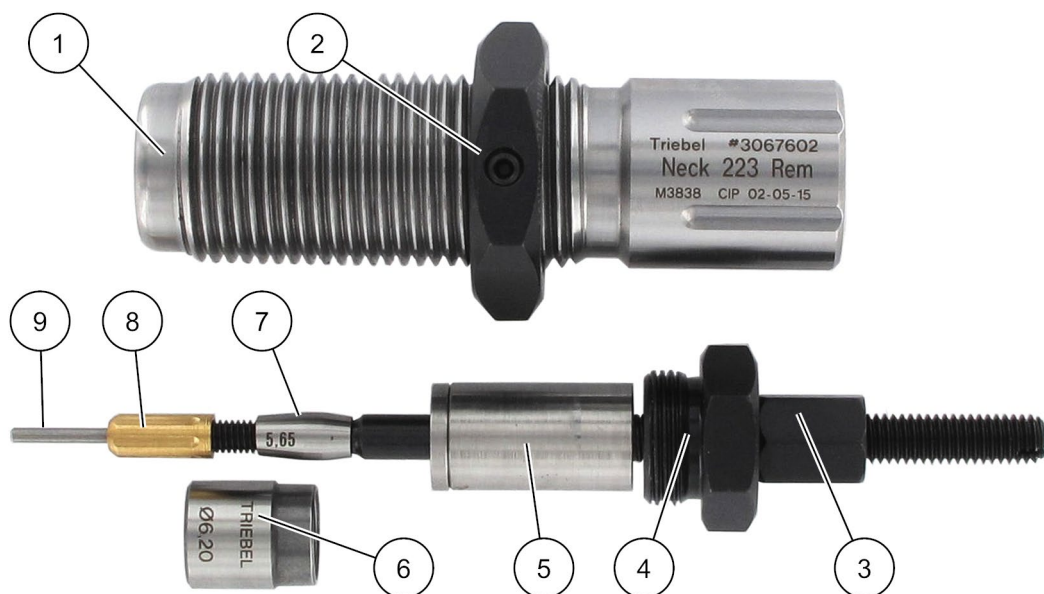
The die body has the inner contour of the chamber.

The neck sizer die consists of the die body, the bullet guide bushing, the distance bushing, the spindle with the interior sizer (expander), the nut and counter nut and the ejector pin with sleeve nut.

The exterior is sized when the cartridge case is pressed into the die. The ejector pin presses the primer out of the cartridge case in the process.

The interior of the case neck is sized when the case is removed from the die. This achieves a consistent bullet seat.

### Individual parts of the neck sizer die



- |   |                          |   |                           |
|---|--------------------------|---|---------------------------|
| 1 | Die body                 | 6 | Neck sizer ring           |
| 2 | Counter nut              | 7 | Interior sizer (expander) |
| 3 | Spindle counter nut      | 8 | Knurled sleeve            |
| 4 | Counter nut with spindle | 9 | Ejector pin               |
| 5 | Distance bushing         |   |                           |

### Determining the diameter of the neck sizer ring

Description	Notes
Measure the bullet diameter of the bullet being used.	Use digital calipers or a micrometer screw.
Measure the wall thickness of the case neck.	Measure at a minimum of 3 locations.
Wall thickness x 2 + (bullet diameter - 0.05 mm) = interior diameter of the neck sizer ring.	<p>If the seat of the bullet does not fit after neck sizing, use a neck sizer ring that is 0.05 mm smaller.</p> <p>Since the cartridge cases of different manufacturers expand differently, slight deviations may occur.</p>



## Setting the neck sizer die



Since the amount of force required during neck sizing is very small, it must be possible to feed the cartridge case into the die without resistance. If, nevertheless, resistance exists, then the cartridge case is too large in comparison to the die.

The die must then be adjusted, which we will be happy to do for you.

Description	Notes
Set the correct case holder in the press punch.	The case holder must fit as precisely as possible. Since the edges of the cartridge cases of different manufacturers can have different dimensions, case holders that are adapted to this condition also exist. If the edge of the cartridge is not guided correctly, there is a risk of it rupturing. A considerable amount of effort is then required to remove the cartridge case. Trial and error is usually the only approach here. <b>If an accident of this type should happen to you, please contact our customer service so that we can rescue the die with as little damage as possible.</b>
Move the press punch to the top position. Screw the Neck sizer die into the press until the outer die body contacts the case holder.	When the cartridge case is inserted, there must be a gap between the case holder and the die body at top dead center. This prevents a pressure buildup that could result in damage. Check the distance.
Measure the height of the cartridge base and set the spindle so that it does not contact the cartridge base.	The spindle could be damaged if there is contact with the cartridge base.
Position the spindle using the interior sizer and the ejector pin so that it is located in the center.	The spindle must not contact the cartridge base. The spindle and the knurled sleeve could be damaged.
Set the interior sizer so that it does not sit too far up on the spindle.	The interior sizer could reach into the area of the case neck, in particular on cartridge cases with a very short powder chamber. The interior sizer must be positioned so that it slides without resistance when the cartridge case moves upwards and that it expands the cartridge case only during the downward stroke.
Lightly grease the cartridge case in the neck area (e.g., with a grease pad) and then insert the cartridge case into the case holder.	Cartridge cases that have not been greased may jam in the die.
Move the press lever back again and remove the cartridge case.	Clean the cartridge case after sizing.
Check the dimensional accuracy of the cartridge case.	The press and the Neck sizer die are now set and you can size additional cartridge cases.

## Bench-rest neck sizer die (BR neck sizer die)

The bench-rest neck sizer die guides the cartridge case over the entire length before the case neck is sized with an interchangeable bushing.

The guide sleeve has the inner contour of the chamber to accommodate the spent cartridge case and the bore to guide the neck sizer bushing.

The bench-rest neck sizer die consists of the die body, the guide bushing, the spindle with the interior sizer (expander), the stop for the neck sizer bushing, the spring, the nut and counter nut and the ejector pin with sleeve nut.

### Individual parts of the bench-rest neck sizer die

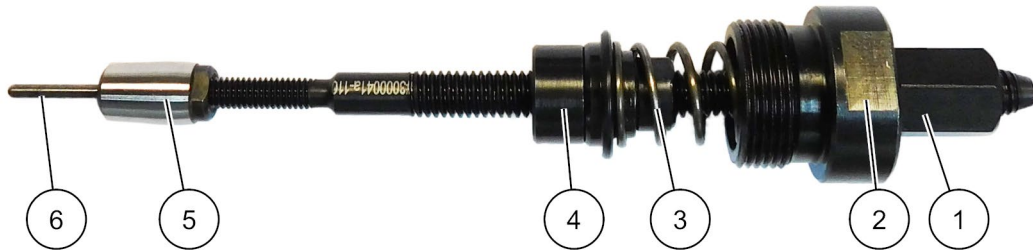


- |   |                          |    |                           |
|---|--------------------------|----|---------------------------|
| 1 | Die body                 | 7  | Pressure spring           |
| 2 | Counter nut              | 8  | Stop                      |
| 3 | Neck sizer ring          | 9  | Interior sizer (expander) |
| 4 | Guide sleeve             | 10 | Knurled sleeve            |
| 5 | Spindle counter nut      | 11 | Ejector pin               |
| 6 | Counter nut with spindle |    |                           |

### Spindle with interior expander for short cartridge cases

The knurled sleeve is no longer needed for the version for short cartridge cases.

The new interior expander performs the clamping function in this case. The interior expander for short cartridge cases has an unpolished collar.



- 1 Counter nut
- 2 Counter nut with spindle
- 3 Pressure spring

- 4 Stop for neck sizing ring
- 5 Interior expander
- 6 Ejector pin

## Setting the bench-rest neck sizer die



Since the amount of force required during neck sizing is very small, it must be possible to feed the cartridge case into the die without resistance. If, nevertheless, resistance exists, then the cartridge case is too large in comparison to the die.

The die must then be adjusted, which we will be happy to do for you.

Description	Notes
Set the correct case holder in the press punch.	The case holder must fit as precisely as possible. Since the edges of the cartridge cases of different manufacturers can have different dimensions, case holders that are adapted to this condition also exist. If the edge of the cartridge is not guided correctly, there is a risk of it rupturing. A considerable amount of effort is then required to remove the cartridge case. Trial and error is usually the only approach here.  <b>If an accident of this type should happen to you, please contact our customer service so that we can rescue the die with as little damage as possible.</b>
Move the press punch to the top position. Screw the Bench-rest neck sizer die into the press until the outer die body contacts the case holder.	When the cartridge case is inserted, there must be a gap between the case holder and the die body at top dead center. This prevents a pressure buildup that could result in damage. Check the distance.
Measure the height of the cartridge base and set the spindle so that it does not contact the cartridge base.	The spindle could be damaged if there is contact with the cartridge base.
Position the spindle using the interior sizer and the ejector pin so that it is located in the center.	The spindle must not contact the cartridge base. The spindle and the knurled sleeve could be damaged.
Set the interior sizer so that it does not sit too far up on the spindle.	The interior sizer could reach into the area of the case neck, in particular on cartridge cases with a very short powder chamber. The interior sizer must be positioned so that it slides without resistance when the cartridge case moves upwards and that it expands the cartridge case only during the downward stroke.
Grease the exterior of the cartridge case and the interior of the case neck (e.g., with a grease pad) and insert it into the case holder.	Cartridge cases that have not been greased may jam in the die. Too much grease on cartridge cases can result in dents in the cartridge cases.
Move the press lever back again and remove the cartridge case.	Clean the cartridge case after sizing.
Check the dimensional accuracy of the cartridge case.	The press and the Bench-rest neck sizer die are now set and you can size additional cartridge cases.

## Multi-neck sizer die

The multi-neck sizer die sizes the spent cartridge case at the case neck.

The multi-neck sizer die consists of the die body, the hardened neck sizer ring, two distance bushings, the spindle with the interior sizer (expander), the nut and counter nut, and the ejector pin with sleeve nut.

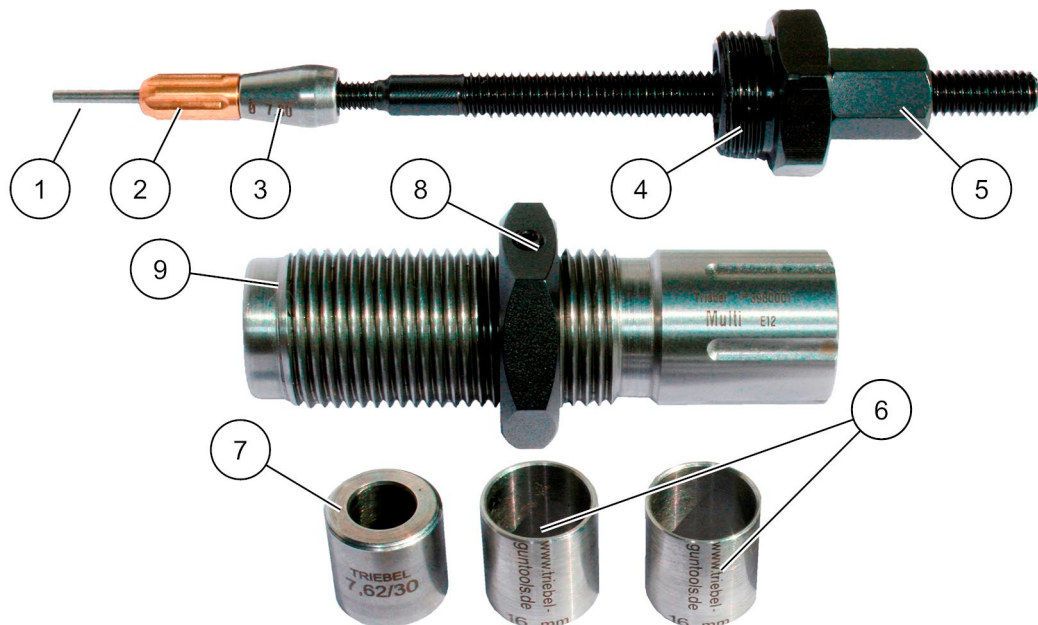
The exterior is sized when the cartridge case is pressed into the die.

The interior of the case neck is sized when the case is removed from the die. This achieves a consistent bullet seat.

The neck sizer ring is installed in the bottom position for short cartridge cases. For longer cartridge cases, one or both of the distance bushings can be exchanged in a downward direction as required.

If the neck sizer ring is installed in the bottom position, then the interior sizer must also be screwed downwards.

### Individual parts of the multi-neck sizer die



- |   |                           |   |                       |
|---|---------------------------|---|-----------------------|
| 1 | Ejector pin               | 6 | Distance bushings     |
| 2 | Knurled sleeve            | 7 | Multi-neck sizer ring |
| 3 | Interior sizer (expander) | 8 | Counter nut           |
| 4 | Counter nut with spindle  | 9 | Die body              |
| 5 | Spindle counter nut       |   |                       |

## Setting the multi-neck sizer die

Description	Notes
Set the correct case holder in the press punch.	The case holder must fit as precisely as possible. Since the edges of the cartridge cases of different manufacturers can have different dimensions, case holders that are adapted to this condition also exist. If the edge of the cartridge is not guided correctly, there is a risk of it rupturing. A considerable amount of effort is then required to remove the cartridge case. Trial and error is usually the only approach here.  <b>If an accident of this type should happen to you, please contact our customer service so that we can rescue the die with as little damage as possible.</b>
Move the press punch to the top position. Screw the Multi-neck sizer die into the press until the outer die body contacts the case holder.	When the cartridge case is inserted, there must be a gap between the case holder and the die body at top dead center. This prevents a pressure buildup that could result in damage. Check the distance.
Measure the height of the cartridge base and set the spindle so that it does not contact the cartridge base.	The spindle could be damaged if there is contact with the cartridge base.
Position the spindle using the interior sizer and the ejector pin so that it is located in the center.	The spindle must not contact the cartridge base. The spindle and the knurled sleeve could be damaged.
Set the interior sizer so that it does not sit too far up on the spindle.	The interior sizer could reach into the area of the case neck, in particular on cartridge cases with a very short powder chamber.  The interior sizer must be positioned so that it slides without resistance when the cartridge case moves upwards and that it expands the cartridge case only during the downward stroke.
Grease the exterior of the cartridge case and the interior of the case neck (e.g., with a grease pad) and insert it into the case holder.	Cartridge cases that have not been greased may jam in the die. Too much grease on cartridge cases can result in dents in the cartridge cases.
Actuate the press lever to move the cartridge case upwards.	The cartridge case is inserted into the Multi-neck sizer die and pressed into the Multi-neck sizer die through the dead center of the press.
Move the press lever back again and remove the cartridge case.	Clean the cartridge case after sizing.
Check the dimensional accuracy of the cartridge case.	The press and the Multi-neck sizer die are now set and you can size additional cartridge cases.

## Seating bullets

During the bullet seating process, a bullet is pressed into a finished sized cartridge case that has been filled with propellant powder.

### Counter nuts for dies

The dies can be equipped with a hexagon counter nut or with a round counter nut for a hook wrench.



1 Hexagon counter nut

2 Counter nuts for hook wrench with pin



Tighten the locking screws of the counter nuts just enough so that the counter nut is fixed on the die.

Version 2 has been factory installed by default since 2020.

Matching hook wrench for version for 7/8" dies:

- Hook wrench with pin of diameter 34-36 mm as per DIN 1810 B

Matching hook wrench for version for 1 1/4" dies:

- Hook wrench with pin of diameter 45-50 mm as per DIN 1810 B



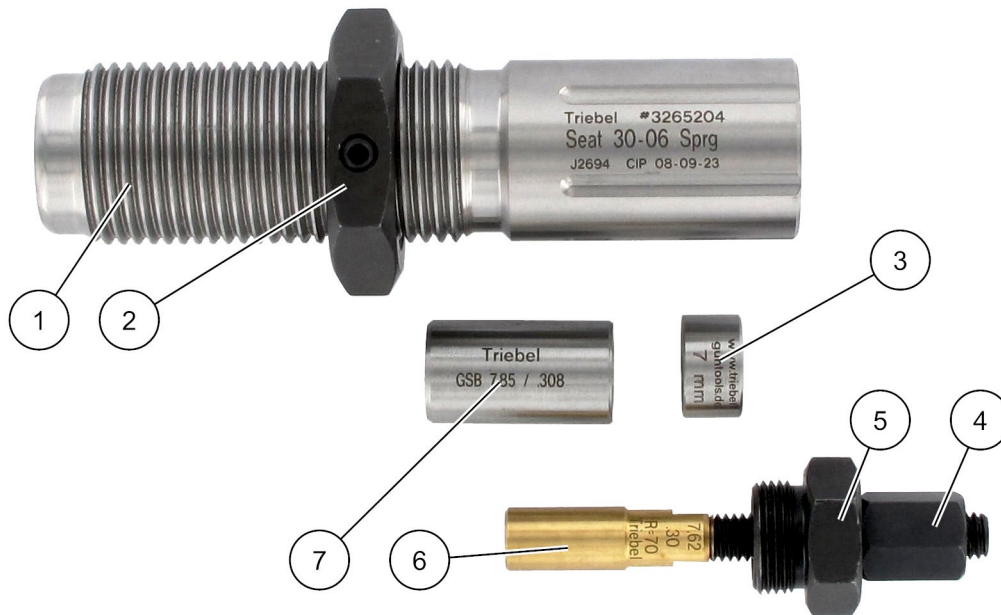
## Bullet seater die (bullet seater, seat)

The bullet seater die is used to precisely seat the bullet. The cartridge case is mounted and centered in the die body in a bore that corresponds to the cartridge case.

The depth of the bullet is set in the upper part of the bullet seater die via the spindle. An interchangeable guide sleeve is used to guide the bullet.

The bullet seater bushing has a crimp and a no-crimp side, which allows you to set whether the case mouth should be crimped on the cartridge.

### Individual parts of the bullet seater die



- |   |                     |   |  |
|---|---------------------|---|--|
| 1 | Die body            | 5 | Counter nut with spindle                       |
| 2 | Counter nut         | 6 | Seater punch                                   |
| 3 | Distance bushing    | 7 | Bullet seater bushing (crimp/no-crimp bushing) |
| 4 | Spindle counter nut |   |  |



## Setting the bullet seater die

Description	Notes
Set the correct case holder in the press punch.	The case holder must fit as precisely as possible. Since the edges of the cartridge cases of different manufacturers can have different dimensions, case holders that are adapted to this condition also exist. If the edge of the cartridge is not guided correctly, there is a risk of it rupturing. A considerable amount of effort is then required to remove the cartridge case. Trial and error is usually the only approach here. <b>If an accident of this type should happen to you, please contact our customer service so that we can rescue the die with as little damage as possible.</b>
Move the press punch to the top position. Screw the Bullet seater die into the press until the outer die body contacts the case holder.	When the cartridge case is inserted, there must be a gap between the case holder and the die body at top dead center. This prevents a pressure buildup that could result in damage. Check the distance.
Position the seater punch so that it sets the bullet at the right height.	
Place a sized cartridge case into the case holder.	
Place the bullet on the case neck and actuate the press lever to move the cartridge case upwards.	The cartridge case is inserted into the die body and pressed into the die through the dead center of the press.
Screw the die downwards until you feel a slight resistance.	
Move the press lever back again and remove the cartridge.	
Check the position of the bullet and the crimp.	The uniformity of the crimp depends on the length of the cartridge case. If the cartridge cases do not all have precisely the same length, then the crimp will also prove to be different. To achieve an as accurate as possible result, you must bring the cartridge cases to the same length.
If the position of the bullet and the crimp are OK, secure the die with the counter nut.	
Check the dimensional accuracy of the cartridges.	The press and the Bullet seater die are now set and you can seat additional bullets.

## Bench-rest bullet seater die (BR seat)

The bench-rest bullet seater die provides for precise, no-tilt seating of the bullet.

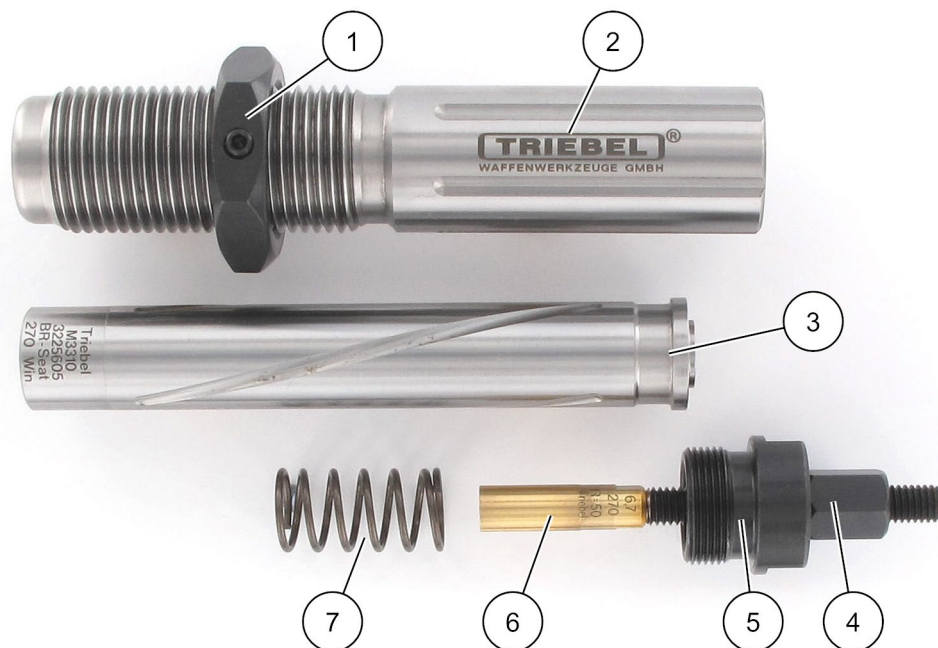
The cartridge case is guided in a spring-loaded guide bushing over its entire length, before the bullet is pressed into the case neck.

As the cartridge case is held over its entire length, axial alignment is ensured.

The bullet is guided in the coaxial bore of the guide sleeve. The bullet seater punch is fixed in the head piece, and the thread can be used to adjust it.

The bullet seater punch can be interchanged to accommodate different bullet shapes. It is not possible to crimp the case mouth.

### Individual parts of the bench-rest bullet seater die



- |   |                     |   |                                |
|---|---------------------|---|--------------------------------|
| 1 | Counter nut         | 5 | Counter nut with spindle       |
| 2 | Die body            | 6 | Seater punch (interchangeable) |
| 3 | Guide sleeve        | 7 | Spring                         |
| 4 | Spindle counter nut |   |                                |



The bench-rest bullet seater die is supplied with a standard seater punch. Make sure that the seater punch always precisely matches the bullet.

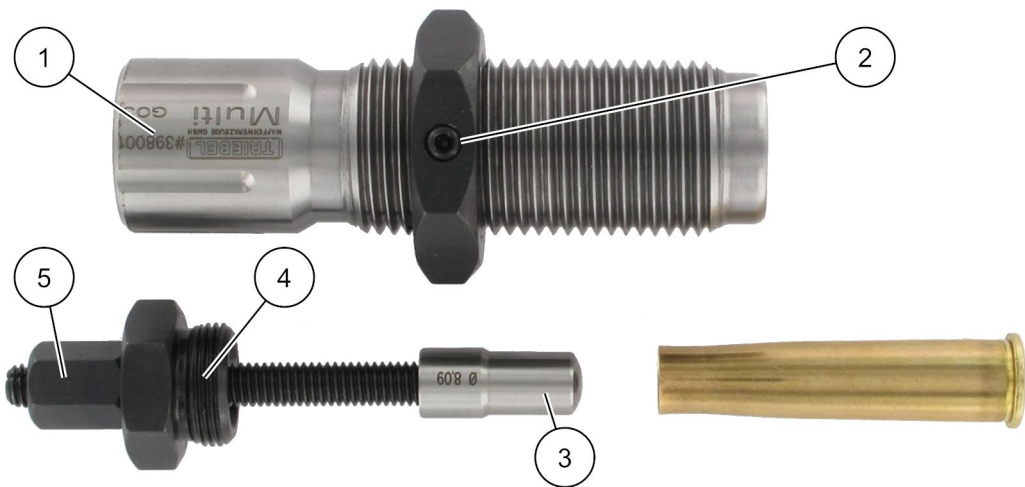
You can order a special setting tool from us to finally adjust the seater punch.

## Setting the bench-rest bullet seater die

Description	Notes
<p>Set the correct case holder in the press punch.</p>	<p>The case holder must fit as precisely as possible. Since the edges of the cartridge cases of different manufacturers can have different dimensions, case holders that are adapted to this condition also exist. If the edge of the cartridge is not guided correctly, there is a risk of it rupturing. A considerable amount of effort is then required to remove the cartridge case. Trial and error is usually the only approach here.</p> <p><b>If an accident of this type should happen to you, please contact our customer service so that we can rescue the die with as little damage as possible.</b></p>
<p>Move the press punch to the top position. Screw the Bench-rest bullet seater die into the press until the outer die body contacts the case holder.</p> <p>Position the seater punch so that it sets the bullet at the right height.</p>	<p>When the cartridge case is inserted, there must be a gap between the case holder and the die body at top dead center. This prevents a pressure buildup that could result in damage. Check the distance.</p>
<p>Place a sized cartridge case into the case holder.</p>	
<p>Place the bullet on the case neck and actuate the press lever to move the cartridge case upwards.</p>	<p>The cartridge case is inserted into the die body and pressed into the die through the dead center of the press.</p>
<p>Screw the die downwards until you feel a slight resistance.</p>	
<p>Move the press lever back again and remove the cartridge.</p>	
<p>Check the position of the bullet.</p>	<p>To achieve an as accurate as possible result, you must bring the cartridge cases to the same length.</p>
<p>If the position of the bullet is OK, secure the die with the counter nut.</p>	
<p>Check the dimensional accuracy of the cartridges.</p>	<p>The press and the Bench-rest bullet seater die are now set and you can seat additional bullets.</p>

## Expansion dies for lead bullets

### Individual parts of the expansion die for lead bullets



1 Die body

2 Counter nut

3 Expander

4 Counter nut with spindle

5 Spindle counter nut

## Setting the expansion die for lead bullets

Description	Notes
Set the correct case holder in the press punch.	<p>The case holder must fit as precisely as possible. Since the edges of the cartridge cases of different manufacturers can have different dimensions, case holders that are adapted to this condition also exist. If the edge of the cartridge is not guided correctly, there is a risk of it rupturing. A considerable amount of effort is then required to remove the cartridge case. Trial and error is usually the only approach here.</p> <p><b>If an accident of this type should happen to you, please contact our customer service so that we can rescue the die with as little damage as possible.</b></p>
<p>Move the press punch to the top position. Screw the Expansion die into the press until the outer die body contacts the case holder.</p>	<p>When the cartridge case is inserted, there must be a gap between the case holder and the die body at top dead center. This prevents a pressure buildup that could result in damage. Check the distance.</p>
Screw the spindle upwards a good distance.	
Place a sized cartridge case into the case holder.	
Actuate the press lever to move the cartridge case upwards.	
Screw the spindle downwards until the expander enters the case neck and a slight funnel is created at the case mouth.	
Tighten the spindle counter nut.	
Move the press lever back again and remove the cartridge case.	
Check the dimension of the cartridge.	<p>The press and the expansion matrix are now set and you can expand additional cartridge cases.</p>

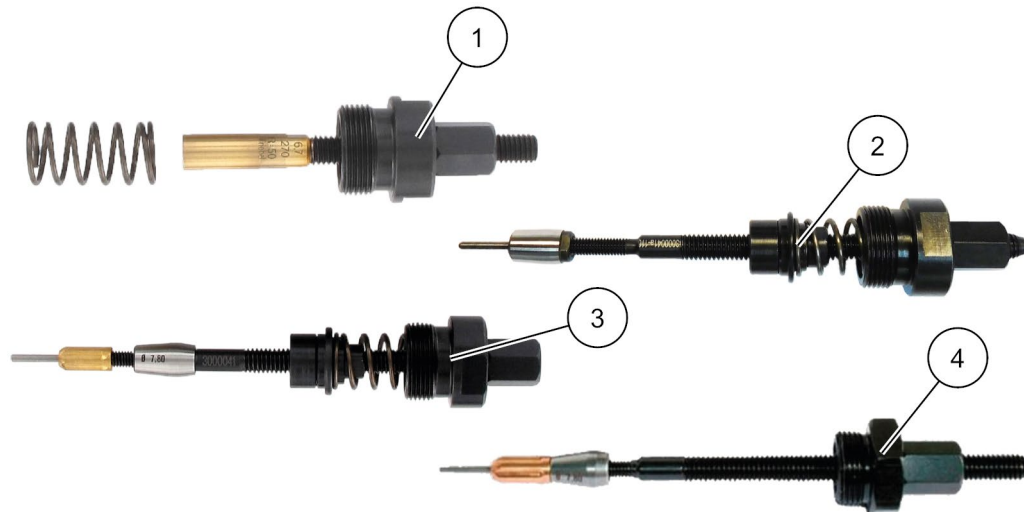
## Replacing components

### Removing the spindle



The removal and installation of the components is similar for all types of dies. The description here is just an example.

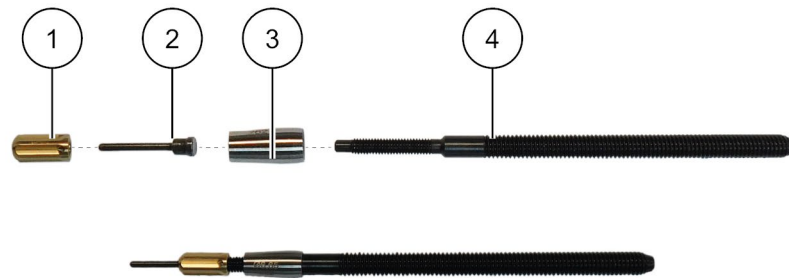
To install the components, reverse the procedure for removal.



- |   |   |   |                                   |
|---|---|---|-----------------------------------|
| 1 | Bullet seater die spindle                                   | 3 | Bench-rest neck sizer die spindle |
| 2 | Bench-rest neck sizer die spindle for short cartridge cases | 4 | Full-length die spindle           |

1. Unscrew the spindle from the die.
2. Unscrew the counter nut from the spindle.
3. Unscrew the counter nut with spindle from the spindle.
4. Depending on type, unscrew the knurled sleeve, interior expander or seater punch.
5. Set the individual parts aside.

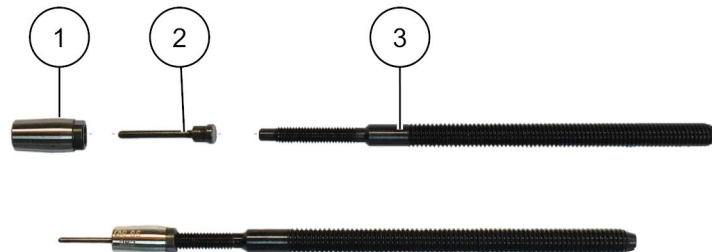
### Fitting the spindle with interior expander for normal cartridge cases



- |   |                |   |                   |
|---|----------------|---|-------------------|
| 1 | Knurled sleeve | 3 | Interior expander |
| 2 | Ejector pin    | 4 | Spindle           |

1. Screw the interior expander onto the spindle.
2. Insert the ejector pin into the knurled sleeve.
3. Screw the knurled sleeve with the ejector pin onto the spindle.
4. Screw the counter nut with spindle onto the spindle.
5. Screw the counter nut onto the spindle.

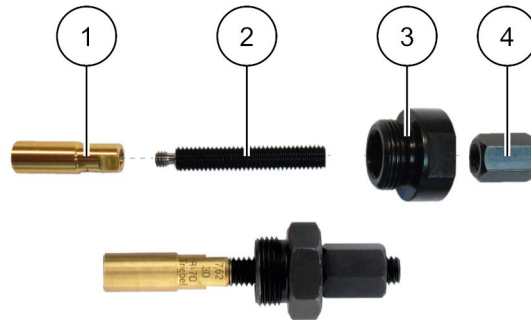
### Fitting the spindle with interior expander for short cartridge cases



- |   |                   |   |         |
|---|-------------------|---|---------|
| 1 | Interior expander | 3 | Spindle |
| 2 | Ejector pin       |   |         |

1. Insert the ejector pin into the interior expander.
2. Screw the interior expander with the ejector pin onto the spindle.
3. Screw the counter nut with spindle onto the spindle.
4. Screw the counter nut onto the spindle.

## Fitting the spindle for the seater punch



- 1 Seater punch
- 2 Spindle

- 3 Counter nut with spindle
- 4 Counter nut

1. Screw the seater punch onto the spindle.
2. Screw the counter nut with spindle onto the spindle.
3. Screw the counter nut onto the spindle.



## Troubleshooting

Fault	Cause	Result
The cartridge case does not fit into the gun after sizing.	The die does not size perfectly.	Size one cartridge case without the expander and check it in the gun or in the test chamber.  If it is possible to load the cartridge case, then the die sizes correctly.
The breech cannot be closed.	The dimension from the cartridge base to the shoulder is too long.	To ensure that the cartridge case does not contact at the case mouth, check the maximum case length.  Replace the die or arrange for a specialist to set it to the correct dimension.
It is possible to insert the cartridge case, but it jams.	The diameter of the chamber is too small.  The die does not size the diameter adequately.	The chamber must be inspected.  Replace the die or arrange for a specialist to set it to the correct dimension.
It is difficult or impossible to press the cartridge case into the die.	The chamber that the cartridge case comes from is too wide.	If you intend to use the cartridge cases in the same gun, then the die must be adapted by a specialist.  Custom manufacturing may also be required.
Withdrawing the cartridge case requires a significant amount of effort.	The die is sizing too much for the wall thickness of the cartridge case. It may be OK for cartridge cases with thinner walls.	Size one cartridge case with an expander and one without.  The difference in the diameter of the case neck should be no greater than 0.1 to 0.15 mm.  For larger clearances, replace the die or arrange for a specialist to set it to the correct dimension.
Scoring on the cartridge case, in the powder chamber, or on the case neck (inside or outside).	Particles of the case material have fixed (cold welded) to the die or the interior sizer.	The particles must be professionally removed by a specialist.

## **Storage**

All of our tools are delivered packaged in special plastic cases or boxes. Keep these containers so you can store the tools in them.

## Replacement parts

You can find all of our replacement parts and accessories on our homepage at:

- <http://catalog.triebel-guntools.de/>

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