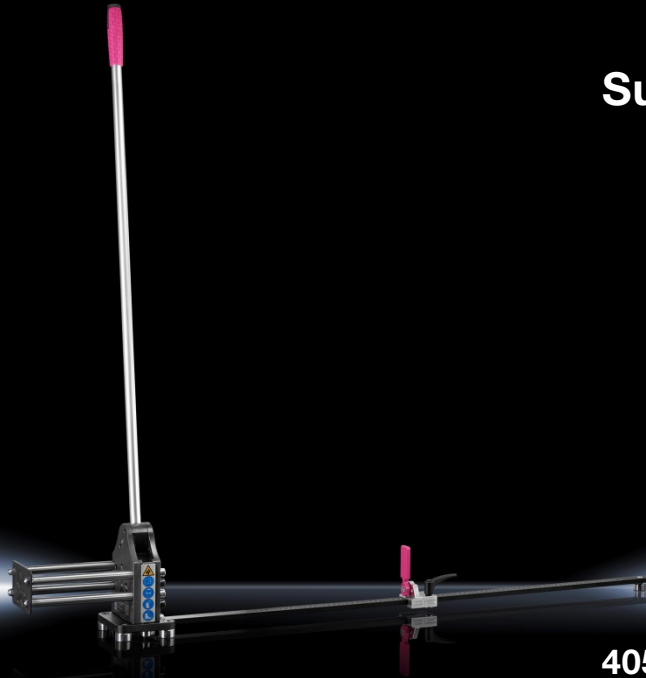


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Support rail cutter MC3

4050.437

Operating instructions

ENCLOSURES

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SOFTWARE & SERVICES

FRIEDHELM LOH GROUP



Foreword

Dear Customer,

We thank you for choosing our Rittal product. Read these operating instructions carefully before using your new unit for the first time and retain them together with the supplied Product Control Card so they can be consulted when required.

We wish you every success.

Kind regards,
Rittal GmbH & Co. KG

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We are always happy to answer any technical questions regarding our entire range of products.

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1 Safety instructions

1.1 Symbols in these operating instructions

The following symbols are used in this documentation:



Warning!

Hazardous situation which may lead to death or serious injury if the instructions are not followed.



Caution!

Hazardous situation which may lead to (minor) injuries if the instructions are not followed.



Note:

Important notes and the identification of situations that can result in material damage.

- This symbol indicates an "action point" and shows that you should perform an operation or work step.

1.2 Symbols on the unit

The following symbols are attached to the unit.



Risk of being crushed or cut by moving unit components.



Observe the operating instructions.



Wear safety goggles.



Wear protective gloves.



Wear safety shoes.

1.3 General safety instructions

When working with the support rail cutter, improper handling and/or poor maintenance can damage the unit and cause severe injuries. Consequently, observe all the following safety instructions and contact our service team should you have any questions.

Caution...

- ... The unit may be commissioned only when it is fully mounted permanently on a sturdy, tip-proof surface. The material for attaching the unit is not included. Use a suitable, sturdy fastening material appropriate for the surface.

Always...

- ... ensure a stable footing and mount the cutting unit permanently.
- ... wear safety goggles, gloves and safety boots when working.
- ... remove swarf and other cutting waste from the unit.
- ... observe the instructions of these operating instructions.
- ... instruct new users in the safe use of the cutting unit.
- ... store and deploy in a dry environment.

Never...

- ... touch the cutting area of the blade.
- ... cut cables with the unit.
- ... cut several workpieces concurrently.
- ... machine rails made of high-strength steels.
- ... deploy the cutting unit when parts are damaged or missing.
- ... work with a blunt shear blade.
- ... subject the unit to corrosive materials.
- ... deploy the unit unless the operating instructions have been read and understood completely.

1.4 Personal safety equipment

The operating and maintenance personnel must always wear personal protective equipment when working on the unit. The personal protective equipment comprises at least the following components:

- Safety shoes: for all work on the unit
- Safety goggles: for all work on the unit
- Gloves: for all work on the unit

1.5 Residual risks when using the unit

There is the danger of being injured by the shear blade when using the unit.

- Wear your personal protective equipment for all work performed on the unit (see section 1.4 "Personal safety equipment") and never place hands and fingers in the area of the shear blade.

2 Intended use

Mounting angles and support rails made of soft to medium-strength metals appropriate for the blade geometry can be cut with the “Rittal support rail cutter MC3”. The unit has only limited suitability for processing mounting angles made of stainless steel. The unit may be deployed only indoors in a dry environment.

3 Technical specifications

Technical specifications	
Model No. and designation	4050.437 support rail cutter MC3
Standard support rails	TS 35/7.5 TS 35/15 C 30 x 15
Support rail material	Medium-strength steel, aluminium, copper
Length of the ruler	100 cm (40.75")
Possible cutting dimensions	4 to 100 cm
Tare weight	14.0 kg (30.8 lbs)
Storage temperature	-30 °C to +60 °C (-22 °F to +140 °F)
Operating temperature	-10 °C to +60 °C (+14 °F to +140 °F)

Tab. 1: Technical specifications

4 Unit description

The support rail cutter is a manual cutting unit for mounting angles or support rails made of metal. The guide plate on the left side exactly positions long semi-finished products and so improves the cutting quality. The desired mounting angle length is set precisely and reproducibly using the ruler and the adjustable end stop. Depending on the profile, the stop flap can be rotated easily.

The long handle rod and the eccentric level press the shear blade inside the unit downward, and the workpiece is separated without burrs. Springs press the shear blade back to its initial position when the level is reset.

The unit stands on four metal feet with through-holes and must also be screw-fastened by the operator onto the workbench in order to ensure a stable and tip-proof footing.

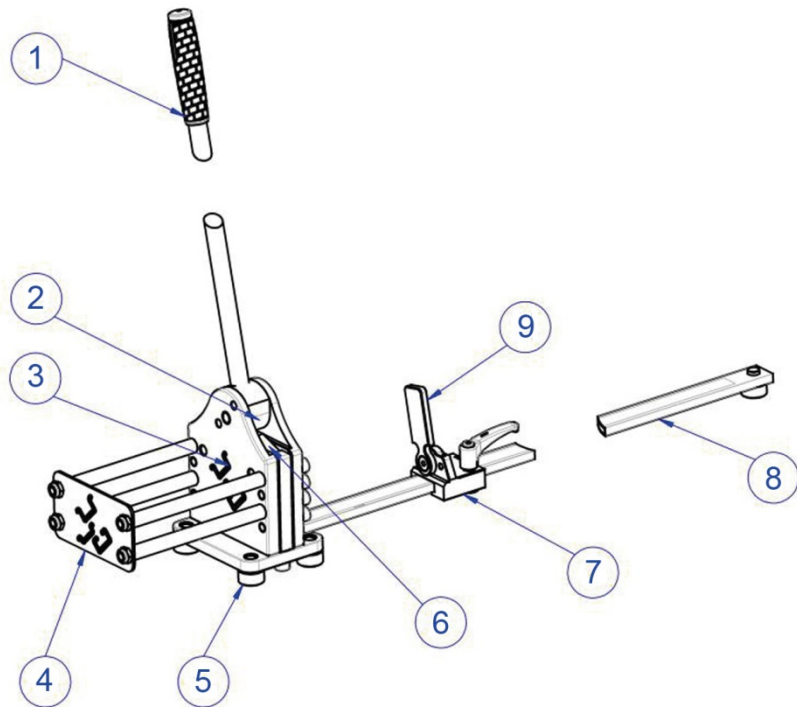


Fig. 1: Overall view

Legend

- 1 Hand lever
- 2 Eccentric lever
- 3 Front panel with profile opening
- 4 Guide plate
- 5 Metal feet with screw-on points
- 6 Shear plate
- 7 Adjustable limit stop
- 8 Ruler
- 9 Stop flap

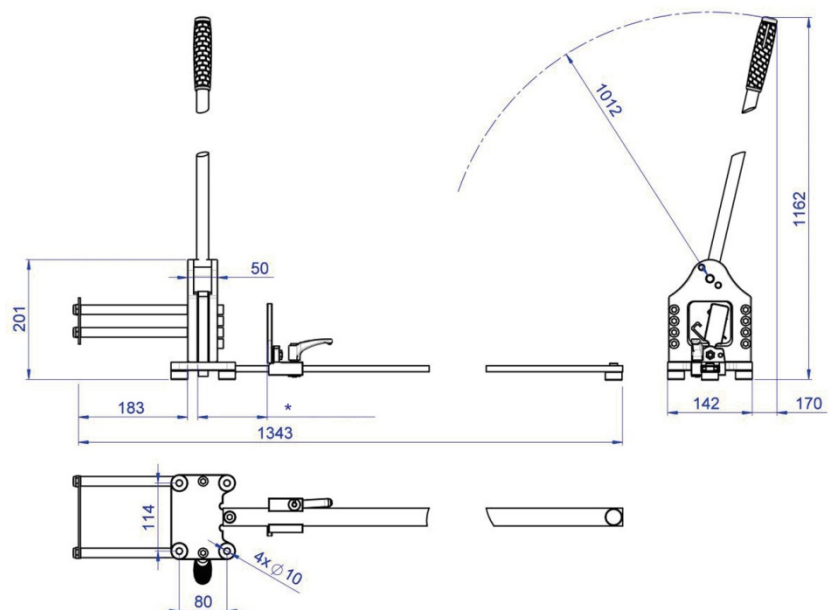


Fig. 2: Dimensions in mm

* Possible cutting dimension with limit stop: 40 – 1000 mm

5 Assembly and commissioning

You receive all required parts as well as detailed operating instructions.

- On receiving the goods, check them for possible transport damage and the delivery for completeness.
- In the event of problems, contact the manufacturer or your vendor without delay.
- In any case, read the complete operating instructions as well as all supplied documents before commissioning the unit.

Assembly

- First screw-in the hand lever into the eccentric lever (fig. 3, item 1) and tighten.
- Then push the labelled ruler on the shoulder of the base plate and fasten with the M10x16 bolt and washer (fig. 3, item 5).
- Now move the limit stop (fig. 3, item 3) on the ruler, as shown, and click the individual metal foot (fig. 3, item 4) into the rear opening of the ruler.

The ruler should now be set to the exact dimension.

- To do this, set the limit stop with the read-off edge (fig. 3, item 6), e.g. at 118 mm, and measure the distance between the stop flap (fig. 3, item 2) and the shear plate with a steel scale.
- Because the moveable shear plate is 18 mm thick, move the ruler so that a distance of exactly 100 mm results between the shear plate and the stop flap.
- Tighten the M10x16 bolt (fig. 3, item 5) so that the ruler is positioned exactly.

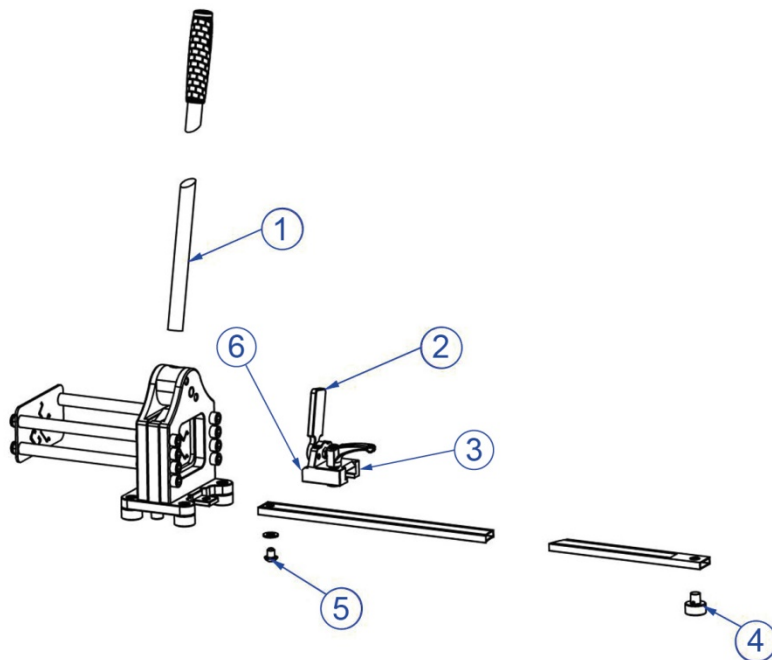


Fig. 3: Assembly sequence

5 Assembly and commissioning

Through-holes for four bolts (M10) are provided to attach the support rail cutter on a sturdy and tip-proof surface.



Caution!

If the support rail cutter is not attached to a sturdy surface, there is the danger of tipping and so cause injury.

■ **Place the support rail cutter into operation only when it is completely mounted permanently on a sturdy tip-proof surface.**

- First, specify the position of the unit on the surface and accept the fastening points of the unit.
- Fasten the support rail cutter with the following bolts on the surface:
4 x M10 cylinder head bolts, tensile strength 800 N/mm²; the length of the bolts depends on the thickness of the surface.
- Fasten each of the bolts from below with a washer and nut.
- Tighten the nuts with a tightening torque of 15 – 20 Nm.

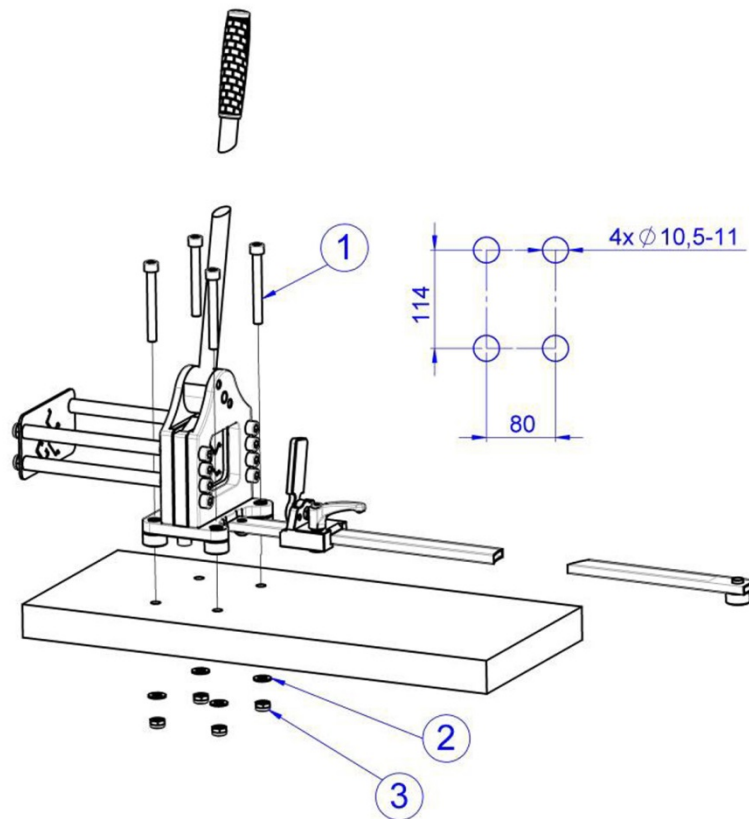


Fig. 4: Support rail cutter attachment

6 Operation

After being assembled and attached to a sturdy surface, the support rail cutter should be operated as follows:

- Set the desired length of the support rail at the length stop and fix the position using clamping levers.

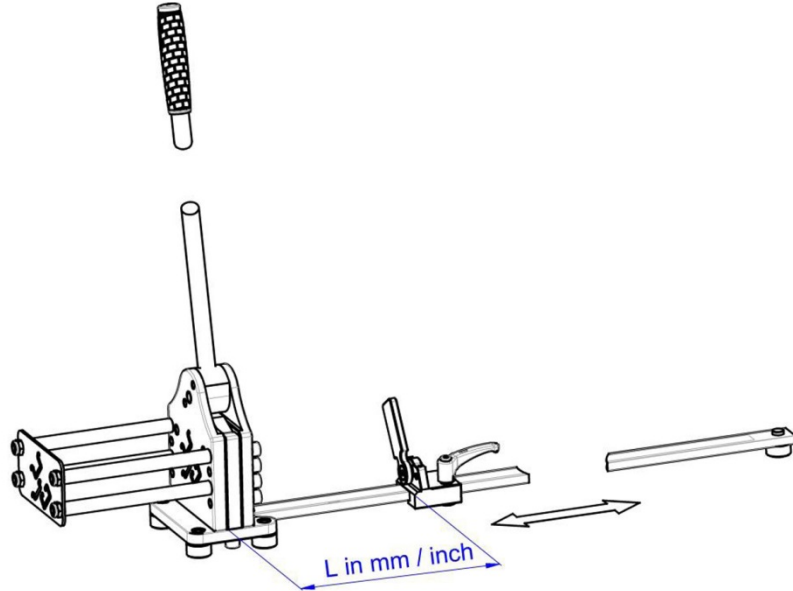


Fig. 5: Length stop setting

- Place the support rail in the appropriate profile of the guide plate and move through the cutting unit to the limit stop. Ensure there is no jamming and the free movement of the profile.



Note:

Beforehand, check the support rail for crushed corners and surface coating residues that protrude out of the rail. If possible, remove any protruding material so that the support rail can be moved easily in the cutting unit.

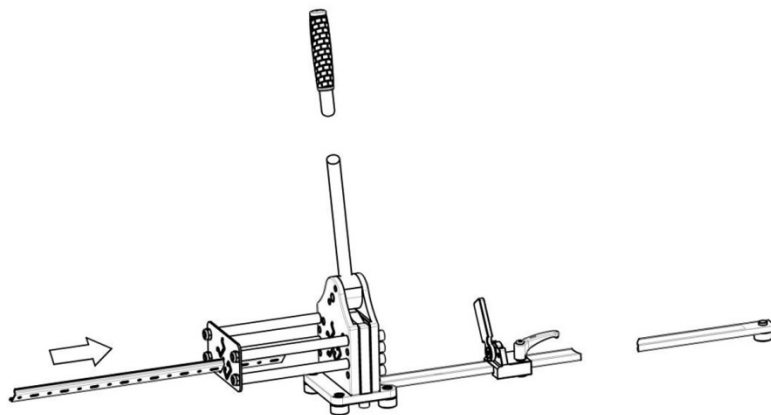


Fig. 6: Support rail insertion

- To perform cutting, pull the manual lever downwards and return it upwards after the cutting operation.

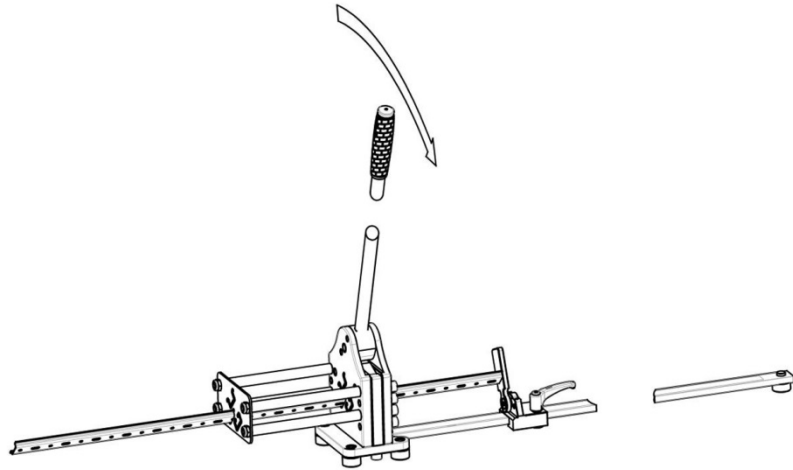


Fig. 7: Cutting operation

- To remove the cut support rail, move the gripping rail backwards fully to its initial position (fig. 8, item 1).
- Depending on the length of the workpiece, it might be necessary to swivel the stop flap to the side (fig. 8, item 2); then remove the completed profile.

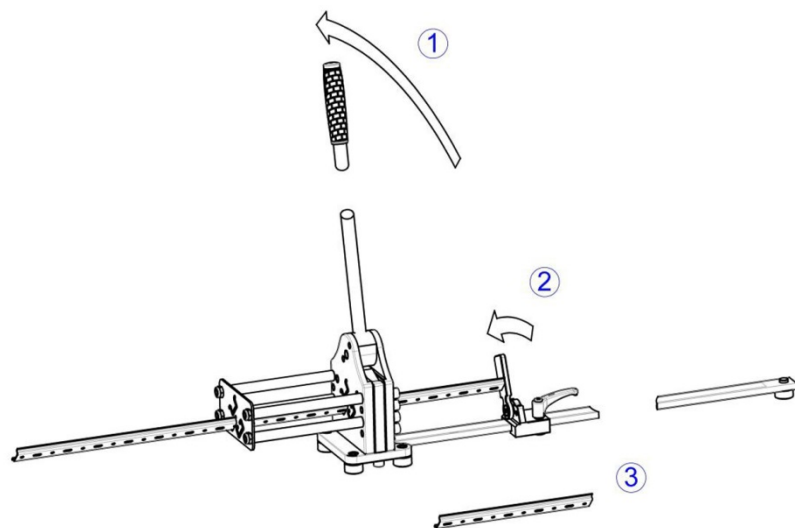


Fig. 8: Support rail removal

**Note:**

To ensure an optimum cutting result and the correct functioning of the unit, the shear blade and the eccentric lever must always be well lubricated.

7 Maintenance and inspection

7.1 Maintenance and inspection of the shear plate

The support rail cutter normally requires minimum maintenance and has a long service life. If, however, impairments occur during operation so that the shear plate no longer returns to its initial position, this can be caused by inadequate lubrication or jammed swarf.



Warning!

The profile cut-outs of the shear plate have very sharp edges!

- **Wear protective gloves for maintenance and cleaning work.**
- **Also wear safety boots and safety goggles.**

To clean the shear plate and the interior of the cutting unit, the following procedure is possible:

- Fold the actuating lever (fig. 9, item 1) completely back.
- Loosen the two M8 bolts (fig. 9, item 2) on the lower side of the unit.
Because these bolts pretension the return springs, they must be released alternately in small steps to prevent jamming of the lower plate.
- Remove the shear plate from the unit from below (fig. 9, item 3).
If the shear plate is jammed excessively, loosen the eight M10 bolts at the side by one half turn and press out the shear plate.
- Inspect the shear plate for damage and scratches or breakouts at the cutting edges.
- Clean the shear plate thoroughly, remove any adhering swarf and apply universal grease copiously on all sides.
- Clean the interior (fig. 9, item 4) of the cutting unit and purge with compressed air.
- Relubricate all surfaces thoroughly with universal grease.



Warning!

When working with compressed air, flying parts or swarf can cause injuries.

- **Wear safety goggles.**
- **Ensure no persons are in the vicinity.**

- When assembling the shear plate, insert the springs in the lower holes of the shear plate and tighten the lower plate alternately in small steps with the two M10x25 bolts.
- If necessary, also retighten the eight bolts at the side.
Torque for these M10 bolts, each 20-30 Nm.
- Check the correct functioning and the smooth-action.

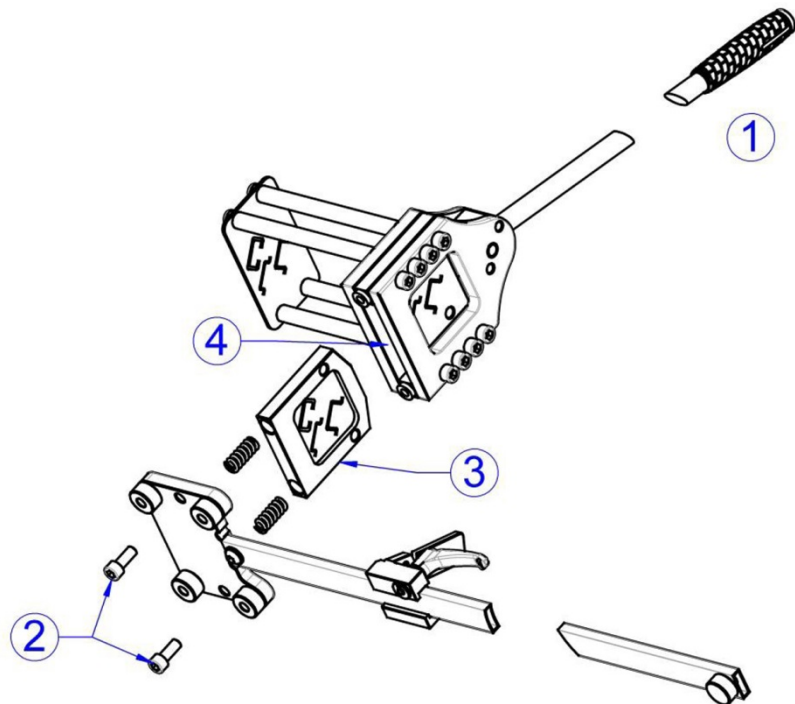


Fig. 9: Shear plate maintenance

7.2 General maintenance and inspection

The user is obliged to maintain and service the cutting unit in accordance with the details in the operating instructions, and in accordance with country-specific standards and regulations.

The maintenance intervals are classified in accordance with the recommended frequency:

Before each use...

- ... visually inspect the cutting unit for damage.
- ... clean the profile openings.

Weekly...

- ... check the correct functioning of the operating lever and of the shear blade.
- ... clean the contact surface and profile openings with compressed air.
- ... check the sturdy bearings of the stop flap.
- ... check the sturdy footing of the unit on the workbench.

Monthly...

- ... check the markings and the labels for readability and damage, and replace if necessary.
- ... coat the running surface of the eccentric lever with copious universal grease.
- ... lightly grease with a brush and corrosion protection oil the blade and the cutting unit to protect against corrosion.
- ... check the sharpness of the shear blade and, if necessary, replace the blade. Increased formation of burrs on the profile is a sign of wear on the shear plate.



Note:
Use only original spare parts

8 Dismantling and disposal

- Wear your personal protective equipment, in particular gloves and safety shoes, also for the dismantling and disposal of the unit (see section 1.4 "Personal safety equipment").

The support rail cutter must be disposed of or recycled appropriately in accordance with the country-specific regulations.

9 Contacts

- For technical queries, please contact:
 - Phone: +49(0)2772 505-9052
 - E-mail: info@rittal.com
 - Homepage: www.rittal.com
- For sales or service requests, please contact your local Rittal organisation which can be found at www.rittal.com/contact.

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