

1 Supporting documents

NOTE:
 Read through the installation and operating instructions carefully before installing the product!
 The installation and operating instructions contain important notes for your personal safety. They must be read and understood by all persons who work with or handle the product during any phase of the product life time.
 The documents listed below are available for download on our website.
 ⇒ www.zimmer-group.de
 Only the documents currently available on the website are valid.

- Catalogs, drawings, CAD data, performance data
- Detailed installation and operating instructions
- General Terms and Conditions of Business with specifications for the warranty entitlement

2 Safety notes

CAUTION:
 Non-compliance may result in severe injuries!
 The following notes shall be taken into account in order to reduce the likelihood of injuries/malfunctions:

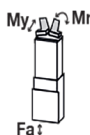
1. Installation, commissioning, maintenance and repairs may only be performed by qualified experts in accordance with these installation and operating instructions.
2. The cutting tongs are state-of-the-art. It is mounted on industrial machines.
3. The cutting tongs may only be used for their intended purpose and in accordance with the technical data. ZIMMER GmbH shall accept no liability for any damage caused by improper use.
4. Any use other than the intended use requires written approval from Zimmer GmbH.
5. Do not reach into the operating range of the cutting tongs.
6. Make sure that the power cables are disconnected before you install, retool, maintain or repair the cutting tongs.
7. In case of maintenance, retrofitting or expansion work, remove the cutting tongs from the machine and perform the work outside the danger zone.
8. When commissioning or testing, make sure that the cutting tongs cannot be actuated by mistake.
9. Modifications to the cutting tongs, such as adding drilled holes or threads, may be made only with prior approval from ZIMMER GmbH.
10. The specified maintenance intervals and compressed air quality specifications are to be observed; also refer to the Maintenance section. Please contact Customer Service for this purpose.
11. Use of the cutting tongs under extreme conditions, such as aggressive liquids and abrasive dusts, is subject to prior approval from ZIMMER GmbH.

3 Proper use

NOTE:
 The ZK series cutting tongs are only to be used in their original state with original accessories, with no unauthorized changes and within the scope of their defined parameters for use.
 Zimmer GmbH shall accept no liability for any damage caused by improper use.

The cutting tongs are designed for operation with compressed air only. They are not suited for operation with other media such as liquids or gases. The cutting tongs are intended for use in closed rooms for the variable compensation of forces and torques.

Proper use of the cutting tongs also includes the forces and torques that may be acting in addition to the cutting force (see technical data sheets at www.zimmer-group.de).



4 Personnel qualification

Installation, commissioning and maintenance may only be performed by qualified personnel. These persons must have read and understood the installation instructions in full.

5 Product description

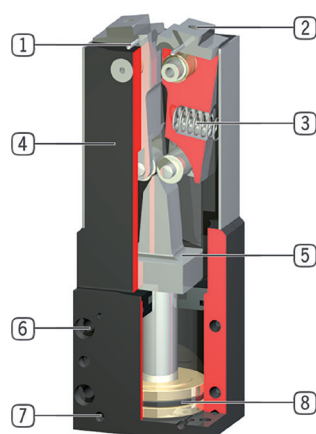
As a result of its flat structure, the ZK series cutting tongs reduce interference contours, thereby enabling simple integration into the machine design.
 Thanks to the variable gripper finger bracket, the ZK series offers the option of adapting standard cutting blades, gripper fingers or even own designs.

Fig. 1: ZK series cutting tongs



①	Switch cam
②	Bracket
③	Integrated spring
④	Robust, lightweight housing
⑤	Force transmission
⑥	Mounting and positioning
⑦	Energy supply
⑧	Drive

Fig. 2: Cutaway view of the ZK series cutting tongs



6 Installation

WARNING:
 Risk of injury in case of unexpected movement of the machine or system into which the cutting tongs are to be installed.

- ▶ Switch off the power supply to the machine before all work.
- ▶ Secure the machine against being switched on unintentionally.
- ▶ Check the machine for any residual energy.

CAUTION:
 Risk of injury in case of unexpected movement of the cutting tongs when pneumatic energy is connected.

- ▶ Switch off the pneumatic energy before all work.
- ▶ Secure the pneumatic circuit against being switched on unintentionally.
- ▶ Check the pneumatic circuit for any existing residual energy; bleed if necessary.

The cutting tongs have to be installed on a mounting surface in accordance with the levelness specifications.
 Diameter < 100 mm → permitted non-levelness < 0,02 mm
 Diameter < 100 mm → permitted non-levelness < 0,05 mm

Installation and Operating instructions
ZK
 DDOC00346
 Index 0
 EN / 2019-03-27

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 ☎: +49 7844 91380
 Fax: +49 7844 913880
 www.zimmer-group.de

6.1 Installation positions

A figure of a ZK22 is shown as an example in the adjacent image. You will find the matching dimensional drawing of the cutting tongs on our website:
 ⇒ www.zimmer-group.de.

The cutting tongs can be either clamped directly via the fit on the shank, in combination with the MCS module system, or attached by means of the thread to a plate by using the supplied nut. After successful installation, screw the pneumatic screw connections into the thread provided.

- Mounting and positioning (⑥).
- Power supply (⑦).

The dimensions for the design of the mounting piece can be found on the respective data sheet on our website. You can download any necessary CAD data in all formats from our website:
 ⇒ www.zimmer-group.de

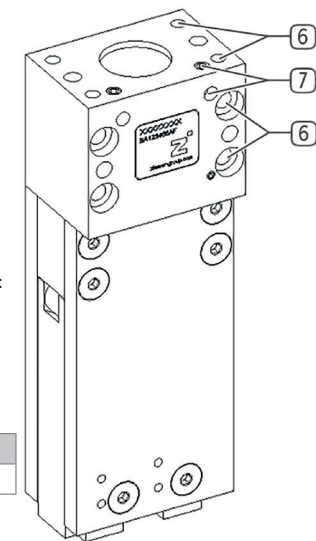
Make the following selections:

Handling technology/cutting tongs/ZK series

Depending on the design size, mounting screws from M5 to M6 and of strength class 8.8 must be used.

The following tightening torques must be observed during installation:

Screw size	[Nm]	M5	M6
Permitted tightening torque		6,4	10,2



6.2 Installing the energy supply

The power supplies (⑦) are located on the side and on the top of the housing.

⇒ You can find these positions in the example Figure in Section 6.1 and on our website www.zimmer-group.de (refer to the technical data sheets)

NOTE:

Close off unused pneumatic connections using dummy plugs.
 ⇒ Use compressed air in accordance with DIN ISO 8573-1 quality class 4.

6.3 Installing the cutting tongs

Before installing the cutting tongs, make sure they are suitable for the material to be cut. The following steps should be performed to install the cutting tongs:

- Dislodge the retaining ring and remove the pin.
- Insert the cutting insert and secure using the pin.
- Re-fit the retaining ring at the pin.

6.4 Installation of accessories

NOTE:
 Before installing an accessory, make sure it is suitable for use with the chosen variant.
 You can find more information on available accessories on our website ⇒ www.zimmer-group.de.

7 Technical data

INFORMATION:
 Refer to our homepage ⇒ www.zimmer-group.de for technical data.
 This data varies within the type series depending on the specific design. If you should have further questions about products or technical data, please contact ZIMMER GmbH Customer Service.

8 Maintenance

Maintenance-free operation of the cutting tongs is guaranteed for up to **5 million cycles**.

The maintenance interval may shorten under the following circumstances:

- Operation with compressed air that does not comply with DIN ISO 8573-1 quality class 4.
- Dirty environment
- Improper use and use that does not comply with the performance data.
- Ambient temperature of more than 60°C; lubricants harden faster!

Dismantling and reassembling the cutting tongs without authorization may result in complications, as special installation equipment is required in some cases.

ZIMMER GmbH shall not be liable in the event of unauthorized dismantling and reassembling of the cutting tongs or in the event of any malfunctions or damage resulting from this.

ZIMMER GmbH recommends having repairs be carried out by ZIMMER Customer Service.

INFORMATION:
 Even though the gripper is, as mentioned, maintenance-free, perform a regular visual inspection to check for any corrosion, damage or contamination. Clean the cutting tongs as needed using a commercially available cleaning agent for machines.

9 Declaration of incorporation

In terms of the EU Machinery Directive 2006/42/EC (Annex II 1 B).

Name and address of the manufacturer:

ZIMMER GmbH • Im Salmenkopf 5 • D-77866 Rheinau, Germany • Phone: +49 7844 9138 0 • Fax: +49 7844 9138 80
 Web: www.zimmer-group.de

We hereby declare that the incomplete machine described below

Product designation: Cutting tongs, pneumatic

Type designation: ZK□□

satisfies the following basic requirements of the Machinery Directive 2006/42/EC:

No. 1.1.2., No. 1.1.3., No. 1.1.5., No. 1.3.2., No. 1.3.4., No. 1.3.7., No. 1.5.3., No. 1.5.4., No. 1.5.8., No. 1.6.4., No. 1.7.1., No. 1.7.4

We also declare that the specific technical documents were produced in accordance with Annex VII Part B of this Directive. We undertake to provide the market supervisory bodies with electronic versions of special documents for the incomplete machine through our documentation department, should they have reason to request them.

The incomplete machine may only be commissioned if it has been ascertained, if applicable, that the machine or system in which the incomplete machine is to be installed satisfies the requirements of Directive 2006/42/EC on Machinery and an EC declaration of conformity has been drawn up in accordance with Annex II 1 A.

Authorized representative for compiling the relevant technical documents

Kurt Ross	See manufacturer's address	Rheinau, Germany, 2019-03-26	Martin Zimmer, Managing Director
First name, last name	Address	Place and date of issuance	Legally binding signature