INSTALLATION AND OPERATING INSTRUCTIONS: 3-jaw concentric gripper, pneumatic, GD500 series



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270 ±0.02 Ø 10"

Installation and

Operation Instructions

1. Supporting documents



NOTE ing documents are available for download on our website. Only the documents currently available on the w

Catalog

• Drawings, performance data, information about accessory parts, etc.

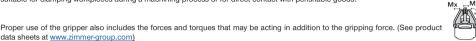
 Technical data (data sheets) · General terms and conditions, including warranty information

2. Proper use



ithin the scope of its defined parameters for use. Zimmer GmbH shall accept no liability for any damage caused by im

he gripper is designed for operation with compressed air only. It is not suited for operation with other media such as liquids or gases The gripper is used as defined under "Proper use" in enclosed rooms for time-restricted gripping, handling and holding workpieces. It is not , My ∰n∭ΩMr suitable for clamping workpieces during a machining process or for direct contact with perishable goods.



Personnel qualifications 3.

NOTE

data sheets at www.zimmer-group.com)

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

4. Safety notes

2.

- Installation, commissioning, maintenance and repairs may only be performed by qualified experts in accordance with these installation and operating instructions
- The gripper is state-of-the-art. It is fitted to industrial machines and is used to hold workpieces. The following are examples of situations in which the gripper may cause a hazard the gripper is not properly fitted, used or maintained
- the gripper is not used for its intended purpose
- failure to observe the local regulations (legislation, guidelines, directives), such as the EC Machinery Directive,
- the Accident Prevention Regulations and the assembly and operating instructions
- The gripper may be used only in accordance with its proper use and technical data ZIMMER GmbH shall accept no liability for any damage caused by improper use.

Any use other than the proper use requires written approval from $\operatorname{Zimmer}\,\operatorname{GmbH}$ 3.

- Do not reach into the operating range of the gripper
- Make sure that the energy supply is disconnected and before you install, retool, maintain or repair the gripper.
- In case of maintenance, renovation or expansion work, remove the gripper from the machine and carry out the work outside the dange zone
- When commissioning or testing, make sure that the gripper cannot be actuated by mistake
- Modifications to the gripper, such as adding drill holes or threads, may be made only with prior approval from Zimmer GmbH. The specified maintenance intervals and compressed air quality specifications are to be observed; also refer to the Maintenance section. 9. Please contact our hotline for this purpose.
- 10 Use of the gripper under extreme conditions, such as aggressive liquids and abrasive dust, is subject to prior approval from Zimmer GmbH
- 11. When disassembling grippers with integrated springs, exercise increased caution because spring tension is always present.
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5. Function

The function relies on the action of 3 pneumatic pistons, vented on both sides and offset by 120°.

Alternating ventilation moves the pneumatic piston back and forth. The energy generated in this process is transferred directly to the gripper jaws via a push rod to produce the gripping force. During this process, a cam disk ensures the movement synchronization of the 3 gripper jaws. Optionally, a gripping force safety device can be set up with a pressure safety valve. The pressure safety valve is available as an accessory.

1	Robust, lightweight housing hard-coated aluminum alloy	Fig. 1: G	
2	Removable centering sleeves quick and economical positioning of the gripper fingers	0	
3	3) Mounting and positioning		
4	Gripper jaw ground, hardened steel individual gripper finger mounting	Fig. 2: G	
5	Precise T-Slot guide high forces and moments capacity	2- 1-	
6	Cam synchronized jaw movement	(5)~	
1	Drive three double-acting pneumatic cylinders		
8	Mounting block mounting for inductive proximity switch	6)	

GD500 gripper



GD500 gripper cross-section





The dimensional drawings can be found on our website.

Two alternative options are available for the installation of the gripper Mounting on the housing floor from below through the mounting piece (10)

Mounting on the mounting piece from above through the housing (1)

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 common formats from our web site:

www.zimmer-group.com



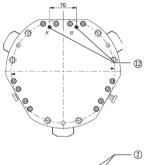
Depending on the size, mounting screws from M3 to M16 and of strength class 8.8 are used. The following tightening torques must be observed upon installation:

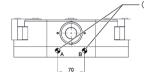
Screw size M3 M4 M5 M6 M10 M12 M14 M16 24,9 6,0 10,2 49,5 138,0 214,9 1,3 2,9 86,3 Permitted tightening torque [Nm]

6.2 Installation of the connecting flanges

The pneumatic connections (2) are located on the outer edge of the housing. An alternative connection option is located on the base plate of the housing (2).

Connection A ②	Closes the gripper	
Connection B ②	Opens the gripper	
Connection A' (alternative)	Closes the gripper	
Connection B' (alternative)	Opens the gripper	







e off unused pneumatic connections with dummy plugs

For the available pneumatic connections, refer to the accessories list on the product data sheets on our website. You can also find the necessary ordering information there

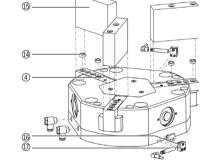
NOTE:

alling the clamping jaws bq, make sure they are of a suitable length for the selected gripper variant.

- Insert the centering sleeves (1) into the provided matching parts on the gripper jaws (4)
- ing sleeve
- Secure the clamping jaws (15) with strength class 8.8 cylinder screws

Inductive proximity switch:

Install the mounting block (6) on the gripper Insert the inductive proximity switch 1 into the mounting block and tension it



7. Technical data

These multi-page data sheets (see example image to the right) contain the following:

- a product description
- the technical data
 - a dimensional drawing
- the available accessories

INFORMATION



Please gather the technical data from our website www.zimmer-group.com This data varies within the series depending on the specific design. If you should have further questions on products or on technical data, please contact ZIMMER GmbH customer service.

8. Maintenance

Maintenance-free operation of the gripper is guaranteed for up to 10 million gripping cycles.

The maintenance interval may shorten under the following circumstances: ith DIN IS

6.3 Installing the gripper fingers and accessories

Position the clamping jaws (5) on the gripper jaws (4) using the center





Risk of injury in case of unexpected movement of the machine or system into which the gripper is being installed.

- Switch off the energy 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 gripper 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 ne

6.1 Installing the gripper

The gripper can be fitted on a mounting surface from several sides with the necessary evenness.

Length of the mounting sur- face [mm]	Permitted unevenness [mm]	
<100	<0,02	
>100	<0,05	

Two alternative options are available for the installation of the gripper:

Mounting position	Connection	
Base plate	10	
Mounting flange	1	

- Dirty environment
- -Improper use and use that does not comply with the performance data
- Ambient temperature of more than 60°C; lubricants harden faster!

We recommend using the Zimmer GmbH repair service for maintenance and the replacement of seals. Dismantling and reassembling the gripper without authorization may result in complications, as special installation equipment is required in some cases

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 www.zimmer-group.de

We hereby declare that the incomplete machine described below

Product designation: Pneumatic gripper Type designation: GD5

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 the machine or system in which the incomplete machine is to be installed has been determined to satisfy the conditions of the Machinery Directive 2006/42/EC and the EC Declaration of Conformity has been produced in accordance with Annex II 1 A.

Authorized representative for compiling the relevant technical documents			Plasti (+.
Kurt Ross	siehe Adresse des Herstellers	Rheinau, den 04.05.2015	Martin Zimmer, Geschäftsführer
First name, last name	Address	(Place and date of issuance)	(Legally binding signature)