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. Only the documents currently available on the website are valid.

- Catalog, 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 gripper is state-of-the-art. It is mounted on industrial machines.
3. The gripper may only be used in accordance with its intended use and 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 gripper.
6. Make sure that the power cables are disconnected before you install, refit, check or move the gripper.
7. In the event of maintenance, conversion or expansion work, remove the gripper from the machine and perform all work outside of the danger zone.
8. When commissioning or testing, make sure that the gripper cannot be actuated by mistake.
9. Improper use and use that does not comply with the performance data.
10. Dirty environment
11. Operation with compressed air that does not comply with DIN ISO 8573-1 quality class 4.
12. Secure the machine against being switched on unintentionally.
13. Check the pneumatic circuit for any existing residual energy; bleed if necessary.
14. Switch off the pneumatic energy before all work.
15. Secure the pneumatic circuit against being switched on unintentionally.
16. Check the cylindrical chamber is available for download on our website.

3 Proper use

NOTE:
The MGP800 series gripper is only to be used in its original state with its original accessories, with no unauthorized changes and within the scope of its defined parameters for use. ZIMMER GmbH shall accept no liability for any damage caused by improper use.

The linear rail side is designed for operation with compressed air only. It is not suited for operation with other media such as liquids or gases. The linear rail side is intended to be used in closed rooms for the variable compensation of forces and torque.

Proper use of the linear rail is also includes the forces and torques that may be acting in addition to the gripping force (see technical data sheets at www.zimmer-group.com).

4 Personnel qualification

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

5 Product description

The knee is based on the effect of a double-sided ventilated pneumatic piston. Alternating venting causes the pneumatic piston to move up and down. The energy generated during this process is transferred to the gripper jaws via kinematics and results in the gripping force. The grippers of the MGP800 series are available in 2 specifications (see Technical Data: Specification N1: Suitable for external gripping. Specification NC: Suitable for external gripping, gripping force retention in case of pressure drop by built-in spring. The spring used in the cylinder chamber is available for download on our website MGP800).

Fig. 1: MGP800 series gripper

6 Installation

WARNING:
Risk of injury in case of unexpected movement of the machine or system into which the gripper is 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 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 necessary.

The gripper has to be installed on a mounting surface in accordance with the levelling specifications.
- Diameter > 100 mm => permitted non-levelness < 0.03 mm
- Diameter < 100 mm => permitted non-levelness < 0.05 mm

6.1 Installation positions

A figure of an MGP812N is shown as an example in the adjacent image.

You will find the matching dimensional drawing of your gripper on our website:
www.zimmer-group.de

The gripper can be mounted either laterally or from above via the threads on the housing or the mounting construction. After assembly, screw the pneumatic screw connections into the provided threads.
- Mounting and positioning
- Power supply
- Dimensions for the design of the mounting piece can be found on the product data sheet on our website.
You can download any necessary CAD data in all formats from our website:
www.zimmer-group.com

Make the following selections:
Handling technology/grippers/pneumatic/2-jaw parallel grippers/MGP800 series

Depending on the design size, mounting screws from M5 to M16 end of strength class 8.8 must be used.

The following tightening torque must be observed during installation:

<table>
<thead>
<tr>
<th>Screw size</th>
<th>Permitted tightening torque [Nm]</th>
</tr>
</thead>
<tbody>
<tr>
<td>M2</td>
<td>0.5</td>
</tr>
<tr>
<td>M2.5</td>
<td>0.7</td>
</tr>
<tr>
<td>M3</td>
<td>0.9</td>
</tr>
<tr>
<td>M4</td>
<td>5.8</td>
</tr>
<tr>
<td>M5</td>
<td>10.2</td>
</tr>
<tr>
<td>M6</td>
<td>24.9</td>
</tr>
<tr>
<td>M8</td>
<td>49.5</td>
</tr>
</tbody>
</table>

6.2 Installing the energy supply

The power supply is located on the front side of the housing. For the MGP812N:
- Connection A = retraction
- Connection B = extraction
- Connection C = extraction
- Connection D = extraction
- You can find these positions on the example figure in Section 6.1 and our website:
www.zimmer-group.com (see the technical data sheets)注

NOTE:
Close-off the unused pneumatic connections with dummy plugs.
- Used compressed air in accordance with DIN ISO 8573-1 quality class 4.

6.3 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.com

7 Technical data

INFORMATION:
Refer to our homepage www.zimmer-group.com 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 gripper is guaranteed for up to 10 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.
- We recommend having maintenance and the replacement of seals performed by ZIMMER GmbH Customer Service. 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 I 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.com

We hereby declare that the incomplete machine described below

Product designation: gripper, pneumatic
Type designation: MGP800 satisfies the following basic requirements of the Machinery Directive 2006/42/EC:
- No. 1.1.2, No. 1.1.3, No. 1.1.8, No. 1.2.1, No. 1.3.4, No. 1.3.7, No. 1.5.3, No. 1.5.4, No. 1.5.6, 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 acoustically, 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 I A.

Authorized representative for the compilation of relevant technical documents
Kurt Rases
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