Handling technology
Gripper series GEP2000
WE HAVE SUCCEEDED FOR YEARS BY OFFERING OUR CUSTOMERS INNOVATIVE AND INDIVIDUALIZED SOLUTIONS. ZIMMER HAS GROWN CONTINUOUSLY AND TODAY WE HAVE REACHED A NEW MILESTONE: THE ESTABLISHMENT OF THE KNOW-HOW FACTORY. IS THERE A SECRET TO OUR SUCCESS?

**Foundation.** Excellent products and services have always been the foundation of our company’s growth. Zimmer is a source of ingenious solutions and important technical innovations. This is why customers with high expectations for technology frequently find their way to us. When things get tricky, Zimmer Group is in its best form.

**Style.** We have an interdisciplinary approach to everything we do, resulting in refined process solutions in six technology fields. This applies not just to development but to production. Zimmer Group serves all industries and stands ready to resolve even the most unique and highly individualized problems. Worldwide.

**Motivation.** Customer orientation is perhaps the most important factor of our success. We are a service provider in the complete sense of the word. With Zimmer Group, our customers have a single, centralized contact for all of their needs. We approach each customer’s situation with a high level of competence and a broad range of possible solutions.
TECHNOLOGIES

HANDLING TECHNOLOGY
MORE THAN 30 YEARS OF EXPERIENCE AND INDUSTRY KNOWLEDGE: OUR PNEUMATIC, HYDRAULIC AND ELECTRICAL HANDLING COMPONENTS AND SYSTEMS ARE GLOBAL LEADERS.

Components. More than 2,000 standardized grippers, swivel units, robotic accessories and much more. We offer a complete selection of technologically superior products that are ready for rapid delivery.

Semi-standard. Our modular approach to design enables custom configurations and high rates of innovation for process automation.

DAMPING TECHNOLOGY
INDUSTRIAL DAMPING TECHNOLOGY AND SOFT CLOSE PRODUCTS EXEMPLIFY THE INNOVATION AND PIONEERING SPIRIT OF THE KNOW-HOW FACTORY.

Industrial damping technology. Whether standard or customized solutions, our products stand for the highest cycle rates and maximum energy absorption with minimal space requirements.

Soft Close. Development and mass production of pneumatic and fluid dampers with extraordinary quality and rapid delivery.

OEM and direct. Whether they need components, returning mechanisms or complete production lines – we are the trusted partner of many prestigious customers.

LINEAR TECHNOLOGY
WE DEVELOP LINEAR COMPONENTS AND SYSTEMS THAT ARE INDIVIDUALLY ADAPTED TO OUR CUSTOMERS’ NEEDS.

Clamping and braking elements. We offer you more than 4,000 types for profiled and round rails as well as for a variety of guide systems from all manufacturers. It makes no difference whether you prefer manual, pneumatic, electric or hydraulic drive.

Flexibility. Our clamping and braking elements ensure that movable components such as Z-axes or machining tables maintain a fixed position and that machines and systems come to a stop as quickly as possible in an emergency.

www.zimmer-group.com
PROCESS TECHNOLOGY

MAXIMUM EFFICIENCY IS ESSENTIAL FOR SYSTEMS AND COMPONENTS USED IN PROCESS TECHNOLOGY. HIGH-LEVEL CUSTOM SOLUTIONS ARE OUR TRADEMARK.

A rich reservoir of experience. Our know-how ranges from the development of materials, processes and tools through product design to production of series products.

Deep production capabilities. The Zimmer Group pairs these capabilities with flexibility, quality and precision, even when making custom products.

Series production. We manufacture demanding products out of metal (MIM), elastomers and plastics with flexibility and speed.

MACHINE TECHNOLOGY

ZIMMER GROUP DEVELOPS INNOVATIVE METAL, WOOD AND COMPOSITE MATERIAL PROCESSING TOOL SYSTEMS FOR ALL INDUSTRIES. NUMEROUS CUSTOMERS CHOOSE US AS THEIR SYSTEMS AND INNOVATION PARTNER.

Knowledge and experience. Industry knowledge and a decades-long development partnership in exchangeable assemblies, tool interfaces and systems make us bound for new challenges around the world.

Components. We deliver numerous standard components from stock and develop innovative, customized systems for OEM and end customers – far beyond the metal and wood processing industries.

Variety. Whether you have machining centers, lathes or flexible production cells, the power tools, holders, assemblies and drilling heads of Zimmer Group are ready for action.

SYSTEM TECHNOLOGY

ZIMMER GROUP IS ONE OF THE LEADING SPECIALISTS IN THE DEVELOPMENT OF CUSTOMIZED SYSTEM SOLUTIONS WORLDWIDE.

Customized. A team made up of more than 20 experienced designers and project engineers develop and produce customized solutions for special tasks in close collaboration with end customers and system integrators. It doesn’t matter if it is a simple gripper and handling solution or a complex system solution.

Solutions. These system solutions are used in many industries, from mechanical engineering to the automotive and supplier industries to plastics engineering and consumer goods industries, all the way to foundries. The Know-how Factory helps countless companies to thrive competitively by increasing automation efficiency.

www.zimmer-group.com
## ELECTRIC GRIPPERS
### OVERVIEW OF SERIES

<table>
<thead>
<tr>
<th>Series</th>
<th>GEP9000</th>
<th>GEP2000</th>
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<tbody>
<tr>
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<td>Voltage [V]</td>
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<td>Weight [kg]</td>
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### Control
- Digital I/O
- IO-Link
- Digital I/O
- Digital I/O

### Equipment features
- Positionable
- Integrated sensing
- Gripping force adjustable
- Protected against corrosion
- Purged air
- IP class
  - IL-00: 40
  - IO-00: 40
  - IO-05: 40

### Options
- Magnetic field sensor

### Safety characteristics
- Spring closing C
- Spring opening O
- Self locking mechanism

### Maintenance
- Maintenance-free cycles (max.)
  - IL-00: 30 million
  - IO-00: 10 million
  - IO-05: 10 million
  - IO-05: 10 million

---

[www.zimmer-group.com](http://www.zimmer-group.com) - Data, Drawings, 3-D Models, Operating Instructions
<table>
<thead>
<tr>
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* with purged air (max. 0.5 bar)
2-JAW PARALLEL GRIPPERS
SERIES GEP2000

► PRODUCT ADVANTAGES

“The electric compact one”

► Largest stroke in small installation space
Do you require a large stroke, due to the fact that you are operating either a form fit gripper or a large range of parts but the installation space and the load capacity of your application is limited? Then this gripper is perfect for you!

► Adjustable gripping force
Using pressures that are too high can damage your workpieces! You can optimally adjust the gripping force to your workpiece by means of the integrated potentiometer or over the control system via IO-Link.

► The simplest activation
It is your choice whether you want to control the gripper by means of I/O ports—like a valve—or if you prefer the version with IO-Link. Both have this in common: they are easy to integrate into your control system.

► SERIES CHARACTERISTICS

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<th>Installation size</th>
<th>GEP20XX</th>
<th>Variants</th>
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<td><img src="image" alt="IO-Link" /></td>
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<tr>
<td><img src="image" alt="Magnetic field sensor" /></td>
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<td><img src="image" alt="Gripping force adjustable" /></td>
</tr>
</tbody>
</table>
# BENEFITS IN DETAIL

![Image of gripper components](image)

1. **Control**
   - Via I/O ports (IO) or via IO-Link (IL)

2. **Mounting and positioning**
   - Mounting possible from several sides for versatile positioning

3. **BLDC motor**
   - Wear-resistant brushless DC motor

4. **Helical worm gear**
   - Self-locking mechanism in case of power drop

5. **Synchronization**
   - Via rack and pinion

6. **Position sensing**
   - Permanent magnet for direct query of jaw movement via magnetic field sensors

7. **Gripper jaw**
   - Individual gripper finger mounting

8. **Removable centering sleeves**
   - Quick and economical positioning of the gripper fingers

## TECHNICAL DATA

<table>
<thead>
<tr>
<th>Installation size</th>
<th>Stroke per jaw [mm]</th>
<th>Gripping force [N]</th>
<th>Weight [kg]</th>
<th>IP class</th>
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<td>GEP2016</td>
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<td>125 - 500</td>
<td>0.9</td>
<td>IP40</td>
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</tbody>
</table>

## FURTHER INFORMATION

1. **Adjustable gripping force**
   - Four-level gripping force adjustment via rotary switch for digital gripper control
   - For the IO-Link variant, gripping force can be conveniently adjusted using the control system

2. **Operating safety**
   - Mechanical self-locking mechanism, which means that in the event of a power failure, the workpiece is held securely
   - Gripper can be mechanically opened by means of an Allen key
CONTROL
GEP2000 SERIES

1 ▶ IO-LINK CONTROL — GEP2000IL-00-A

2 ▶ DIGITAL CONTROL — GEP2000IO-00-A

3 ▶ DIGITAL CONTROL + INTEGRATED ANALOG SENSING — GEP2000IO-05-A
1  ► IO-LINK CONTROL — GEP2000IL-00-A

► Single-cable solution—control system data, status/sensor data and power supply over a single cable
► Bi-directional data transmission
► Gripping force and gripping speed can be configured using software
► 32 workpieces data sets can be programmed
► Parts detection in range of +/- 0.05 mm with freely teachable area
► Status data such as temperature and cycle number can be read out
► Can be integrated into ZIMMER HMI

2  ► DIGITAL CONTROL — GEP2000IO-00-A

► Single-cable solution—control system data and power supply over a single cable
► Gripper commissioning by means of digital signals
► Optional digital gripper position feedback via external sensors
► Gripping force adjustment in four levels to the object being gripped, using rotary switch
► Can be integrated into ZIMMER HMI

3  ► DIGITAL CONTROL + INTEGRATED ANALOG SENSING — GEP2000IO-05-A

► Single-cable solution—control system data, sensor data and power supply over a single cable
► Gripper activation by means of digital signals
► Integrated analog feedback of the gripper position
► Gripping force adjustment in four levels to the object being gripped, using rotary switch
► Can be integrated into ZIMMER HMI
**SENSORS**

1-point magnetic field sensors – MFS

For non-contact sensing of the piston position

The sensor is clamped in the C-groove of the gripper and detects the magnet attached to the gripper jaws. The MSF02 is available in versions with 5 m cables with exposed leads and 0,3 m cable with connector.

---

2-point magnetic field sensors – MFS

With two freely programmable switching points

Using the programming unit integrated in the cable, two switch points can be freely defined for this sensor. To do so, the sensor is clamped in the C-groove, the gripper approaches position one and the position is taught in using the teach button. Afterwards, the second position is approached with the gripper and programmed. To ensure use in a wide variety of space conditions, the sensors are available in two variants. While the horizontal MFS02, with straight cable outlet, disappears into the C-groove of the gripper almost completely, the vertical MSF01 is taller, but has a cable outlet that is offset at an angle of 90°. The sensors are available in versions with 5 m cables with exposed leads and 0,3 m cable with connector.
CONNECTIONS / OTHER

Plug-in connectors
For extending and fabricating the connection lines
Cables with a length of 5 m with exposed leads are available. Depending on the specific needs, the cables can be shortened or fabricated with connectors in sizes M8 and M12. A 5 m long cable with connector / socket is available for the IO-Link connection.

Adapter plate
Additional screw connection option
By attaching the optional adapter plate, the gripper can also be screwed on vertically (from above) if the fastening options integrated into the gripper housing cannot be used for space reasons.
Centering sleeves
For defined position measurement of the gripper fingers
The centering sleeves are inserted into the fits of the gripper jaws to define the position of the gripper fingers. The centering sleeves are comparable to a pin connection.
2-JAW PARALLEL GRIPPERS
INSTALLATION SIZE GEP2006

PRODUCT SPECIFICATIONS

Gripping force diagram

Forces and moments
Displays static forces and moments that can also have an effect, besides the gripping force.

TECHNICAL DATA

Order no.

Control
Integrated position sensing
Stroke per jaw [mm]
Gripping force safety device
Control time [s]
Permissible weight per jaw max [kg]
Length of the gripper fingers max. [mm]
Repetition accuracy +/- [mm]
Operating temperature [°C]
Voltage [V]
Current consumption max. [A]
Minimum positioning path per jaw [mm]
Protection to IEC 60529
Weight [kg]

Order no.

Gripping force [N]
Closing time / Opening time [s]

Order no.

Gripping force [N]
Closing time / Opening time [s]

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Gripping force [N]
Closing time / Opening time [s]

Order no.

Gripping force [N]
1. Gripper attachment
2. Energy supply IO-Link (M12, 5-pole)
3. Fixing for gripper finger
4. Integrated slot for magnetic field sensor
5. Energy supply (M8, 4-pole)
6. Energy supply (M8, 5-pole)
7. Force level setting
8. Gripper mounting clamp

Gripper attachment
Energy supply IO-Link (M12, 5-pole)
Fixing for gripper finger
Integrated slot for magnetic field sensor
Energy supply (M8, 4-pole)
Energy supply (M8, 5-pole)
Force level setting
Gripper mounting clamp

Installation size GEP2006 / 2-Jaw Parallel Grippers / electrical / Grippers

Data, Drawings, 3-D Models, Operating Instructions  www.zimmer-group.com
2-JAW PARALLEL GRIPPERS
INSTALLATION SIZE GEP2006

► ACCESORIES

► INCLUDED IN DELIVERY

6 [piece]
Centering Disc

354237

► YOU CAN FIND CONFIGURATION EXAMPLES ON PAGE 32 / 33
# RECOMMENDED ACCESSORY GEP2006IL-00-A

### CONNECTIONS / OTHER

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<tr>
<th>Accessory</th>
<th>Description</th>
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<tbody>
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<td>KAG500IL</td>
<td>Plug-in connector straight 5 m - plug, socket M12</td>
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<tr>
<td>AP2006</td>
<td>Adapter plate</td>
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# RECOMMENDED ACCESSORY GEP2006IO-00-A

### SENSORS

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<td>Magnetic field sensor Angled Cable 0.3 m - Connector M8</td>
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<tr>
<td>MFS02-S-KHC-P1-PNP</td>
<td>Magnetic field sensor Straight Cable 0.3 m - Connector M8</td>
</tr>
<tr>
<td>MFS01-S-KHC-P2-PNP</td>
<td>2-Position-Sensor Cable 0.3 m - Connector M8</td>
</tr>
<tr>
<td>MFS02-S-KHC-P2-PNP</td>
<td>2-Position-Sensor Cable 0.3 m - Connector M8</td>
</tr>
</tbody>
</table>

### CONNECTIONS / OTHER

<table>
<thead>
<tr>
<th>Accessory</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>KAG500</td>
<td>Plug-in connector Straight Cable 5m - Socket M8 (female)</td>
</tr>
<tr>
<td>KAG500B4</td>
<td>Plug-in connector Straight Cable 5m - Socket M8 (female)</td>
</tr>
<tr>
<td>S8-G-3</td>
<td>Plug-in connector customiz-able Straight - Connector M8</td>
</tr>
<tr>
<td>S8-G-4</td>
<td>Plug-in connector customiz-able Straight - Connector M8</td>
</tr>
<tr>
<td>AP2006</td>
<td>Adapter plate</td>
</tr>
</tbody>
</table>

# RECOMMENDED ACCESSORY GEP2006IO-05-A

### CONNECTIONS / OTHER

<table>
<thead>
<tr>
<th>Accessory</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>KAG500B5</td>
<td>Plug-in connector Straight Cable 5m - Socket M8 (female)</td>
</tr>
<tr>
<td>AP2006</td>
<td>Adapter plate</td>
</tr>
</tbody>
</table>

---

Installation size GEP2006 / 2-Jaw Parallel Grippers / electrical / Grippers
PRODUCT SPECIFICATIONS

Gripping force diagram

Forces and moments

Displays static forces and moments that can also have an effect, besides the gripping force.

| Mr [Nm] | 7 |
| My [Nm] | 7 |
| Fa [N]  | 200 |

TECHNICAL DATA

Order no. GEP2010IL-00-A GEP2010IO-00-A GEP2010IO-05-A
Control
Integrated position sensing
Using process data
10
Gripping force safety device
mechanical
Control time [s] 0.03
0.10
80
Replication accuracy +/- [mm] 0.02
Operating temperature [°C] +5 ... +60
Voltage [V] 24
Current consumption max. [A] 1
Minimum positioning path per jaw [mm] 0.5
Protection to IEC 60529 IP40
Weight [kg] 0.31

TECHNICAL DATA OF THE FORCE LEVELS

Order no. GEP2010IL-00-A GEP2010IO-00-A GEP2010IO-05-A
Gripping force [N] 50 50 50
Closing time / Opening time [s] 0.3 / 0.3 0.3 / 0.3 0.3 / 0.3

Order no. GEP2010IL-00-A GEP2010IO-00-A GEP2010IO-05-A
Gripping force [N] 100 100 100
Closing time / Opening time [s] 0.25 / 0.25 0.25 / 0.25 0.25 / 0.25

Order no. GEP2010IL-00-A GEP2010IO-00-A GEP2010IO-05-A
Gripping force [N] 150 150 150
Closing time / Opening time [s] 0.22 / 0.22 0.22 / 0.22 0.22 / 0.22

Order no. GEP2010IL-00-A GEP2010IO-00-A GEP2010IO-05-A
Gripping force [N] 200 200 200
Closing time / Opening time [s] 0.19 / 0.19 0.19 / 0.19 0.19 / 0.19
TECHNICAL DRAWINGS

1. Gripper attachment
2. Energy supply IO-Link (M12, 5-pole)
3. Fixing for gripper finger
4. Integrated slot for magnetic field sensor
5. Energy supply (M8, 4-pole)
6. Energy supply (M8, 5-pole)
7. Force level setting
8. Gripper mounting clamp

Gripper attachment
2
Energy supply IO-Link (M12, 5-pole)
Fixing for gripper finger
Integrated slot for magnetic field sensor
Energy supply (M8, 4-pole)
Energy supply (M8, 5-pole)
Force level setting
Gripper mounting clamp

Data, Drawings, 3-D Models, Operating Instructions ➤ www.zimmer-group.com
2-JAW PARALLEL GRIPPERS
INSTALLATION SIZE GEP2010

► ACCEESORIES

► INCLUDED IN DELIVERY

6 [piece] Centering Disc
390677

► YOU CAN FIND CONFIGURATION EXAMPLES ON PAGE 32 / 33
RECOMMENDED ACCESSORY GEP2010IL-00-A

CONNECTIONS / OTHER

KAG500IL
Plug-in connector straight 5 m - plug, socket M12

AP2010
Adapter plate

RECOMMENDED ACCESSORY GEP2010IO-00-A

SENSORS

MFS01-S-KHC-P1-PNP
Magnetic field sensor Angled Cable 0.3 m - Connector M8

MFS02-S-KHC-P1-PNP
Magnetic field sensor Straight Cable 0.3 m - Connector M8

MFS01-S-KHC-P2-PNP
2-Position-Sensor Cable 0.3 m - Connector M8

MFS02-S-KHC-P2-PNP
2-Position-Sensor Cable 0.3 m - Connector M8

CONNECTIONS / OTHER

KAG500
Plug-in connector Straight Cable 5m - Socket M8 (female)

KAG500B4
Plug-in connector Straight Cable 5m - Socket M8 (female)

S8-G-3
Plug-in connector customiz- able Straight - Connector M8

S8-G-4
Plug-in connector customiz- able Straight - Connector M8

AP2010
Adapter plate

RECOMMENDED ACCESSORY GEP2010IO-05-A

CONNECTIONS / OTHER

KAG500B5
Plug-in connector Straight Cable 5m - Socket M8 (female)

AP2010
Adapter plate

Installation size GEP2010 / 2-Jaw Parallel Grippers / electrical / Grippers

Data, Drawings, 3-D Models, Operating Instructions  www.zimmer-group.com
# 2-Jaw Parallel Grippers
## Installation Size GEP2013

### PRODUCT SPECIFICATIONS

![Gripping force diagram](image)

> Gripping force diagram

Shows the arithmetic total of the individual forces that occur on the gripper fingers, depending on the gripper finger length.

### Forces and moments

Displays static forces and moments that can also have an effect, besides the gripping force.

<table>
<thead>
<tr>
<th>Forces and moments</th>
<th>Level 1</th>
<th>Level 2</th>
<th>Level 3</th>
<th>Level 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mr [Nm]</td>
<td>13</td>
<td>13</td>
<td>13</td>
<td></td>
</tr>
<tr>
<td>Mx [Nm]</td>
<td>13</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>My [Nm]</td>
<td>10</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fa [N]</td>
<td>325</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### TECHNICAL DATA

<table>
<thead>
<tr>
<th>Order no.</th>
<th>Technical data</th>
</tr>
</thead>
<tbody>
<tr>
<td>GEP2013IL-00-A</td>
<td>GEP2013IO-00-A</td>
</tr>
<tr>
<td>GEP2013IL-00-A</td>
<td>GEP2013IO-00-A</td>
</tr>
<tr>
<td>Digital I/O</td>
<td>Digital I/O</td>
</tr>
</tbody>
</table>

### TECHNICAL DATA OF THE FORCE LEVELS

<table>
<thead>
<tr>
<th>Order no.</th>
<th>Level 1</th>
<th>Level 2</th>
<th>Level 3</th>
<th>Level 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>GEP2013IL-00-A</td>
<td>GEP2013IO-00-A</td>
<td>GEP2013IO-05-A</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gripping force [N]</td>
<td>90</td>
<td>90</td>
<td>90</td>
<td></td>
</tr>
<tr>
<td>Closing time / Opening time [s]</td>
<td>0.42 / 0.42</td>
<td>0.42 / 0.42</td>
<td>0.42 / 0.42</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Order no.</th>
<th>Level 2</th>
<th>Level 3</th>
<th>Level 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>GEP2013IL-00-A</td>
<td>GEP2013IO-00-A</td>
<td>GEP2013IO-05-A</td>
<td></td>
</tr>
<tr>
<td>Gripping force [N]</td>
<td>180</td>
<td>180</td>
<td>180</td>
</tr>
<tr>
<td>Closing time / Opening time [s]</td>
<td>0.32 / 0.32</td>
<td>0.32 / 0.32</td>
<td>0.32 / 0.32</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Order no.</th>
<th>Level 3</th>
<th>Level 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>GEP2013IL-00-A</td>
<td>GEP2013IO-00-A</td>
<td>GEP2013IO-05-A</td>
</tr>
<tr>
<td>Gripping force [N]</td>
<td>270</td>
<td>270</td>
</tr>
<tr>
<td>Closing time / Opening time [s]</td>
<td>0.26 / 0.26</td>
<td>0.26 / 0.26</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Order no.</th>
<th>Level 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>GEP2013IL-00-A</td>
<td>GEP2013IO-00-A</td>
</tr>
<tr>
<td>Gripping force [N]</td>
<td>360</td>
</tr>
<tr>
<td>Closing time / Opening time [s]</td>
<td>0.23 / 0.23</td>
</tr>
</tbody>
</table>
### TECHNICAL DRAWINGS

1. Gripper attachment
2. Energy supply IO-Link (M12, 5-pole)
3. Fixing for gripper finger
4. Integrated slot for magnetic field sensor
5. Energy supply (M8, 4-pole)
6. Energy supply (M8, 5-pole)
7. Force level setting
8. Gripper mounting clamp

**GEP2013IL-00-A**

<table>
<thead>
<tr>
<th>Component</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>2x M4x8</td>
</tr>
<tr>
<td>2.</td>
<td>2x 7H7x1.5</td>
</tr>
</tbody>
</table>

**GEP2013IO-00-A**

<table>
<thead>
<tr>
<th>Component</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.</td>
<td>2x 7H7x1.5</td>
</tr>
</tbody>
</table>

**GEP2013IO-05-A**

<table>
<thead>
<tr>
<th>Component</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>2x M4x8</td>
</tr>
</tbody>
</table>

---

Installation size GEP2013 / 2-Jaw Parallel Grippers / electrical / Grippers

Data, Drawings, 3-D Models, Operating Instructions → www.zimmer-group.com
2-JAW PARALLEL GRIPPERS
INSTALLATION SIZE GEP2013

► ACCESSORIES

► INCLUDED IN DELIVERY

6 [piece]
Centering Disc
390677

► YOU CAN FIND CONFIGURATION EXAMPLES ON PAGE 32 / 33
**RECOMMENDED ACCESSORY GEP2013IL-00-A**

**CONNECTIONS / OTHER**

- **KAG500IL**
  - Plug-in connector straight
  - 5 m - plug, socket M12

- **AP2013**
  - Adapter plate

**RECOMMENDED ACCESSORY GEP2013IO-00-A**

**SENSORS**

- **MFS01-S-KHC-P1-PNP**
  - Magnetic field sensor Angled
  - Cable 0,3 m - Connector M8

- **MFS02-S-KHC-P1-PNP**
  - Magnetic field sensor Straight
  - Cable 0,3 m - Connector M8

- **MFS01-S-KHC-P2-PNP**
  - 2-Position-Sensor Cable
  - 0,3 m - Connector M8

- **MFS02-S-KHC-P2-PNP**
  - 2-Position-Sensor Cable
  - 0,3 m - Connector M8

**CONNECTIONS / OTHER**

- **KAG500**
  - Plug in connector Straight Cable 5m - Socket M8 (female)

- **KAG500B4**
  - Plug in connector Straight Cable 5m - Socket M8 (female)

- **S8-G-3**
  - Plug in connector customizable Straight - Connector M8

- **S8-G-4**
  - Plug in connector customizable Straight - Connector M8

- **AP2013**
  - Adapter plate

**RECOMMENDED ACCESSORY GEP2013IO-05-A**

**CONNECTIONS / OTHER**

- **KAG500B5**
  - Plug in connector Straight Cable 5m - Socket M8 (female)

- **AP2013**
  - Adapter plate

Data, Drawings, 3-D Models, Operating Instructions  ➤ www.zimmer-group.com
2-JAW PARALLEL GRIPPERS
INSTALLATION SIZE GEP2016

PRODUCT SPECIFICATIONS

Gripping force diagram

Forces and moments
Displays static forces and moments that can also have an effect, besides the gripping force.

TECHNICAL DATA

<table>
<thead>
<tr>
<th>Order no.</th>
<th>Technical data</th>
<th>GEP2016IL-00-A</th>
<th>GEP2016IO-00-A</th>
<th>GEP2016IO-05-A</th>
</tr>
</thead>
<tbody>
<tr>
<td>Control</td>
<td>I/O-Link</td>
<td>Digital I/O</td>
<td>Digital I/O</td>
<td></td>
</tr>
<tr>
<td>Integrated position sensing</td>
<td>Using process data</td>
<td>No</td>
<td>Analog 0 to 10 V</td>
<td></td>
</tr>
<tr>
<td>Stroke per jaw [mm]</td>
<td>16</td>
<td>16</td>
<td>16</td>
<td></td>
</tr>
<tr>
<td>Gripping force safety device</td>
<td>mechanical</td>
<td>mechanical</td>
<td>mechanical</td>
<td></td>
</tr>
<tr>
<td>Control time [s]</td>
<td>0.055</td>
<td>0.055</td>
<td>0.055</td>
<td></td>
</tr>
<tr>
<td>Permissible weight per jaw max [kg]</td>
<td>0.21</td>
<td>0.21</td>
<td>0.21</td>
<td></td>
</tr>
<tr>
<td>Length of the gripper fingers max. [mm]</td>
<td>120</td>
<td>120</td>
<td>120</td>
<td></td>
</tr>
<tr>
<td>Repetition accuracy +/- [mm]</td>
<td>0.02</td>
<td>0.02</td>
<td>0.02</td>
<td></td>
</tr>
<tr>
<td>Operating temperature [°C]</td>
<td>+5 ... +60</td>
<td>+5 ... +60</td>
<td>+5 ... +60</td>
<td></td>
</tr>
<tr>
<td>Voltage [V]</td>
<td>24</td>
<td>24</td>
<td>24</td>
<td></td>
</tr>
<tr>
<td>Current consumption max. [A]</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Minimum positioning path per jaw [mm]</td>
<td>0.5</td>
<td>0.5</td>
<td>0.5</td>
<td></td>
</tr>
<tr>
<td>Protection to IEC 60529</td>
<td>IP40</td>
<td>IP40</td>
<td>IP40</td>
<td></td>
</tr>
<tr>
<td>Weight [kg]</td>
<td>0.9</td>
<td>0.9</td>
<td>0.9</td>
<td></td>
</tr>
</tbody>
</table>

TECHNICAL DATA OF THE FORCE LEVELS

<table>
<thead>
<tr>
<th>Order no.</th>
<th>Level 1</th>
<th>GEP2016IL-00-A</th>
<th>GEP2016IO-00-A</th>
<th>GEP2016IO-05-A</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gripping force [N]</td>
<td>125</td>
<td>125</td>
<td>125</td>
<td></td>
</tr>
<tr>
<td>Closing time / Opening time [s]</td>
<td>0.44 / 0.44</td>
<td>0.44 / 0.44</td>
<td>0.44 / 0.44</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Order no.</th>
<th>Level 2</th>
<th>GEP2016IL-00-A</th>
<th>GEP2016IO-00-A</th>
<th>GEP2016IO-05-A</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gripping force [N]</td>
<td>250</td>
<td>250</td>
<td>250</td>
<td></td>
</tr>
<tr>
<td>Closing time / Opening time [s]</td>
<td>0.39 / 0.39</td>
<td>0.39 / 0.39</td>
<td>0.39 / 0.39</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Order no.</th>
<th>Level 3</th>
<th>GEP2016IL-00-A</th>
<th>GEP2016IO-00-A</th>
<th>GEP2016IO-05-A</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gripping force [N]</td>
<td>375</td>
<td>375</td>
<td>375</td>
<td></td>
</tr>
<tr>
<td>Closing time / Opening time [s]</td>
<td>0.35 / 0.35</td>
<td>0.35 / 0.35</td>
<td>0.35 / 0.35</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Order no.</th>
<th>Level 4</th>
<th>GEP2016IL-00-A</th>
<th>GEP2016IO-00-A</th>
<th>GEP2016IO-05-A</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gripping force [N]</td>
<td>500</td>
<td>500</td>
<td>500</td>
<td></td>
</tr>
<tr>
<td>Closing time / Opening time [s]</td>
<td>0.3 / 0.3</td>
<td>0.3 / 0.3</td>
<td>0.3 / 0.3</td>
<td></td>
</tr>
</tbody>
</table>
2-JAW PARALLEL GRIPPERS
INSTALLATION SIZE GEP2016

► ACCESORIES

► INCLUDED IN DELIVERY

6 [piece]
Centering Disc
345453

► YOU CAN FIND CONFIGURATION EXAMPLES ON PAGE 32 / 33
RECOMMENDED ACCESSORY GEP2016IL-00-A

CONNECTIONS / OTHER

KAG500IL
Plug-in connector straight 5 m - plug, socket M12

AP2016
Adapter plate

RECOMMENDED ACCESSORY GEP2016IO-00-A

SENSORS

MFS01-S-KHC-P1-PNP
Magnetic field sensor Angled Cable 0.3 m - Connector M8

MFS02-S-KHC-P1-PNP
Magnetic field sensor Straight Cable 0.3 m - Connector M8

MFS01-S-KHC-P2-PNP
2-Position-Sensor Cable 0.3 m - Connector M8

MFS02-S-KHC-P2-PNP
2-Position-Sensor Cable 0.3 m - Connector M8

RECOMMENDED ACCESSORY GEP2016IO-05-A

CONNECTIONS / OTHER

KAG500B4
Plug-in connector Straight Cable 5m - Socket M8 (female)

S8-G-3
Plug-in connector customiz-able Straight - Connector M8

S8-G-4
Plug-in connector customiz-able Straight - Connector M8

AP2016
Adapter plate

www.zimmer-group.com
SECURED CONFIGURATION EXAMPLES
GEP2000 SERIES

► GEP2000-IL-00-A (IO-LINK) WIRING TO CONTROL CABINET (BECKHOFF)

- IO-Link connection cable 5 m M12-connecting cable 5x0.34 (max. cable length 10 m) Order No. CSTE0829
- Control system Beckhoff
- 1-2 grippers
  - 24V 5A power supply unit with boost Phoenix Contact Order No. 2866750
- 3-4 grippers
  - 24V 10A power supply unit with boost Phoenix Contact Order No. 2866763
  *Depending on max. power consumption of the actuator

► GEP2000-IL-00-A (IO-LINK) WIRING TO CONTROL CABINET (SIEMENS)

- IO-Link connection cable 5 m M12-connecting cable 5x0.34 (max. cable length 10 m) Order No. CSTE0829
- Control system e.g. Siemens ET200SP
- 1-2 grippers
  - 24V 5A power supply unit with boost Phoenix Contact Order No. 2866750
- 3-4 grippers
  - 24V 10A power supply unit with boost Phoenix Contact Order No. 2866763
  *Depending on max. power consumption of the actuator

► GEP2000-IL-00-A (IO-LINK) WIRING TO IO-LINK MASTER IP67 (BECKHOFF)

- IO-Link connection cable 5 m M12-connecting cable 5x0.34 (max. cable length 10 m) Order No. KAG000L
- Control system Beckhoff
- 1-2 grippers
  - 24V 5A power supply unit with boost Phoenix Contact Order No. 2866750
- 3-4 grippers
  - 24V 10A power supply unit with boost Phoenix Contact Order No. 2866763
<table>
<thead>
<tr>
<th>Customer number</th>
<th>Telephone number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Company</td>
<td>Fax number</td>
</tr>
<tr>
<td>Contact</td>
<td>E-mail</td>
</tr>
<tr>
<td>☐ Mr. ☐ Mrs.</td>
<td></td>
</tr>
<tr>
<td>☐ Request</td>
<td>Desired date</td>
</tr>
<tr>
<td>☐ Order</td>
<td>Request No.</td>
</tr>
<tr>
<td>☐ Parallel grippers</td>
<td>☐ Concentric grippers</td>
</tr>
<tr>
<td>☐ Other / if yes, which type</td>
<td></td>
</tr>
</tbody>
</table>

**Drive**

<table>
<thead>
<tr>
<th>Pneumatic</th>
<th>Electrical</th>
<th>Hydraulic</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operating pressure [bar]</td>
<td>Voltage [V]</td>
<td></td>
</tr>
</tbody>
</table>

**Required stroke**

<table>
<thead>
<tr>
<th>Per jaw [mm]</th>
<th>or</th>
<th>Total stroke [mm]</th>
</tr>
</thead>
</table>

**Gripper finger length**

<table>
<thead>
<tr>
<th>Gripper top edge to force application point [mm]</th>
</tr>
</thead>
</table>

**Ambient conditions**

<table>
<thead>
<tr>
<th>Clean / Dry</th>
<th>Small amount of swarf / Coolant overspray</th>
<th>Large amount of swarf / Coolant under pressure / Grinding agent</th>
</tr>
</thead>
<tbody>
<tr>
<td>☐ Chemical substances / if yes, which</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Temperature [°C]</td>
<td>Cycles per minute</td>
<td></td>
</tr>
</tbody>
</table>

**Required force**

<table>
<thead>
<tr>
<th>Gripping force [N]</th>
<th>or</th>
<th>Workpiece weight kg</th>
<th>g</th>
</tr>
</thead>
</table>

**Gripping type**

| Internal gripping | ☐ External gripping |
| Frictional fit | ☐ Form fit |
| Prism angle [°] | Friction coefficient |
| Axis acceleration [m/s²] |

**Self-locking**

| Not required | ☐ In closing | ☐ In opening | ☐ Pressure safety valve |

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[34] www.zimmer-group.com
<table>
<thead>
<tr>
<th>Desired accessories</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Inductive sensor</td>
<td>☐</td>
</tr>
<tr>
<td>Magnetic field sensor</td>
<td>☐</td>
</tr>
<tr>
<td>With Cable</td>
<td>☐</td>
</tr>
<tr>
<td>Plugable</td>
<td>☐</td>
</tr>
<tr>
<td>Separate cable / if yes, how long</td>
<td>☐</td>
</tr>
<tr>
<td>Pressure safety valve</td>
<td>☐</td>
</tr>
<tr>
<td>Pneumatic fittings / if yes, which</td>
<td>☐</td>
</tr>
<tr>
<td>Straight fitting</td>
<td>☐</td>
</tr>
<tr>
<td>Angled fitting</td>
<td>☐</td>
</tr>
<tr>
<td>Air flow control valve</td>
<td>☐</td>
</tr>
</tbody>
</table>

Notes / Comments

Editor / Date

Attachment

- Sketch | ☐ |
- 3D model | ☐ |
- Others | ☐ |
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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.1.7.3., No.1.7.4.

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