

## INSTALLATION INSTRUCTIONS: PNEUMATIC GRIPPERS

### 1. Applicable documents



The following documents are available to download on our website. Only the documents currently available on the website are valid.

- Catalogue
- Drawings, performance data, information about accessory parts etc. General
- Terms and Conditions (GTCs)
- Includes warranty information

### 2. Proper use



The gripper should only be used in its original state with its original accessories, with no unauthorised changes and within the scope of its defined parameters for use. Zimmer GmbH accepts no liability for any damage caused by improper use.

The gripper is designed for operation with compressed air only. It is not suited to operation with other media such as liquids or other gases. The gripper is used as defined under „Proper use“ in closed rooms to temporarily grip, handle and hold parts. It is not suitable for clamping workpieces during a machining process or for direct contact with perishable goods.

### 3. Function

Venting from one direction and then the other moves the internal pneumatic cylinder up and down. The energy generated in this process is transferred to the gripper jaws via a kinematic system to produce the grip force. In the case of grippers with an integrated spring, the spring supports the grip force in the direction in which it is applied.

### 4. Personnel qualification

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

### 5. Installation

#### 5.1 Information about possible dangers when installing the gripper



##### **CAUTION! Non-compliance may result in minor injuries**

When transporting the gripper to its destination, observe the local health and safety regulations for lifting and carrying heavy loads.



##### **WARNING! Non-compliance may result in death or serious injuries**

If a gripper weighing more than 3 kg is to be installed overhead, it must be handled with lifting equipment or by two people.

#### 5.2 Installing the gripper

The gripper can be fitted from several sides on a mounting surface with the necessary evenness. If the mounting surface is <100mm, the permitted unevenness is <0.02mm; if the length is >100mm, the permitted unevenness is <0.05mm.

The following steps should be performed to install the gripper:

- using the connection without a hose, fit O-rings in the recesses on the mounting surface (produced in situ)
- Insert cylinder pins and/or a centring disc (depending on type) in the fits provided on the gripper
- Position gripper on the mounting surface using the cylinder pins and/or centring disc (depending on type)
- Secure gripper with strength class 8.8 cylinder screws
- Screw pneumatic screws connections into the threads provided

#### 5.3 Information about possible dangers when installing the gripper jaws



##### **WARNING! Non-compliance may result in death or serious injuries**

Before installing the gripper jaws, depressurise the system and remove supply lines from the gripper. For spring-assisted grippers, wait until the jaws have reached the limit position with the system depressurised.

#### 5.4 Installing the gripper jaws

Before installing the gripper jaws, make sure they are of a suitable length for the selected gripper variant.

The following steps should be performed to install the gripper jaws:

- Insert centring sleeves or cylinder pins (depending on variant) into the fits provided on the gripper jaws
- Position gripper jaws on gripper using centring sleeves or cylinder pins (depending on variant)
- Secure gripper jaws with strength class 8.8 cylinder screws

### 6. Maintenance

#### 6.1 Information about possible dangers when maintaining the unit



##### **CAUTION! Non-compliance may result in minor injuries**

When transporting the gripper to its destination, observe the local health and safety regulations for lifting and carrying heavy loads.




##### **WARNING! Non-compliance may result in death or serious injuries**

Before venting the gripper, ensure that there are no workpieces in the range of travel of the gripper jaws. If a gripper weighing more than 3 kg is to be removed overhead, it must be handled with lifting equipment or by two people.



##### **WARNING! Non-compliance may result in death or serious injuries**

When removing a gripper with an integrated spring (recognisable by the spring symbol  on the housing), use an apparatus which prevents the piston or piston cover being expelled by the pre-tensioned spring.

#### 6.2 Maintenance intervals

Maintenance-free operation of the gripper is guaranteed for up to 10 million cycles. Exceptions are the GP1800, GP200, GD1700 series which are maintenance-free for 5 million cycles and the GP1200 series which is maintenance-free for 1.5 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 in excess of
- 60°C, lubricants will harden more quickly!

At each maintenance intervention, the gripper should be lubricated with the following lubricants or those which have been proven to display the same characteristics:

- Mechanical: Molykote BR2plus
- Cylinder: Renolit HLT2

#### 6.3 Dismantling the gripper

We recommend using the Zimmer GmbH repair service for maintenance and the replacement of seals. Dismantling and reassembling the gripper yourself may result in complications as in some cases special installation equipment is required.

**INSTALLATION INSTRUCTIONS: PNEUMATIC GRIPPERS**

**7. Declaration of incorporation** in terms of the EC Directive 2006/42/EC on Machinery (Annex II 1 B)

**Name and address of the manufacturer:**

Zimmer GmbH  
Im Salmenkopf 5  
77866 Rheinau

**We hereby declare that the incomplete machines described below**

**Product designation:** Pneumatic Gripper

**Type designation:**

<b>GP403N-C</b>	GP420SC-C	GP416XNO-C	GP1820NC-B	<b>GD303N-C</b>	<b>GD1704N-B</b>	GK15NC-B	MGP812N
GP403NC-C	GP420SO-C	GP416XS-C	GP1820NO-B	GD303NC-C	GD1704NC-B	GK20N-B	MGP812NC
GP403NO-C	GP430N-C	GP416XS-C	GP1830N-B	GD303NO-C	GD1704NO-B	GK20NC-B	<b>MGW801N</b>
GP404N-C	GP430NC-C	GP416XS-O-C	GP1830NC-B	GD304N-C	GD1706N-B	GK25N-B	MGW802N
GP404NC-C	GP430NO-C	GP420XN-C	GP1830NO-B	GD304NC-C	GD1706NC-B	GK25NC-B	MGW803N
GP404NO-C	GP430S-C	GP420XNC-C	<b>GP12-B</b>	GD304NO-C	GD1706NO-B	GK35N-B	MGW803NC
GP404S-C	GP430SC-C	GP420XNO-C	GP19-B	GD304S-C	GD1708N-B	GK35NC-B	MGW804N
GP404SC-C	GP430SO-C	GP420XS-C	GP30-B	GD304SC-C	GD1708NC-B	GK40N-B	MGW804NC
GP404SO-C	<b>GP403XN-C</b>	GP420XSC-C	GP45-B	GD304SO-C	GD1708NO-B	GK40NC-B	MGW806N
GP406N-C	GP403XNC-C	GP420XSO-C	GP45S-B	GD306N-C	GD1710N-B	GK50N-B	MGW806NC
GP406NC-C	GP403XNO-C	GP430XN-C	GP75-B	GD306NC-C	GD1710NC-B	GK50NC-B	MGW808N
GP406NO-C	GP404XN-C	GP430XNC-C	GP75S-B	GD306NO-C	GD1710NO-B	<b>GG1065NC</b>	MGW808NC
GP406S-C	GP404XNC-C	GP430XNO-C	GP100-B	GD306S-C	GD1712N-B	GG1085NC	MGW810N
GP406SC-C	GP404XNO-C	GP430XS-C	GP100-B-99	GD306SC-C	GD1712NC-B	GG1110NC	MGW810NC
GP406SO-C	GP404XS-C	GP430XSC-C	GP100S-B	GD306SO-C	GD1712NO-B	GG1140NC	MGW812N
GP408N-C	GP404XSC-C	GP430XSO-C	<b>GP224-B</b>	GD308N-C	GD1716N-B	GG1065FNC	MGW812NC
GP408NC-C	GP404XSO-C	<b>GP103</b>	GP224S-B	GD308NC-C	GD1716NC-B	GG1085FNC	<b>MGD801N</b>
GP408NO-C	GP406XN-C	GP104	GP224-B-99	GD308NO-C	GD1716NO-B	GG1110FNC	MGD802N
GP408S-C	GP406XNC-C	GP105	GP224S-B-99	GD308S-C	GD1720N-B	GG1140FNC	MGD803N
GP408SC-C	GP406XNO-C	GP110	GP240-B	GD308SC-C	<b>GD530</b>	<b>GG4032NC</b>	MGW803NC
GP408SO-C	GP406XS-C	GP115	GP240S-B	GD308SO-C	GD540	GG4040NC	MGD804N
GP410N-C	GP406XSC-C	<b>GP1803N-B</b>	GP240-B-99	GD310N-C	GD310N-C	GG4049NC	MGD804NC
GP410NC-C	GP406XSO-C	GP1803NC-B	GP240S-B-99	GD310NC-C	<b>GH6040-B</b>	GG4058NC	MGD806N
GP410NO-C	GP408XN-C	GP1803NO-B	GP260	GD310NO-C	GH6060-B	GG4072NC	MGD806NC
GP410S-C	GP408XNC-C	GP1804N-B	GP260S	GD310S-C	GH6080-B	GG4084NC	MGD808N
GP410SC-C	GP408XNO-C	GP1804NC-B	GP260-99	GD310SC-C	GH6140-B	GG4032SC	MGD808NC
GP410SO-C	GP408XS-C	GP1804NO-B	GP260S-99	GD310SO-C	GH6160-B	GG4040SC	MGD810N
GP412N-C	GP408XSC-C	GP1806N-B	GP280	GD312N-C	GH6180-B	GG4049SC	MGD810NC
GP412NC-C	GP408XSO-C	GP1806NC-B	GP280S	GD312NC-C	GH6240-B	GG4058SC	MGD812N
GP412NO-C	GP410XN-C	GP1806NO-B	GP280-99	GD312NO-C	GH6260-B	GG4072SC	MGD812NC
GP412S-C	GP410XNC-C	GP1808N-B	GP280S-99	GD312S-C	GH6280-B	GG4084SC	<b>MGH8010</b>
GP412SC-C	GP410XNO-C	GP1808NC-B	<b>GP1224N</b>	GD312SC-C	GH62100-B	<b>MGP801N</b>	MGH8020
GP412SO-C	GP410XS-C	GP1808NO-B	GP1224NC	GD312SO-C	GH62150-B	MGP802N	MGH8110
GP416N-C	GP410XSC-C	GP1810N-B	GP1224NO	GD316N-C	GH6360-B	MGP803N	MGH8120
GP416NC-C	GP410XSO-C	GP1810NC-B	GP1240N	GD316NC-C	GH63100-B	MGP803NC	MGH8230
GP416NO-C	GP412XN-C	GP1810NO-B	GP1240NC	GD316NO-C	GH63150-B	MGP804N	MGH8240
GP416S-C	GP412XNC-C	GP1812N-B	GP1240NO	GD316S-C	GH6460-B	MGP804NC	MGH8350
GP416SC-C	GP412XNO-C	GP1812NC-B	GP1260N	GD316SC-C	GH64100-B	MGP806N	MGH8375
GP416SO-C	GP412XS-C	GP1812NO-B	GP1260NC	GD316SO-C	GH64150-B	MGP806NC	MGH83100
GP420N-C	GP412XSC-C	GP1816N-B	GP1260NO	GD320N-C	GH64200-B	MGP808N	
GP420NC-C	GP412XSO-C	GP1816NC-B	GP1280N	GD320S-C	<b>GH7665</b>	MGP808NC	
GP420NO-C	GP416XN-C	GP1816NO-B	GP1280NC	GD330N-C	GH76100	MGP810N	
GP420S-C	GP416XNC-C	GP1820N-B	GP1280NO	GD330S-C	<b>GK15N-B</b>	MGP810NC	

**satisfy the following basic requirements of the Machinery Directive 2006/42/EC**

Nr.1.1.2., Nr.1.1.3., Nr.1.1.5., Nr.1.3.2., Nr.1.3.4., Nr.1.3.7., Nr.1.5.4., Nr.1.5.8., Nr.1.6.4., Nr.1.7.1., Nr.1.7.4.

We also declare that the special 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 the incomplete machine's special documents via 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.

**Authorised representative for the compilation of the relevant technical documents**

*Martin Zimmer*

Kurt Ross	See manufacturer's address First
Surname	Address

Rheinau, the 16.01.2014	Martin Zimmer
(Place and date)	(legally binding signature)
	Managing director

