

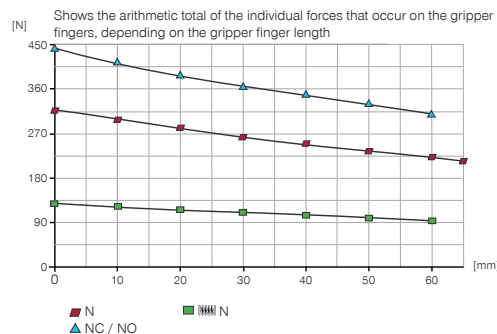
3-JAW CONCENTRIC GRIPPERS

INSTALLATION SIZE GPD5003

PRODUCT SPECIFICATIONS

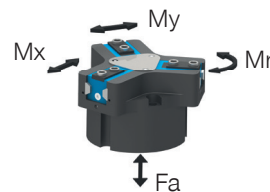


Gripping force diagram



Forces and moments

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



Mr [Nm]	7
Mx [Nm]	14
My [Nm]	13
Fa [N]	550

TECHNICAL DATA

Technical data			
Order no.	GPD5003N-00-A	GPD5003NC-00-A	GPD5003NO-00-A
Stroke per jaw [mm]	2.5	2.5	2.5
Gripping force in closing [N]	310	440	
Gripping force in opening [N]	335		465
Gripping force secured by spring min. [N]		130	130
Closing time [s]	0.015	0.01	0.02
Opening time [s]	0.015	0.02	0.01
Permissible weight per jaw max [kg]	0.12	0.12	0.12
Length of the gripper fingers max. [mm]	65	60	60
Repetition accuracy +/- [mm]	0.01	0.01	0.01
Operating pressure min. [bar]	3	4	4
Operating pressure max. [bar]	8	7	7
Nominal operating pressure [bar]	6	6	6
Operating temperature [°C]	-10 ... +90	-10 ... +90	10 ... +90
Air volume per cycle [cm³]	4.2	9.5	9.5
Protection to IEC 60529	IP64	IP64	IP64
Weight [kg]	0.14	0.18	0.18

Technical Data - High Temperature Version			
Order no.	GPD5003N-20-A	GPD5003NC-20-A	GPD5003NO-20-A
Operating temperature [°C]	-10 ... +130	-10 ... +130	-10 ... +130

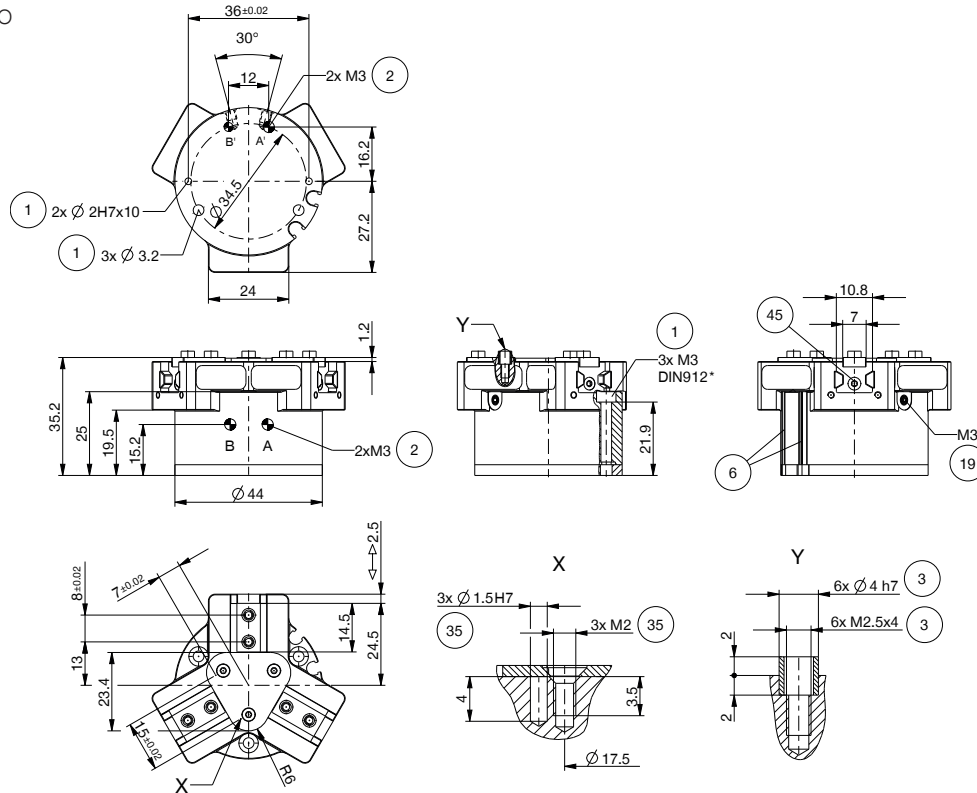
Technical Data - Protector Version			
Order no.	GPD5003N-21-A	GPD5003NC-21-A	GPD5003NO-21-A
Protection to IEC 60529	IP67 *	IP67 *	IP67 *
Weight [kg]	0.18	0.22	0.22

Technical Data - High Temperature Protector Version			
Order no.	GPD5003N-24-A	GPD5003NC-24-A	GPD5003NO-24-A
Operating temperature [°C]	-10 ... +130	-10 ... +130	-10 ... +130
Protection to IEC 60529	IP67 *	IP67 *	IP67 *
Weight [kg]	0.18	0.22	0.22

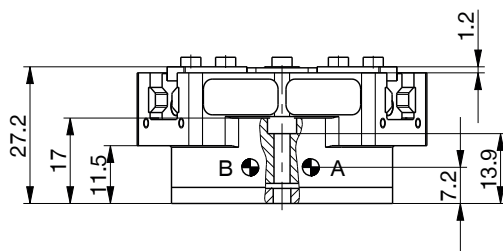
*with purged air (max. 0,5 bar)

TECHNICAL DRAWINGS

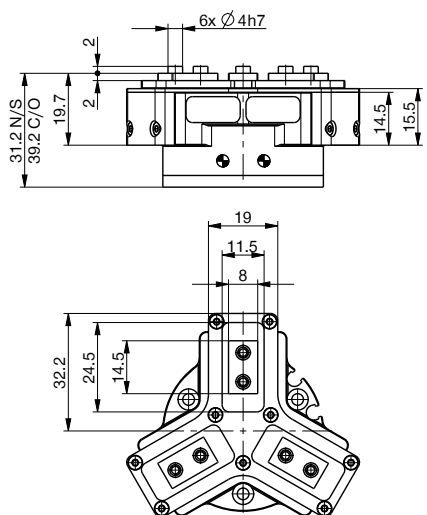
NC / NO



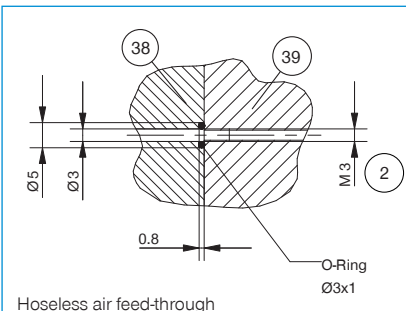
N



Protector version

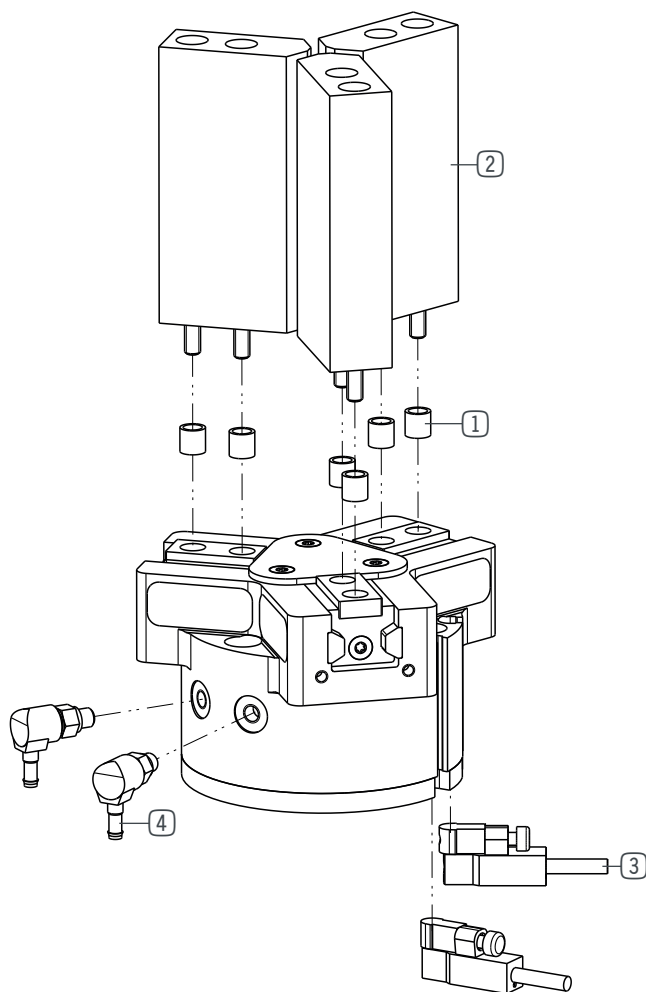


- | | |
|---|--|
| ① Gripper attachment | ③⑨ Gripper |
| ② Energy supply | ④⑤ Switch cam adjustment |
| ③ Fixing for gripper finger | Ⓐ Air connection (close) |
| ⑥ Integrated slot for magnetic field sensor | Ⓑ Air connection (open) |
| ⑱ Air purge connection option | Ⓐ' Air connection, alternative (close) |
| ③⑤ Attachment option for customer-specific fittings | Ⓑ' Air connection, alternative (open) |
| ③⑧ Adapter | |



3-JAW CONCENTRIC GRIPPERS

INSTALLATION SIZE GPD5003



► INCLUDED IN DELIVERY



Centering Disc

DST06510

► RECOMMENDED ACCESSORIES



Universal jaw aluminium

UB5003AL

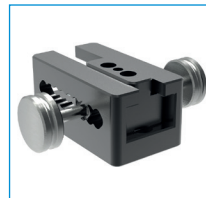


Universal jaw steel

UB5003ST

Rubber Coated Tape
Knobbed

KF50N



Aluminum adjustment jaw

EB5003AL



Steel adjustment jaw

EB5003ST



Pressure piece N / S

ADS5003-01

Pressure piece NC / NO /
SC / SO

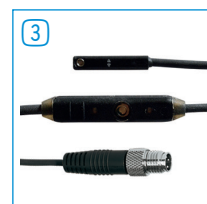
ADS5003-02

Magnetic field sensor Angled
Cable 0,3 m - Connector M8

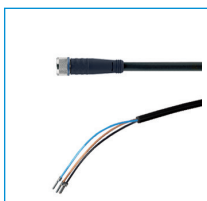
MFS103SKHC

Magnetic field sensor Straight
Cable 0,3 m - Connector M8

MFS204SKHC

2-Position-Sensor Cable
0,3 m - Connector M8

MFSP2SKHC-02

Plug-in connector Straight Ca-
ble 5m - Socket M8 (female)

KAG500

Plug-in connector customiz-
able Straight - Connector M12

S12-G-3

Straight Fittings - Barb
Style Connection

GVM3

Angled Fittings - Barb
Style Connection

WVM3

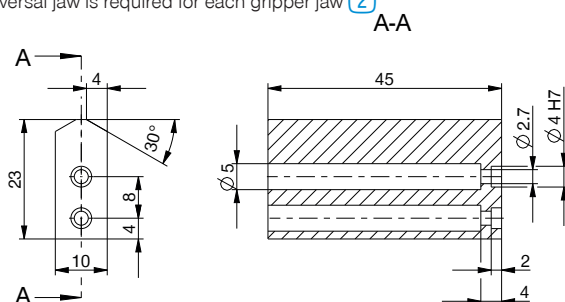


Pressure Safety Valve

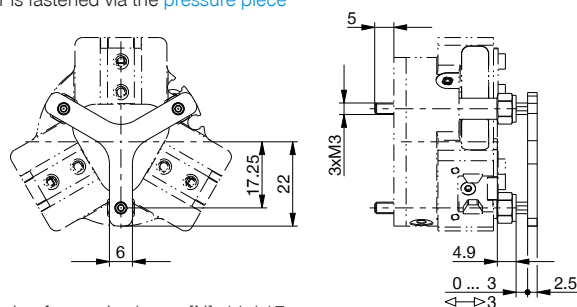
DSV1-8

► TECHNICAL DRAWINGS ACCESSORIES

One universal jaw is required for each gripper jaw ²



Gripper is fastened via the [pressure piece](#)

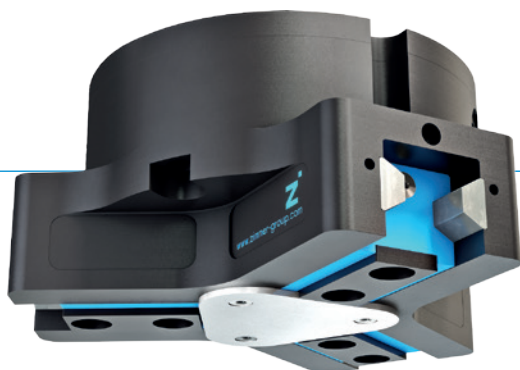


Total spring force min. / max. [N]: 11 / 17

3-JAW CONCENTRIC GRIPPERS

SERIES GPD5000

▶ PRODUCT ADVANTAGES



“The Universal One”

- ▶ Up to 30% more gripping force than the benchmark
- ▶ 10% more static forces and moments than the benchmark
- ▶ Gripper fingers up to 10% longer than the benchmark
- ▶ Gripper fingers weight up to 15% higher than the benchmark
- ▶ Sealed guide IP64 / Protector version IP67 (with purged air)
- ▶ Protected against corrosion
- ▶ Up to 30 million cycles without maintenance

▶ THE BEST PRODUCT FOR YOUR APPLICATION



▶ Our products welcome the challenge!

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Find the best product for your specific use:

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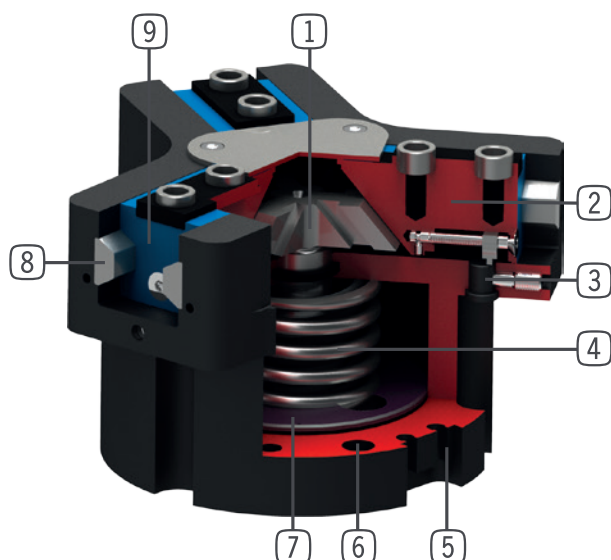
HOW TO ORDER CORRECTLY

- ▶ The product order numbers are arranged according to this diagram:

Order no.	GPD5010	☐	☐	- ☐	-A
Basis version	N	☐	☐	☐	
High force	S				
For external gripping, self-locking, spring closing	C				
For internal gripping, self-locking, spring opening	O				
temperature-resistant version to 130 °C				20	
Protector version IP67 for use in adverse environments (with purged air)				21	
temperature-resistant protector version IP67 for use in adverse environments (with purged air)to 130 °C				24	



► BENEFITS IN DETAIL



- ① **Wedge hook mechanism**
 - high forces and moments capacity
 - Synchronized gripper jaw movement
- ② **Gripper jaw**
 - Gripper fingers mounted using removable centring sleeves
 - Lubricated for life via incorporated lubrication slots
- ③ **Mounting block**
 - mounting for inductive proximity switch
- ④ **Integrated gripping force safety device**
 - Spring built into cylinder chamber as an energy store
- ⑤ **Sensing slot**
 - mounting and positioning of magnetic field sensors
- ⑥ **Mounting and positioning**
 - Alternatively, on several sides for customized mounting
 - Pneumatic and electrical versions identical apart from height
- ⑦ **Drive**
 - Double-acting pneumatic rotor cylinder
- ⑧ **Steel Linear Guide**
 - Steel in steel guide
 - Enables use of extremely long gripper fingers
- ⑨ **Dual lip seal**
 - IP64 and up to IP67 (with purged air) for Protector version
 - Prevents grease from being squeezed out, increasing service life

► SERIES CHARACTERISTICS



Number of installation sizes	11
Stroke per jaw	2,5 mm - 45 mm
Gripping force	310 N - 72500 N
Weight	0,14 kg - 88 kg
AP class	5



30 million maintenance-free cycles (max.)



High-strength S



IP67



Temperature-resistant



Spring closing C



Inductive sensor



Corrosion resistance



Purged air



Spring opening O



IP64



Magnetic field sensor