

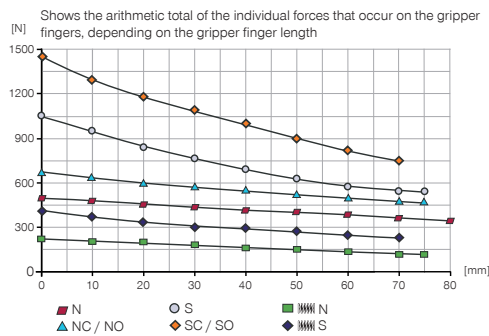
# 3-JAW CONCENTRIC GRIPPERS

## INSTALLATION SIZE GPD5004

### PRODUCT SPECIFICATIONS

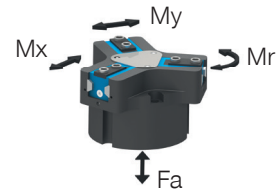


#### Gripping force diagram



#### Forces and moments

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



Mr [Nm]	14
Mx [Nm]	29
My [Nm]	23
Fa [N]	750

### TECHNICAL DATA

Order no.	Technical data					
	GPD5004N-00-A	GPD5004NC-00-A	GPD5004NO-00-A	GPD5004S-00-A	GPD5004SC-00-A	GPD5004SO-00-A
Stroke per jaw [mm]	4	4	4	2	2	2
Gripping force in closing [N]	460	650		1010	1430	
Gripping force in opening [N]	500		690	1100		1520
Gripping force secured by spring min. [N]		190	190		420	420
Closing time [s]	0.025	0.018	0.028	0.025	0.018	0.028
Opening time [s]	0.025	0.028	0.018	0.025	0.028	0.018
Permissible weight per jaw max [kg]	0.2	0.2	0.2	0.2	0.2	0.2
Length of the gripper fingers max. [mm]	80	75	75	75	70	70
Repetition accuracy +/- [mm]	0.01	0.01	0.01	0.01	0.01	0.01
Operating pressure min. [bar]	3	4	4	3	4	4
Operating pressure max. [bar]	8	7	7	8	7	7
Nominal operating pressure [bar]	6	6	6	6	6	6
Operating temperature [°C]	-10 ... +90	-10 ... +90	-10 ... +90	-10 ... +90	-10 ... +90	-10 ... +90
Air volume per cycle [cm³]	11	21	21	11	21	21
Protection to IEC 60529	IP64	IP64	IP64	IP64	IP64	IP64
Weight [kg]	0.27	0.33	0.33	0.27	0.33	0.33

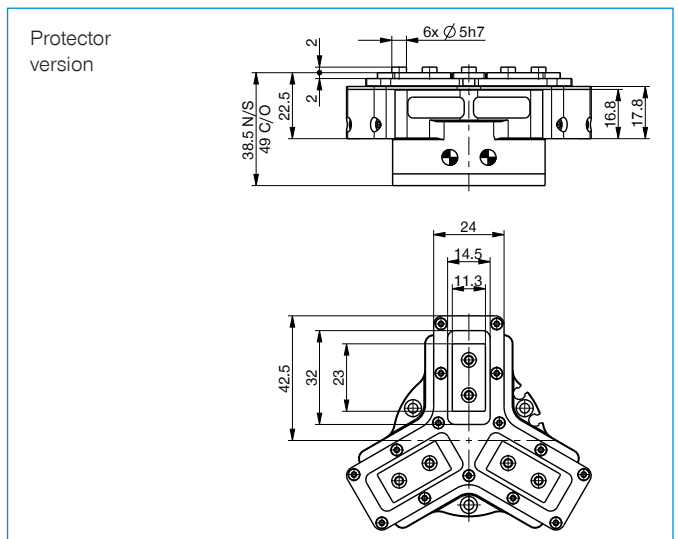
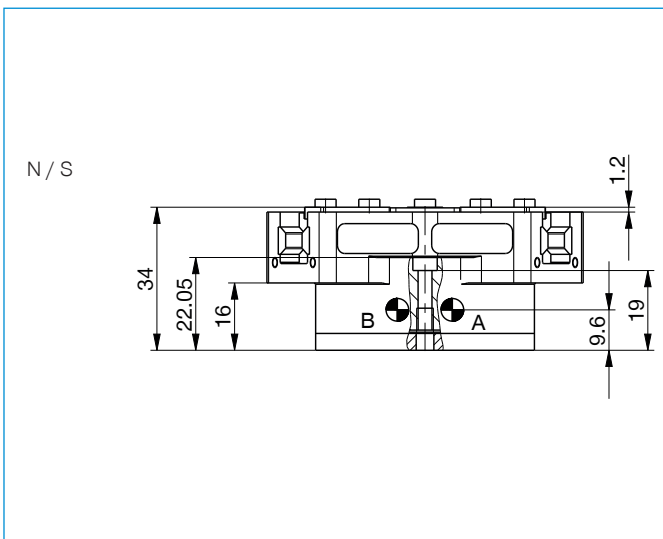
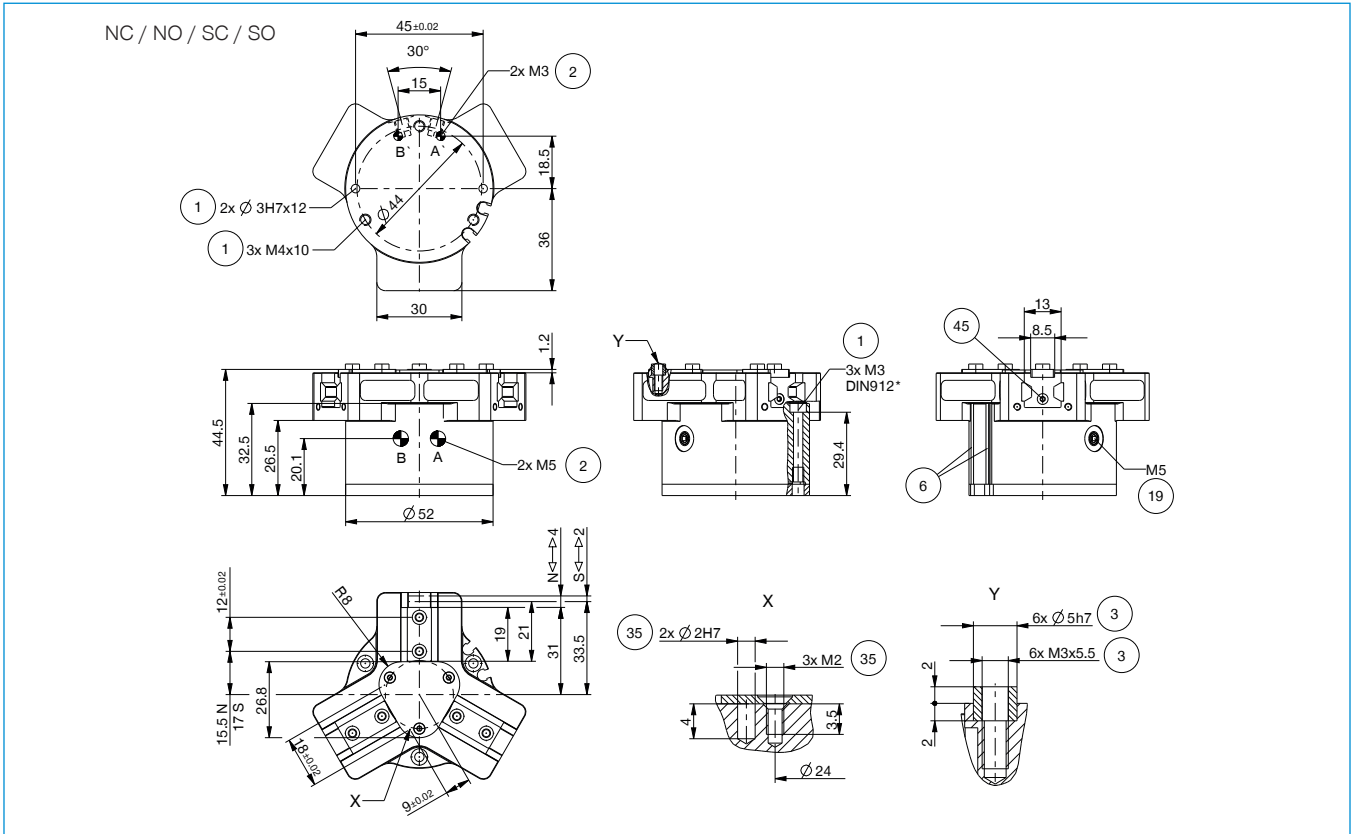
Order no.	Technical Data - High Temperature Version					
	GPD5004N-20-A	GPD5004NC-20-A	GPD5004NO-20-A	GPD5004S-20-A	GPD5004SC-20-A	GPD5004SO-20-A
Operating temperature [°C]	-10 ... +130	-10 ... +130	-10 ... +130	-10 ... +130	-10 ... +130	-10 ... +130

Order no.	Technical Data - Protector Version					
	GPD5004N-21-A	GPD5004NC-21-A	GPD5004NO-21-A	GPD5004S-21-A	GPD5004SC-21-A	GPD5004SO-21-A
Protection to IEC 60529	IP67 *	IP67 *	IP67 *	IP67 *	IP67 *	IP67 *
Weight [kg]	0.35	0.41	0.41	0.35	0.41	0.41

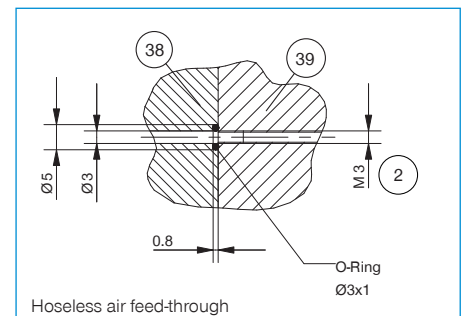
Order no.	Technical Data - High Temperature Protector Version					
	GPD5004N-24-A	GPD5004NC-24-A	GPD5004NO-24-A	GPD5004S-24-A	GPD5004SC-24-A	GPD5004SO-24-A
Operating temperature [°C]	-10 ... +130	-10 ... +130	-10 ... +130	-10 ... +130	-10 ... +130	-10 ... +130
Protection to IEC 60529	IP67 *	IP67 *	IP67 *	IP67 *	IP67 *	IP67 *
Weight [kg]	0.35	0.41	0.41	0.35	0.41	0.41

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

## TECHNICAL DRAWINGS

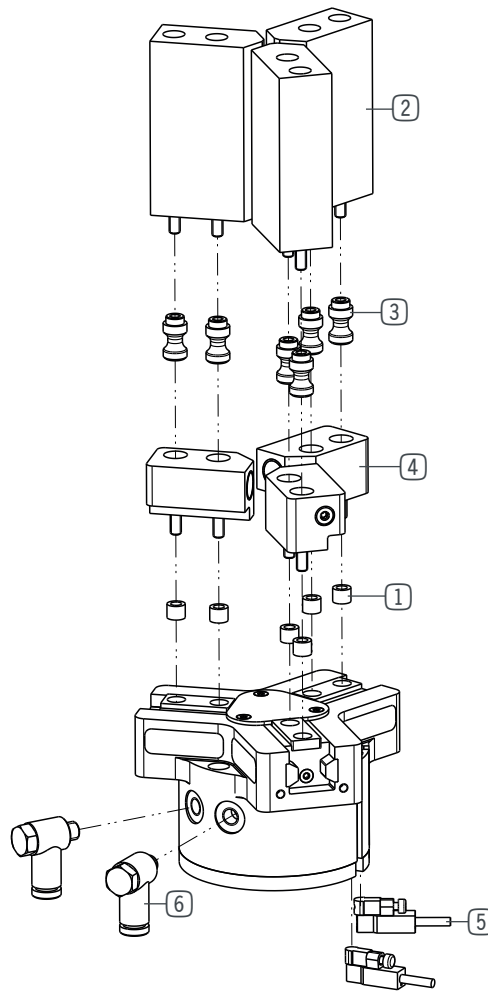


- |  |                                       |
|--|---------------------------------------|
| ① Gripper attachment                               | ③⑨ Gripper                            |
| ② Energy supply                                    | ④⑤ Switch cam adjustment              |
| ③ Fixing for gripper finger                        | Ⓐ Air connection (close)              |
| ⑥ Integrated slot for magnetic field sensor        | Ⓑ Air connection (open)               |
| ⑱ Air purge connection option                      | Ⓐ Air connection, alternative (close) |
| ⑳ Attachment option for customer-specific fittings | Ⓑ Air connection, alternative (open)  |
| ⑳ Adapter  |                                       |



# 3-JAW CONCENTRIC GRIPPERS

## INSTALLATION SIZE GPD5004



### ► INCLUDED IN DELIVERY



Centering Disc

015761

## RECOMMENDED ACCESSORIES



Universal jaw aluminium

UB5004AL



Universal jaw steel

UB5004ST



Aluminum adjustment jaw

EB5004AL



Steel adjustment jaw

EB5004ST



Changeable jaw, loose-part-set

WB5004L



Changeable jaw, fix-part

WB5004F



Pressure piece N / S

ADS5004-01



Pressure piece NC / NO / SC / SO

ADS5004-02



Straight Fittings - Quick Connect Style

GVM5



Angled Fittings - Quick Connect Style

WVM5



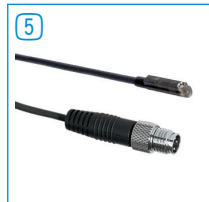
Pressure Safety Valve

DSV1-8



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

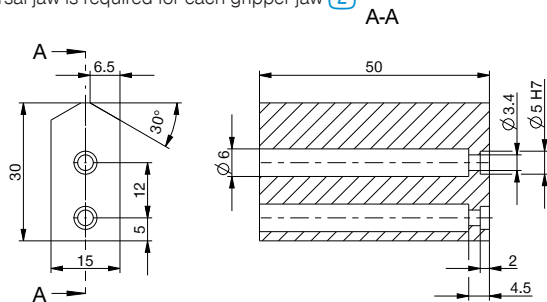


Plug-in connector Straight Cable 5m - Socket M8 (female)

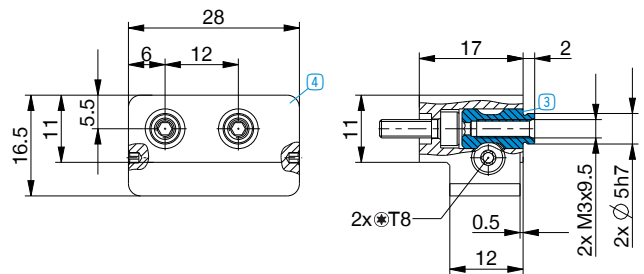
KAG500

## TECHNICAL DRAWINGS ACCESSORIES

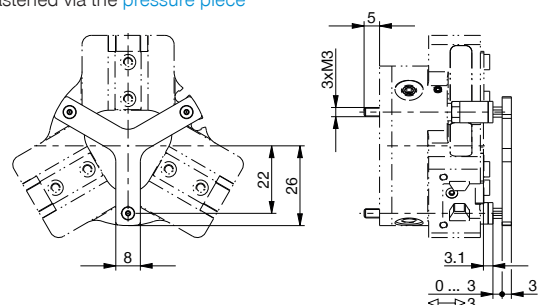
One universal jaw is required for each gripper jaw <sup>(2)</sup>



For each gripper jaw, one interchangeable jaw loose part set <sup>(3)</sup> and one interchangeable jaw fixed part <sup>(4)</sup> are needed



Gripper is fastened via the **pressure piece**

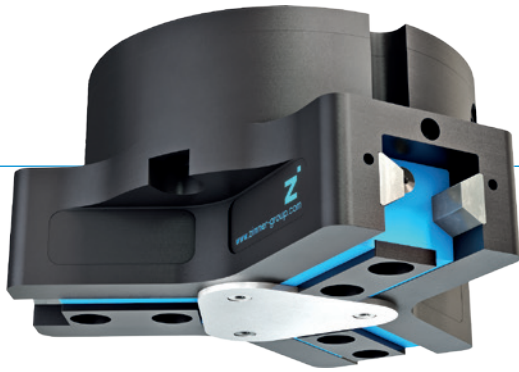


Total spring force min. / max. [N]: 17 / 41

# 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!

Extreme conditions, all over the world—our tried and tested components and systems give you endless possibilities.

Find the best product for your specific use:

[www.zimmer-group.de](http://www.zimmer-group.de)

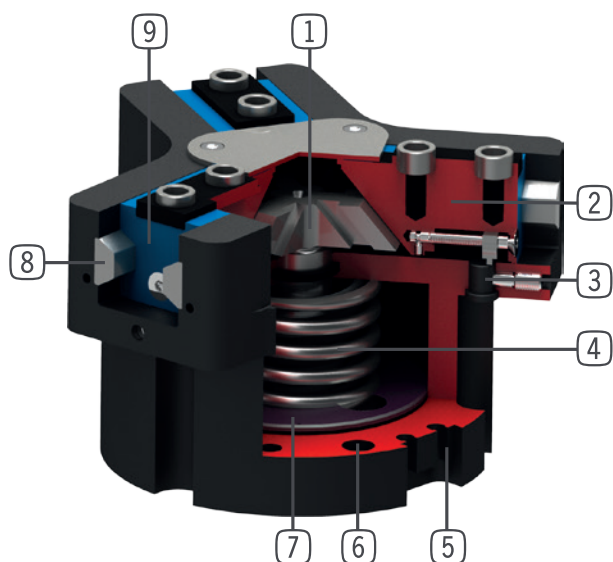
#### HOW TO ORDER CORRECTLY

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

Order no.	GPD5010	<input type="checkbox"/>	<input type="checkbox"/>	- <input type="checkbox"/>	-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

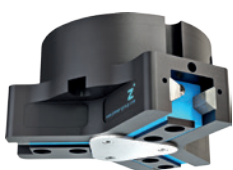


## ► BENEFITS IN DETAIL



- 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