

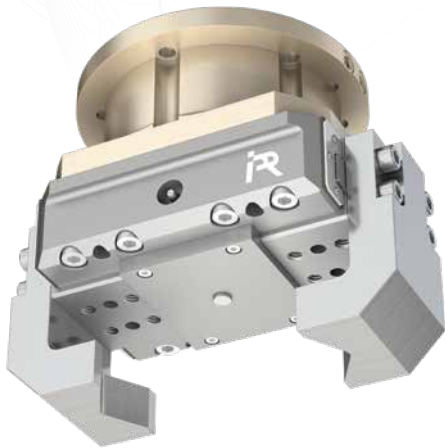
SOLUTIONS AT HAND

GRIPPING TECHNOLOGY

PARALLEL GRIPPERS

CENTRIC GRIPPERS

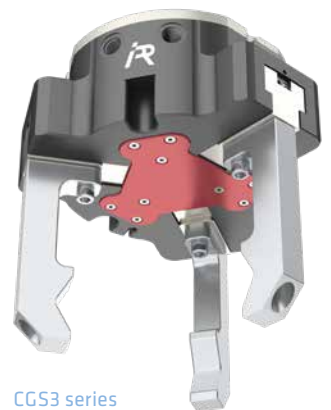
ANGULAR GRIPPERS



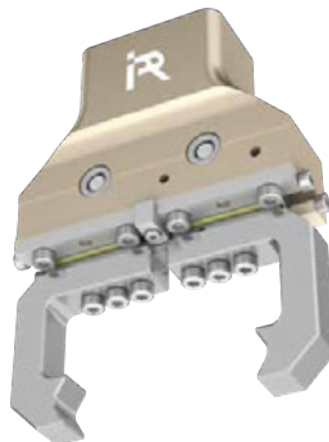
IRP series



WGS series



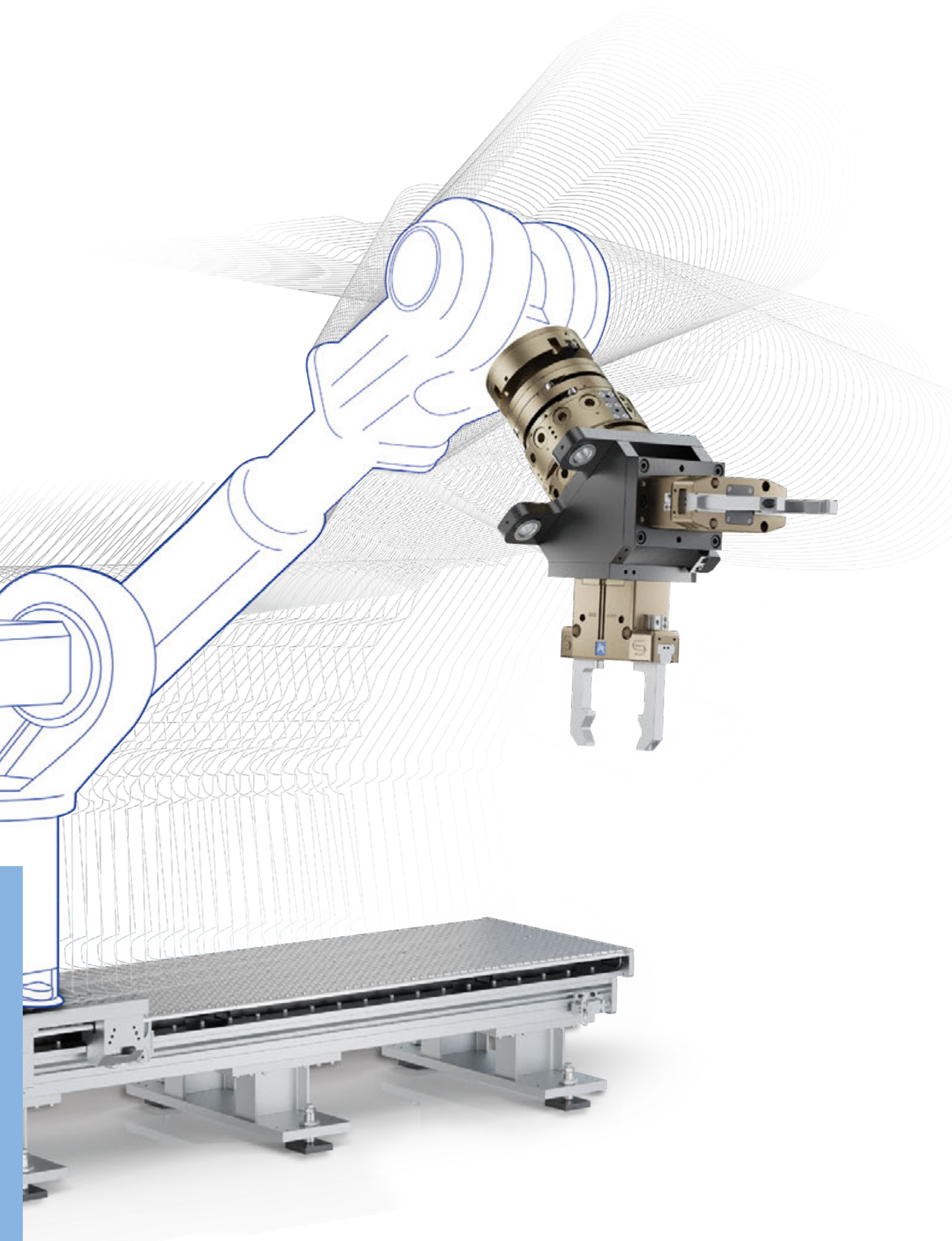
CGS3 series



RP series



CGS2 series



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Changes and errors excepted. You can find the current data online: en.iprworldwide.com/downloads/flyers/.

The product illustrations are non-binding.

Our general terms and Terms and Conditions can be found at en.iprworldwide.com/terms-purchase-conditions/

IPR – Solutions at hand

Our components make your robot more intelligent, flexible and versatile

Innovation meets top quality

IPR Intelligente Peripherien für Roboter GmbH is a leader in the development and manufacturing of products related to industrial robots and offers an extensive product range with innovative systems and components for assembly and handling technology. Our parallel and angular grippers, tool changers, joining and compensating systems as well as load limiters, 7th axes for robots and customer-specific solutions are used by customers in many countries around the world.

Companies from all industries trust our products. Quality, technical and industry knowledge are our most important success factors.

We offer you standard products ready for immediate use, but we also support you in special and large-scale projects. Here you benefit directly from the development and manufacturing technologies in our house.





Industry-specific solutions

For robot applications and automation solutions

Assembly and handling technology



Machinery loading and unloading



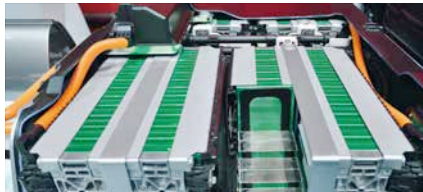
Foundry and forge



Automotive



E-mobility



Medicine and pharmaceuticals



Increased value for your application

IPR components are used in a wide variety of industries. The high variance in the product series combined with the possibility of creating modified standard or specifically designed special products in a short time holds a lot of potential for meeting the requirements of our customers. Our success is the result of many years of experience in

our company. Our employees are professionals in their field and have extensive knowledge around industries and production processes. This is how we continually develop innovative, high-quality and high-performance solutions for each individual project.



Individuality for your application

From standardized to customized

For individual solutions, we combine standardized components with custom-built modules to reduce design and delivery times as well as costs. Our company provides these services for a wide range of industries such as the

automotive and supplier industry, machine tools and plant engineering, intralogistics, electrical industry, renewable energies, medical technology and the aerospace industry.



IPR offers everything that robots need to work

Discover our extensive portfolio of peripherals for robots

Our product range of series-produced automation modules includes a variety of grippers and tool changers, joining and compensation modules, collision protection systems and 7th axes for robots. Within the individual product types, differently graded sizes are available for all load ranges. The excellent quality of our product range ensures high availability as well as smooth use in the production process. We would be pleased to inform you about our components and technologies. Benefit from the many years of experience of IPR consultants.

IPR stands for:

■ Customer proximity

We are always there for our customers with advice and support.

■ Internationality

We are on site worldwide.

■ Innovation

We offer innovative solutions in top quality.

■ Competence

We utilize many years of experience and the know-how of all employees.

■ Quality and flexibility

We live lean structures and short decision-making paths.

2

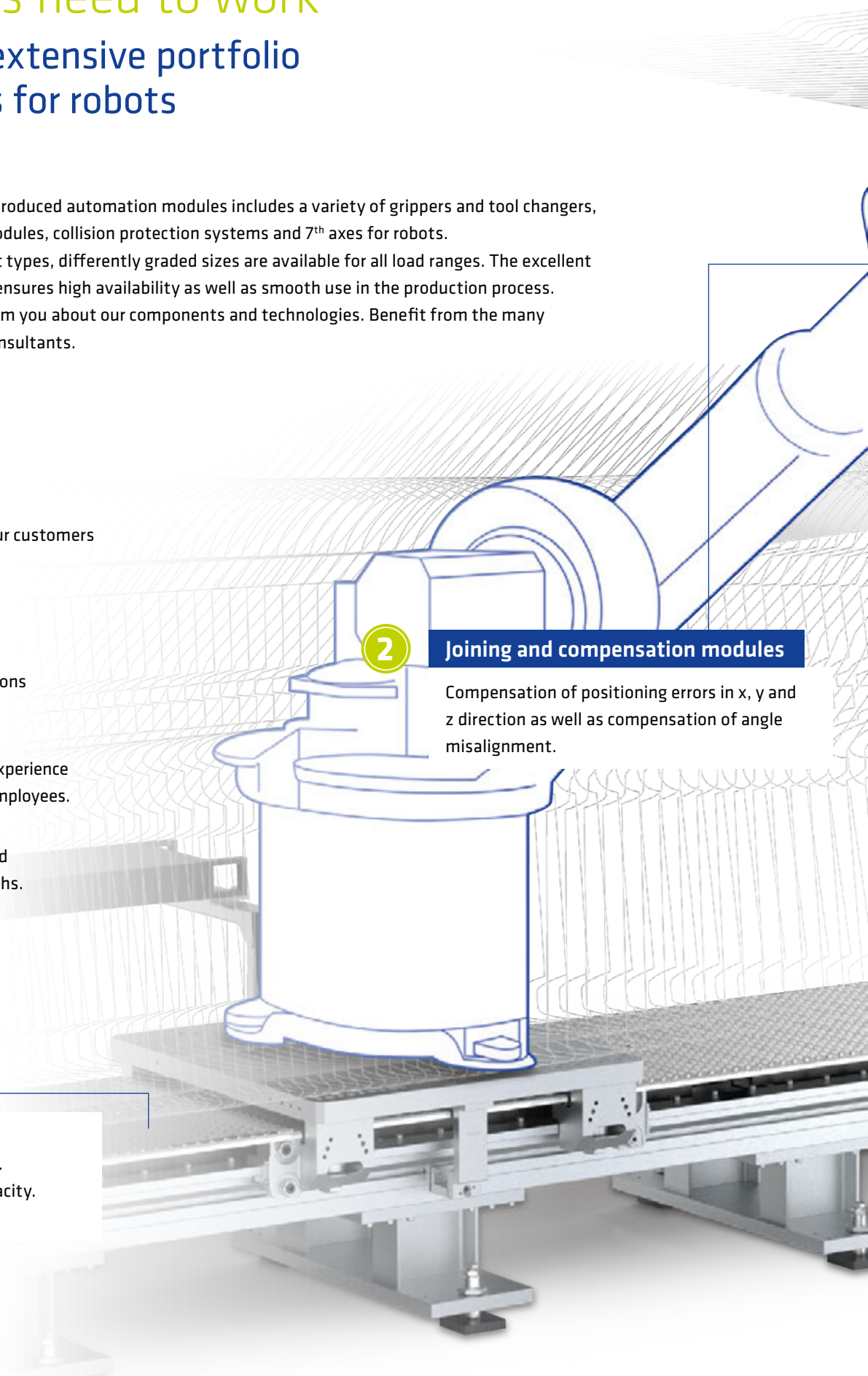
Joining and compensation modules

Compensation of positioning errors in x, y and z direction as well as compensation of angle misalignment.

5

7th axes

Modular system.
High repeatability.
Extreme load capacity.
Long life.



4

Collision protection systems

Mechanical device with included sensors to prevent damage in case of overload and collision, optional with internal cable routing.

1

Gripper

Compact design and very robust construction. Gripping force retention via spring (optional).

3

Tool changer

Quick change of tools and grippers on the robot or gantry. Simple assembly and high flexibility due to short changeover times.

1

Gripper

2

Joining and compensation modules

3

Tool changer

4

Collision protection systems

5

7th axes for robots

Everything under control

The gripper portfolio from IPR

IPR's grippers increase the productivity of automated manufacturing equipment by reliably gripping workpieces of all sizes, with a wide variety of geometries, and in any environment. Specially sealed standard variants for use in dirty and dusty environments, high-temperature variants for foundry and forging applications, and a hybrid gripper with electric-pneumatic drive make selecting the right gripper child's play.

A broad portfolio of suitable sensors for stroke sensing, gripper pads to protect fragile workpieces, and pressure maintenance valves for additional safety round off the portfolio. And if the right solution cannot be found in the standard, we will develop a gripping system for you that is optimally tailored to the application.

Parallel grippers

CGS2

- + Payload up to **95 kg**
- + Gripping force up to **30,000 N**
- + Total stroke from **4 to 90 mm**

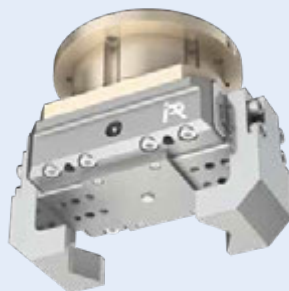
- Universal gripper with a high number of variants
- Optional: gripping force retention
- Variants: dust cover (IP64) and high temperature



IRP

- + Payload up to **95 kg**
- + Gripping force up to **17,200 N**
- + Total stroke from **20 to 64 mm**

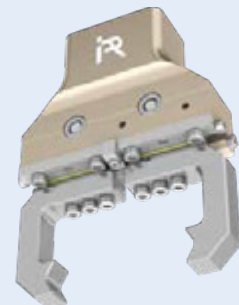
- Robust steel-on-steel guide
- ISO flange for simple mounting to the robot without adapter plate
- Optional: gripping force retention



RP

- + Payload up to **8 kg**
- + Operating pressure from **1.5 bar**
- + Total stroke from **13 to 51 mm**

- Very smooth-running with roller guide
- Enables precise gripping
- High repeatability

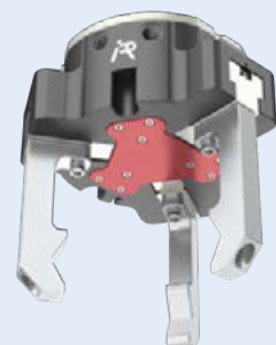


Centric grippers

CGS3

- + Payload up to **35 kg**
- + Gripping force up to **16,000 N**
- + Per-jaw stroke from **2.5 to 25 mm**

- Perfectly suited for gripping round components
- High number of variants
- Optional: gripping force retention and dust cover (IP64)



Make use of the CAD portal online!

In the IPR online portal, you can view your desired product in 3D from all sides and compare different sizes and versions. You will also find all technical data and drawings in one place. You also have the possibility to contact us directly. And in case you need the data offline, you can download CAD and drawing data as well as data sheets for each product.

Try it now: <https://ipr.partcommunity.com>



MGS

- + Payload up to **1.45 kg**
- + Tare weight from **25 g**
- + Total stroke from **1.5 to 14 mm**

- Precise gripper for small components
- High power density with compact dimensions and low weight
- Optional: gripping force retention



RPW

- + Payload up to **15 kg**
- + Gripping force up to **1,550 N**
- + Total stroke from **19 to 114 mm**

- Sealed rod guide
- Large stroke with compact dimensions
- Robust and durable



Customizing

- + Tailored solution competence
- + Our solutions perfectly customized to your needs

- Our various teams of experts implement the process from the development of ideas construction to production.
- Development of customized individual solutions based on our standard program.
- Shortening of construction and delivery times – the costs are lower.

Angular grippers

WGS

- + Payload up to **8 kg**
- + Gripping torque up to **437 Nm**
- + Opening angle (total): **30°**

- Developed for rapid gripping of various components
- Durable, robust construction
- Optional: gripping force retention and stroke limitation



CGS2 – The 2-jaw universal parallel gripper

Key advantages of our CGS2 series

Fields of application

The gripper series was developed for universal use. From clean assembly applications to dirt-prone applications in forges and foundries, there is a suitable gripper version for every task.

Function description

The vertical stroke movement of the oval piston is translated via wedge hook into a horizontally synchronized movement of the jaws. The application of compressed air to the pneumatic piston thus causes the gripper to open and close. The optional spring enables the gripping force to be maintained proportionally in the event of a drop in compressed air.

CGS | COMPATIBLE GRIPPER SERIES

- + Various sizes
- + Precise and reliable use
- + Light to heaviest handling weights
- + Maximum gripping forces

MORE VERSATILE

GREATER VALUE

TOUGHER

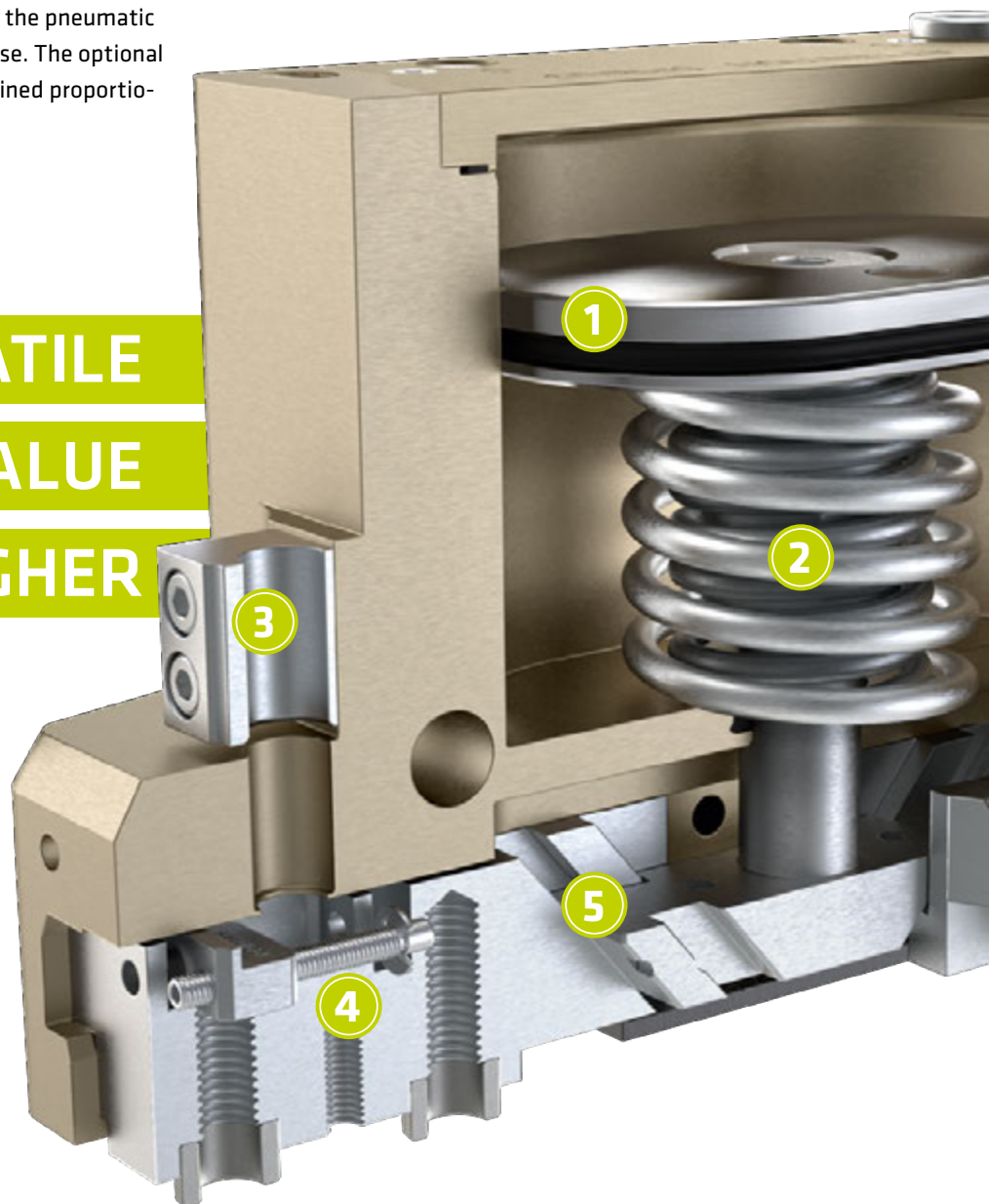


Figure shows CGS2-125-1-FA

Product advantages & benefits at a glance

- Compatible with standard universal grippers from the competition
- Maximum guide length of the base jaw (suitable for longer gripper fingers)
- Lubricant pockets as grease reservoirs (leads to extended maintenance intervals)
- Up to 15 % lighter than comparable universal grippers due to weight-optimized design
- Optimized position measuring system for safe handling, type recognition and quality control
- Insensitive to crashes, dust and dirt due to the tried and tested T-slot guide
- Oval piston for maximum gripping force (maximum power density, minimum interference contour)
- Customary third-party sensors permissible (standardization of the customers can be matched)



1

Oval piston

The effective area of the piston has been optimized for the geometry of the base body to allow maximum gripping forces.

2

Spring for gripping force retention (depending on version)

Due to a spring installed in the piston chamber, the gripping force can be maintained even in the event of a drop in compressed air pressure.

3

Sensor holder included as standard

Inductive sensors for monitoring the jaw stroke can be mounted in the aluminum blocks below the jaw guides. In addition to that, commercially available magnetic sensors can be inserted in the C-slots in the housing.

4

Cam adjustment made of robust steel

The exact jaw position at which the inductive sensors output a signal for stroke sensing can be defined stepless with standard tools.

5

Backdrop / wedge hook

Thanks to an optimized design of the wedge hook the force of the piston is transmitted to the jaws with low loss and low wear.

6

Lubricant pockets

Pockets in the sides of the jaws allow permanent storage of grease and thus maintenance-free application under normal conditions.

7

Mounting holes for lateral mounting

Different mounting options for fastening of the gripper offer maximum flexibility for any application.

The sizes of the CGS2 series

With a high number of variants
and versatile application possibilities



Page 16-17

CGS2-40

up to **0.64 kg**



Page 18-19

CGS2-50

up to **1.70 kg**



Page 20-21

CGS2-64

up to **3.60 kg**



Page 22-23

CGS2-80

up to **4.95 kg**



Page 24-25

CGS2-100

up to **9.05 kg**



Page 26-27

CGS2-125

up to **14.75 kg**

More versatile. Greater value. Tougher.

With handling weights
from 0.4 kg up to 95.6 kg



Page 28-29

CGS2-160

up to **21.40 kg**



Page 30-31

CGS2-200

up to **29.40 kg**



Page 32-33

CGS2-240

up to **41.84 kg**



Page 34-35

CGS2-300

up to **55.35 kg**



Page 36-37

CGS2-380

up to **95.60 kg**

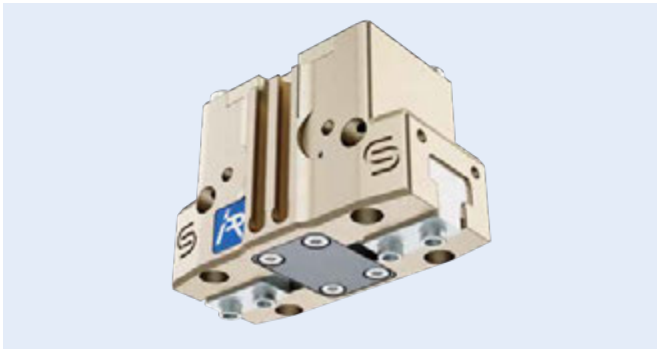
2-jaw universal parallel gripper

CGS2-40

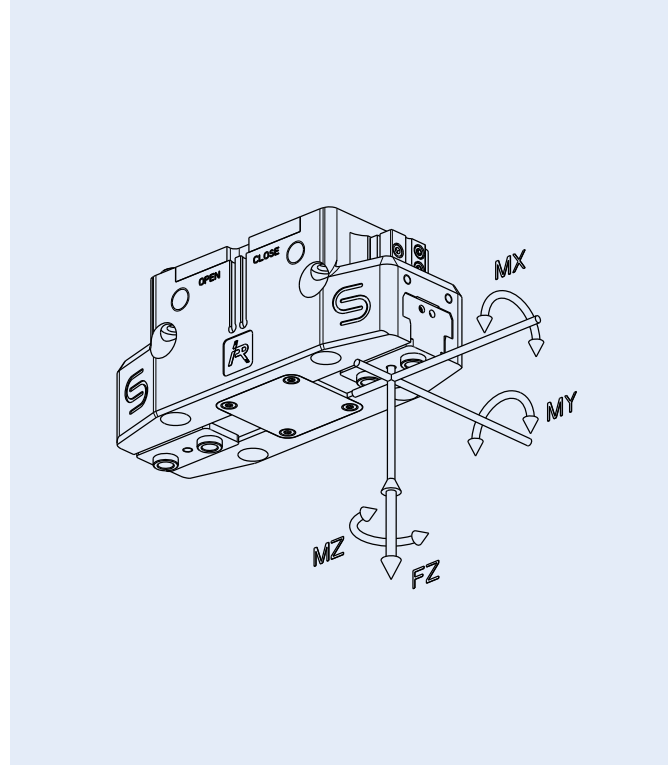
CGS2-40



CGS2-40 with spring (-FA/-FI)



Forces and moments



Technical data

Type	CGS2-40	CGS2-40-FA	CGS2-40-FI
Item no.	150000976	150000977	150000978
Recommended payload	0.64 kg	0.64 kg	0.64 kg
Gripping force external gripping	117 N	178 N	75 N
Gripping force internal gripping	128 N	85 N	188 N
Min. spring force	-	42 N	42 N
Stroke per jaw	3 mm	3 mm	3 mm
Max. finger length	70 mm	65 mm	65 mm
Max. permissible mass per finger	0.12 kg	0.12 kg	0.12 kg
Repeatability	+/-0.01 mm	+/-0.01 mm	+/-0.01 mm
Weight	0.09 kg	0.11 kg	0.11 kg
Max. moment Mx	10 Nm	10 Nm	10 Nm
Max. moment My	12 Nm	12 Nm	12 Nm
Max. moment Mz	5 Nm	5 Nm	5 Nm
Max. tensile/compressive force Fz, Fd	250 N	250 N	250 N
Opening time	0.015 s	0.03 s	0.015 s
Closing time	0.015 s	0.015 s	0.03 s
Air consumption per cycle	0.01 l	0.01 l	0.01 l
Connection thread open/close	M3	M3	M3
Operating pressure	3 ... 8 bar	4 ... 6.5 bar	4 ... 6.5 bar
Max. seal air pressure	1 bar	1 bar	1 bar
Ambient temperature	+5 ... +80 °C	+5 ... +80 °C	+5 ... +80 °C
Length x width x height [mm]	50 x 24 x 24.7	50 x 24 x 33.7	50 x 24 x 33.7
Customs tariff number (CTN)	84799070	84799070	84799070

All data apply at 6 bar nominal operating pressure

Versions

For special environmental conditions

CGS2-40 with dust cover (similar to protection class IP64)

Type	CGS2-40-SA	CGS2-40-FA-SA	CGS2-40-FI-SA
Item no.	150001019	150001020	150001021
Weight	0.13 kg	0.15 kg	0.15 kg
L x W x H [mm]	64 x 24 x 28.7	64 x 24 x 37.7	64 x 24 x 37.7

Other technical data correspond to the basic variants (see table on the left).



CGS2-40 as high temperature version

Type	CGS2-40-VH	CGS2-40-FA-VH	CGS2-40-FI-VH
Item no.	150001022	150001023	150001024
Max. operating temperature	+130 °C	+130 °C	+130 °C

Other technical data correspond to the basic variants (see table on the left).



Suitable accessories

Type	Sensors	Double check valves	Gripper pads	Dust cover
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2-jaw universal parallel gripper

CGS2-50

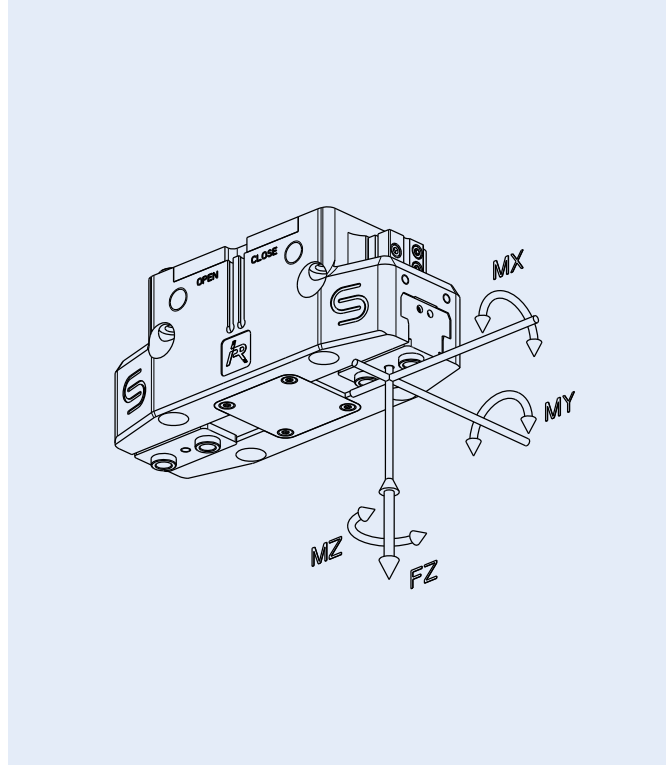
CGS2-50



CGS2-50 with spring (-FA/-FI)



Forces and moments



Technical data

Type	CGS2-50-1	CGS2-50-1-FA	CGS2-50-1-FI	CGS2-50-2	CGS2-50-2-FA	CGS2-50-2-FI
Item no.	150000925	150000927	150000928	150000926	150000929	150000930
Recommended payload	0.80 kg	0.80 kg	0.80 kg	1.70 kg	1.70 kg	1.70 kg
Gripping force external gripping	163 N	235 N	112 N	356 N	514 N	246 N
Gripping force internal gripping	177 N	127 N	250 N	387 N	277 N	546 N
Min. spring force	-	50 N	50 N	-	110 N	110 N
Stroke per jaw	4 mm	4 mm	4 mm	2 mm	2 mm	2 mm
Max. finger length	85 mm	80 mm	80 mm	80 mm	75 mm	75 mm
Max. permissible mass per finger	0.20 kg	0.20 kg	0.20 kg	0.20 kg	0.20 kg	0.20 kg
Repeatability	+/-0.01 mm	+/-0.01 mm	+/-0.01 mm	+/-0.01 mm	+/-0.01 mm	+/-0.01 mm
Weight	0.16 kg	0.21 kg	0.22 kg	0.17 kg	0.22 kg	0.22 kg
Max. moment Mx	20 Nm	20 Nm	20 Nm	20 Nm	20 Nm	20 Nm
Max. moment My	25 Nm	25 Nm	25 Nm	25 Nm	25 Nm	25 Nm
Max. moment Mz	15 Nm	15 Nm	15 Nm	15 Nm	15 Nm	15 Nm
Max. tensile/compressive force Fz, Fd	650 N	650 N	650 N	650 N	650 N	650 N
Opening time	0.02 s	0.03 s	0.02 s	0.02 s	0.03 s	0.02 s
Closing time	0.02 s	0.02 s	0.03 s	0.02 s	0.02 s	0.03 s
Air consumption per cycle	0.02 l	0.02 l	0.02 l	0.02 l	0.02 l	0.02 l
Connection thread open/close	M5	M5	M5	M5	M5	M5
Operating pressure	3 ... 8 bar	4 ... 6.5 bar	4 ... 6.5 bar	3 ... 8 bar	4 ... 6.5 bar	4 ... 6.5 bar
Max. seal air pressure	1 bar	1 bar	1 bar	1 bar	1 bar	1 bar
Ambient temperature	+5 ... +80 °C	+5 ... +80 °C	+5 ... +80 °C	+5 ... +80 °C	+5 ... +80 °C	+5 ... +80 °C
Length x width x height [mm]	65 x 30 x 31	65 x 30 x 47	65 x 30 x 47	65 x 30 x 31	65 x 30 x 47	65 x 30 x 47
Customs tariff number (CTN)	84799070	84799070	84799070	84799070	84799070	84799070

All data apply at 6 bar nominal operating pressure

Versions

For special environmental conditions

CGS2-50 with dust cover (similar to protection class IP64)

Type	CGS2-50-1-SA	CGS2-50-1-FA-SA	CGS2-50-1-FI-SA
Item no.	150001039	150001041	150001042
Weight	0.23 kg	0.28 kg	0.29 kg
L x W x H [mm]	83 x 30 x 35.5	83 x 30 x 51.5	83 x 30 x 51.5
Type	CGS2-50-2-SA	CGS2-50-2-FA-SA	CGS2-50-2-FI-SA
Item no.	150001040	150001043	150001044
Weight	0.24 kg	0.29 kg	0.29 kg
L x W x H [mm]	83 x 30 x 35.5	83 x 30 x 51.5	83 x 30 x 51.5

Other technical data correspond to the basic variants (see table on the left).



CGS2-50 as high temperature version

Type	CGS2-50-1-VH	CGS2-50-1-FA-VH	CGS2-50-1-FI-VH
Item no.	150001047	150001049	150001050
Max. operating temperature	+130 °C	+130 °C	+130 °C
Type	CGS2-50-2-VH	CGS2-50-2-FA-VH	CGS2-50-2-FI-VH
Item no.	150001048	150001051	150001052
Max. operating temperature	+130 °C	+130 °C	+130 °C

Other technical data correspond to the basic variants (see table on the left).



Suitable accessories

Type	Sensors	Double check valves	Gripper pads	Dust cover
Further information	Page 117	Page 122	Page 123	Page 125



2-jaw universal parallel gripper

CGS2-64

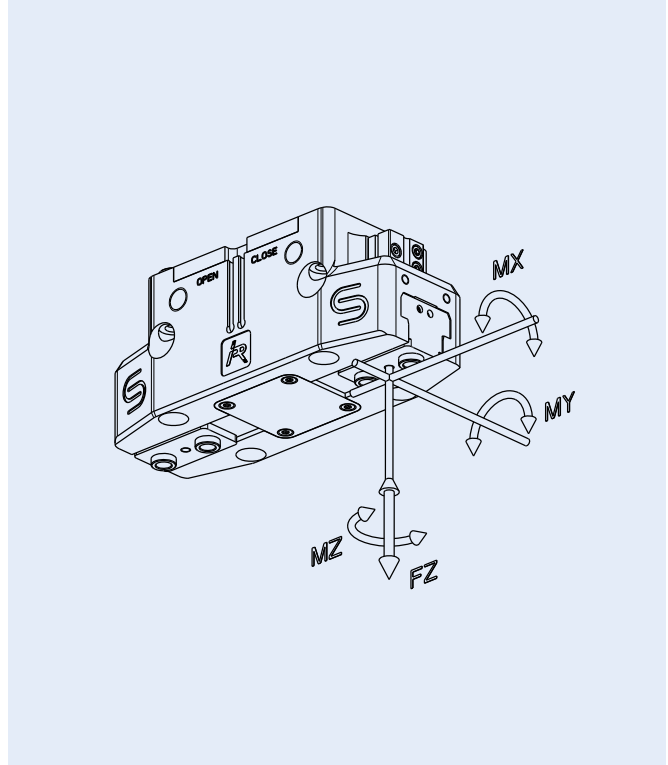
CGS2-64



CGS2-64 with spring (-FA/-FI)



Forces and moments



Technical data

Type	CGS2-64-1	CGS2-64-1-FA	CGS2-64-1-FI	CGS2-64-2	CGS2-64-2-FA	CGS2-64-2-FI
Item no.	150000913	150000915	150000916	150000914	150000917	150000918
Recommended payload	1.50 kg	1.50 kg	1.50 kg	3.60 kg	3.60 kg	3.60 kg
Gripping force external gripping	295 N	446 N	195 N	600 N	907 N	396 N
Gripping force internal gripping	326 N	225 N	477 N	662 N	458 N	970 N
Min. spring force	-	100 N	100 N	-	204 N	204 N
Stroke per jaw	6 mm	6 mm	6 mm	3 mm	3 mm	3 mm
Max. finger length	105 mm	95 mm	95 mm	95 mm	90 mm	90 mm
Max. permissible mass per finger	0.40 kg	0.40 kg	0.40 kg	0.40 kg	0.40 kg	0.40 kg
Repeatability	+/-0.01 mm	+/-0.01 mm	+/-0.01 mm	+/-0.01 mm	+/-0.01 mm	+/-0.01 mm
Weight	0.28 kg	0.36 kg	0.36 kg	0.29 kg	0.37 kg	0.37 kg
Max. moment Mx	45 Nm	45 Nm	45 Nm	45 Nm	45 Nm	45 Nm
Max. moment My	60 Nm	60 Nm	60 Nm	60 Nm	60 Nm	60 Nm
Max. moment Mz	40 Nm	40 Nm	40 Nm	40 Nm	40 Nm	40 Nm
Max. tensile/compressive force Fz, Fd	1,300 N	1,300 N	1,300 N	1,300 N	1,300 N	1,300 N
Opening time	0.03 s	0.04 s	0.03 s	0.03 s	0.04 s	0.03 s
Closing time	0.03 s	0.03 s	0.04 s	0.03 s	0.03 s	0.04 s
Air consumption per cycle	0.06 l	0.06 l	0.06 l	0.06 l	0.06 l	0.06 l
Connection thread open/close	M5	M5	M5	M5	M5	M5
Operating pressure	3 ... 8 bar	4 ... 6.5 bar	4 ... 6.5 bar	3 ... 8 bar	4 ... 6.5 bar	4 ... 6.5 bar
Max. seal air pressure	1 bar	1 bar	1 bar	1 bar	1 bar	1 bar
Ambient temperature	+5 ... +80 °C	+5 ... +80 °C	+5 ... +80 °C	+5 ... +80 °C	+5 ... +80 °C	+5 ... +80 °C
Length x width x height [mm]	76 x 36 x 39	76 x 36 x 57	76 x 36 x 57	76 x 36 x 39	76 x 36 x 57	76 x 36 x 57
Customs tariff number (CTN)	84799070	84799070	84799070	84799070	84799070	84799070

All data apply at 6 bar nominal operating pressure

Versions

For special environmental conditions

CGS2-64 with dust cover (similar to protection class IP64)

Type	CGS2-64-1-SA	CGS2-64-1-FA-SA	CGS2-64-1-FI-SA
Item no.	150001027	150001029	150001030
Weight	0.39 kg	0.47 kg	0.47 kg
L x W x H [mm]	94 x 36 x 44.5	94 x 36 x 62.5	94 x 36 x 62.5
Type	CGS2-64-2-SA	CGS2-64-2-FA-SA	CGS2-64-2-FI-SA
Item no.	150001028	150001031	150001032
Weight	0.40 kg	0.48 kg	0.48 kg
L x W x H [mm]	94 x 36 x 44.5	94 x 36 x 62.5	94 x 36 x 62.5

Other technical data correspond to the basic variants (see table on the left).



CGS2-64 as high temperature version

Type	CGS2-64-1-VH	CGS2-64-1-FA-VH	CGS2-64-1-FI-VH
Item no.	150001033	150001035	150001036
Max. operating temperature	+130 °C	+130 °C	+130 °C
Type	CGS2-64-2-VH	CGS2-64-2-FA-VH	CGS2-64-2-FI-VH
Item no.	150001034	150001037	150001038
Max. operating temperature	+130 °C	+130 °C	+130 °C

Other technical data correspond to the basic variants (see table on the left).



Suitable accessories

Type	Sensors	Double check valves	Gripper pads	Dust cover
Further information	Page 117	Page 122	Page 123	Page 125



2-jaw universal parallel gripper

CGS2-80

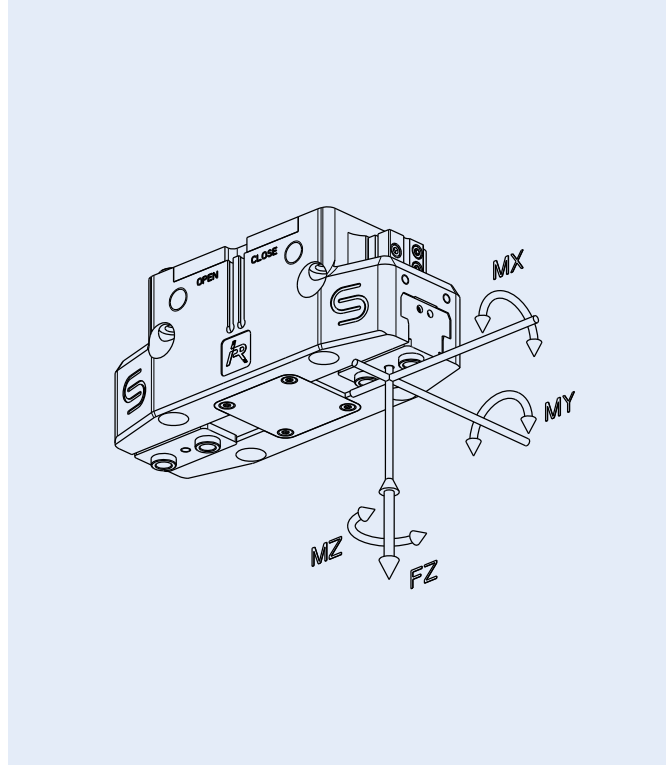
CGS2-80



CGS2-80 with spring (-FA/-FI)



Forces and moments



Technical data

Type	CGS2-80-1	CGS2-80-1-FA	CGS2-80-1-FI	CGS2-80-2	CGS2-80-2-FA	CGS2-80-2-FI
Item no.	150000907	150000909	150000910	150000908	150000911	150000912
Recommended payload	2.25 kg	2.25 kg	2.25 kg	4.95 kg	4.95 kg	4.95 kg
Gripping force external gripping	453 N	709 N	286 N	990 N	1.550 N	626 N
Gripping force internal gripping	493 N	327 N	749 N	1,078 N	714 N	1.638 N
Min. spring force	-	166 N	166 N	-	360 N	360 N
Stroke per jaw	8 mm	8 mm	8 mm	4 mm	4 mm	4 mm
Max. finger length	130 mm	120 mm	120 mm	120 mm	110 mm	110 mm
Max. permissible mass per finger	0.70 kg	0.70 kg	0.70 kg	0.70 kg	0.70 kg	0.70 kg
Repeatability	+/-0.01 mm	+/-0.01 mm	+/-0.01 mm	+/-0.01 mm	+/-0.01 mm	+/-0.01 mm
Weight	0.51 kg	0.64 kg	0.63 kg	0.53 kg	0.66 kg	0.65 kg
Max. moment Mx	60 Nm	60 Nm	60 Nm	60 Nm	60 Nm	60 Nm
Max. moment My	95 Nm	95 Nm	95 Nm	95 Nm	95 Nm	95 Nm
Max. moment Mz	55 Nm	55 Nm	55 Nm	55 Nm	55 Nm	55 Nm
Max. tensile/compressive force Fz, Fd	1,700 N	1,700 N	1,700 N	1,700 N	1,700 N	1,700 N
Opening time	0.04 s	0.05 s	0.03 s	0.04 s	0.05 s	0.03 s
Closing time	0.04 s	0.03 s	0.05 s	0.04 s	0.03 s	0.05 s
Air consumption per cycle	0.12 l	0.12 l	0.12 l	0.13 l	0.13 l	0.13 l
Connection thread open/close	M5	M5	M5	M5	M5	M5
Operating pressure	3 ... 8 bar	4 ... 6.5 bar	4 ... 6.5 bar	3 ... 8 bar	4 ... 6.5 bar	4 ... 6.5 bar
Max. seal air pressure	1 bar	1 bar	1 bar	1 bar	1 bar	1 bar
Ambient temperature	+5 ... +80 °C	+5 ... +80 °C	+5 ... +80 °C	+5 ... +80 °C	+5 ... +80 °C	+5 ... +80 °C
Length x width x height [mm]	96 x 42 x 49	96 x 42 x 67	96 x 42 x 67	96 x 42 x 49	96 x 42 x 67	96 x 42 x 67
Customs tariff number (CTN)	84799070	84799070	84799070	84799070	84799070	84799070

All data apply at 6 bar nominal operating pressure

Versions

For special environmental conditions

CGS2-80 with dust cover (similar to protection class IP64)

Type	CGS2-80-1-SA	CGS2-80-1-FA-SA	CGS2-80-1-FI-SA
Item no.	150001053	150001055	150001056
Weight	0.68 kg	0.81 kg	0.90 kg
L x W x H [mm]	116 x 42 x 54.5	116 x 42 x 72.5	116 x 42 x 72.5
Type	CGS2-80-2-SA	CGS2-80-2-FA-SA	CGS2-80-2-FI-SA
Item no.	150001054	150001057	150001058
Weight	0.70 kg	0.83 kg	0.82 kg
L x W x H [mm]	116 x 42 x 54.5	116 x 42 x 72.5	116 x 42 x 72.5

Other technical data correspond to the basic variants (see table on the left).



CGS2-80 as high temperature version

Type	CGS2-80-1-VH	CGS2-80-1-FA-VH	CGS2-80-1-FI-VH
Item no.	150001059	150001061	150001062
Max. operating temperature	+130 °C	+130 °C	+130 °C
Type	CGS2-80-2-VH	CGS2-80-2-FA-VH	CGS2-80-2-FI-VH
Item no.	150001060	150001063	150001064
Max. operating temperature	+130 °C	+130 °C	+130 °C

Other technical data correspond to the basic variants (see table on the left).



Suitable accessories

Type	Sensors	Double check valves	Gripper pads	Dust cover
Further information	Page 117	Page 122	Page 123	Page 125



2-jaw universal parallel gripper

CGS2-100

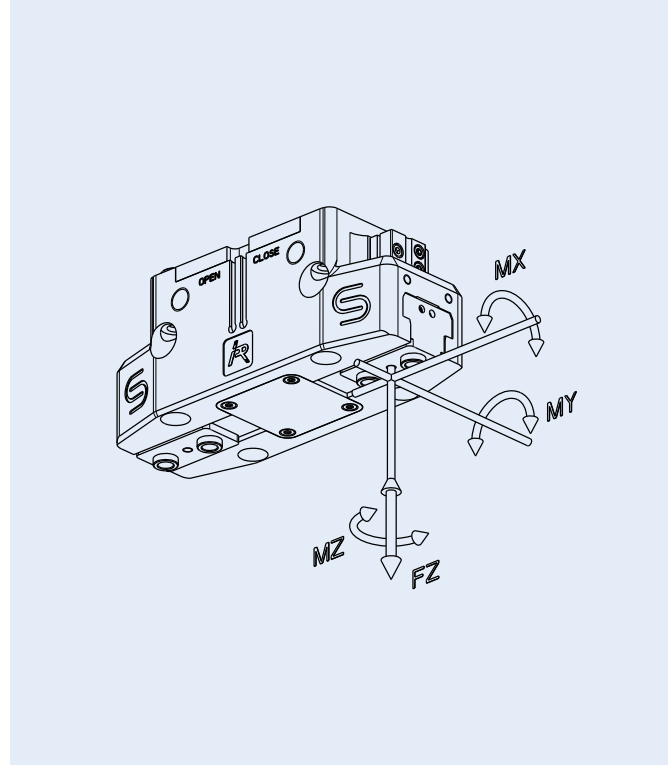
CGS2-100



CGS2-100 with spring (-FA/-FI)



Forces and moments



Technical data

Type	CGS2-100-1	CGS2-100-1-FA	CGS2-100-1-FI	CGS2-100-2	CGS2-100-2-FA	CGS2-100-2-FI
Item no.	150000901	150000903	150000904	150000902	150000905	150000906
Recommended payload	4.10 kg	4.10 kg	4.10 kg	9.05 kg	9.05 kg	9.05 kg
Gripping force external gripping	827 N	1,273 N	545 N	1,808 N	2,782 N	1,192 N
Gripping force internal gripping	885 N	603 N	1,331 N	1,934 N	1,318 N	2,908 N
Min. spring force	-	280 N	280 N	-	615 N	615 N
Stroke per jaw	10 mm	10 mm	10 mm	5 mm	5 mm	5 mm
Max. finger length	170 mm	155 mm	155 mm	155 mm	140 mm	140 mm
Max. permissible mass per finger	1.10 kg	1.10 kg	1.10 kg	1.10 kg	1.10 kg	1.10 kg
Repeatability	+/-0.01 mm	+/-0.01 mm	+/-0.01 mm	+/-0.01 mm	+/-0.01 mm	+/-0.01 mm
Weight	0.80 kg	1.04 kg	1.04 kg	0.83 kg	1.07 kg	1.06 kg
Max. moment Mx	80 Nm	80 Nm	80 Nm	80 Nm	80 Nm	80 Nm
Max. moment My	115 Nm	115 Nm	115 Nm	115 Nm	115 Nm	115 Nm
Max. moment Mz	70 Nm	70 Nm	70 Nm	70 Nm	70 Nm	70 Nm
Max. tensile/compressive force Fz, Fd	2,500 N	2,500 N	2,500 N	2,500 N	2,500 N	2,500 N
Opening time	0.07 s	0.09 s	0.05 s	0.07 s	0.09 s	0.05 s
Closing time	0.07 s	0.05 s	0.09 s	0.07 s	0.05 s	0.09 s
Air consumption per cycle	0.28 l	0.28 l	0.28 l	0.30 l	0.30 l	0.30 l
Connection thread open/close	G1/8"	G1/8"	G1/8"	G1/8"	G1/8"	G1/8"
Operating pressure	3 ... 8 bar	4 ... 6.5 bar	4 ... 6.5 bar	3 ... 8 bar	4 ... 6.5 bar	4 ... 6.5 bar
Max. seal air pressure	1	1	1	1	1	1
Ambient temperature	+5 ... +80 °C	+5 ... +80 °C	+5 ... +80 °C	+5 ... +80 °C	+5 ... +80 °C	+5 ... +80 °C
Length x width x height [mm]	120 x 50 x 55	120 x 50 x 81	120 x 50 x 81	120 x 50 x 55	120 x 50 x 81	120 x 50 x 81
Customs tariff number (CTN)	84799070	84799070	84799070	84799070	84799070	84799070

All data apply at 6 bar nominal operating pressure

Versions

For special environmental conditions

CGS2-100 with dust cover (similar to protection class IP64)

Type	CGS2-100-1-SA	CGS2-100-1-FA-SA	CGS2-100-1-FI-SA
Item no.	150001067	150001069	150001070
Weight	1.07 kg	1.31 kg	1.31 kg
L x W x H [mm]	143 x 50 x 61.5	143 x 50 x 87.5	120 x 50 x 81
Type	CGS2-100-2-SA	CGS2-100-2-FA-SA	CGS2-100-2-FI-SA
Item no.	150001068	150001071	150001072
Weight	1.10 kg	1.34 kg	1.33 kg
L x W x H [mm]	143 x 50 x 61.5	143 x 50 x 87.5	143 x 50 x 87.5

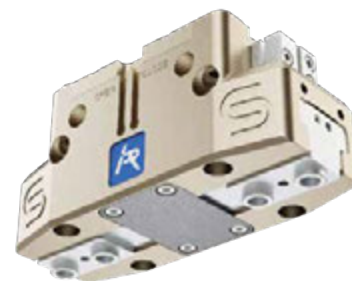
Other technical data correspond to the basic variants (see table on the left).



CGS2-100 as high temperature version

Type	CGS2-100-1-VH	CGS2-100-1-FA-VH	CGS2-100-1-FI-VH
Item no.	150001073	150001075	150001076
Max. operating temperature	+130 °C	+130 °C	+130 °C
Type	CGS2-100-2-VH	CGS2-100-2-FA-VH	CGS2-100-2-FI-VH
Item no.	150001074	150001077	150001078
Max. operating temperature	+130 °C	+130 °C	+130 °C

Other technical data correspond to the basic variants (see table on the left).



Suitable accessories

Type	Sensors	Double check valves	Gripper pads	Dust cover
Further information	Page 117	Page 122	Page 123	Page 125



2-jaw universal parallel gripper

CGS2-125

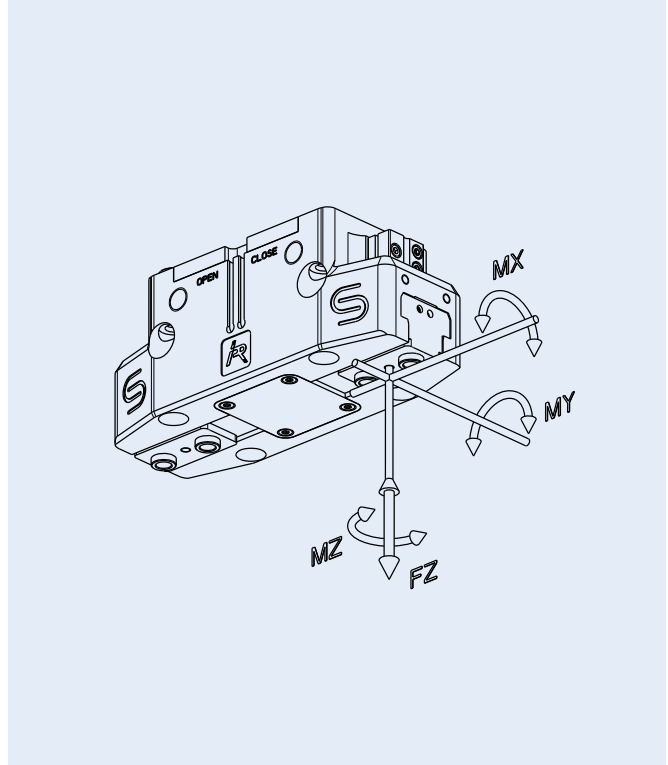
CGS2-125



CGS2-125 with spring (-FA/-FI)



Forces and moments



Technical data

Type	CGS2-125-1	CGS2-125-1-FA	CGS2-125-1-FI	CGS2-125-2	CGS2-125-2-FA	CGS2-125-2-FI
Item no.	150000893	150000895	150000896	150000894	150000897	150000898
Recommended payload	6.65 kg	6.65 kg	6.65 kg	14.75 kg	14.75 kg	14.75 kg
Gripping force external gripping	1,333 N	2,087 N	790 N	2,914 N	4,562 N	1,727 N
Gripping force internal gripping	1,391 N	848 N	2,145 N	3,040 N	1,854 N	4,688 N
Min. spring force	-	543 N	543 N	-	1,187 N	1,187 N
Stroke per jaw	13 mm	13 mm	13 mm	6 mm	6 mm	6 mm
Max. finger length	210 mm	195 mm	195 mm	195 mm	180 mm	180 mm
Max. permissible mass per finger	2.40 kg	2.40 kg	2.40 kg	2.40 kg	2.40 kg	2.40 kg
Repeatability	+/-0.01 mm	+/-0.01 mm	+/-0.01 mm	+/-0.01 mm	+/-0.01 mm	+/-0.01 mm
Weight	1.32 kg	1.72 kg	1.71 kg	1.37 kg	1.76 kg	1.76 kg
Max. moment Mx	120 Nm	120 Nm	120 Nm	120 Nm	120 Nm	120 Nm
Max. moment My	145 Nm	145 Nm	145 Nm	145 Nm	145 Nm	145 Nm
Max. moment Mz	100 Nm	100 Nm	100 Nm	100 Nm	100 Nm	100 Nm
Max. tensile/compressive force Fz, Fd	3,150 N	3,150 N	3,150 N	3,150 N	3,150 N	3,150 N
Opening time	0.09 s	0.11 s	0.07 s	0.09 s	0.11 s	0.07 s
Closing time	0.09 s	0.07 s	0.11 s	0.09 s	0.07 s	0.11 s
Air consumption per cycle	0.58 l	0.58 l	0.58 l	0.58 l	0.58 l	0.58 l
Connection thread open/close	G1/8"	G1/8"	G1/8"	G1/8"	G1/8"	G1/8"
Operating pressure	3 ... 8 bar	4 ... 6.5 bar	4 ... 6.5 bar	3 ... 8 bar	4 ... 6.5 bar	4 ... 6.5 bar
Max. seal air pressure	1 bar	1 bar	1 bar	1 bar	1 bar	1 bar
Ambient temperature	+5 ... +80 °C	+5 ... +80 °C	+5 ... +80 °C	+5 ... +80 °C	+5 ... +80 °C	+5 ... +80 °C
Length x width x height [mm]	151 x 60 x 63	151 x 60 x 93	151 x 60 x 93	151 x 60 x 63	151 x 60 x 93	151 x 60 x 93
Customs tariff number (CTN)	84799070	84799070	84799070	84799070	84799070	84799070

All data apply at 6 bar nominal operating pressure

Versions

For special environmental conditions

CGS2-125 with dust cover (similar to protection class IP64)

Type	CGS2-125-1-SA	CGS2-125-1-FA-SA	CGS2-125-1-FI-SA
Item no.	150001006	150001008	150001009
Weight	1.68 kg	2.08 kg	2.07 kg
L x W x H [mm]	176 x 60 x 69.5	176 x 60 x 99.5	176 x 60 x 99.5
Type	CGS2-125-2-SA	CGS2-125-2-FA-SA	CGS2-125-2-FI-SA
Item no.	150001007	150001010	150001011
Weight	1.73 kg	2.12 kg	2.12 kg
L x W x H [mm]	176 x 60 x 69.5	176 x 60 x 99.5	176 x 60 x 99.5

Other technical data correspond to the basic variants (see table on the left).



CGS2-125 as high temperature version

Type	CGS2-125-1-VH	CGS2-125-1-FA-VH	CGS2-125-1-FI-VH
Item no.	150001013	150001015	150001016
Max. operating temperature	+130 °C	+130 °C	+130 °C
Type	CGS2-125-2-VH	CGS2-125-2-FA-VH	CGS2-125-2-FI-VH
Item no.	150001014	150001017	150001018
Max. operating temperature	+130 °C	+130 °C	+130 °C

Other technical data correspond to the basic variants (see table on the left).



Suitable accessories

Type	Sensors	Double check valves	Gripper pads	Dust cover
Further information	Page 117	Page 122	Page 123	Page 125



2-jaw universal parallel gripper

CGS2-160

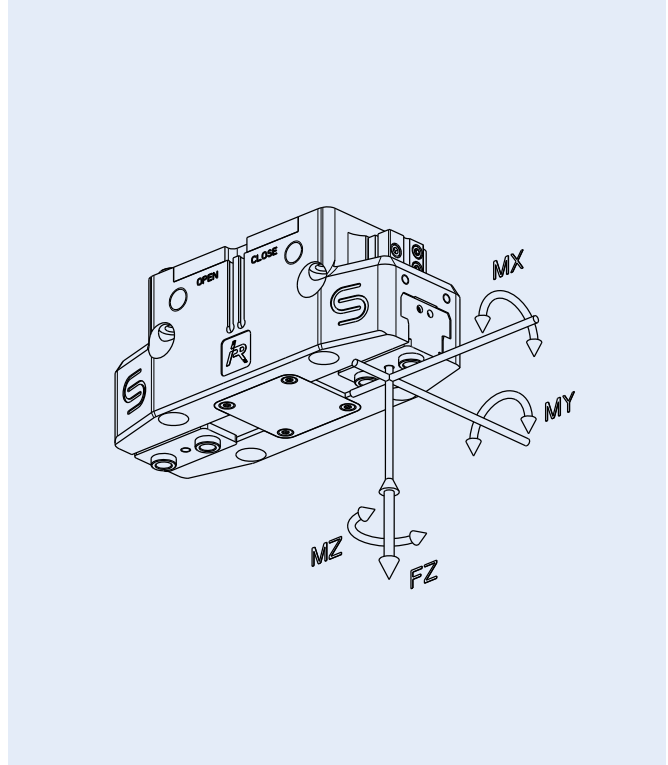
CGS2-160



CGS2-160 with spring (-FA/-FI)



Forces and moments



Technical data

Type	CGS2-160-1	CGS2-160-1-FA	CGS2-160-1-FI	CGS2-160-2	CGS2-160-2-FA	CGS2-160-2-FI
Item no.	150000956	150000958	150000959	150000957	150000960	150000961
Recommended payload	9.80 kg	9.80 kg	9.80 kg	21.40 kg	21.40 kg	21.40 kg
Gripping force external gripping	1,960 N	2,876 N	1,345 N	4,284 N	6,287 N	2,941 N
Gripping force internal gripping	2,090 N	1,476 N	3,006 N	4,569 N	3,226 N	6,572 N
Min. spring force	-	615 N	615 N	-	1,344 N	1,344 N
Stroke per jaw	16 mm	16 mm	16 mm	8 mm	8 mm	8 mm
Max. finger length	255 mm	235 mm	235 mm	235 mm	225 mm	225 mm
Max. permissible mass per finger	3.80 kg	3.80 kg	3.80 kg	3.80 kg	3.80 kg	3.80 kg
Repeatability	+/-0.01 mm	+/-0.01 mm	+/-0.01 mm	+/-0.01 mm	+/-0.01 mm	+/-0.01 mm
Weight	2.78 kg	3.58 kg	3.58 kg	2.89 kg	3.68 kg	3.68 kg
Max. moment Mx	190 Nm	190 Nm	190 Nm	190 Nm	190 Nm	190 Nm
Max. moment My	180 Nm	180 Nm	180 Nm	180 Nm	180 Nm	180 Nm
Max. moment Mz	130 Nm	130 Nm	130 Nm	130 Nm	130 Nm	130 Nm
Max. tensile/compressive force Fz, Fd	4,300 N	4,300 N	4,300 N	4,300 N	4,300 N	4,300 N
Opening time	0.1 s	0.2 s	0.1 s	0.1 s	0.2 s	0.1 s
Closing time	0.1 s	0.1 s	0.2 s	0.1 s	0.1 s	0.2 s
Air consumption per cycle	1.06 l	1.06 l	1.06 l	1.15 l	1.15 l	1.15 l
Connection thread open/close	G1/8"	G1/8"	G1/8"	G1/8"	G1/8"	G1/8"
Operating pressure	3 ... 8 bar	4 ... 6.5 bar	4 ... 6.5 bar	3 ... 8 bar	4 ... 6.5 bar	4 ... 6.5 bar
Max. seal air pressure	1 bar	1 bar	1 bar	1 bar	1 bar	1 bar
Ambient temperature	+5 ... +80 °C	+5 ... +80 °C	+5 ... +80 °C	+5 ... +80 °C	+5 ... +80 °C	+5 ... +80 °C
Length x width x height [mm]	192 x 72 x 77	192 x 72 x 117	192 x 72 x 117	192 x 72 x 77	192 x 72 x 117	192 x 72 x 117
Customs tariff number (CTN)	84799070	84799070	84799070	84799070	84799070	84799070

All data apply at 6 bar nominal operating pressure

Versions

For special environmental conditions

CGS2-160 with dust cover (similar to protection class IP64)

Type	CGS2-160-1-SA	CGS2-160-1-FA-SA	CGS2-160-1-FI-SA
Item no.	150001079	150001081	150001082
Weight	3.56 kg	4.36 kg	4.36 kg
L x W x H [mm]	230 x 72 x 85.5	230 x 72 x 125.5	230 x 72 x 125.5
Type	CGS2-160-2-SA	CGS2-160-2-FA-SA	CGS2-160-2-FI-SA
Item no.	150001080	150001083	150001084
Weight	3.67 kg	4.46 kg	4.46 kg
L x W x H [mm]	230 x 72 x 85.5	230 x 72 x 125.5	230 x 72 x 125.5

Other technical data correspond to the basic variants (see table on the left).



CGS2-160 as high temperature version

Type	CGS2-160-1-VH	CGS2-160-1-FA-VH	CGS2-160-1-FI-VH
Item no.	150001086	150001088	150001089
Max. operating temperature	+130 °C	+130 °C	+130 °C
Type	CGS2-160-2-VH	CGS2-160-2-FA-VH	CGS2-160-2-FI-VH
Item no.	150001087	150001090	150001091
Max. operating temperature	+130 °C	+130 °C	+130 °C

Other technical data correspond to the basic variants (see table on the left).



Suitable accessories

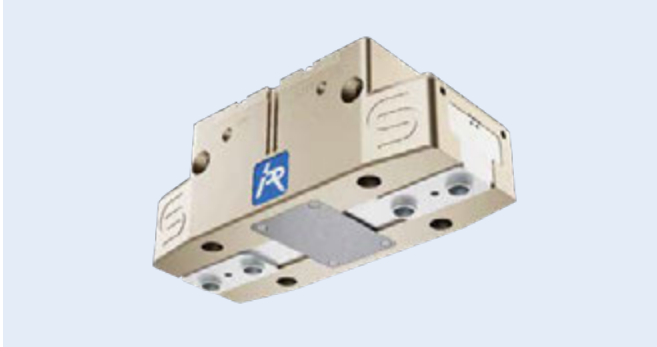
Type	Sensors	Double check valves	Gripper pads	Dust cover
Further information	Page 117	Page 122	Page 123	Page 125



2-jaw universal parallel gripper

CGS2-200

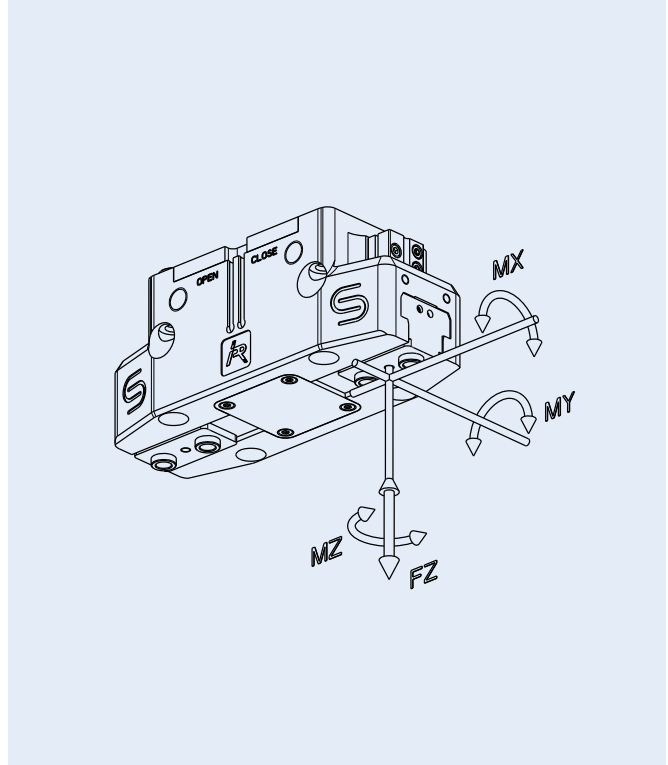
CGS2-200



CGS2-200 with spring (-FA/-FI)



Forces and moments



Technical data

Type	CGS2-200-1	CGS2-200-1-FA	CGS2-200-1-FI	CGS2-200-2	CGS2-200-2-FA	CGS2-200-2-FI
Item no.	150000932	150000934	150000935	150000933	150000936	150000937
Recommended payload	16.30 kg	16.30 kg	16.30 kg	29.40 kg	29.40 kg	29.40 kg
Gripping force external gripping	3,256 N	4,775 N	2,114 N	5,874 N	8,614 N	3,813 N
Gripping force internal gripping	3,467 N	2,325 N	4,986 N	6,255 N	4,194 N	8,995 N
Min. spring force	-	1,143 N	1,143 N	-	2,061 N	2,061 N
Stroke per jaw	25 mm	25 mm	25 mm	14 mm	14 mm	14 mm
Max. finger length	320 mm	275 mm	275 mm	275 mm	230 mm	230 mm
Max. permissible mass per finger	6.50 kg	6.50 kg	6.50 kg	6.50 kg	6.50 kg	6.50 kg
Repeatability	+/-0.01 mm	+/-0.01 mm	+/-0.01 mm	+/-0.01 mm	+/-0.01 mm	+/-0.01 mm
Weight	5.34 kg	7.07 kg	6.95 kg	5.57 kg	7.30 kg	7.18 kg
Max. moment Mx	215 Nm	215 Nm	215 Nm	215 Nm	215 Nm	215 Nm
Max. moment My	200 Nm	200 Nm	200 Nm	200 Nm	200 Nm	200 Nm
Max. moment Mz	150 Nm	150 Nm	150 Nm	150 Nm	150 Nm	150 Nm
Max. tensile/compressive force Fz, Fd	5,000 N	5,000 N	5,000 N	5,000 N	5,000 N	5,000 N
Opening time	0.25 s	0.35 s	0.25 s	0.25 s	0.35 s	0.25 s
Closing time	0.25 s	0.25 s	0.35 s	0.25 s	0.25 s	0.35 s
Air consumption per cycle	2.74 l	2.74 l	2.74 l	2.77 l	2.77 l	2.77 l
Connection thread open/close	G1/8"	G1/8"	G1/8"	G1/8"	G1/8"	G1/8"
Operating pressure	3 ... 8 bar	4 ... 6.5 bar	4 ... 6.5 bar	3 ... 8 bar	4 ... 6.5 bar	4 ... 6.5 bar
Max. seal air pressure	1 bar	1 bar	1 bar	1 bar	1 bar	1 bar
Ambient temperature	+5 ... +80 °C	+5 ... +80 °C	+5 ... +80 °C	+5 ... +80 °C	+5 ... +80 °C	+5 ... +80 °C
Length x width x height [mm]	234 x 100 x 91	234 x 100 x 141	234 x 100 x 141	234 x 100 x 91	234 x 100 x 141	234 x 100 x 141
Customs tariff number (CTN)	84799070	84799070	84799070	84799070	84799070	84799070

All data apply at 6 bar nominal operating pressure

Versions

For special environmental conditions

CGS2-200 with dust cover (similar to protection class IP64)

Type	CGS2-200-1-SA	CGS2-200-1-FA-SA	CGS2-200-1-FI-SA
Item no.	150001093	150001095	150001096
Weight	6.45 kg	8.18 kg	8.06 kg
L x W x H [mm]	254 x 100 x 99.5	254 x 100 x 149.5	254 x 100 x 149.5
Type	CGS2-200-2-SA	CGS2-200-2-FA-SA	CGS2-200-2-FI-SA
Item no.	150001094	150001097	150001098
Weight	6.68 kg	8.41 kg	8.29 kg
L x W x H [mm]	254 x 100 x 99.5	254 x 100 x 149.5	254 x 100 x 149.5

Other technical data correspond to the basic variants (see table on the left).



CGS2-200 as high temperature version

Type	CGS2-200-1-VH	CGS2-200-1-FA-VH	CGS2-200-1-FI-VH
Item no.	150001100	150001102	150001103
Max. operating temperature	+130 °C	+130 °C	+130 °C
Type	CGS2-200-2-VH	CGS2-200-2-FA-VH	CGS2-200-2-FI-VH
Item no.	150001101	150001104	150001105
Max. operating temperature	+130 °C	+130 °C	+130 °C

Other technical data correspond to the basic variants (see table on the left).



Suitable accessories

Type	Sensors	Double check valves	Gripper pads	Dust cover
Further information	Page 117	Page 122	Page 123	Page 125



2-jaw universal parallel gripper

CGS2-240

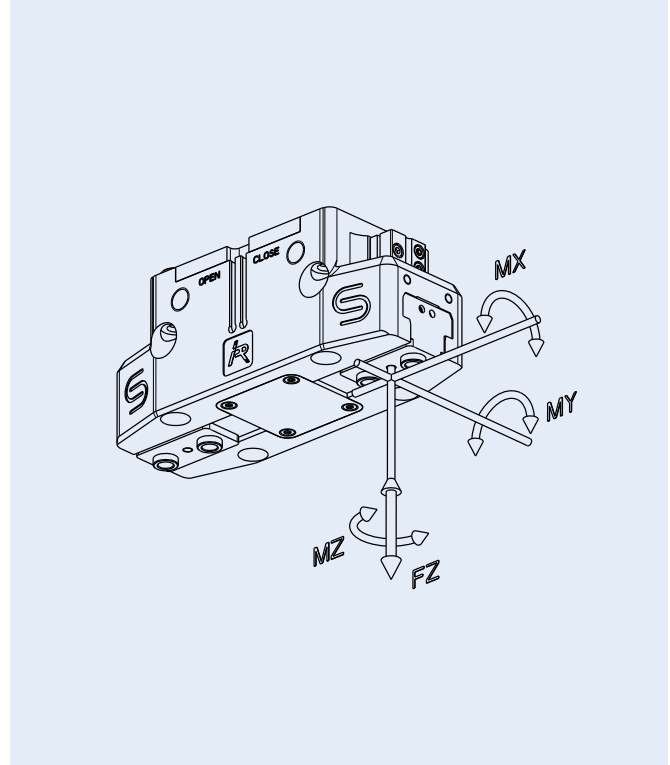
CGS2-240



CGS2-240 with spring (-FA/-FI)



Forces and moments



Technical data

Type	CGS2-240-1	CGS2-240-1-FA	CGS2-240-1-FI	CGS2-240-2	CGS2-240-2-FA	CGS2-240-2-FI
Item no.	150000962	150000964	150000965	150000963	150000966	150000967
Recommended payload	24.10 kg	24.10 kg	24.10 kg	41.84 kg	41.84 kg	41.84 kg
Gripping force external gripping	4,831 N	7,553 N	3,255 N	8,367 N	13,082 N	5,637 N
Gripping force internal gripping	5,095 N	3,519 N	7,818 N	8,825 N	6,096 N	13,540 N
Min. spring force	-	1,575 N	1,575 N	-	2,730 N	2,730 N
Stroke per jaw	30 mm	30 mm	30 mm	17 mm	17 mm	17 mm
Max. finger length	360 mm	310 mm	310 mm	310 mm	270 mm	270 mm
Max. permissible mass per finger	9.50 kg	9.50 kg	9.50 kg	9.50 kg	9.50 kg	9.50 kg
Repeatability	+/-0.01 mm	+/-0.01 mm	+/-0.01 mm	+/-0.01 mm	+/-0.01 mm	+/-0.01 mm
Weight	7.97 kg	10.44 kg	10.48 kg	8.31 kg	10.78 kg	10.83 kg
Max. moment Mx	280 Nm	280 Nm	280 Nm	280 Nm	280 Nm	280 Nm
Max. moment My	250 Nm	250 Nm	250 Nm	250 Nm	250 Nm	250 Nm
Max. moment Mz	200 Nm	200 Nm	200 Nm	200 Nm	200 Nm	200 Nm
Max. tensile/compressive force Fz, Fd	6,200 N	6,200 N	6,200 N	6,200 N	6,200 N	6,200 N
Opening time	0.5 s	0.8 s	0.5 s	0.5 s	0.8 s	0.5 s
Closing time	0.5 s	0.5 s	0.8 s	0.5 s	0.5 s	0.8 s
Air consumption per cycle	4.85 l	4.85 l	4.85 l	4.76 l	4.76 l	4.76 l
Connection thread open/close	G1/8"	G1/8"	G1/8"	G1/8"	G1/8"	G1/8"
Operating pressure	3 ... 8 bar	4 ... 6.5 bar	4 ... 6.5 bar	3 ... 8 bar	4 ... 6.5 bar	4 ... 6.5 bar
Max. seal air pressure	1 bar	1 bar	1 bar	1 bar	1 bar	1 bar
Ambient temperature	+5 ... +80 °C	+5 ... +80 °C	+5 ... +80 °C	+5 ... +80 °C	+5 ... +80 °C	+5 ... +80 °C
Length x width x height [mm]	270 x 115 x 107	270 x 115 x 163.5	270 x 115 x 163.5	270 x 115 x 107	270 x 115 x 163.5	270 x 115 x 163.5
Customs tariff number (CTN)	84799070	84799070	84799070	84799070	84799070	84799070

All data apply at 6 bar nominal operating pressure

Versions

For special environmental conditions

CGS2-240 with dust cover (similar to protection class IP64)

Type	CGS2-240-1-SA	CGS2-240-1-FA-SA	CGS2-240-1-FI-SA
Item no.	150001106	150001108	150001109
Weight	9.38 kg	11.85 kg	11.89 kg
L x W x H [mm]	292 x 115 x 115,5	292 x 115 x 172	292 x 115 x 172
Type	CGS2-240-2-SA	CGS2-240-2-FA-SA	CGS2-240-2-FI-SA
Item no.	150001107	150001110	150001111
Weight	9.72 kg	12.19 kg	12.24 kg
L x W x H [mm]	292 x 115 x 115,5	292 x 115 x 172	292 x 115 x 172

Other technical data correspond to the basic variants (see table on the left).



CGS2-240 as high temperature version

Type	CGS2-240-1-VH	CGS2-240-1-FA-VH	CGS2-240-1-FI-VH
Item no.	150001113	150001115	150001116
Max. operating temperature	+130 °C	+130 °C	+130 °C
Type	CGS2-240-2-VH	CGS2-240-2-FA-VH	CGS2-240-2-FI-VH
Item no.	150001114	150001117	150001118
Max. operating temperature	+130 °C	+130 °C	+130 °C

Other technical data correspond to the basic variants (see table on the left).



Suitable accessories

Type	Sensors	Double check valves	Gripper pads	Dust cover
Further information	Page 117	Page 122	Page 123	Page 125



2-jaw universal parallel gripper

CGS2-300

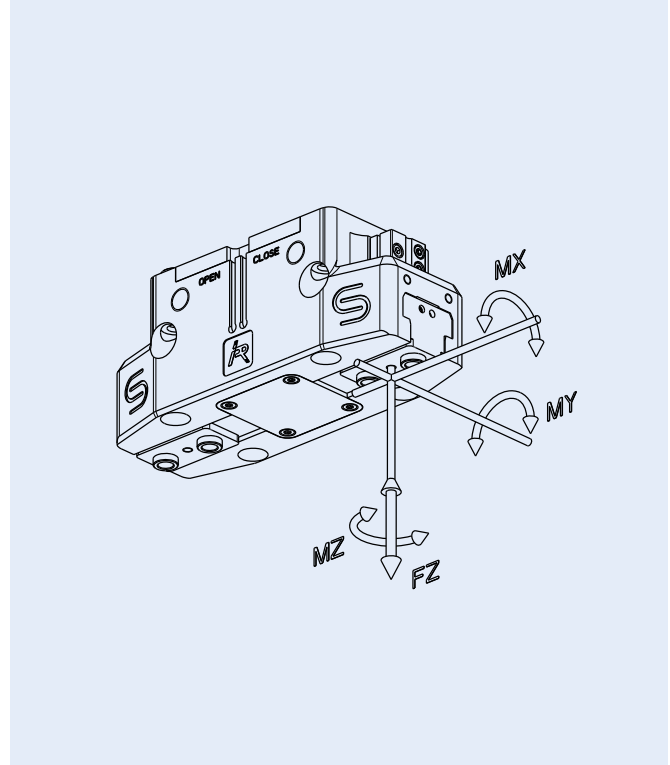
CGS2-300



CGS2-300 with spring (-FA/-FI)



Forces and moments



Technical data

Type	CGS2-300-1	CGS2-300-1-FA	CGS2-300-1-FI	CGS2-300-2	CGS2-300-2-FA	CGS2-300-2-FI
Item no.	150000938	150000940	150000941	150000939	150000942	150000943
Recommended payload	31.95 kg	31.95 kg	31.95 kg	55.35 kg	55.35 kg	55.35 kg
Gripping force external gripping	6,390 N	9,614 N	4,743 N	11,069 N	16,652 N	8,215 N
Gripping force internal gripping	6,736 N	5,089 N	9,960 N	11,667 N	8,814 N	17,251 N
Min. spring force	-	1,648 N	1,648 N	-	2,854 N	2,854 N
Stroke per jaw	35 mm	35 mm	35 mm	20 mm	20 mm	20 mm
Max. finger length	365 mm	315 mm	315 mm	315 mm	265 mm	265 mm
Max. permissible mass per finger	11.50 kg	11.50 kg	11.50 kg	11.50 kg	11.50 kg	11.50 kg
Repeatability	+/-0.01 mm	+/-0.01 mm	+/-0.01 mm	+/-0.01 mm	+/-0.01 mm	+/-0.01 mm
Weight	13.12 kg	16.42 kg	16.31 kg	13.68 kg	16.99 kg	16.88 kg
Max. moment Mx	400 Nm	400 Nm	400 Nm	400 Nm	400 Nm	400 Nm
Max. moment My	400 Nm	400 Nm	400 Nm	400 Nm	400 Nm	400 Nm
Max. moment Mz	250 Nm	250 Nm	250 Nm	250 Nm	250 Nm	250 Nm
Max. tensile/compressive force Fz, Fd	8,000 N	8,000 N	8,000 N	8,000 N	8,000 N	8,000 N
Opening time	0.6 s	0.9 s	0.6 s	0.6 s	0.9 s	0.6 s
Closing time	0.6 s	0.6 s	0.9 s	0.6 s	0.6 s	0.9 s
Air consumption per cycle	7.48 l	7.48 l	7.48 l	7.41 l	7.41 l	7.41 l
Connection thread open/close	G1/4"	G1/4"	G1/4"	G1/4"	G1/4"	G1/4"
Operating pressure	3 ... 8 bar	4 ... 6.5 bar	4 ... 6.5 bar	3 ... 8 bar	4 ... 6.5 bar	4 ... 6.5 bar
Max. seal air pressure	1 bar	1 bar	1 bar	1 bar	1 bar	1 bar
Ambient temperature	+5 ... +80 °C	+5 ... +80 °C	+5 ... +80 °C	+5 ... +80 °C	+5 ... +80 °C	+5 ... +80 °C
Length x width x height [mm]	320 x 140 x 122	320 x 140 x 172	320 x 140 x 172	320 x 140 x 122	320 x 140 x 172	320 x 140 x 172
Customs tariff number (CTN)	84799070	84799070	84799070	84799070	84799070	84799070

All data apply at 6 bar nominal operating pressure

Versions

For special environmental conditions

CGS2-300 with dust cover (similar to protection class IP64)

Type	CGS2-300-1-SA	CGS2-300-1-FA-SA	CGS2-300-1-FI-SA
Item no.	150001132	150001134	150001135
Weight	16.33 kg	19.63 kg	19.52 kg
L x W x H [mm]	348 x 140 x 135,5	348 x 140 x 185,5	348 x 140 x 185,5
Type	CGS2-300-2-SA	CGS2-300-2-FA-SA	CGS2-300-2-FI-SA
Item no.	150001133	150001136	150001137
Weight	16.89 kg	20.20 kg	20.09 kg
L x W x H [mm]	348 x 140 x 135,5	348 x 140 x 185,5	348 x 140 x 185,5

Other technical data correspond to the basic variants (see table on the left).



CGS2-300 as high temperature version

Type	CGS2-300-1-VH	CGS2-300-1-FA-VH	CGS2-300-1-FI-VH
Item no.	150001139	150001141	150001142
Max. operating temperature	+130 °C	+130 °C	+130 °C
Type	CGS2-300-2-VH	CGS2-300-2-FA-VH	CGS2-300-2-FI-VH
Item no.	150001140	150001143	150001144
Max. operating temperature	+130 °C	+130 °C	+130 °C

Other technical data correspond to the basic variants (see table on the left).



Suitable accessories

Type	Sensors	Double check valves	Gripper pads	Dust cover
Further information	Page 117	Page 122	Page 123	Page 125



2-jaw universal parallel gripper

CGS2-380

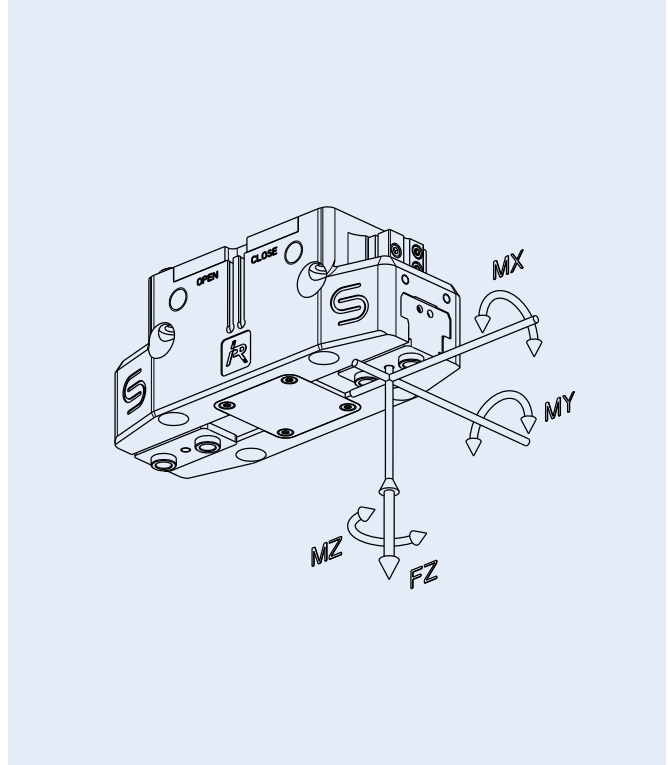
CGS2-380



CGS2-380 with spring (-FA/-FI)



Forces and moments



Technical data

Type	CGS2-380-1	CGS2-380-1-FA	CGS2-380-1-FI	CGS2-380-2	CGS2-380-2-FA	CGS2-380-2-FI
Item no.	150000970	150000972	150000973	150000971	150000974	150000975
Recommended payload	55.20 kg	55.20 kg	55.20 kg	95.60 kg	95.60 kg	95.60 kg
Gripping force external gripping	11,040 N	17,258 N	7,816 N	19,122 N	29,892 N	13,539 N
Gripping force internal gripping	11,580 N	8,357 N	17,798 N	20,057 N	14,474 N	30,827 N
Min. spring force	-	3,220 N	3,220 N	-	5,580 N	5,580 N
Stroke per jaw	45 mm	45 mm	45 mm	26 mm	26 mm	26 mm
Max. finger length	410 mm	360 mm	360 mm	360 mm	310 mm	310 mm
Max. permissible mass per finger	17.00 kg	17.00 kg	17.00 kg	17.00 kg	17.00 kg	17.00 kg
Repeatability	+/-0.01 mm	+/-0.01 mm	+/-0.01 mm	+/-0.01 mm	+/-0.01 mm	+/-0.01 mm
Weight	25.99 kg	33.21 kg	32.09 kg	27.05 kg	34.26 kg	33.15 kg
Max. moment Mx	560 Nm	560 Nm	560 Nm	560 Nm	560 Nm	560 Nm
Max. moment My	560 Nm	560 Nm	560 Nm	560 Nm	560 Nm	560 Nm
Max. moment Mz	370 Nm	370 Nm	370 Nm	370 Nm	370 Nm	370 Nm
Max. tensile/compressive force Fz, Fd	10,000 N	10,000 N	10,000 N	10,000 N	10,000 N	10,000 N
Opening time	0.7 s	1 s	0.7 s	0.7 s	1 s	0.7 s
Closing time	0.7 s	0.7 s	1 s	0.7 s	0.7 s	1 s
Air consumption per cycle	16.58 l	16.58 l	16.58 l	16.59 l	16.59 l	16.59 l
Connection thread open/close	G1/4"	G1/4"	G1/4"	G1/4"	G1/4"	G1/4"
Operating pressure	3 ... 8 bar	4 ... 6.5 bar	4 ... 6.5 bar	3 ... 8 bar	4 ... 6.5 bar	4 ... 6.5 bar
Max. seal air pressure	1 bar	1 bar	1 bar	1 bar	1 bar	1 bar
Ambient temperature	+5 ... +80 °C	+5 ... +80 °C	+5 ... +80 °C	+5 ... +80 °C	+5 ... +80 °C	+5 ... +80 °C
Length x width x height [mm]	410 x 170 x 155	410 x 170 x 226.5	410 x 170 x 226.5	410 x 170 x 155	410 x 170 x 226.5	410 x 170 x 226.5
Customs tariff number (CTN)	84799070	84799070	84799070	84799070	84799070	84799070

All data apply at 6 bar nominal operating pressure

Versions

For special environmental conditions

CGS2-380 with dust cover (similar to protection class IP64)

Type	CGS2-380-1-SA	CGS2-380-1-FA-SA	CGS2-380-1-FI-SA
Item no.	150001119	150001121	150001122
Weight	32.37 kg	39.59 kg	38.47 kg
L x W x H [mm]	440 x 170 x 172.5	440 x 170 x 244.5	440 x 170 x 244.5
Type	CGS2-380-2-SA	CGS2-380-2-FA-SA	CGS2-380-2-FI-SA
Item no.	150001120	150001123	150001124
Weight	33.43 kg	40.64 kg	39.53 kg
L x W x H [mm]	440 x 170 x 172.5	440 x 170 x 244.5	440 x 170 x 244.5

Other technical data correspond to the basic variants (see table on the left).



CGS2-380 as high temperature version

Type	CGS2-380-1-VH	CGS2-380-1-FA-VH	CGS2-380-1-FI-VH
Item no.	150001126	150001128	150001129
Max. operating temperature	+130 °C	+130 °C	+130 °C
Type	CGS2-380-2-VH	CGS2-380-2-FA-VH	CGS2-380-2-FI-VH
Item no.	150001127	150001130	150001131
Max. operating temperature	+130 °C	+130 °C	+130 °C

Other technical data correspond to the basic variants (see table on the left).



Suitable accessories

Type	Sensors	Double check valves	Gripper pads	Dust cover
Further information	Page 117	Page 122	Page 123	Page 125



IRP – The heavy duty gripper

Key advantages of our IRP series

Fields of application

The gripper series was developed for use in heavy-duty applications. From clean heavy-duty applications to demanding applications in foundries and forges to dirt-prone applications with high material stress, there is a suitable variant for every task.

Function description

The vertical stroke movement of the piston is translated via a linkage into a horizontally synchronized movement of the 6 jaws. Compressed air applied to the pneumatic piston causes the gripper to open and close. The optional spring allows the gripping force to be maintained proportionally in the event of a drop in compressed air.

ROBUST
POWERFUL
PRECISE

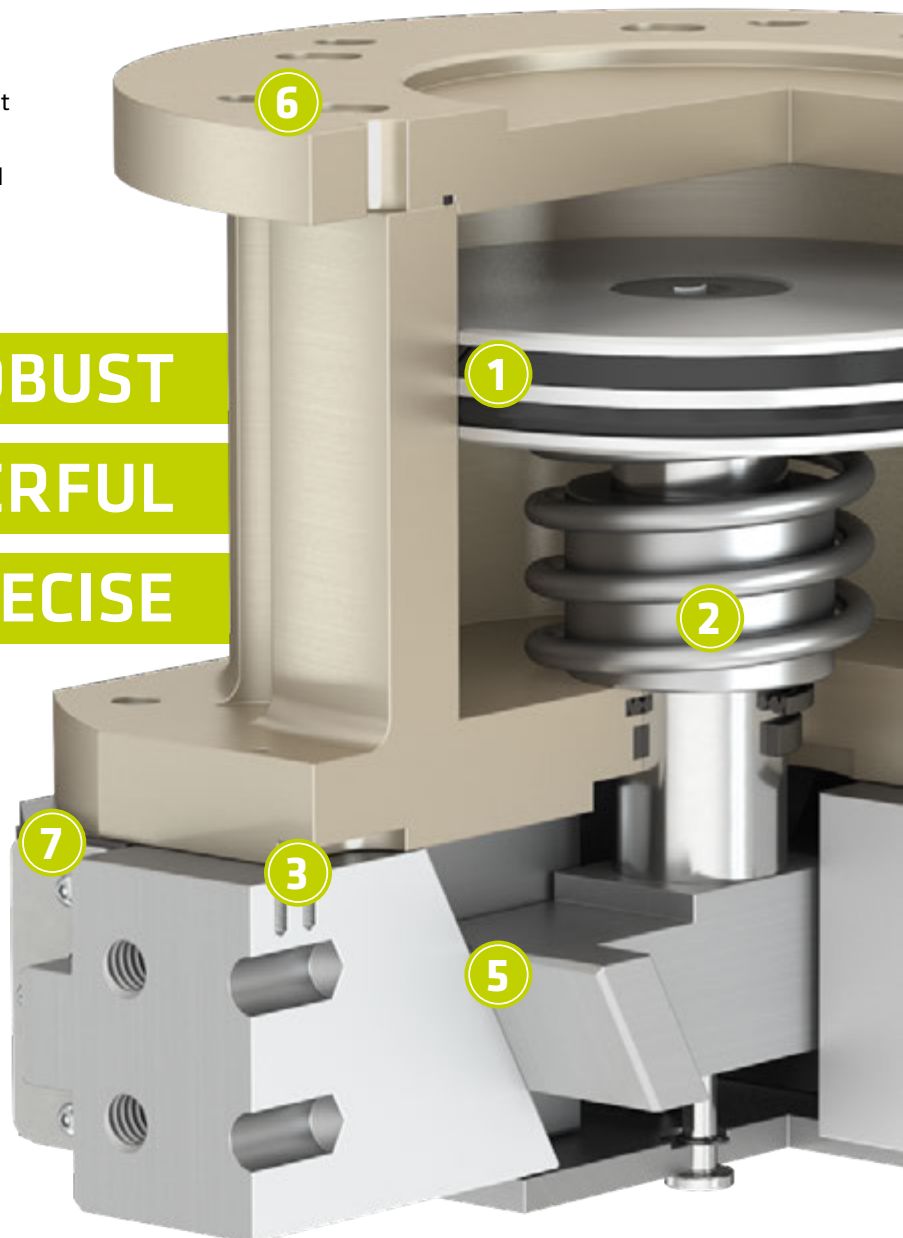


Figure shows IRP-20-ISO-160-FA

Product advantages & benefits at a glance

- Hardened and ground flat tool steel guides
- Special wipers on the guides of the jaws
- Optimized position measuring system for safe handling, type recognition and quality control
- Optional gripping force retention by spring
- Standardized ISO flange for gripper mounting
- Customary third-party sensors permissible (standardization of the customers can be matched)



1

Pneumatic piston

The effective area of the piston has been optimized for the geometry of the base body to allow maximum gripping forces.

2

Spring for gripping force retention (depending on version)

Due to a spring installed in the piston chamber, the gripping force can be maintained even in the event of a drop in compressed air pressure.

3

Preparation for standard sensors

With the aid of optionally available mounting kits, standard sensors can be mounted directly on the gripper. This enables the jaw stroke to be monitored.

4

Ground gripper jaws in steel guide

Precise steel jaws guided in a steel guide ensure high repeatability and allow large forces to be absorbed.

5

Backdrop / wedge hook

Thanks to an optimized design of the wedge hook the force of the piston is transmitted to the jaws with low loss and low wear and enables synchronized movement.

6

ISO flange for gripper mounting

The integration of a screw-on flange according to ISO 9409-1 makes direct mounting on a robot or tool changer possible without an adapter plate.

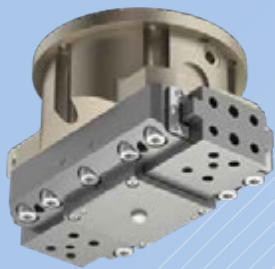
7

Scraper

Special rubber seals on the guides prevent dirt, chips and splash water from entering the guides.

The sizes of the IRP series

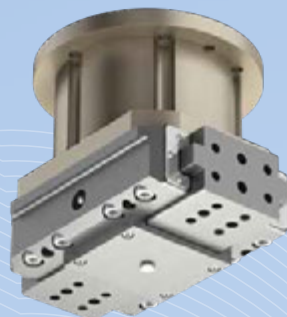
With handling weights
from 9 kg up to 95 kg



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IRP-19

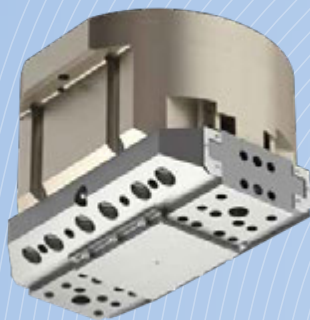
up to **20 kg**



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IRP-20

up to **45 kg**



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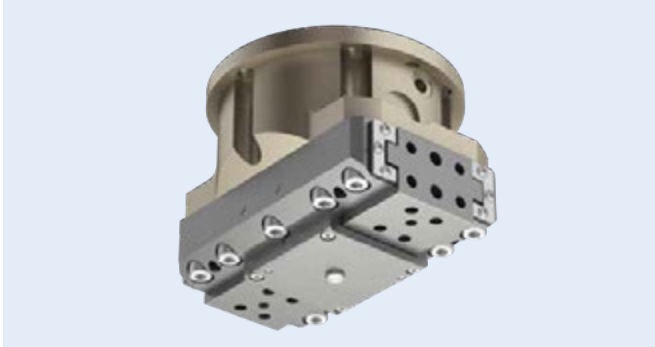
IRP-21

up to **95 kg**

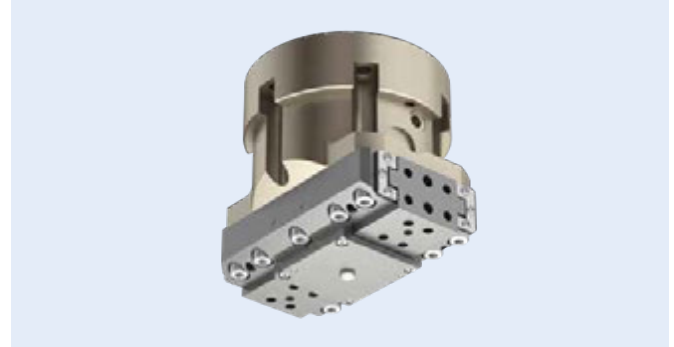
The 2-jaw parallel gripper with ISO-Flange

IRP-19

IRP-19



IRP-19 with spring (-FA/-FI)



Technical data

Type	IRP-19/20-ISO-125	IRP-19/20-ISO-125-FA	IRP-19/20-ISO-125-FI	IRP-19/40-ISO-125	IRP-19/40-ISO-125-FA	IRP-19/40-ISO-125-FI
Item no.	15000351	15000387	15000388	15000092	15000373	15000374
Recommended handling weight	18 kg	20 kg	20 kg	9 kg	12 kg	12 kg
Gripping force external gripping	4,700 N	5,000 N	5,000 N	2,600 N	2,950 N	2,950 N
Stroke per jaw	10 mm	10 mm	10 mm	20 mm	20 mm	20 mm
Max. finger length	280 mm	280 mm	280 mm	280 mm	280 mm	280 mm
Weight	6.8 kg	7.9 kg	7.9 kg	6.8 kg	7.9 kg	7.9 kg
Repeatability	0.03 mm	0.03 mm	0.03 mm	0.03 mm	0.03 mm	0.03 mm
Opening time	0.6 s	0.6 s	0.5 s	0.6 s	0.7 s	0.6 s
Closing time	0.6 s	0.5 s	0.6 s	0.6 s	0.6 s	0.7 s
Air consumption per cycle	2.2 l	2.2 l	2.2 l	2.2 l	2.2 l	2.2 l
Operating pressure	3 ... 8 bar	3 ... 8 bar	3 ... 8 bar	3 ... 8 bar	3 ... 8 bar	3 ... 8 bar
Ambient temperature	+5 ... +80 °C	+5 ... +80 °C	+5 ... +80 °C	+5 ... +80 °C	+5 ... +80 °C	+5 ... +80 °C
Adaption Flange / Pitch Circle Diameter	ISO 125	ISO 125	ISO 125	ISO 125	ISO 125	ISO 125
Length x width x height	166 x 144 x 114.5 mm	166 x 144 x 149 mm	166 x 144 x 149 mm	166 x 144 x 114.5 mm	166 x 144 x 149 mm	166 x 144 x 149 mm
Customs tariff number (CTN)	84799070	84799070	84799070	84799070	84799070	84799070

Suitable accessories

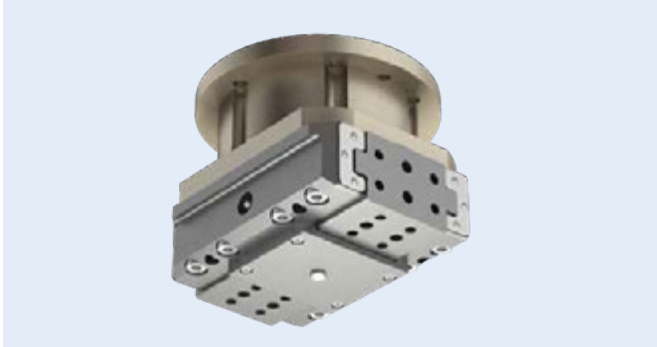
Type	Sensors	Stroke monitoring	Double check valves	Gripper pads
Further information	Page 117	Page 119	Page 122	Page 123



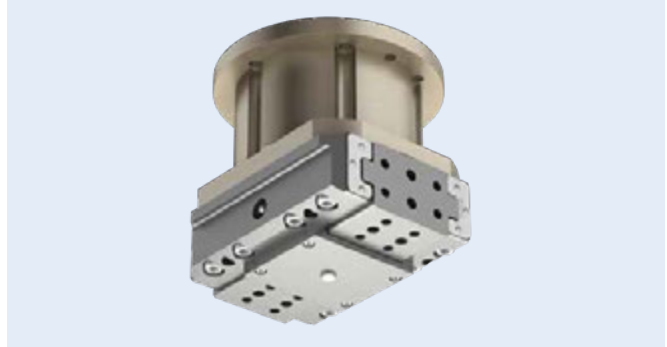
The 2-jaw parallel gripper with ISO-Flange

IRP-20

IRP-20



IRP-20 with spring (-FA/-FI)



Technical data

Type	IRP-20-ISO-160	IRP-20-ISO-160-FA	IRP-20-ISO-160-FI
Item no.	15000349	15000375	15000388
Recommended handling weight	25 kg	45 kg	45 kg
Gripping force external gripping	7,200 N	8,300 N	8,700 N
Stroke per jaw	19 mm	17.75 mm	19 mm
Max. finger length	320 mm	320 mm	320 mm
Weight	18.3 kg	19.5 kg	19.5 kg
Repeatability	0.03 mm	0.03 mm	0.03 mm
Opening time	1 s	1.6 s	1.5 s
Closing time	1 s	1.5 s	1.6 s
Air consumption per cycle	5.3 l	5.3 l	5.3 l
Operating pressure	3 ... 8 bar	3 ... 8 bar	3 ... 8 bar
Ambient temperature	+5 ... +80 °C	+5 ... +80 °C	+5 ... +80 °C
Adaption Flange / Pitch Circle Diameter	ISO 160	ISO 160	ISO 160
Length x width x height	208 x 198 x 59 mm	208 x 198 x 159 mm	208 x 198 x 159 mm
Customs tariff number (CTN)	84799070	84799070	84799070

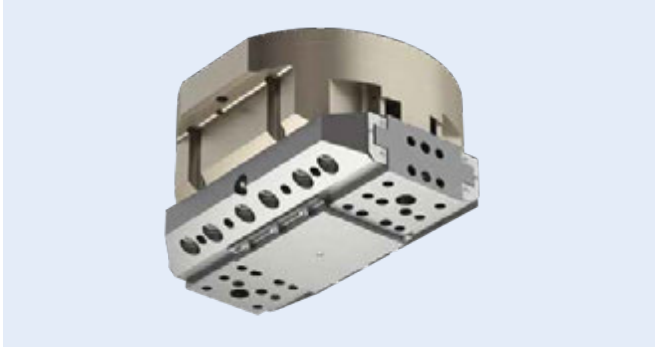
Suitable accessories

Type	Sensors	Stroke monitoring	Double check valves	Gripper pads
Further information	Page 117	Page 119	Page 122	Page 123

The 2-jaw parallel gripper with ISO-Flange

IRP-21

IRP-21



IRP-21 with spring (-FA/-FI)



Technical data

Type	IRP-21/37-ISO-250	IRP-21/37-ISO-250-FA	IRP-21/37-ISO-250-FI	IRP-21/64-ISO-250	IRP-21/64-ISO-250-FA	IRP-21/64-ISO-250-FI
Item no.	15000376	15000377	15000378	15000350	15000383	15000374
Recommended handling weight	80 kg	95 kg	95 kg	70 kg	85 kg	85 kg
Gripping force external gripping	15,400 N	17,200 N	17,600 N	8,900 N	9,900 N	10,100 N
Stroke per jaw	18.5 mm	18.5 mm	18.5 mm	32 mm	32 mm	32 mm
Max. finger length	400 mm	400 mm	400 mm	400 mm	400 mm	400 mm
Weight	37 kg	45 kg	45 kg	37 kg	45 kg	45 kg
Repeatability	0.03 mm	0.03 mm	0.03 mm	0.03 mm	0.03 mm	0.03 mm
Opening time	1.8 s	2.3 s	1.8 s	2.3 s	2.5 s	0.6 s
Closing time	1.8 s	1.8 s	2.3 s	2.3 s	2.5 s	0.7 s
Air consumption per cycle	11.39 l	11.39 l	11.39 l	11.39 l	11.39 l	11.39 l
Operating pressure	3 ... 8 bar	3 ... 8 bar	3 ... 8 bar	3 ... 8 bar	3 ... 8 bar	3 ... 8 bar
Ambient temperature	+5 ... +80 °C	+5 ... +80 °C	+5 ... +80 °C	+5 ... +80 °C	+5 ... +80 °C	+5 ... +80 °C
Adaption Flange / Pitch Circle Diameter	ISO 250	ISO 250	ISO 250	ISO 250	ISO 250	ISO 250
Length x width x height	313 x 270 x 170 mm	313 x 270 x 213 mm	313 x 270 x 213 mm	313 x 270 x 170 mm	313 x 270 x 213 mm	313 x 270 x 213 mm
Customs tariff number (CTN)	84799070	84799070	84799070	84799070	84799070	84799070

Suitable accessories

Type	Sensors	Stroke monitoring	Double check valves	Gripper pads
Further information	Page 117	Page 119	Page 122	Page 123



RP – The sensitive precision gripper

Key advantages of our RP series

Fields of application

The gripper series was developed for use with sensitive workpieces. From high-precision assembly applications to the handling of glass and ceramics to the smallest parts in the electronics industry, there is a suitable variant for every task.

Function description

The vertical stroke movement of the piston is translated into a horizontally synchronized movement of the jaws via a gear rack drive. Pressurizing the pneumatic piston with compressed air causes the gripper to open and close. The jaws are guided by roller bearings in cross roller cages.

SMOOTH-RUNNING

FLEXIBLE

PRECISE



Figure shows RP-100-I

Product advantages & benefits at a glance

- Hardened tool steel guide rails
- Very smooth jaw movement due to roller cages
- Low minimum operating pressure enables handling of delicate workpieces without damage
- Direct power transmission via rack/gear wheel
- Simple sensing of the jaw position via integrated switching flag
- Large opening stroke with small external dimensions

**1**

Pneumatic piston

The effective area of the piston has been optimized for the geometry of the base body to allow maximum gripping forces.

2

Rack and pinion drive

Direct power transmission from the piston to the jaws is ensured by gas-nitrided pinions made of tool steel, which reduces jaw play to a minimum.

3

Preparation for standard sensors

With the aid of optionally available mounting kits, standard sensors can be mounted directly on the gripper. This enables the jaw stroke to be monitored.

4

Roller bearings in crossed roller cages

A roller-guided bearing of the jaws eliminates the “stick-slip effect” and enables jerk-free start-up at low operating pressures as well as precise jaw movements without damaging the workpiece.

5

Guide rails made of hard chromium-plated steel

The high precision and repeatability of the RP grippers is mainly achieved by the know-how of the IPR experts in manufacturing and adjusting the special guide pads.

6

Various mounting options for gripper fingers

Application-specific fingers can be mounted from above using the threaded holes and pin holes provided.

The sizes of the RP series

With handling weights
from 0.1 kg up to 8 kg



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RP-50-I

up to **0.1** kg



Page 47

RP-100-I

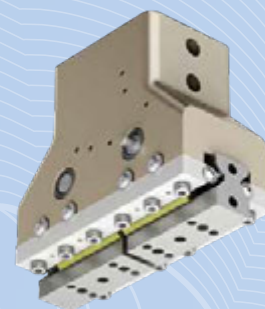
up to **0.2** kg



Page 48

RP-25-I

up to **1.0** kg



Page 48

RP-35-I

up to **5.0** kg



Page 49

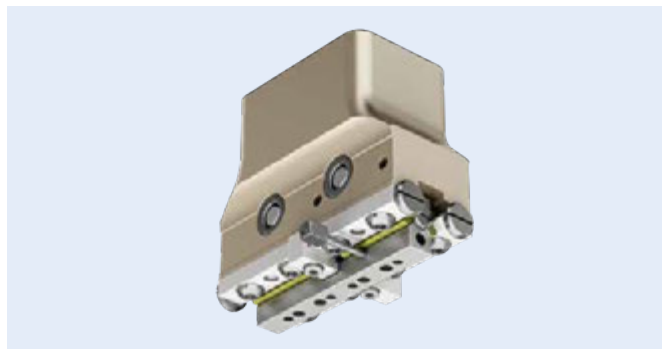
RP-40-I

up to **8.0** kg

2-jaw parallel gripper RP series with roller guide

RP-50-I

RP-50-I



Technical data

Type	RP-50-I
Item no.	15000602
Recommended handling weight	0.1 kg
Gripping force external gripping	90 N
Stroke per jaw	6.35 mm
Max. finger length	80 mm
Weight	0.15 kg
Repeatability	0.01 mm
Opening time	0.14 s
Closing time	0.14 s
Air consumption per cycle	0.023 l
Operating pressure	1.5 ... 8 bar
Ambient temperature	+5 ... +80 °C
Length x width x height	54 x 25.4 x 47 mm
Customs tariff number (CTN)	84799070

RP-100-I

RP-100-I



Technical data

Type	RP-100-I
Item no.	15000341
Recommended handling weight	0.2 kg
Gripping force external gripping	140 N
Stroke per jaw	12.7 mm
Max. finger length	80 mm
Weight	0.23 kg
Repeatability	0.01 mm
Opening time	0.18 s
Closing time	0.18 s
Air consumption per cycle	0.051 l
Operating pressure	1.5 ... 8 bar
Ambient temperature	+5 ... +80 °C
Length x width x height	75 x 25.4 x 59.5 mm
Customs tariff number (CTN)	84799070

Suitable accessories

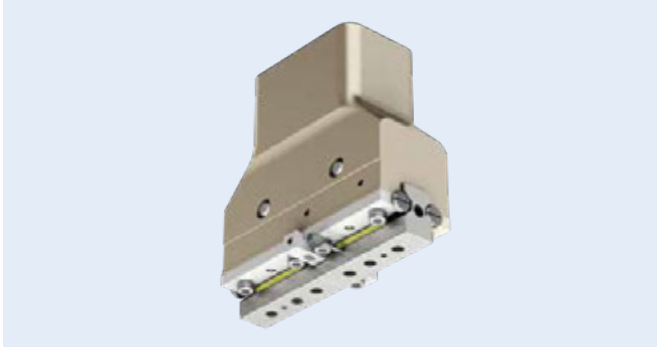
Type	Sensors	Stroke monitoring	Double check valves	Gripper pads
Further information	Page 117	Page 119	Page 122	Page 123



2-jaw parallel gripper RP series with roller guide

RP-25-I

RP-25-I

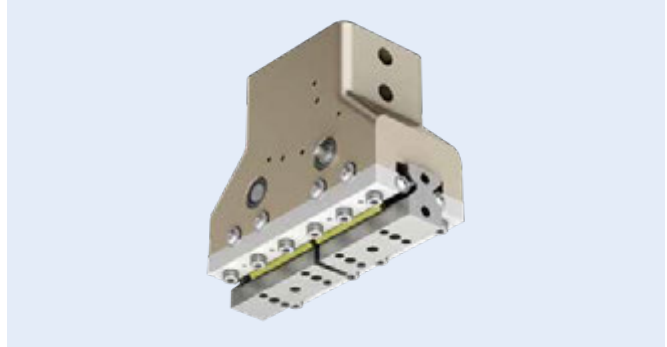


Technical data

Type	RP-25-I
Item no.	15000579
Recommended handling weight	1 kg
Gripping force external gripping	245 N
Stroke per jaw	14.35 mm
Max. finger length	80 mm
Weight	0.55 kg
Repeatability	0.01 mm
Opening time	0.21 s
Closing time	0.21 s
Air consumption per cycle	0.115 l
Operating pressure	1.5 ... 8 bar
Ambient temperature	+5 ... +80 °C
Length x width x height	80 x 32 x 81 mm
Customs tariff number (CTN)	84799070

RP-35-I

RP-35-I



Technical data

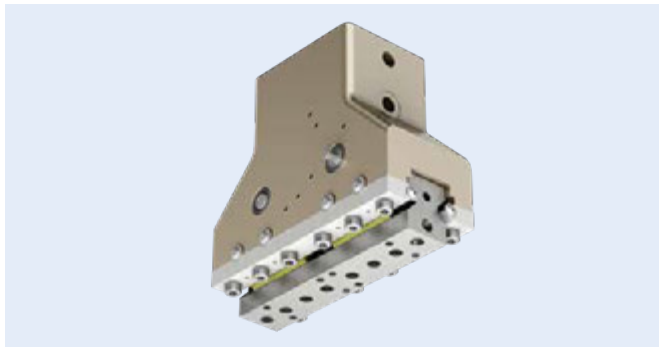
Type	RP-35-I
Item no.	150000870
Recommended handling weight	5 kg
Gripping force external gripping	720 N
Stroke per jaw	12.7 mm
Max. finger length	110 mm
Weight	1.7 kg
Repeatability	0.01 mm
Opening time	0.33 s
Closing time	0.33 s
Air consumption per cycle	0.238 l
Operating pressure	1.5 ... 8 bar
Ambient temperature	+5 ... +80 °C
Length x width x height	117.5 x 51 x 103 mm
Customs tariff number (CTN)	84799070

Suitable accessories

Type	Sensors	Stroke monitoring	Double check valves	Gripper pads
Further information	Page 117	Page 119	Page 122	Page 123

RP-40-I

RP-40-I



Technical data

Type	RP-40-I
Item no.	15000306
Recommended handling weight	8 kg
Gripping force external gripping	850 N
Stroke per jaw	25.4 mm
Max. finger length	160 mm
Weight	2.7 kg
Repeatability	0.03 mm
Opening time	0.39 s
Closing time	0.39 s
Air consumption per cycle	0.392 l
Operating pressure	1.5 ... 8 bar
Ambient temperature	+5 ... +80 °C
Length x width x height	137 x 59 x 125.5 mm
Customs tariff number (CTN)	84799070

Suitable accessories

Type	Sensors	Stroke monitoring	Double check valves	Gripper pads
Further information	Page 117	Page 119	Page 122	Page 123



MGS – The small parts gripper

Key advantages of our MGS series

Fields of application

The gripper series was developed for use in the small parts sector. From interlinked process chains with the shortest throughput times to the handling of electronic components and complex assembly applications, there is a suitable variant for every task.

Function description

The vertical stroke movement of the piston is translated into a horizontally synchronized movement of the jaws. Compressed air is applied to the pneumatic piston to open and close the gripper. The optionally included spring ensures that the gripping force is maintained in the event of a drop in compressed air.

ROBUST

PRECISE

COMPACT

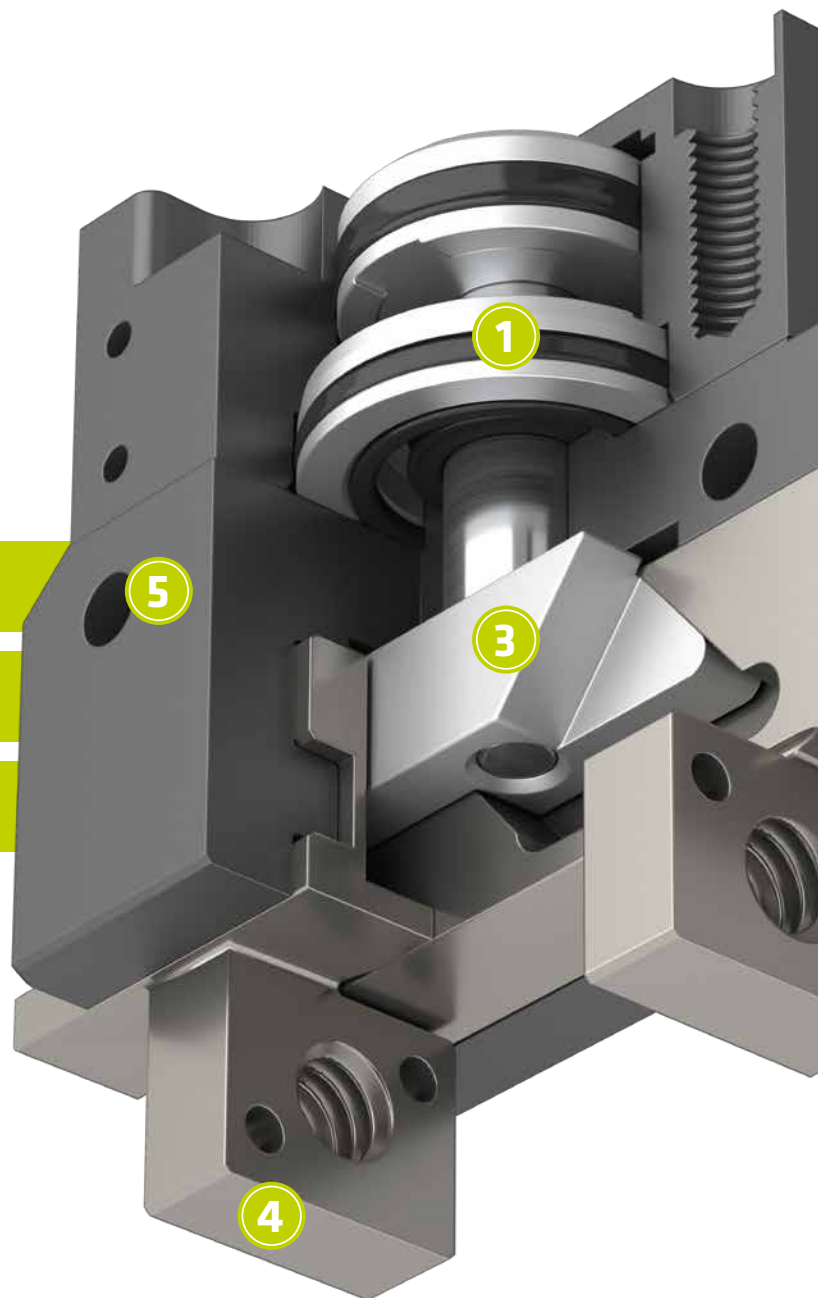
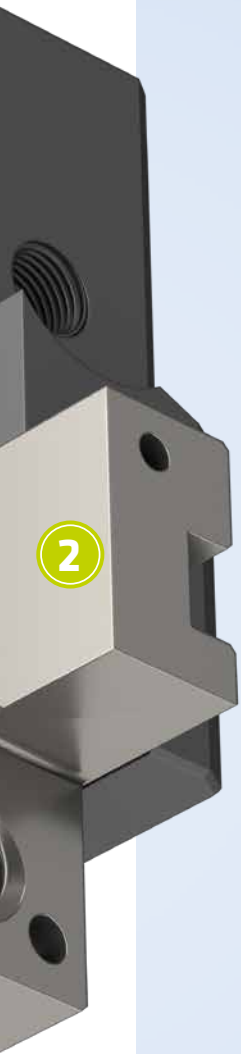


Figure shows MGS-32

Product advantages & benefits at a glance

- Compatible to commercially available small parts grippers from the competition
- Low weight for maximum dynamics
- Great smoothness enable sensitive gripping
- Shortest motion times allow for high cycle times
- Extremely precise and shock-resistant due to grinded-in sliding guide
- High guide length allows for maximum finger lengths
- Cost-efficient due to maintenance-free operation
- Customary third-party sensors permissible (standardization of the customers can be matched)



1

Pneumatic piston

The effective area of the piston has been optimized for the geometry of the base body to allow maximum gripping forces.

Spring for gripping force retention (depending on version)

Due to a spring installed in the piston chamber, the gripping force can be maintained even in the event of a drop in compressed air pressure.

Preparation for standard sensors

Inductive sensors for monitoring the jaw stroke can be mounted in the aluminum blocks below the jaw guides. In addition to that, commercially available magnetic sensors can be inserted in the C-slots in the housing.

2

Geschliffene Greiferbacken

Jaws precisely fitted into the base body ensure high repeat accuracy and enable large forces to be absorbed.

3

Backdrop / wedge hook

Thanks to an optimized design of the wedge hook the force of the piston is transmitted to the jaws with low loss and low wear and enables synchronized movement.

4

Reinforced finger attachment

Typical breaking points on miniature grippers have been reinforced and optimized based on years of experience so that long gripper fingers can be fitted.

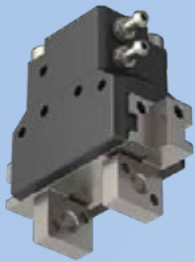
5

Mounting holes for lateral mounting

Different mounting options for fastening of the gripper offer maximum flexibility for any application.

The sizes of the MGS series

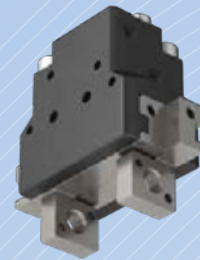
With a high number of variants
and versatile application possibilities



Page 54–55

MGS-16

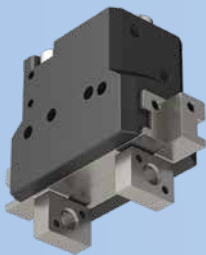
up to **0.10** kg



Page 56–57

MGS-20

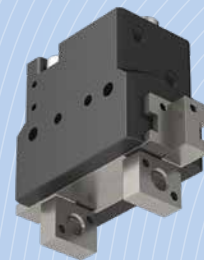
up to **0.16** kg



Page 58–59

MGS-25

up to **0.19** kg



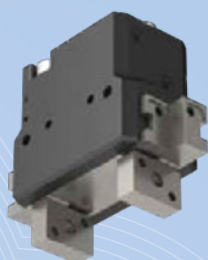
Page 60–61

MGS-32

up to **0.36** kg

Robust. Precise. Compact.

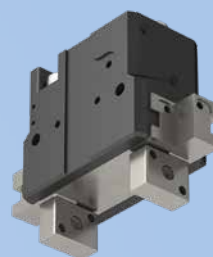
With handling weights from
0.1 kg up to 1.62 kg



Page 62-63

MGS-40

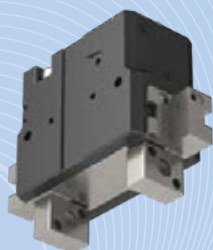
up to **0.63 kg**



Page 64-65

MGS-50

up to **0.80 kg**



Page 66-67

MGS-64

up to **1.16 kg**



Page 68-69

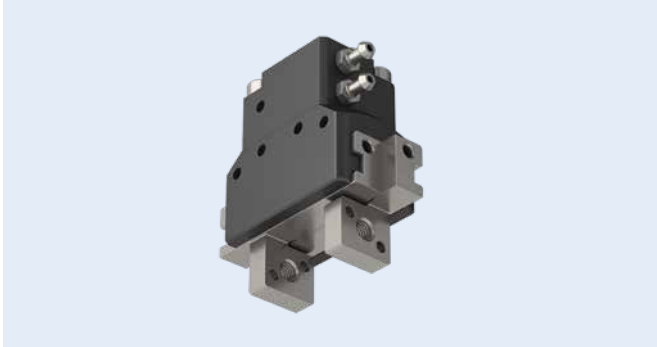
MGS-80

up to **1.62 kg**

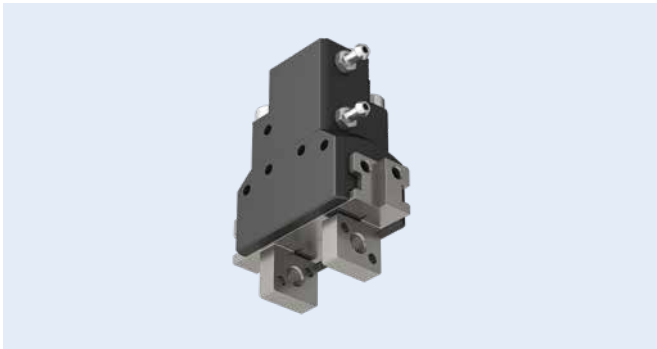
2-jaw small parts gripper

MGS-16

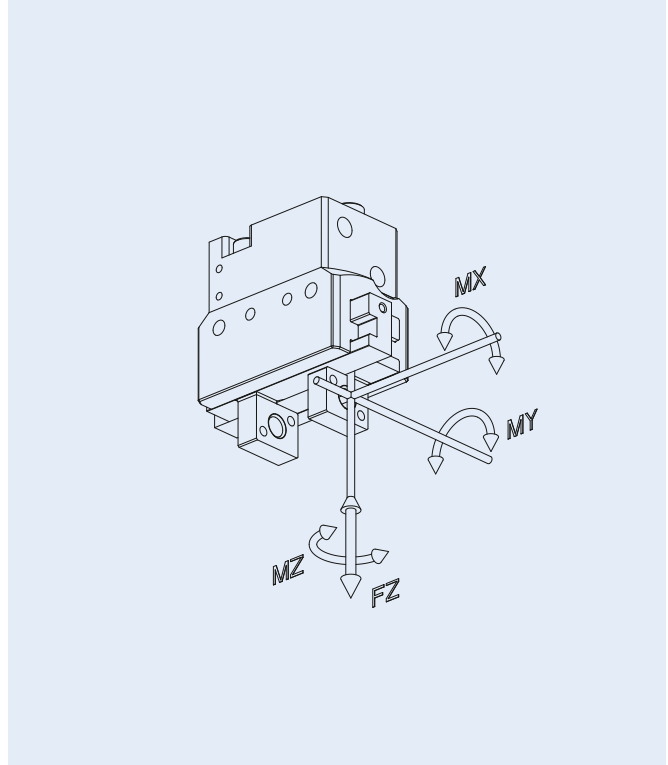
MGS-16



MGS-16 with spring (-FA/-FI)



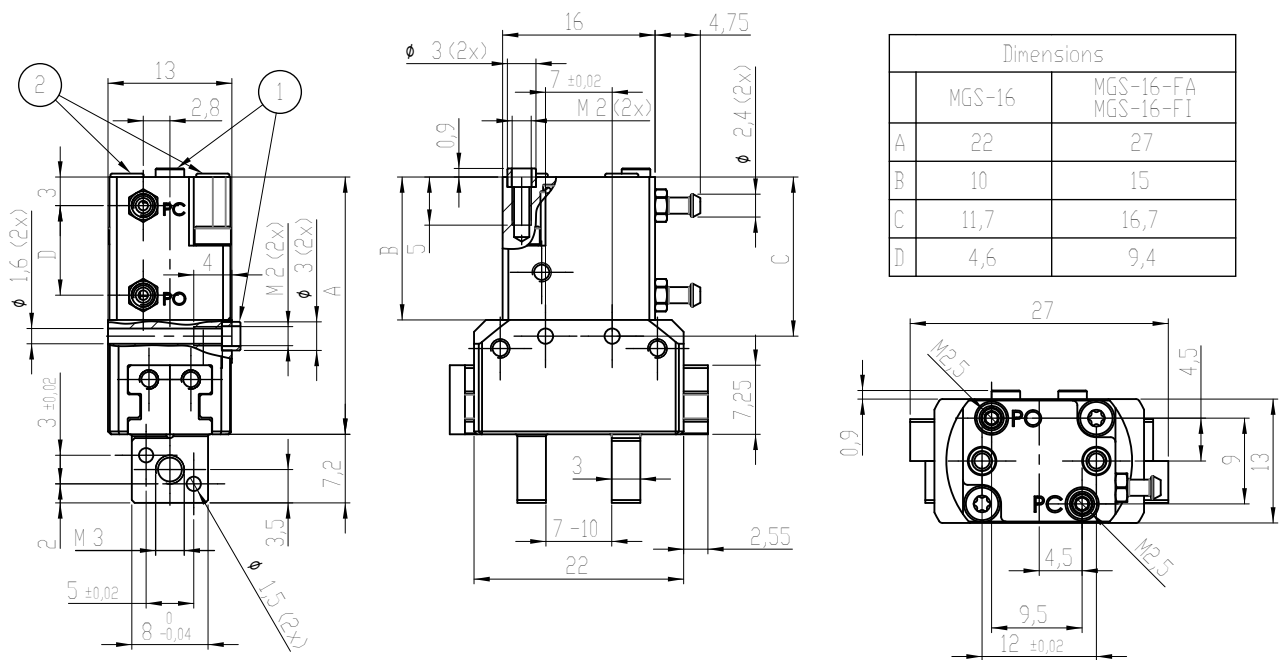
Forces and moments



Technical data

Type	MGS-16	MGS-16-FA	MGS-16-FI
Item no.	150001199	150001200	150001201
Recommended handling weight	0.1 kg	0.1 kg	0.1 kg
Gripping force external gripping	20.5 N	28 N	-
Gripping force internal gripping	17.5 N	-	25 N
Min. spring force	-	7.5 N	7.5 N
Stroke per jaw	1.5 mm	1.5 mm	1.5 mm
Max. finger length	20 mm	20 mm	20 mm
Max. permissible mass per finger	0.012 kg	0.012 kg	0.012 kg
Repeatability	+/-0.02 mm	+/-0.02 mm	+/-0.02 mm
Weight	0.025 kg	0.027 kg	0.027 kg
Max. moment Mx	0.3 Nm	0.3 Nm	0.3 Nm
Max. moment My	0.5 Nm	0.5 Nm	0.5 Nm
Max. moment Mz	0.5 Nm	0.5 Nm	0.5 Nm
Max. tensile/compressive force Fz, Fd	48 N	48 N	48 N
Opening time	0.012 s	0.016 s	0.012 s
Closing time	0.012 s	0.012 s	0.016 s
Air consumption per cycle	0.002 l	0.005 l	0.005 l
Connection thread open/close	Plug nipple (1.5 mm)	Plug nipple (1.5 mm)	Plug nipple (1.5 mm)
Operating pressure	3 ... 8 bar	4 ... 8 bar	4 ... 8 bar
Ambient temperature	+5 ... +80 °C	+5 ... +80 °C	+5 ... +80 °C
Length x width x height	22 x 12.9 x 22 mm	22 x 12.9 x 27 mm	22 x 12.9 x 27 mm
Customs tariff number (CTN)	84799070	84799070	84799070

Technical drawing



Suitable accessories

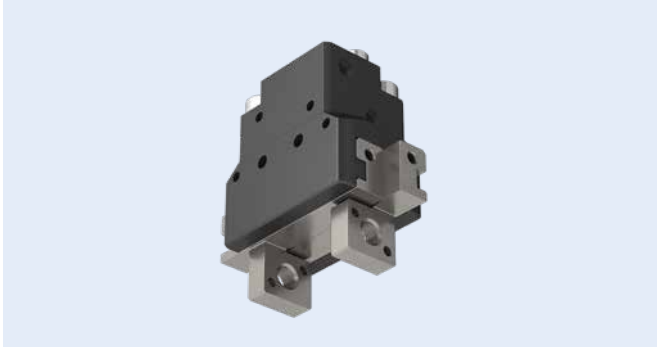
Type	Sensors	Stroke monitoring	Double check valves	Gripper pads
Further information	Page 117	Page 118	Page 122	Page 123



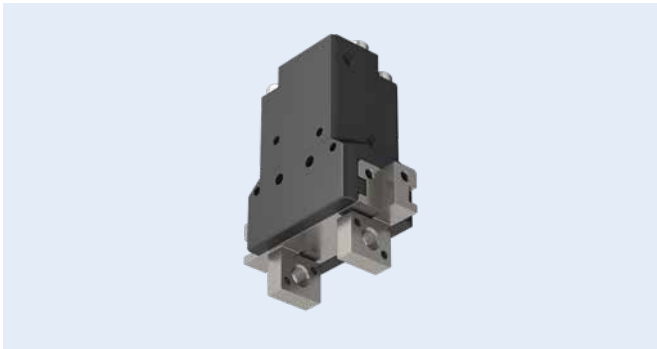
2-jaw small parts gripper

MGS-20

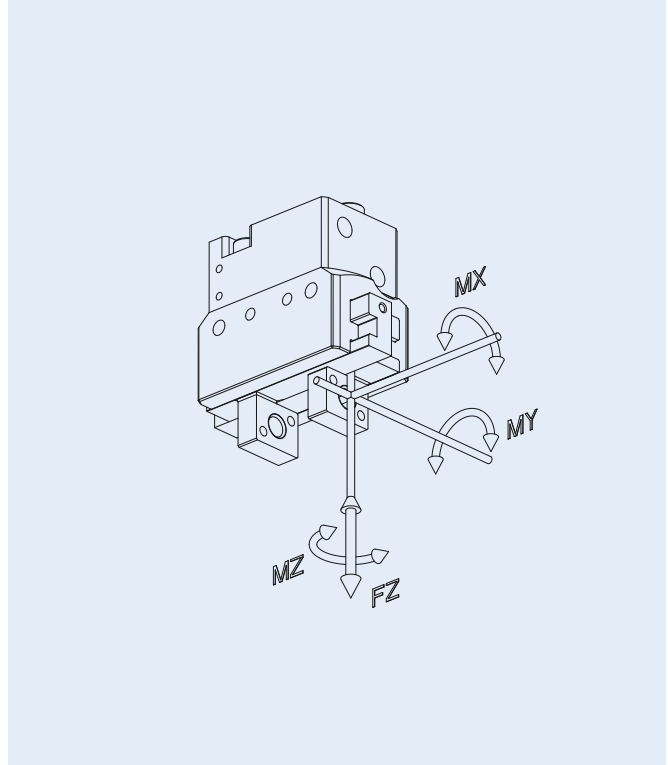
MGS-20



MGS-20 with spring (-FA/-FI)



Forces and moments

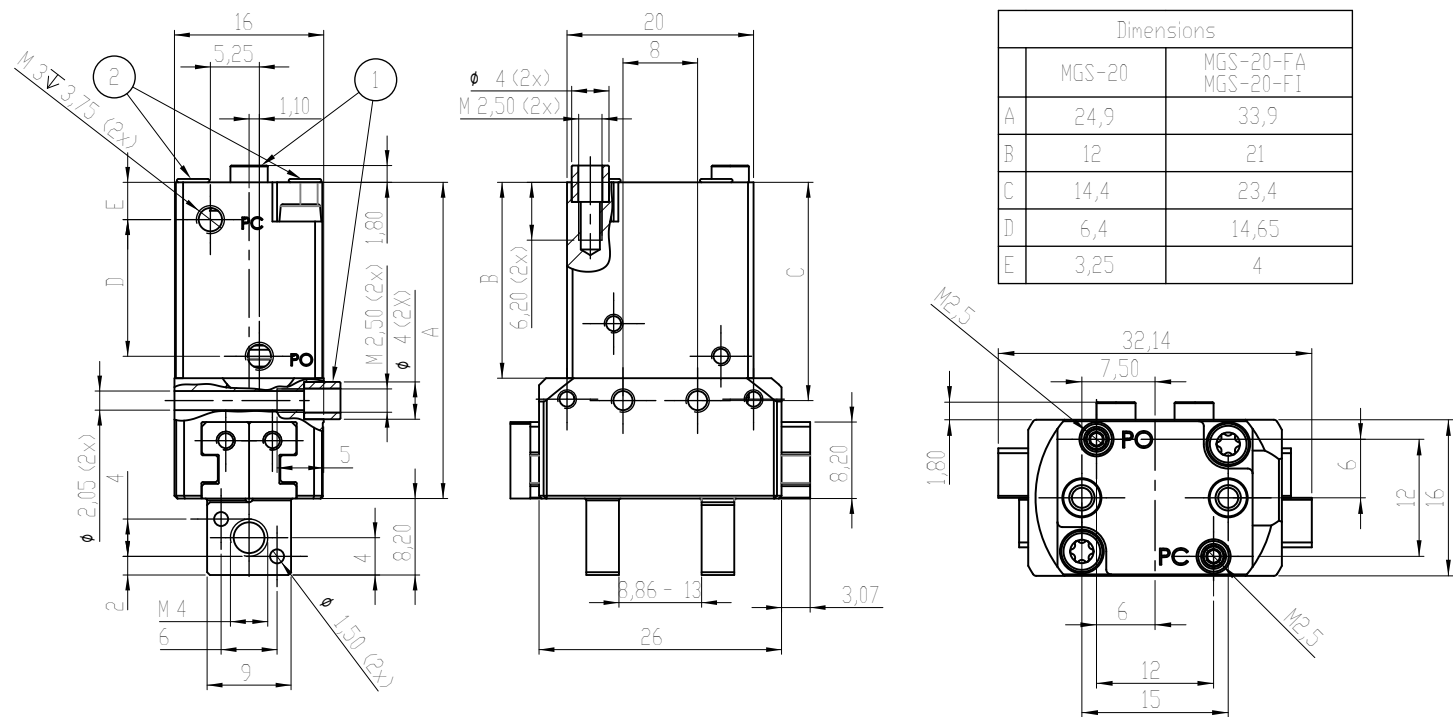


Technical data

Type	MGS-20	MGS-20-FA	MGS-20-FI
Item no.	150001202	150001203	150001204
Recommended handling weight	0.16 kg	0.16 kg	0.16 kg
Gripping force external gripping	32 N	43.5 N	-
Gripping force internal gripping	27 N	-	38.5 N
Min. spring force	-	11.5 N	11.5 N
Stroke per jaw	2 mm	2 mm	2 mm
Max. finger length	25 mm	25 mm	25 mm
Max. permissible mass per finger	0.025 kg	0.025 kg	0.025 kg
Repeatability	+/-0.02 mm	+/-0.02 mm	+/-0.02 mm
Weight	0.042 kg	0.047 kg	0.047 kg
Max. moment Mx	0.5 Nm	0.5 Nm	0.5 Nm
Max. moment My	1 Nm	1 Nm	1 Nm
Max. moment Mz	1 Nm	1 Nm	1 Nm
Max. tensile/compressive force Fz, Fd	82 N	82 N	82 N
Opening time	0.012 s	0.02 s	0.012 s
Closing time	0.012 s	0.012 s	0.02 s
Air consumption per cycle	0.003 l	0.009 l	0.009 l
Connection thread open/close	M3	M3	M3
Operating pressure	3 ... 8 bar	4 ... 8 bar	4 ... 8 bar
Ambient temperature	+5 ... +80 °C	+5 ... +80 °C	+5 ... +80 °C
Length x width x height	26 x 15.9 x 24.9 mm	26 x 15.9 x 33.9 mm	26 x 15.9 x 33.9 mm
Customs tariff number (CTN)	84799070	84799070	84799070

All data apply at 6 bar nominal operating pressure

Technical drawing



Suitable accessories

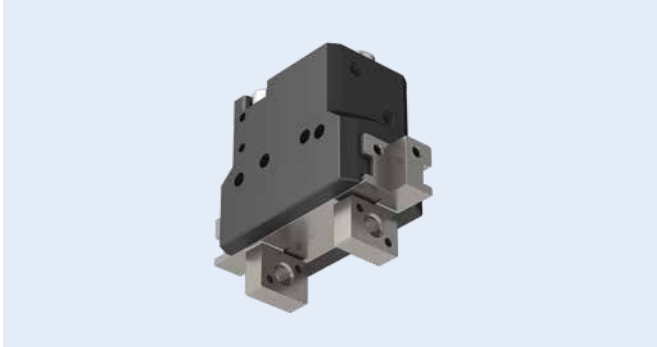
Type	Sensors	Stroke monitoring	Double check valves	Gripper pads
Further information	Page 117	Page 118	Page 122	Page 123



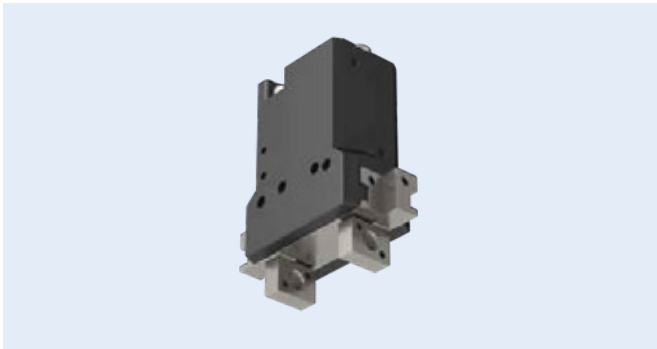
2-jaw small parts gripper

MGS-25

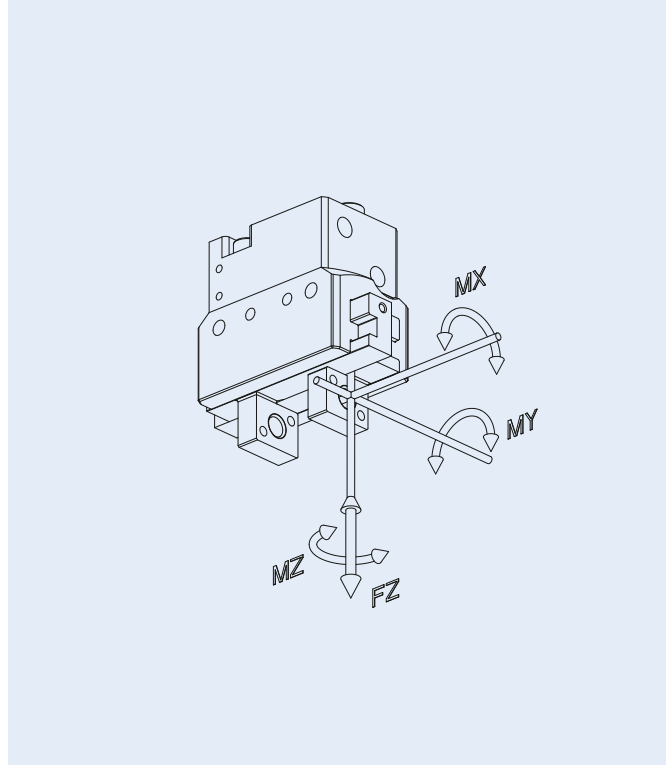
MGS-25



MGS-25 with spring (-FA/-FI)



Forces and moments

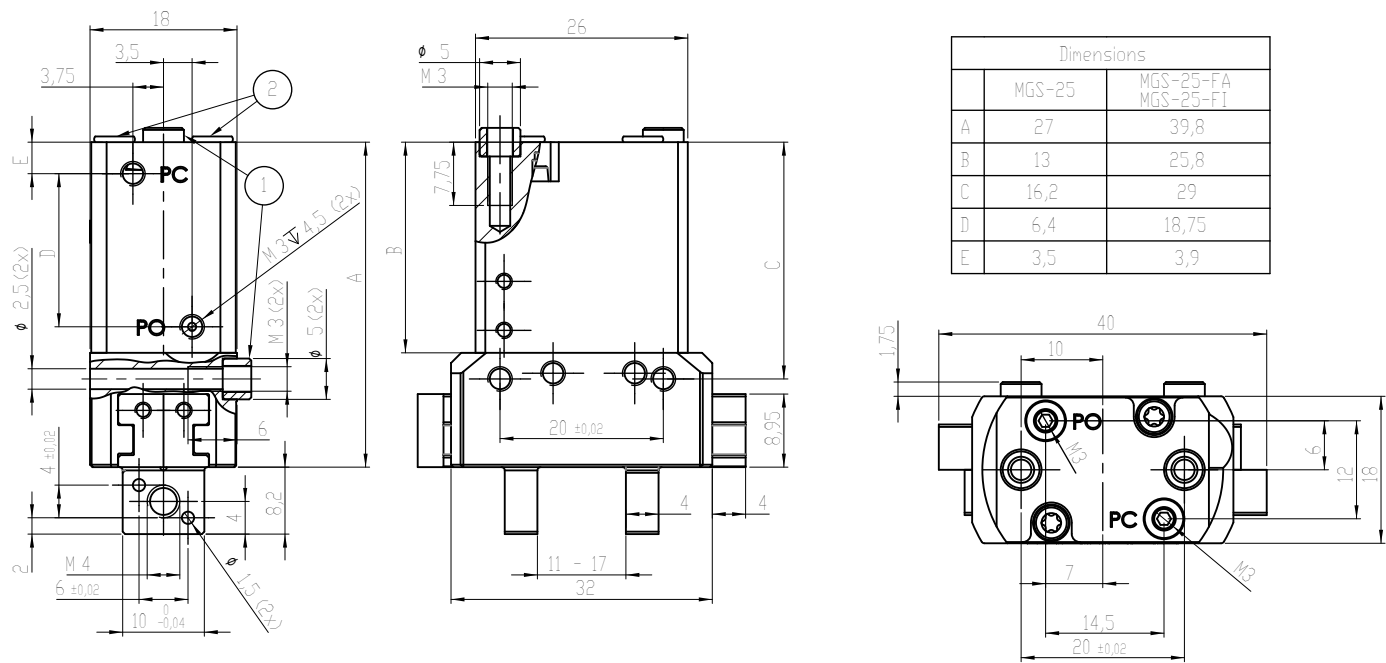


Technical data

Type	MGS-25	MGS-25-FA	MGS-25-FI
Item no.	150001205	150001206	150001207
Recommended handling weight	0.19 kg	0.19 kg	0.19 kg
Gripping force external gripping	37.5 N	51.5 N	-
Gripping force internal gripping	31 N	-	45 N
Min. spring force	-	14 N	14 N
Stroke per jaw	3 mm	3 mm	3 mm
Max. finger length	32 mm	32 mm	32 mm
Max. permissible mass per finger	0.033 kg	0.033 kg	0.033 kg
Repeatability	+/-0.02 mm	+/-0.02 mm	+/-0.02 mm
Weight	0.058 kg	0.075 kg	0.075 kg
Max. moment Mx	0.9 Nm	0.9 Nm	0.9 Nm
Max. moment My	1.6 Nm	1.6 Nm	1.6 Nm
Max. moment Mz	1.6 Nm	1.6 Nm	1.6 Nm
Max. tensile/compressive force Fz, Fd	117 N	117 N	117 N
Opening time	0.017 s	0.035 s	0.017 s
Closing time	0.017 s	0.017 s	0.035 s
Air consumption per cycle	0.006 l	0.017 l	0.017 l
Connection thread open/close	M3	M3	M3
Operating pressure	3 ... 8 bar	4 ... 8 bar	4 ... 8 bar
Ambient temperature	+5 ... +80 °C	+5 ... +80 °C	+5 ... +80 °C
Length x width x height	32 x 17.9 x 27 mm	32 x 17.9 x 39.8 mm	32 x 17.9 x 39.8 mm
Customs tariff number (CTN)	84799070	84799070	84799070

All data apply at 6 bar nominal operating pressure

Technical drawing



Suitable accessories

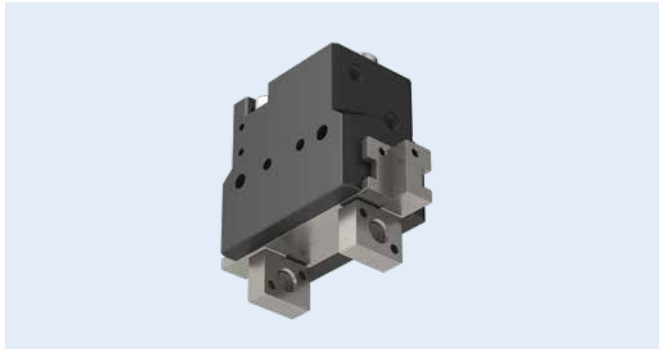
Type	Sensors	Stroke monitoring	Double check valves	Gripper pads
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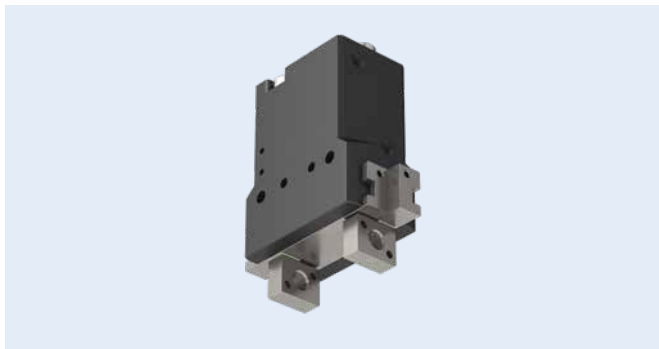
2-jaw small parts gripper

MGS-32

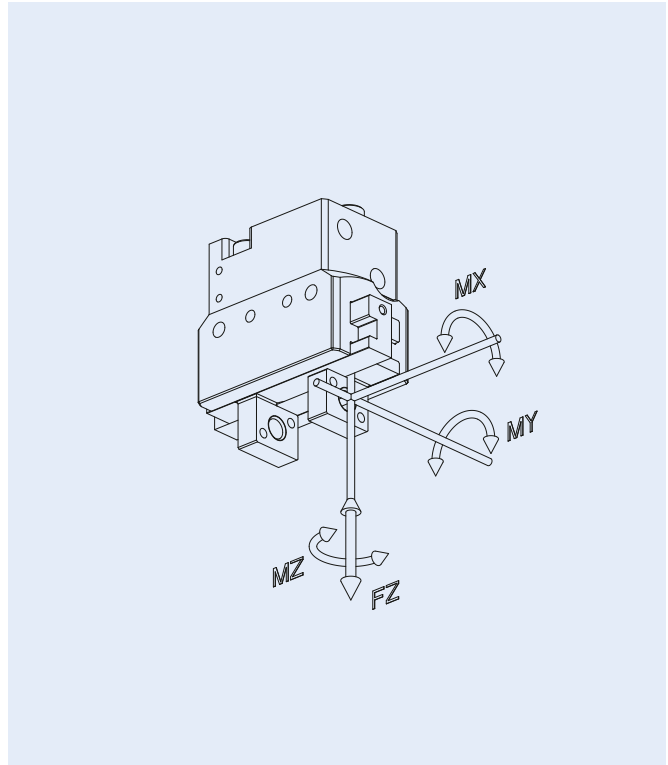
MGS-32



MGS-32 with spring (-FA/-FI)



Forces and moments



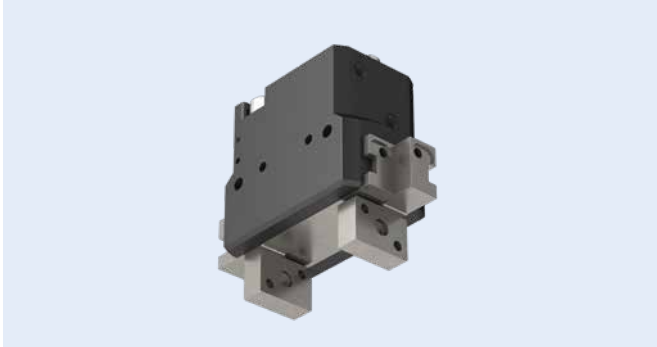
Technical data

Type	MGS-32	MGS-32-FA	MGS-32-FI
Item no.	150001208	150001209	150001210
Recommended handling weight	0.36 kg	0.36 kg	0.36 kg
Gripping force external gripping	71.5 N	96.5 N	-
Gripping force internal gripping	60 N	-	85 N
Min. spring force	-	25 N	25 N
Stroke per jaw	4 mm	4 mm	4 mm
Max. finger length	40 mm	40 mm	40 mm
Max. permissible mass per finger	0.04 kg	0.04 kg	0.04 kg
Repeatability	+/-0.02 mm	+/-0.02 mm	+/-0.02 mm
Weight	0.108 kg	0.136 kg	0.136 kg
Max. moment Mx	1.7 Nm	1.7 Nm	1.7 Nm
Max. moment My	3 Nm	3 Nm	3 Nm
Max. moment Mz	3 Nm	3 Nm	3 Nm
Max. tensile/compressive force Fz, Fd	167 N	167 N	167 N
Opening time	0.025 s	0.04 s	0.03 s
Closing time	0.025 s	0.04 s	0.03 s
Air consumption per cycle	0.011 l	0.028 l	0.028 l
Connection thread open/close	M5	M5	M5
Operating pressure	3 ... 8 bar	4 ... 8 bar	4 ... 8 bar
Ambient temperature	+5 ... +80 °C	+5 ... +80 °C	+5 ... +80 °C
Length x width x height	38 x 21.9 x 34 mm	38 x 21.9 x 47.3 mm	38 x 21.9 x 47.3 mm
Customs tariff number (CTN)	84799070	84799070	84799070

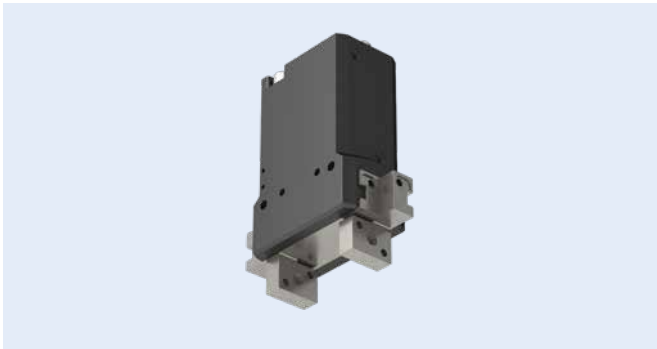
2-jaw small parts gripper

MGS-40

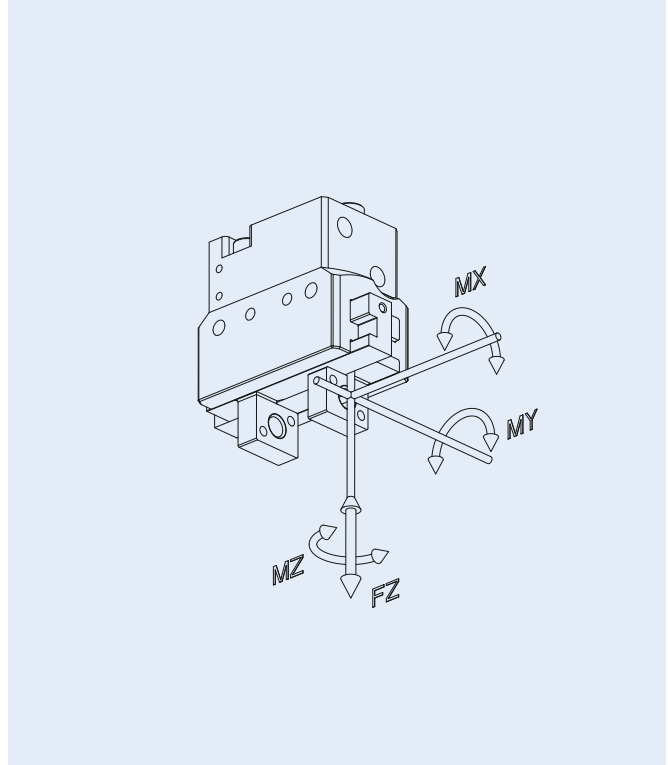
MGS-40



MGS-40 with spring (-FA/-FI)



Forces and moments

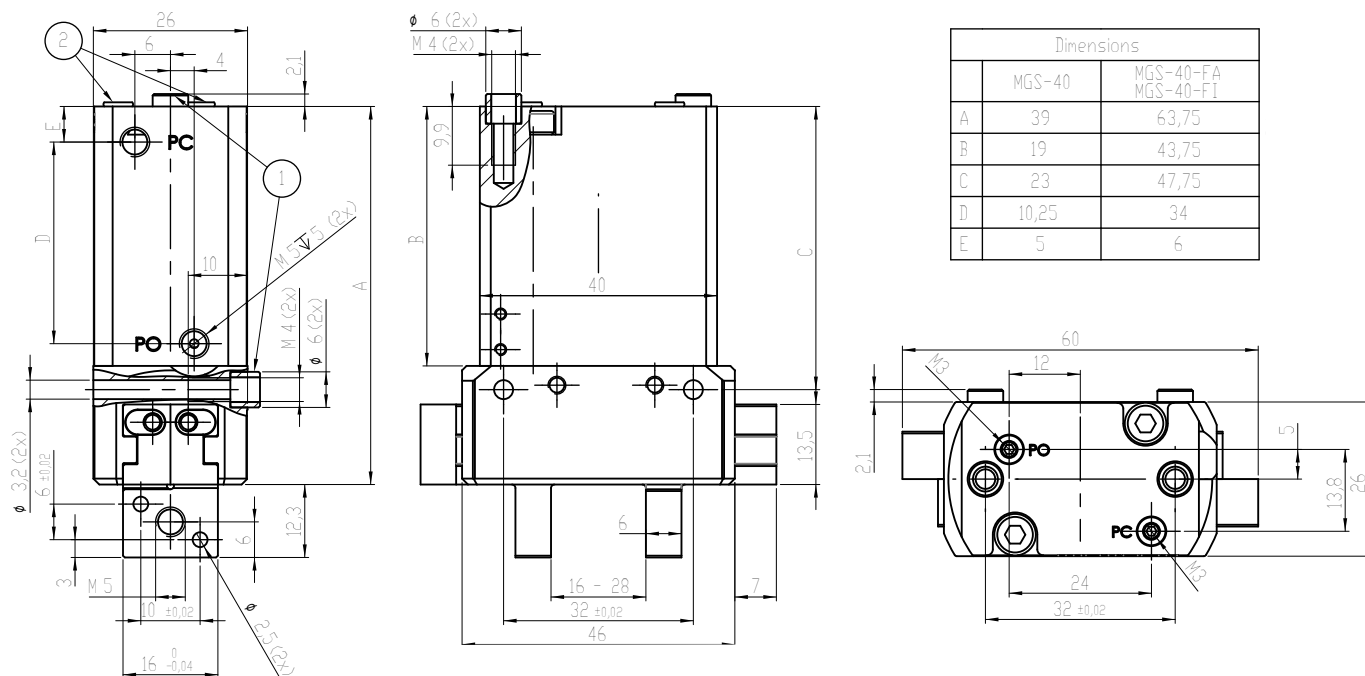


Technical data

Type	MGS-40	MGS-40-FA	MGS-40-FI
Item no.	150001211	150001212	150001213
Recommended handling weight	0.63 kg	0.63 kg	0.63 kg
Gripping force external gripping	126 N	171 N	-
Gripping force internal gripping	106 N	-	151 N
Min. spring force	-	45 N	45 N
Stroke per jaw	6 mm	6 mm	6 mm
Max. finger length	50 mm	50 mm	50 mm
Max. permissible mass per finger	0.094 kg	0.094 kg	0.094 kg
Repeatability	+/-0.02 mm	+/-0.02 mm	+/-0.02 mm
Weight	0.188 kg	0.257 kg	0.257 kg
Max. moment Mx	2.3 Nm	2.3 Nm	2.3 Nm
Max. moment My	4 Nm	4 Nm	4 Nm
Max. moment Mz	4 Nm	4 Nm	4 Nm
Max. tensile/compressive force Fz, Fd	200 N	200 N	200 N
Opening time	0.03 s	0.06 s	0.04 s
Closing time	0.03 s	0.04 s	0.06 s
Air consumption per cycle	0.027 l	0.071 l	0.071 l
Connection thread open/close	M5	M5	M5
Operating pressure	3 ... 8 bar	4 ... 8 bar	4 ... 8 bar
Ambient temperature	+5 ... +80 °C	+5 ... +80 °C	+5 ... +80 °C
Length x width x height	46 x 25.9 x 39 mm	46 x 25.9 x 63.75 mm	46 x 25.9 x 63.75 mm
Customs tariff number (CTN)	84799070	84799070	84799070

All data apply at 6 bar nominal operating pressure

Technical drawing



Suitable accessories

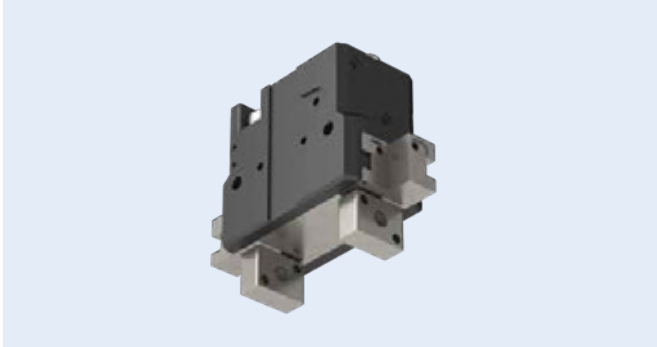
Type	Sensors	Stroke monitoring	Double check valves	Gripper pads
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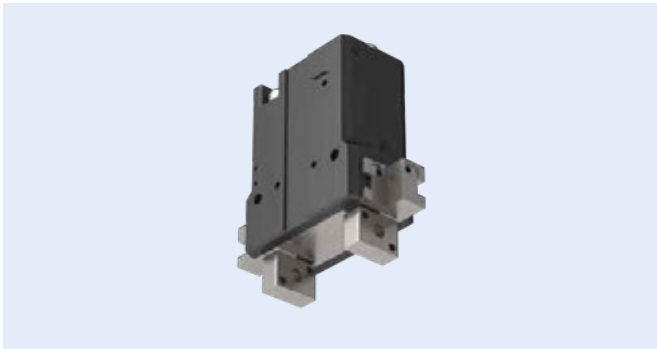
2-jaw small parts gripper

MGS-50

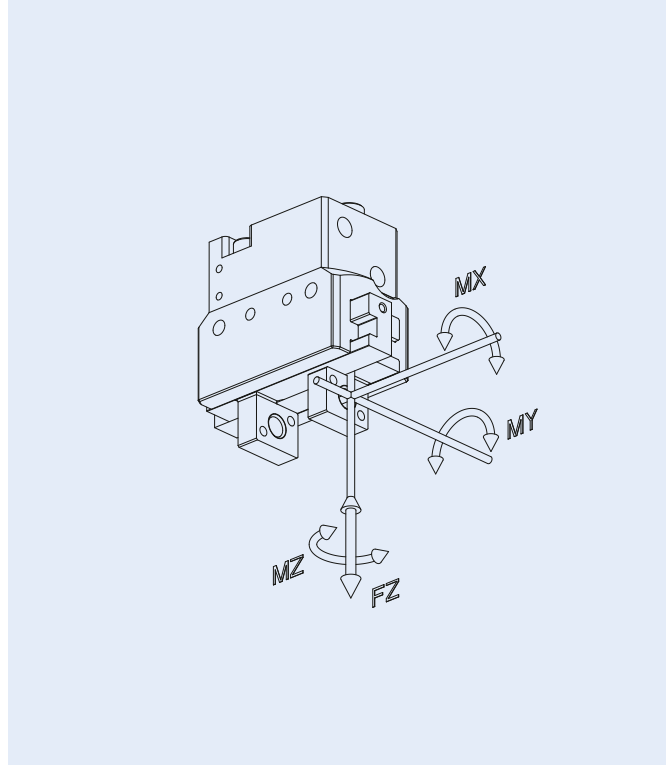
MGS-50



MGS-50 with spring (-FA/-FI)



Forces and moments

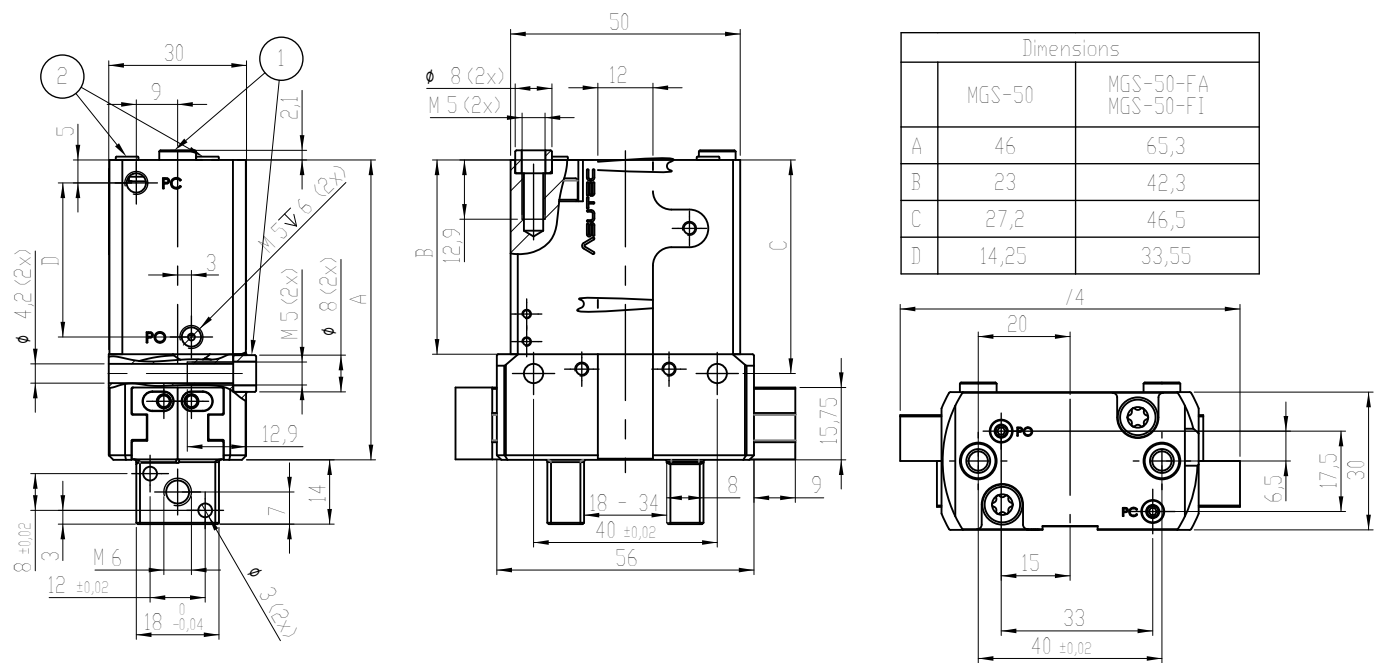


Technical data

Type	MGS-50	MGS-50-FA	MGS-50-FI
Item no.	150001214	150001215	150001216
Recommended handling weight	0.8 kg	0.8 kg	0.8 kg
Gripping force external gripping	161 N	217 N	-
Gripping force internal gripping	136 N	-	192 N
Min. spring force	-	56 N	56 N
Stroke per jaw	8 mm	8 mm	8 mm
Max. finger length	63 mm	63 mm	63 mm
Max. permissible mass per finger	0.21 kg	0.21 kg	0.21 kg
Repeatability	+/-0.02 mm	+/-0.02 mm	+/-0.02 mm
Weight	0.305 kg	0.385 kg	0.385 kg
Max. moment Mx	3.4 Nm	3.4 Nm	3.4 Nm
Max. moment My	6 Nm	6 Nm	6 Nm
Max. moment Mz	6 Nm	6 Nm	6 Nm
Max. tensile/compressive force Fz, Fd	300 N	300 N	300 N
Opening time	0.04 s	0.07 s	0.045 s
Closing time	0.04 s	0.045 s	0.07 s
Air consumption per cycle	0.053 l	0.112 l	0.112 l
Connection thread open/close	M5	M5	M5
Operating pressure	3 ... 8 bar	4 ... 8 bar	4 ... 8 bar
Ambient temperature	+5 ... +80 °C	+5 ... +80 °C	+5 ... +80 °C
Length x width x height	56 x 29.9 x 46 mm	56 x 29.9 x 65.3 mm	56 x 29.9 x 65.3 mm
Customs tariff number (CTN)	84799070	84799070	84799070

All data apply at 6 bar nominal operating pressure

Technical drawing



Suitable accessories

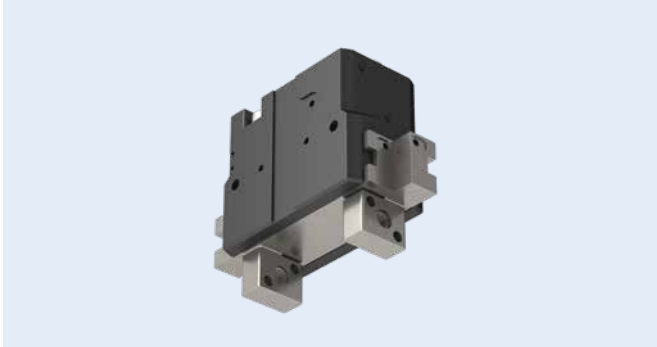
Type	Sensors	Stroke monitoring	Double check valves	Gripper pads
Further information	Page 117	Page 118	Page 122	Page 123



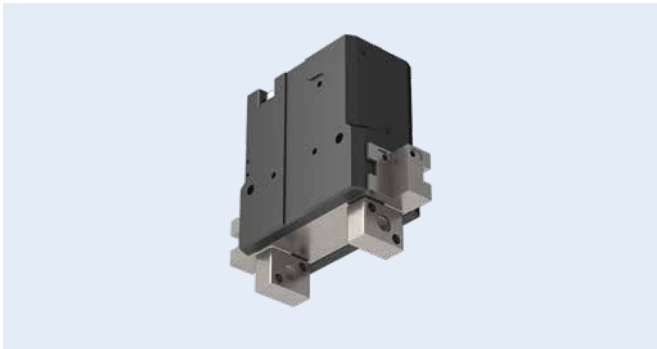
2-jaw small parts gripper

MGS-64

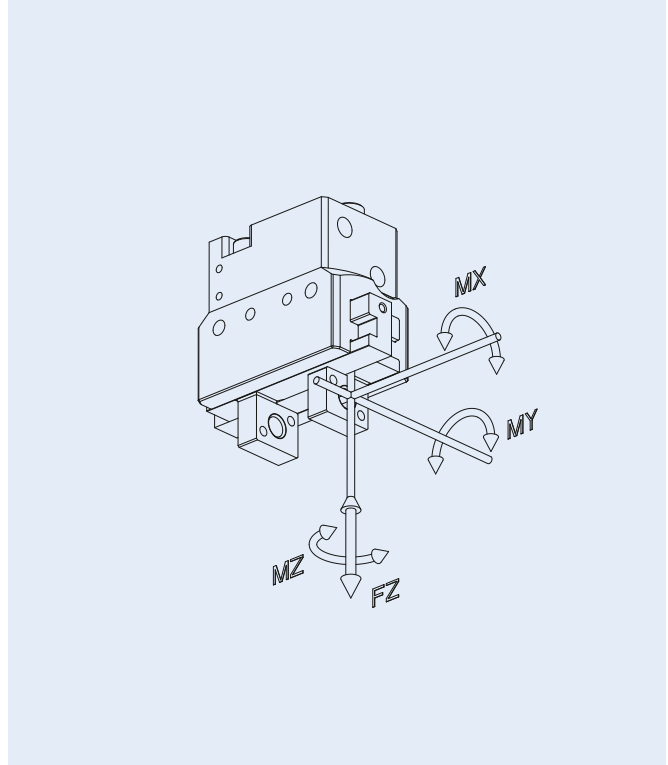
MGS-64



MGS-64 with spring (-FA/-FI)



Forces and moments

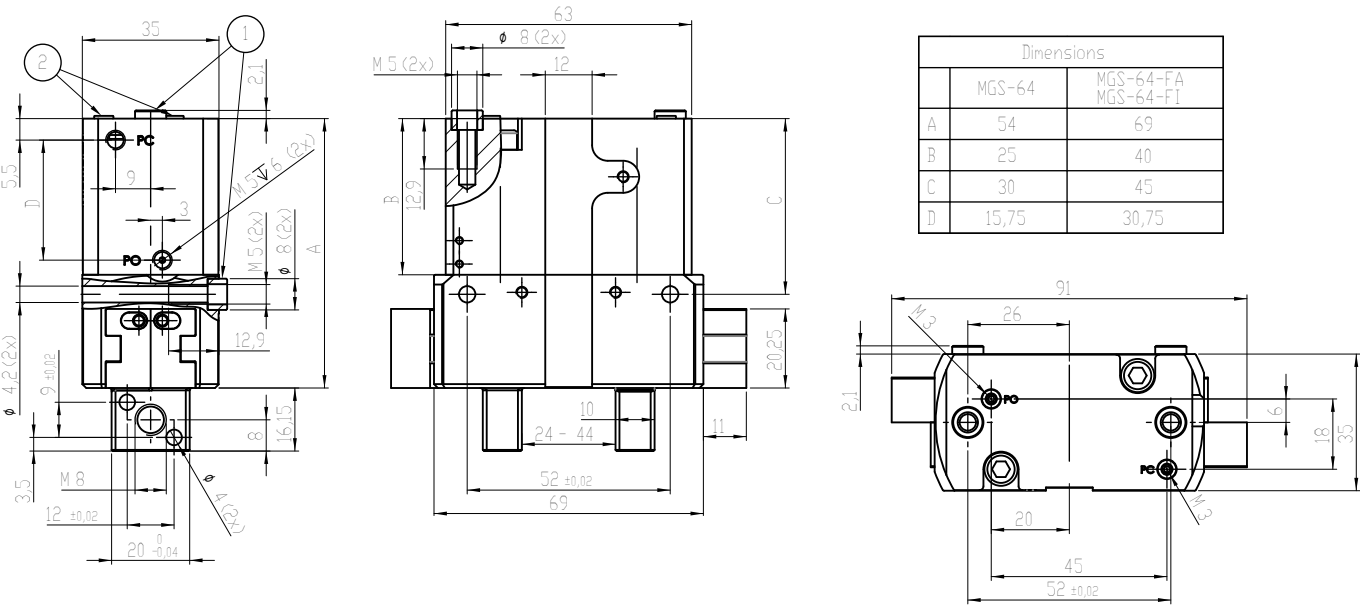


Technical data

Type	MGS-64	MGS-64-FA	MGS-64-FI
Item no.	150001217	150001218	150001219
Recommended handling weight	1.16 kg	1.16 kg	1.16 kg
Gripping force external gripping	232 N	297 N	-
Gripping force internal gripping	195 N	-	260 N
Min. spring force	-	65 N	65 N
Stroke per jaw	10 mm	10 mm	10 mm
Max. finger length	80 mm	80 mm	80 mm
Max. permissible mass per finger	0.375 kg	0.375 kg	0.375 kg
Repeatability	+/-0.02 mm	+/-0.02 mm	+/-0.02 mm
Weight	0.526 kg	0.614 kg	0.614 kg
Max. moment Mx	5.7 Nm	5.7 Nm	5.7 Nm
Max. moment My	10 Nm	10 Nm	10 Nm
Max. moment Mz	10 Nm	10 Nm	10 Nm
Max. tensile/compressive force Fz, Fd	405 N	405 N	405 N
Opening time	0.06 s	0.1 s	0.07 s
Closing time	0.06 s	0.07 s	0.1 s
Air consumption per cycle	0.091 l	0.168 l	0.168 l
Connection thread open/close	M5	M5	M5
Operating pressure	3 ... 8 bar	4 ... 8 bar	4 ... 8 bar
Ambient temperature	+5 ... +80 °C	+5 ... +80 °C	+5 ... +80 °C
Length x width x height	69 x 34.9 x 54 mm	69 x 34.9 x 69 mm	69 x 34.9 x 69 mm
Customs tariff number (CTN)	84799070	84799070	84799070

All data apply at 6 bar nominal operating pressure

Technical drawing



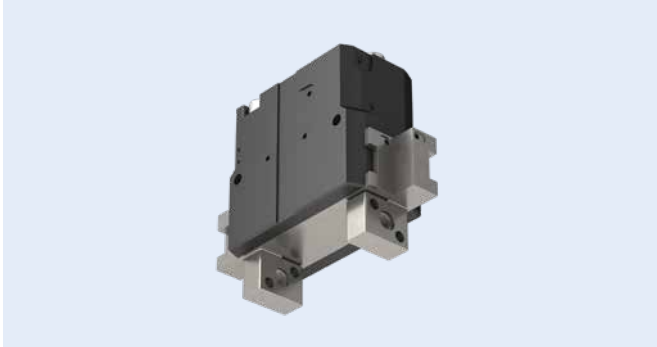
Suitable accessories

Type	Sensors	Stroke monitoring	Double check valves	Gripper pads
Further information	Page 117	Page 118	Page 122	Page 123

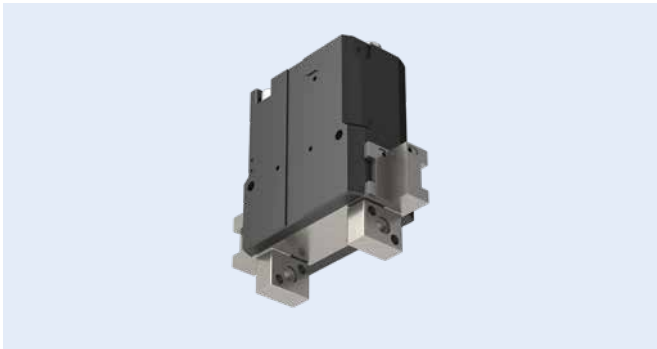
2-jaw small parts gripper

MGS-80

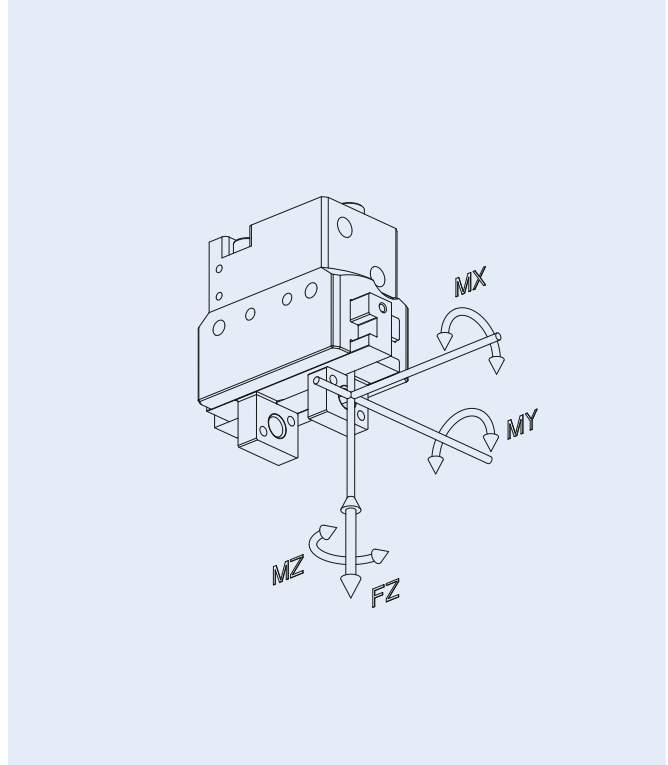
MGS-80



MGS-80 with spring (-FA/-FI)



Forces and moments

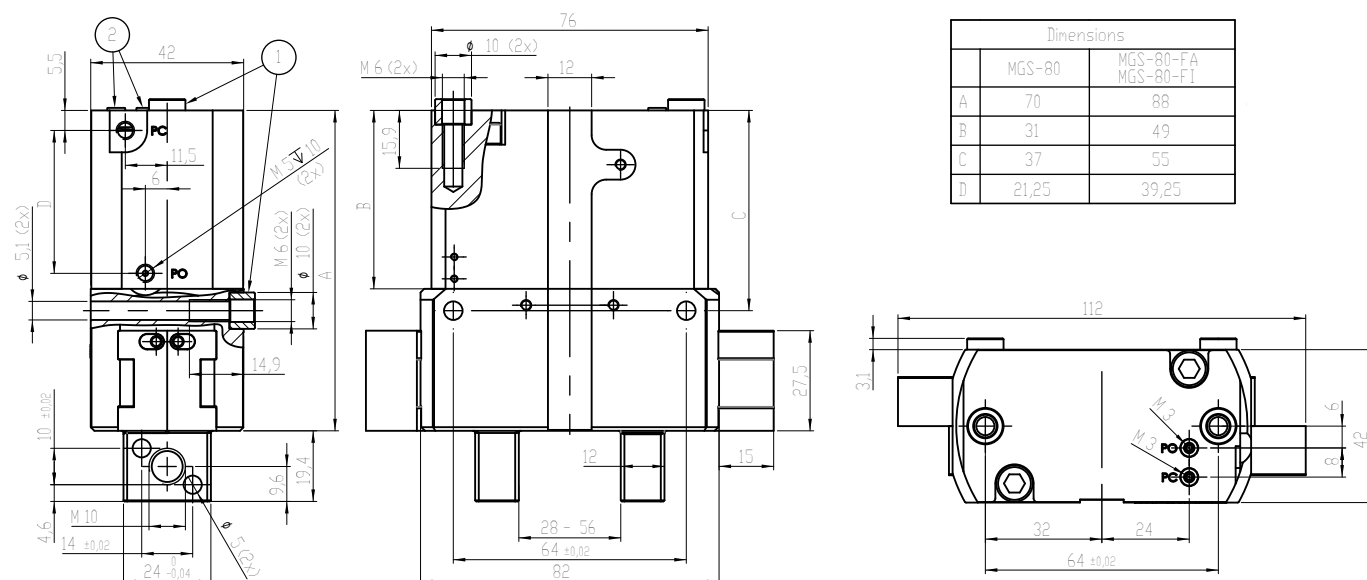


Technical data

Type	MGS-80	MGS-80-FA	MGS-80-FI
Item no.	150001220	150001221	150001222
Recommended handling weight	1.62 kg	1.62 kg	1.62 kg
Gripping force external gripping	325 N	405 N	-
Gripping force internal gripping	275 N	-	355 N
Min. spring force	-	80 N	80 N
Stroke per jaw	14 mm	14 mm	14 mm
Max. finger length	100 mm	100 mm	100 mm
Max. permissible mass per finger	0.43 kg	0.43 kg	0.43 kg
Repeatability	+/-0.02 mm	+/-0.02 mm	+/-0.02 mm
Weight	0.968 kg	1.12 kg	1.12 kg
Max. moment Mx	9 Nm	9 Nm	9 Nm
Max. moment My	16 Nm	16 Nm	16 Nm
Max. moment Mz	16 Nm	16 Nm	16 Nm
Max. tensile/compressive force Fz, Fd	540 N	540 N	540 N
Opening time	0.07 s	0.09 s	0.07 s
Closing time	0.07 s	0.07 s	0.09 s
Air consumption per cycle	0.189 l	0.308 l	0.308 l
Connection thread open/close	M5	M5	M5
Operating pressure	3 ... 8 bar	4 ... 8 bar	4 ... 8 bar
Ambient temperature	+5 ... +80 °C	+5 ... +80 °C	+5 ... +80 °C
Length x width x height	82 x 41.9 x 70 mm	82 x 41.9 x 88 mm	82 x 41.9 x 88 mm
Customs tariff number (CTN)	84799070	84799070	84799070

All data apply at 6 bar nominal operating pressure

Technical drawing



Suitable accessories

Type	Sensors	Stroke monitoring	Double check valves	Gripper pads
Further information	Page 117	Page 118	Page 122	Page 123



RPW – Large Stroke Gripper

Key advantages of our RPW series

Fields of application

The gripper series was developed for universal use. From clean assembly applications to dirt-prone applications in forges and foundries, there is a suitable variant for every task

Function description

The parallel movement of the jaws is generated by a gear/rack drive using two double-acting pneumatic cylinders. The jaws are guided by toothed racks and guide rods in combination with the slide guided piston rod.

ROBUST

FLEXIBLE

SEALED

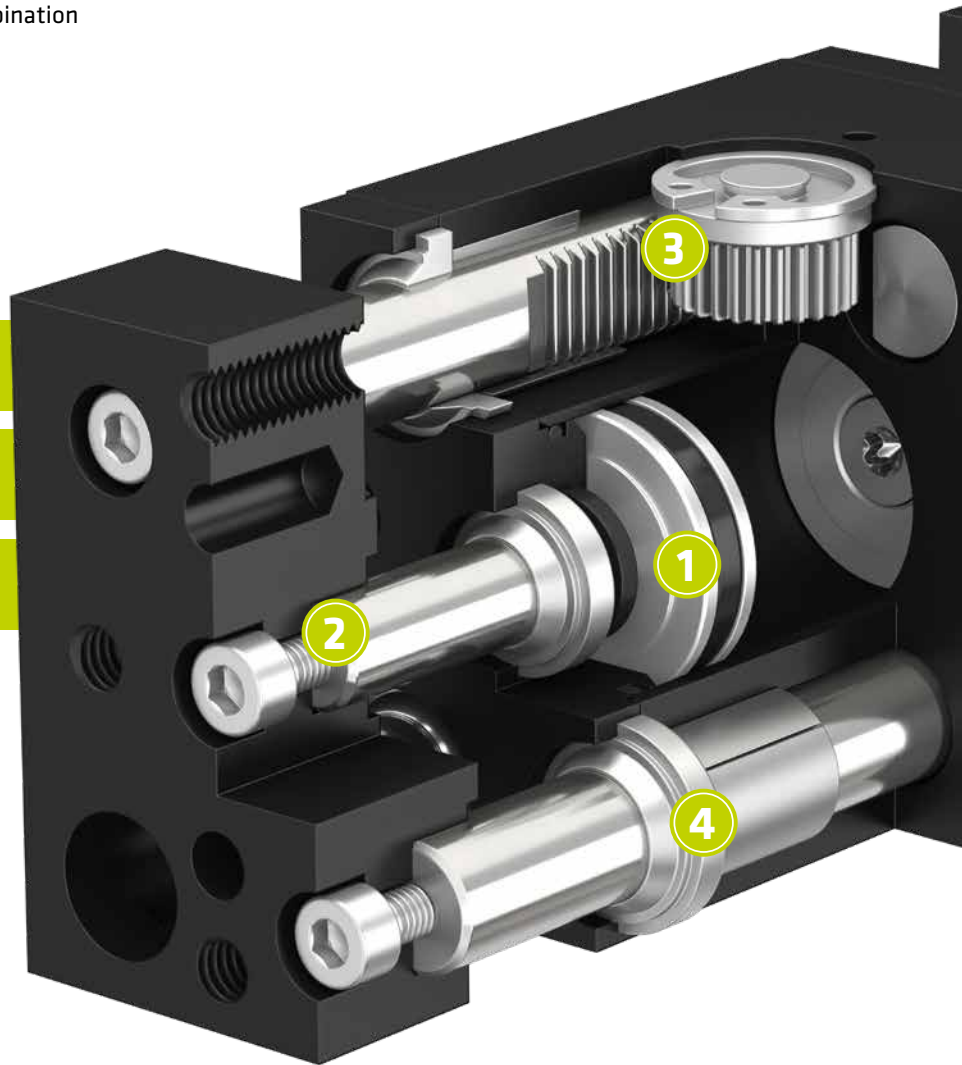


Figure shows RPW-375-1-I

Product advantages & benefits at a glance

- Sealed round guides with wipers for protection class similar to IP67
- Separate piston for each gripper jaw for direct power transmission
- Gripper attachment possible from two sides
- Different stroke variants in each size for maximum flexibility
- Up to 114 mm total stroke for large workpieces and workpiece variants
- Also available as hybrid variant with electric motor

**1**

Two pneumatic pistons

The effective area of the pistons has been optimized for the geometry of the base body to allow maximum gripping forces.

2

Piston rod bolted to gripper jaw

The use of a separate piston for each gripper jaw means that there is no need to divert the force at all.

3

Synchronization of the jaws by means of a gear wheel

Uniform jaw movement and force distribution is achieved by means of a toothed rack per jaw in conjunction with a gear wheel.

4

Scraper

Special wipers on the guide, toothed and piston rods seal the basic body of the gripper and enable a high protection class similar to IP67.

5

Different stroke variants

Different stroke variants with identical gripping force and different spans are available for each size for maximum flexibility.

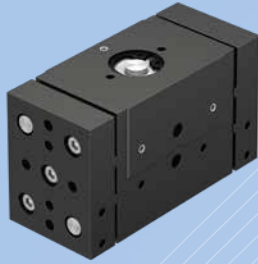
6

Mounting holes for lateral mounting

Different mounting options for fastening of the gripper offer maximum flexibility for any application.

The sizes of the RPW series

With handling weights
from 0.5 kg up to 15 kg



Page 73

RPW-250

up to **0.5 kg**



Page 74

RPW-375

up to **1.5 kg**



Page 75

RPW-500

up to **4.0 kg**



Page 76

RPW-625

up to **8.0 kg**



Page 77

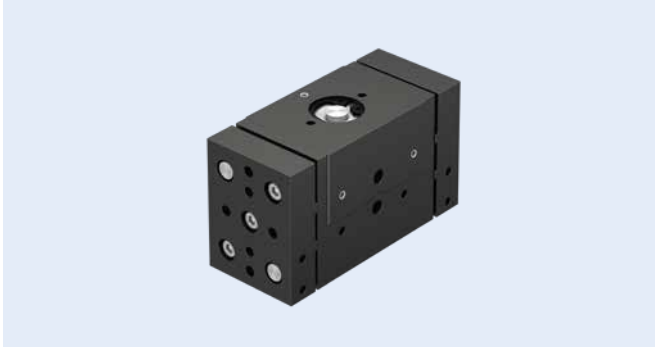
RPW-750

up to **15.0 kg**

2-jaw universal parallel gripper with large stroke

RPW-250-I

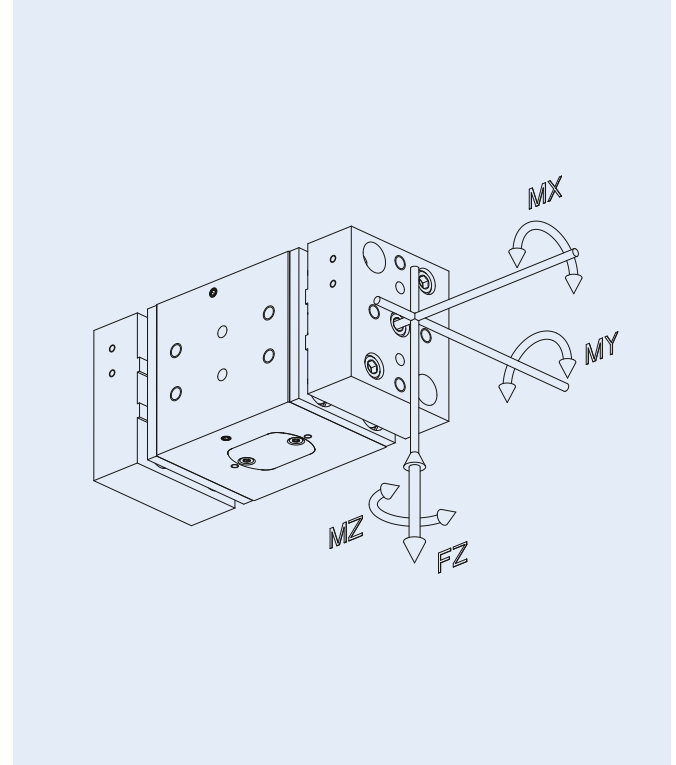
RPW-250-1-I



RPW-250-2-I



Forces and moments



Technical data

Type	RPW-250-1-I	RPW-250-2-I
Item no.	15000606	15000607
Recommended handling weight	0.5 kg	0.5 kg
Gripping force external gripping	155 N	155 N
Stroke per jaw	9.5 mm	20 mm
Max. finger length	75 mm	75 mm
Weight	0.3 kg	0.34 kg
Repeatability	+/-0.03 mm	+/-0.03
Opening time	0.16 s	0.2 s (interpoliert)
Closing time	0.16 s	0.2 s (interpoliert)
Air consumption per cycle	0.055 l	0.105 l
Operating pressure	3.5 ... 8 bar	3.5 ... 8 bar
Ambient temperature	+5 ... +80 °C	+5 ... +80 °C
Length x width x height	73 x 32 x 41 mm	113 x 32 x 41 mm
Customs tariff number (CTN)	84799070	84799070

Suitable accessories

Type	Sensors	Stroke monitoring	Double check valves	Gripper pads
Further information	Page 117	Page 120	Page 122	Page 123



2-jaw universal parallel gripper with large stroke

RPW-375-I

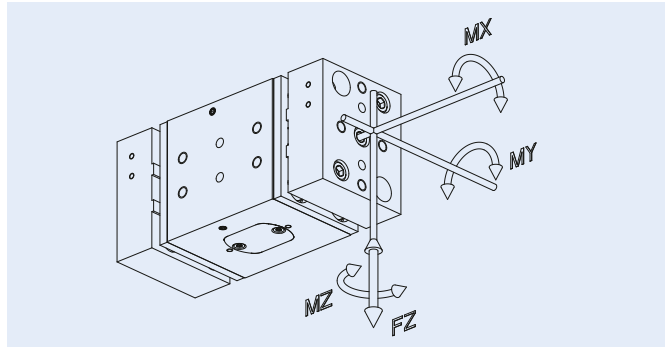
RPW-375-1-I



RPW-375-3-I



RPW-375-2-I



Technical data

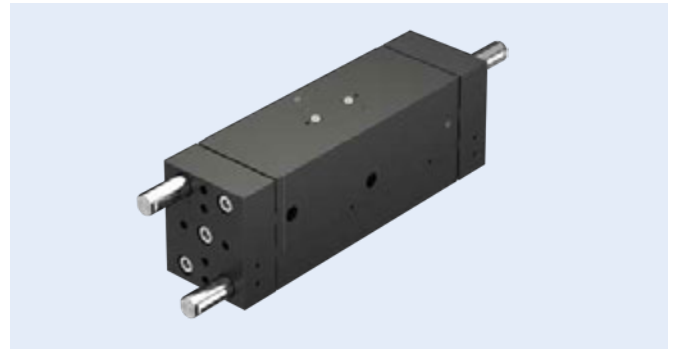
Type	RPW-375-1-I	RPW-375-2-I	RPW-375-3-I
Item no.	15000612	15000611	150000718
Recommended handling weight	1.5 kg	1.5 kg	1.5 kg
Gripping force external gripping	330 N	330 N	330 N
Stroke per jaw	12.7 mm	25.4 mm	37.9 mm
Max. finger length	100 mm	100 mm	100 mm
Weight	0.59 kg	0.91 kg	1.1 kg
Repeatability	+/-0.03 mm	+/-0.03	+/-0.03
Opening time	0.2 s	0.25 s	0.3 (interpoliert)
Closing time	0.2 s	0.25 s	0.3 s
Air consumption per cycle	0.0136 l	0.252 l	0.377 l
Operating pressure	3.5 ... 8 bar	3.5 ... 8 bar	3.5 ... 8 bar
Ambient temperature	+5 ... +80 °C	+5 ... +80 °C	+5 ... +80 °C
Length x width x height	95 x 38 x 51 mm	137 x 38 x 51 mm	195 x 38 x 51 mm
Customs tariff number (CTN)	84799070	84799070	84799070

Suitable accessories

Type	Sensors	Stroke monitoring	Double check valves	Gripper pads
Further information	Page 117	Page 120	Page 122	Page 123

2-jaw universal parallel gripper with large stroke

RPW-500-I

RPW-500-1-I**RPW-500-3-I****RPW-500-2-I****RPW-500-4-I**

Technical data

Type	RPW-500-1-I	RPW-500-2-I	RPW-500-3-I	RPW-500-4-I
Item no.	15000681	15000682	15000683	15000684
Recommended handling weight	4 kg	4 kg	4 kg	4 kg
Gripping force external gripping	690 N	690 N	690 N	690 N
Stroke per jaw	19.05 mm	31.75 mm	42.45 mm	52.5 mm
Max. finger length	160 mm	160 mm	160 mm	160 mm
Weight	1.6 kg	2 kg	2.64 kg	3.26 kg
Repeatability	+/-0.03 mm	+/-0.03	+/-0.03	+/-0.03
Opening time	0.25 s	0.33 s	0.16 s	0.16 s
Closing time	0.25 s	0.33 s	0.16 s	0.16 s
Air consumption per cycle	0.399 l	0.665 l	0.889 l	1.09 l
Operating pressure	3.5 ... 8 bar	3.5 ... 8 bar	3.5 ... 8 bar	3.5 ... 8 bar
Ambient temperature	+5 ... +80 °C	+5 ... +80 °C	+5 ... +80 °C	+5 ... +80 °C
Length x width x height	133 x 57 x 67 mm	171 x 57 x 67 mm	218 x 57 x 67 mm	262 x 57 x 67 mm
Customs tariff number (CTN)	84799070	84799070	84799070	84799070

Suitable accessories

Type	Sensors	Stroke monitoring	Double check valves	Gripper pads
Further information	Page 117	Page 120	Page 122	Page 123



2-jaw universal parallel gripper with large stroke RPW-625-I

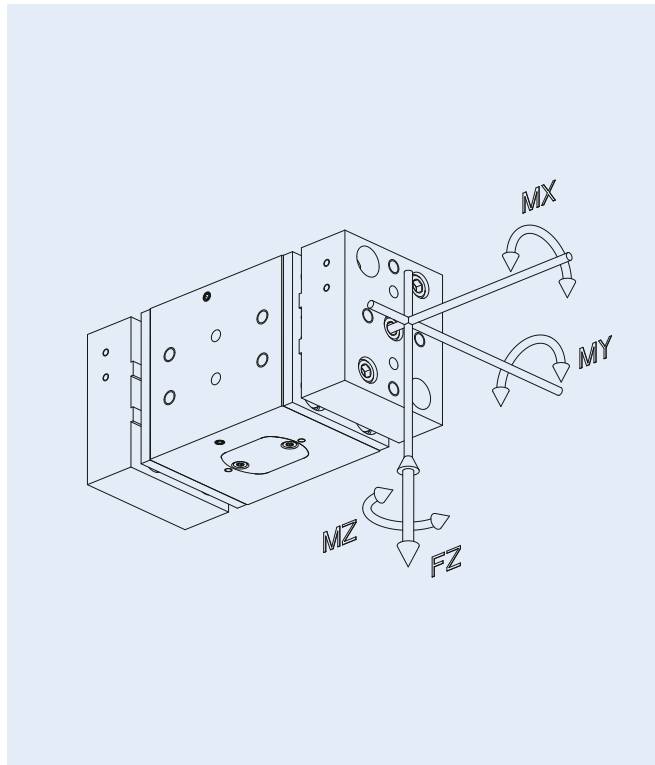
RPW-625-1-I



RPW-625-2-I



Forces and moments



Technical data

Type	RPW-625-1-I	RPW-625-2-I
Item no.	15000689	15000690
Recommended handling weight	8 kg	8 kg
Gripping force external gripping	1.040 N	1.040 N
Stroke per jaw	25.4 mm	44.45 mm
Max. finger length	280 mm	280 mm
Weight	2.9 kg	3.5 kg
Repeatability	+/- 0.03 mm	+/- 0.03
Opening time	0.52 s	0.69 s
Closing time	0.52 s	0.69 s
Air consumption per cycle	0.85 l	1.49 l
Operating pressure	3.5 ... 8 bar	3.5 ... 8 bar
Ambient temperature	+5 ... +80 °C	+5 ... +80 °C
Length x width x height	169 x 66.5 x 82.5 mm	232 x 66.5 x 82.5 mm
Customs tariff number (CTN)	84799070	84799070

Suitable accessories

Type	Sensors	Stroke monitoring	Double check valves	Gripper pads
Further information	Page 117	Page 120	Page 122	Page 123

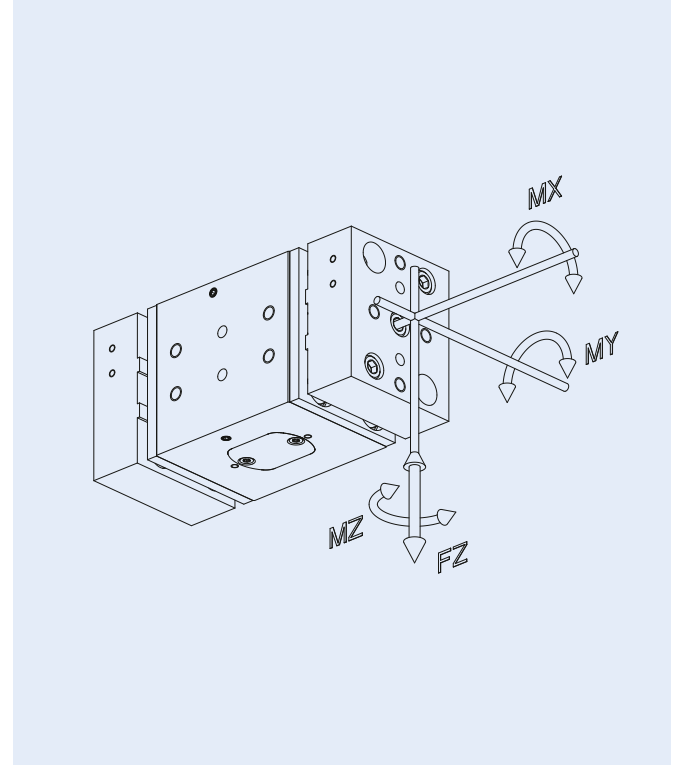
2-jaw universal parallel gripper with large stroke

RPW-750-I

RPW-750-1-I



Forces and moments



Technical data

Type	RPW-750-1-I
Item no.	15000691
Recommended handling weight	15 kg
Gripping force external gripping	1.550 N
Stroke per jaw	57 mm
Max. finger length	350 mm
Weight	6.95 kg
Repeatability	+/-0.03 mm
Opening time	1 s
Closing time	1 s
Air consumption per cycle	3.05 l
Operating pressure	3.5 ... 8 bar
Ambient temperature	+5 ... +80 °C
Length x width x height	296 x 75 x 100 mm
Customs tariff number (CTN)	84799070

Suitable accessories

Type	Sensors	Stroke monitoring	Double check valves	Gripper pads
Further information	Page 117	Page 120	Page 122	Page 123



CGS3 – The centric gripper

Key advantages of our CGS3 series

Fields of application

The gripper series was developed for universal use in handling round workpieces. From clean assembly applications to loading and unloading machine tools to dirt-prone applications in forges and foundries, there is a suitable variant for every task.

Function description

The vertical stroke movement of the piston is translated into a horizontally synchronized movement of the jaws via a link. Compressed air is applied to the pneumatic piston to open and close the gripper. The optional spring enables the gripping force to be maintained proportionally when the compressed air is released.

PROVEN

PRECISE

DURABLE

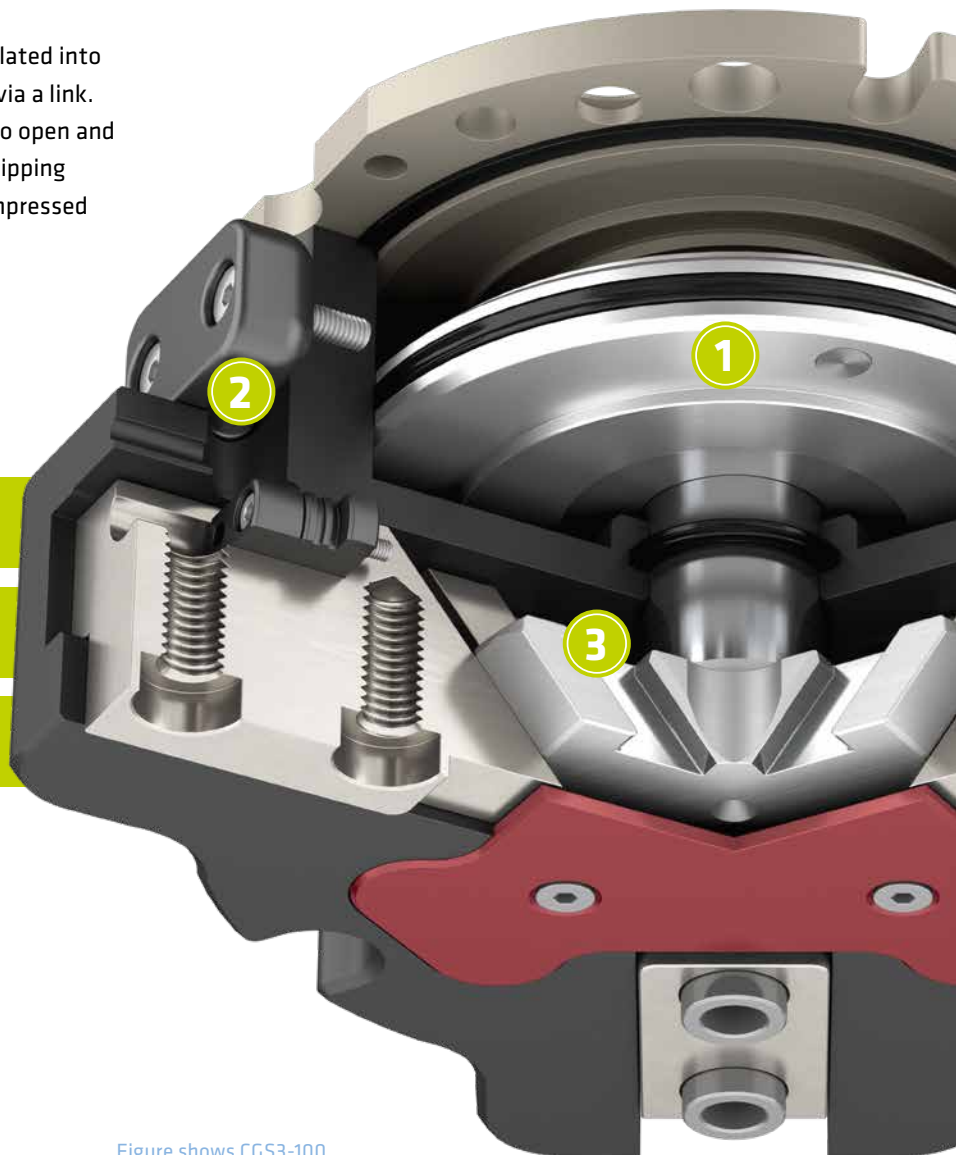
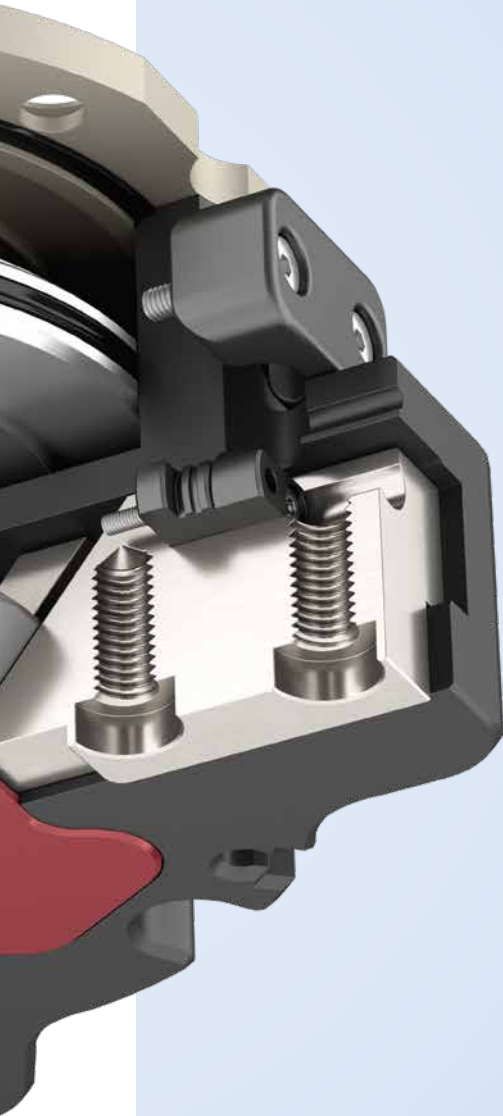


Figure shows CGS3-100

Product advantages & benefits at a glance

- Compatible with standard universal grippers from the competition
- Maximum guide length of the base jaw (suitable for longer gripper fingers)
- Lubricant pockets as grease reservoirs (leads to extended maintenance intervals)
- Optimized position measuring system for safe handling, type recognition and quality control
- Insensitive to crashes, dust and dirt due to the tried and tested T-slot guide
- Customary third-party sensors permissible (standardization of the customers can be matched)



1

Pneumatic piston

The effective area of the piston has been optimized for the geometry of the base body to allow maximum gripping forces.

Spring for gripping force retention (depending on version)

Due to a spring installed in the piston chamber, the gripping force can be maintained even in the event of a drop in compressed air pressure.

2

Sensor holder included as standard

Inductive sensors for monitoring the jaw stroke can be mounted in the aluminum blocks below the jaw guides. In addition to that, commercially available magnetic sensors can be inserted in the C-slots in the housing.

Magnetic sensors

The exact jaw position at which the inductive sensors output a signal for stroke sensing can be continuously defined with standard tools.

3

Backdrop / wedge hook

Thanks to an optimized design of the wedge hook the force of the piston is transmitted to the jaws with low loss and low wear.

Lubricant pockets

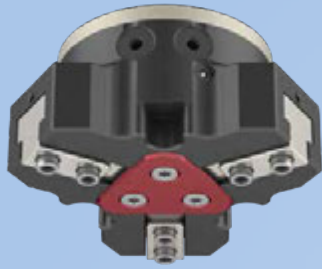
Pockets in the sides of the jaws allow permanent storage of grease and thus maintenance-free application under normal conditions.

Mounting options for accessories integrated

Application-specific additional components such as pressure stars or supports can be mounted by means of holes under the splitter cover.

The sizes of the CGS3 series

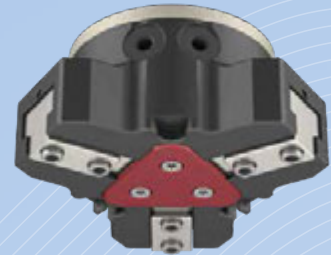
With a high number of variants
and versatile application possibilities



Page 82–83

CGS3-40

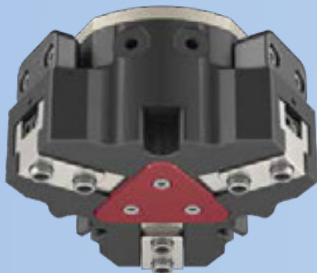
up to **1.30 kg**



Page 84–85

CGS3-50

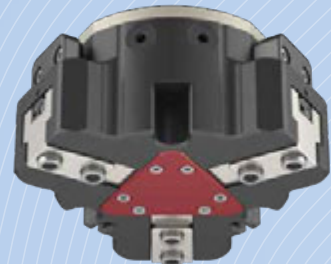
up to **1.70 kg**



Page 86–87

CGS3-64

up to **3.20 kg**



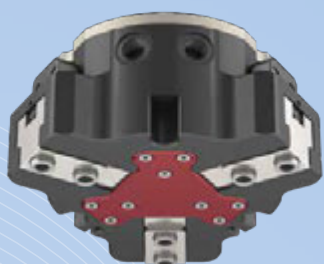
Page 88–89

CGS3-80

up to **5.00 kg**

Proven. Precise. Durable.

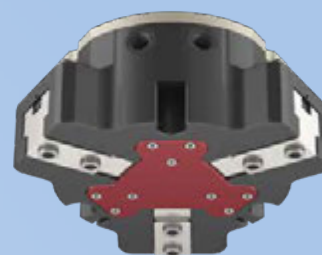
With handling weights
from 1.30 kg up to 35.20 kg



Page 90-91

CGS3-100

up to **9.50 kg**



Page 92-93

CGS3-125

up to **15.50 kg**



Page 94-95

CGS3-160

up to **27.60 kg**



Page 96-97

CGS3-200

up to **35.20 kg**

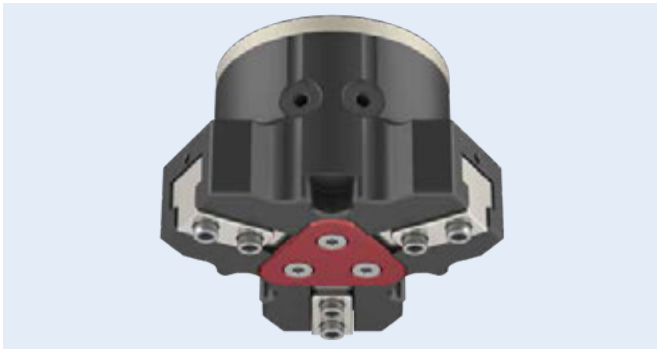
3-jaw universal centric gripper

CGS3-40

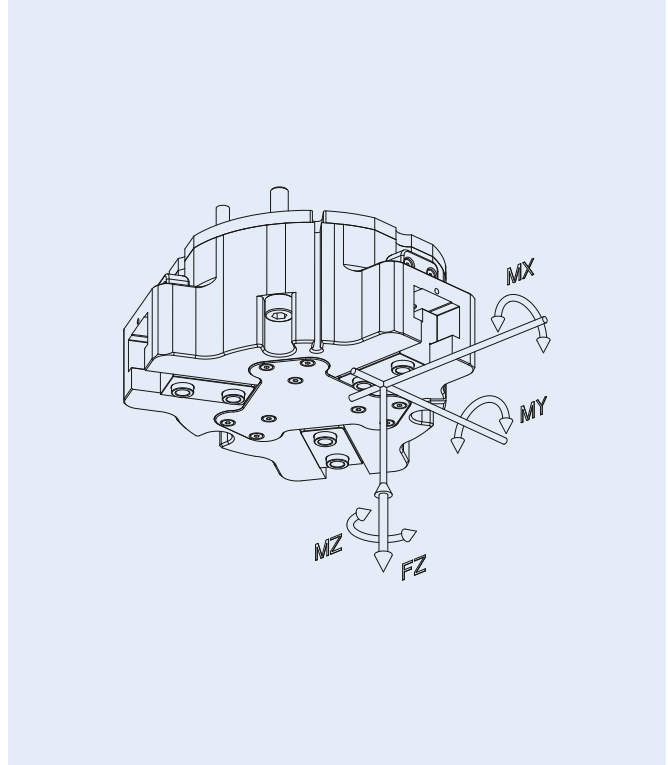
CGS3-40



CGS3-40 with spring (-FA/-FI)



Forces and moments

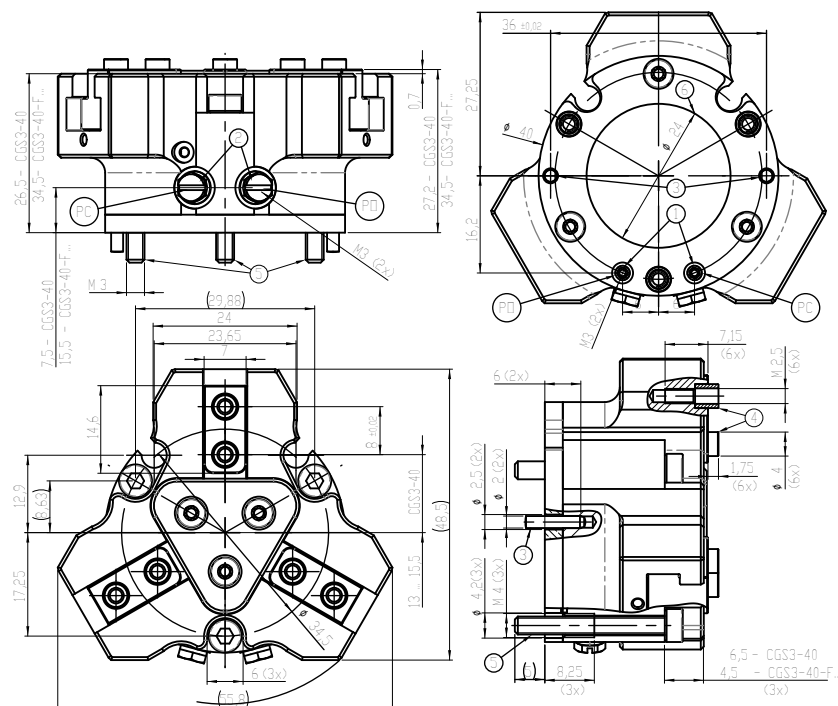


Technical data

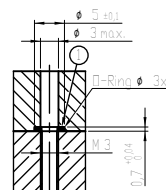
Type	CGS3-40	CGS3-40-FA	CGS3-40-FI
Item no.	150001223	150001224	150001225
Recommended handling weight	1.3 kg	1.3 kg	1.3 kg
Gripping force external gripping	255 N	360 N	-
Gripping force internal gripping	280 N	-	385 N
Min. spring force	-	105 N	105 N
Stroke per jaw	2.5 mm	2.5 mm	2.5 mm
Max. finger length	57.5 mm	52.5 mm	52.5 mm
Max. permissible mass per finger	0.1 kg	0.1 kg	0.1 kg
Repeatability	+/-0.01	+/-0.01	+/-0.01
Weight	0.128 kg	0.156 kg	0.152 kg
Max. moment Mx	10 Nm	10 Nm	10 Nm
Max. moment My	12 Nm	12 Nm	12 Nm
Max. moment Mz	7.5 Nm	7.5 Nm	7.5 Nm
Max. tensile/compressive force Fz, Fd	260 N	260 N	260 N
Opening time	0.03 s	0.04 s	0.02 s
Closing time	0.03 s	0.02 s	0.04 s
Air consumption per cycle	0.03 l	0.06 l	0.067 l
Connection thread open/close	M3	M3	M3
Operating pressure	3 ... 8 bar	4 ... 8 bar	4 ... 8 bar
Ambient temperature	+5 ... +80 °C	+5 ... +80 °C	+5 ... +80 °C
Length x width x height [mm]	55.8 x 48.5 x 27.2	55.8 x 48.5 x 34.5	55.8 x 48.5 x 34.5
Customs tariff number (CTN)	84799070	84799070	84799070

All data apply at 6 bar nominal operating pressure

Technical drawing



- 1 Direct air connection PO Open
- 2 Main air connection PC Close
- 3 Centering option with cylindrical pins
- 4 Centering sleeves - gripper fingers
- 5 Mounting screws - gripper
- 6 Maximum hollow - Ø of the mounting surface



Versions

CGS3-40

CGS3-40 with dust cover (similar to protection class IP64)

Type	CGS3-40-SA	CGS3-40-FA-SA	CGS3-40-FI-SA
Item no.	150001289	150001287	150001288
Weight	0.152 kg	0.183 kg	0.183 kg
L x W x H [mm]	56 x 48.5 x 31.2	62 x 54.5 x 39.2	62 x 54.5 x 39.2

Other technical data correspond to the basic variants (see table on the left).



Suitable accessories

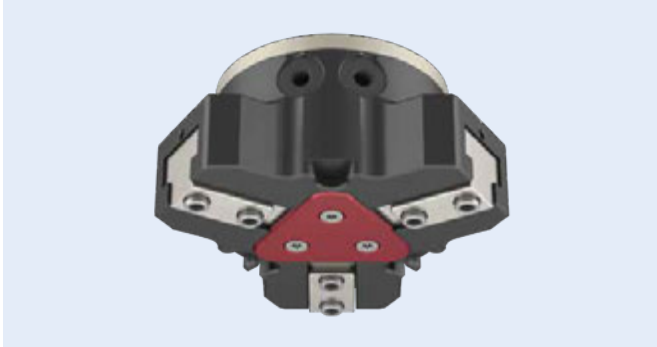
Type	Sensors	Double check valves	Gripper pads	Dust Cover	Pressure stars
Further information	Page 117	Page 122	Page 123	Page 125	Page 126



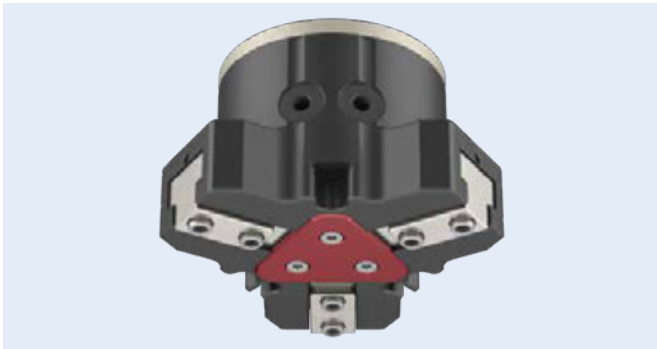
3-jaw universal centric gripper

CGS3-50

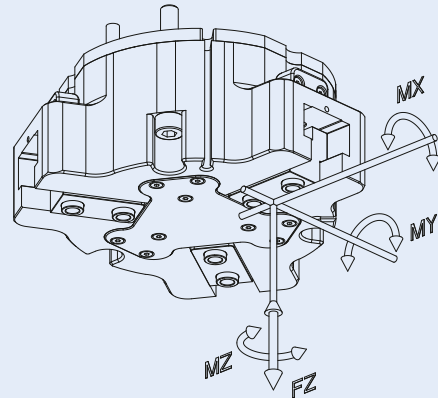
CGS3-50



CGS3-50 with spring (-FA/-FI)



Forces and moments

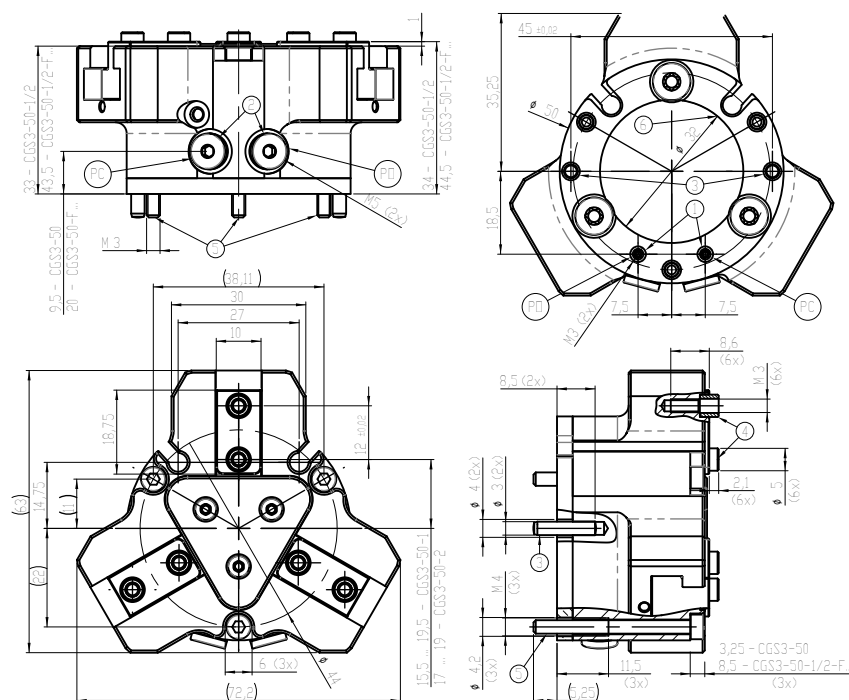


Technical data

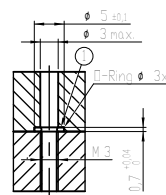
Type	CGS3-50-1	CGS3-50-1-FA	CGS3-50-1-FI	CGS3-50-2	CGS3-50-2-FA	CGS3-50-2-FI
Item no.	150001226	150001227	150001228	150001229	150001230	150001231
Recommended handling weight	1.7 kg	1.7 kg	1.7 kg	3.4 kg	3.4 kg	3.4 kg
Gripping force external gripping	335 N	465 N	-	670 N	930 N	-
Gripping force internal gripping	370 N	-	500 N	740 N	-	1,000 N
Min. spring force	-	130 N	260 N	-	130 N	260 N
Stroke per jaw	4 mm	4 mm	4 mm	2 mm	2 mm	2 mm
Max. finger length	72.5 mm	67.5 mm	67.5 mm	72.5 mm	67.5 mm	67.5 mm
Max. permissible mass per finger	0.18 kg	0.18 kg	0.18 kg	0.18 kg	0.18 kg	0.18 kg
Repeatability	+/-0.01 mm	+/-0.01 mm	+/-0.01 mm	+/-0.01 mm	+/-0.01 mm	+/-0.01 mm
Weight	0.265 kg	0.32 kg	0.31 kg	0.265 kg	0.32 kg	0.31 kg
Max. moment Mx	20 Nm	20 Nm	20 Nm	20 Nm	20 Nm	20 Nm
Max. moment My	24 Nm	24 Nm	24 Nm	24 Nm	24 Nm	24 Nm
Max. moment Mz	15 Nm	15 Nm	15 Nm	15 Nm	15 Nm	15 Nm
Max. tensile/compressive force Fz, Fd	520 N	520 N	520 N	520 N	520 N	520 N
Opening time	0.03 s	0.04 s	0.02 s	0.03 s	0.04 s	0.02 s
Closing time	0.03 s	0.02 s	0.04 s	0.03 s	0.02 s	0.04 s
Air consumption per cycle	0.06 l	0.105 l	0.112 l	0.06 l	0.105 l	0.112 l
Connection thread open/close	M3	M3	M3	M3	M3	M3
Operating pressure	3 ... 8 bar	4 ... 8 bar	4 ... 8 bar	3 ... 8 bar	4 ... 8 bar	4 ... 8 bar
Ambient temperature	+5 ... +80 °C	+5 ... +80 °C	+5 ... +80 °C	+5 ... +80 °C	+5 ... +80 °C	+5 ... +80 °C
Length x width x height [mm]	72.2 x 63 x 34	72.2 x 63 x 44.5	72.2 x 63 x 44.5	72.2 x 63 x 34	72.2 x 63 x 44.5	72.2 x 63 x 44.5
Customs tariff number (CTN)	84799070	84799070	84799070	84799070	84799070	84799070

All data apply at 6 bar nominal operating pressure

Technical drawing



- 1 Direct air connection PO Open
- 2 Main air connection PC Close
- 3 Centering option with cylindrical pins
- 4 Centering sleeves - gripper fingers
- 5 Mounting screws - gripper
- 6 Maximum hollow - Ø of the mounting surface



Versions

CGS3-50

CGS3-50 with dust cover (similar to protection class IP64)

Type	CGS3-50-1-SA	CGS3-50-1-FA-SA	CGS3-50-1-FI-SA
Item no.	150001290	150001291	150001292
Weight	0.32 kg	0.375 kg	0.365 kg
L x W x H [mm]	79 x 69.5 x 38.5	79 x 69.5 x 49	79 x 69.5 x 49
Type	CGS3-50-2-SA	CGS3-50-2-FA-SA	CGS3-50-2-FI-SA
Item no.	150001293	150001294	150001295
Weight	0.32 kg	0.375 kg	0.365 kg
L x W x H [mm]	79 x 69.5 x 38,5	79 x 69.5 x 49	79 x 69.5 x 49

Other technical data correspond to the basic variants (see table on the left).



Suitable accessories

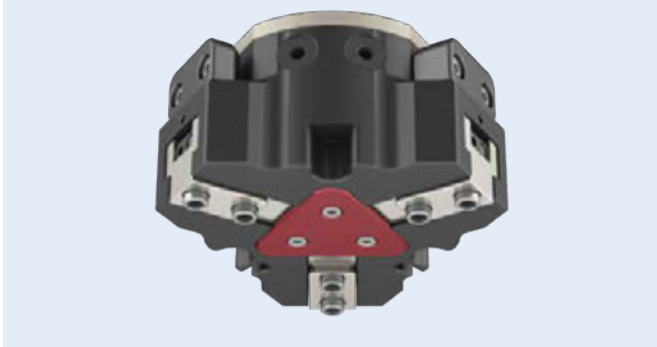
Type	Sensors	Double check valves	Gripper pads	Dust Cover	Pressure stars
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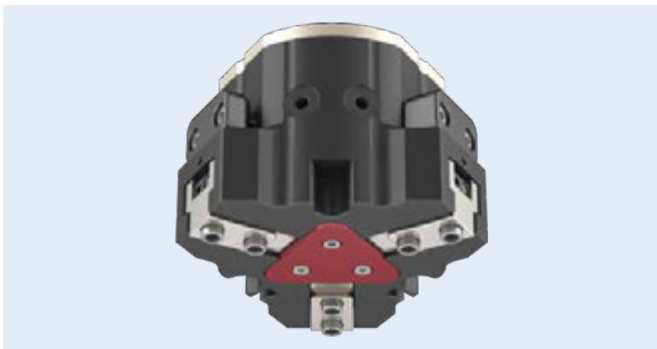
3-jaw universal centric gripper

CGS3-64

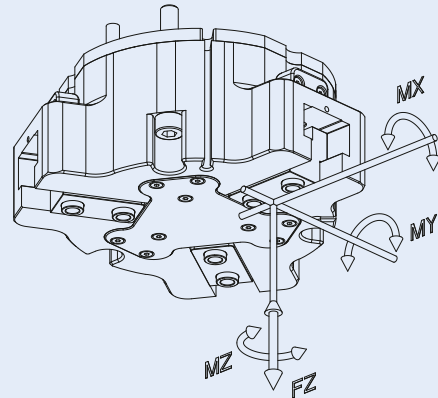
CGS3-64



CGS3-64 with spring (-FA/-FI)



Forces and moments

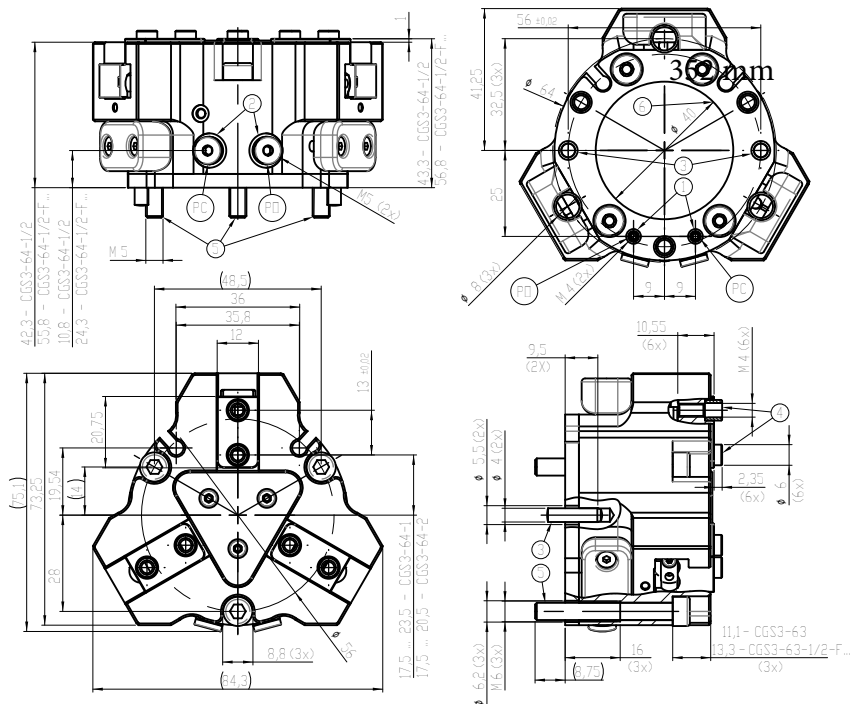


Technical data

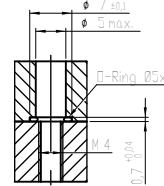
Type	CGS3-64-1	CGS3-64-1-FA	CGS3-64-1-FI	CGS3-64-2	CGS3-64-2-FA	CGS3-64-2-FI
Item no.	150001232	150001233	150001234	150001235	150001236	150001237
Recommended handling weight	3.2 kg	3.2 kg	3.2 kg	6.4 kg	6.4 kg	6.4 kg
Gripping force external gripping	640 N	890 N	-	1,280 N	1,780 N	-
Gripping force internal gripping	690 N	-	940 N	1,380 N	-	1,880 N
Min. spring force	-	250 N	250 N	-	500 N	500 N
Stroke per jaw	6 mm	6 mm	6 mm	3 mm	3 mm	3 mm
Max. finger length	90 mm	85 mm	85 mm	90 mm	85 mm	85 mm
Max. permissible mass per finger	0.35 kg	0.35 kg	0.35 kg	0.35 kg	0.35 kg	0.35 kg
Repeatability	+/-0.01 mm	+/-0.01 mm	+/-0.01 mm	+/-0.01 mm	+/-0.01 mm	+/-0.01 mm
Weight	0.48 kg	0.59 kg	0.57 kg	0.48 kg	0.585 kg	0.57 kg
Max. moment Mx	40 Nm	40 Nm	40 Nm	40 Nm	40 Nm	40 Nm
Max. moment My	48 Nm	48 Nm	48 Nm	48 Nm	48 Nm	48 Nm
Max. moment Mz	35 Nm	35 Nm	35 Nm	35 Nm	35 Nm	35 Nm
Max. tensile/compressive force Fz, Fd	1,000 N	1,000 N	1,000 N	1,000 N	1,000 N	1,000 N
Opening time	0.03 s	0.04 s	0.02 s	0.03 s	0.04 s	0.02 s
Closing time	0.03 s	0.02 s	0.04 s	0.03 s	0.02 s	0.04 s
Air consumption per cycle	0.168 l	0.28 l	0.308 l	0.168 l	0.28 l	0.308 l
Connection thread open/close	M3	M3	M3	M3	M3	M3
Operating pressure	3 ... 8 bar	4 ... 8 bar	4 ... 8 bar	3 ... 8 bar	4 ... 8 bar	4 ... 8 bar
Ambient temperature	+5 ... +80 °C	+5 ... +80 °C	+5 ... +80 °C	+5 ... +80 °C	+5 ... +80 °C	+5 ... +80 °C
Length x width x height [mm]	84.3 x 75.1 x 43.3	72.2 x 63 x 44.5	84.3 x 75.1 x 56.8	84.3 x 75.1 x 43.3	84.3 x 75.1 x 56.8	84.3 x 75.1 x 56.8
Customs tariff number (CTN)	84799070	84799070	84799070	84799070	84799070	84799070

All data apply at 6 bar nominal operating pressure

Technical drawing



- 1 Direct air connection (PO) Open
- 2 Main air connection (PC) Close
- 3 Centering option with cylindrical pins
- 4 Centering sleeves - gripper fingers
- 5 Mounting screws - gripper
- 6 Maximum hollow - Ø of the mounting surface



Versions

CGS3-64

CGS3-64 with dust cover (similar to protection class IP64)

Type	CGS3-64-1-SA	CGS3-64-1-FA-SA	CGS3-64-1-FI-SA
Item no.	150001296	150001297	150001298
Weight	0.586 kg	0.678 kg	0.658 kg
L x W x H [mm]	91.4 x 81.2 x 48.8	91.4 x 81.2 x 62.3	91.4 x 81.2 x 62.3
Type	CGS3-64-2-SA	CGS3-64-2-FA-SA	CGS3-64-2-FI-SA
Item no.	150001299	150001300	150001301
Weight	0.568 kg	0.673 kg	0.658 kg
L x W x H [mm]	91.4 x 81.2 x 48.8	91.4 x 81.2 x 62.3	91.4 x 81.2 x 62.3

Other technical data correspond to the basic variants (see table on the left).



Suitable accessories

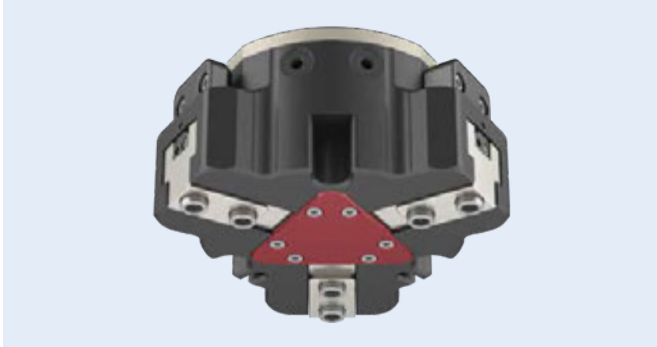
Type	Sensors	Double check valves	Gripper pads	Dust Cover	Pressure stars
Further information	Page 117	Page 122	Page 123	Page 125	Page 126



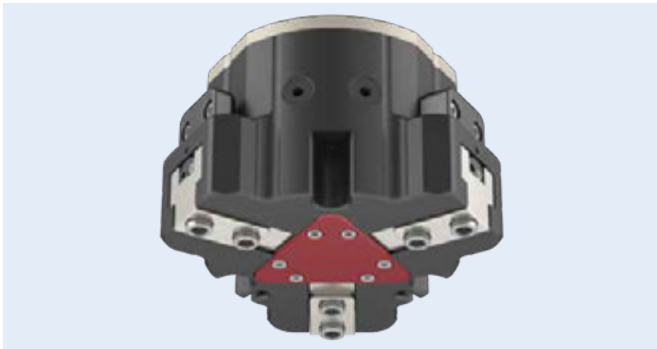
3-jaw universal centric gripper

CGS3-80

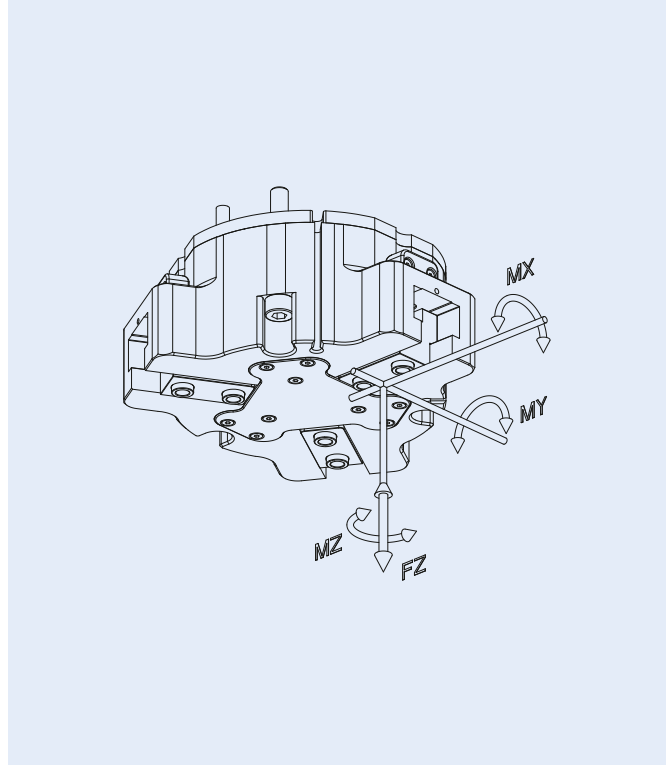
CGS3-80



CGS3-80 with spring (-FA/-FI)



Forces and moments

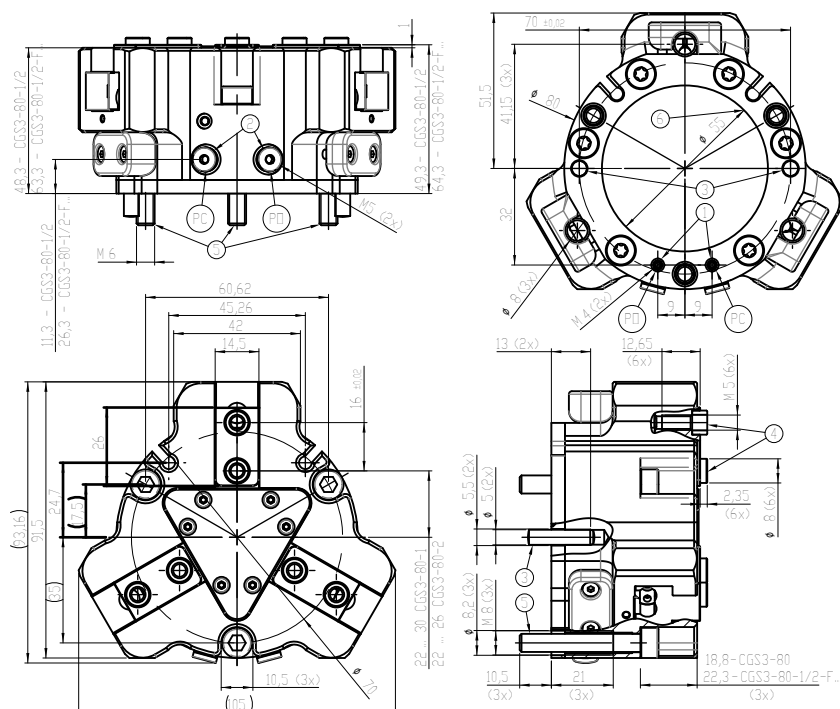


Technical data

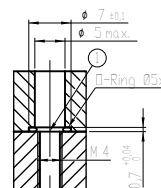
Type	CGS3-80-1	CGS3-80-1-FA	CGS3-80-1-FI	CGS3-80-2	CGS3-80-2-FA	CGS3-80-2-FI
Item no.	150001238	150001239	150001240	150001241	150001242	150001243
Recommended handling weight	5 kg	5 kg	5 kg	10 kg	10 kg	10 kg
Gripping force external gripping	1,010 N	1,390 N	-	2,020 N	2,780 N	-
Gripping force internal gripping	1,080 N	-	1,460 N	2,160 N	-	2,920 N
Min. spring force	-	380 N	380 N	-	760 N	760 N
Stroke per jaw	8 mm	8 mm	8 mm	4 mm	4 mm	4 mm
Max. finger length	110 mm	105 mm	105 mm	110 mm	105 mm	105 mm
Max. permissible mass per finger	0.6 kg	0.6 kg	0.6 kg	0.6 kg	0.6 kg	0.6 kg
Repeatability	+/- 0.01 mm	+/- 0.01 mm	+/- 0.01 mm	+/- 0.01 mm	+/- 0.01 mm	+/- 0.01 mm
Weight	0.865 kg	1.05 kg	1.025 kg	0.865 kg	1.05 kg	1.025 kg
Max. moment Mx	55 Nm	55 Nm	55 Nm	55 Nm	55 Nm	55 Nm
Max. moment My	82 Nm	82 Nm	82 Nm	82 Nm	82 Nm	82 Nm
Max. moment Mz	57 Nm	57 Nm	57 Nm	57 Nm	57 Nm	57 Nm
Max. tensile/compressive force Fz, Fd	1,550 N	1,550 N	1,550 N	1,550 N	1,550 N	1,550 N
Opening time	0.05 s	0.06 s	0.04 s	0.05 s	0.06 s	0.04 s
Closing time	0.05 s	0.04 s	0.06 s	0.05 s	0.04 s	0.06 s
Air consumption per cycle	0.35 l	0.581 l	0.602 l	0.35 l	0.581 l	0.602 l
Connection thread open/close	M3	M3	M3	M3	M3	M3
Operating pressure	3 ... 8 bar	4 ... 8 bar	4 ... 8 bar	3 ... 8 bar	4 ... 8 bar	4 ... 8 bar
Ambient temperature	+5 ... +80 °C	+5 ... +80 °C	+5 ... +80 °C	+5 ... +80 °C	+5 ... +80 °C	+5 ... +80 °C
Length x width x height [mm]	105 x 93.2 x 49.3	105 x 93.2 x 64.3	105 x 93.2 x 64.3	105 x 93.2 x 49.3	105 x 93.2 x 64.3	105 x 93.2 x 64.3
Customs tariff number (CTN)	84799070	84799070	84799070	84799070	84799070	84799070

All data apply at 6 bar nominal operating pressure

Technical drawing



- 1 Direct air connection PO Open
- 2 Main air connection PC Close
- 3 Centering option with cylindrical pins
- 4 Centering sleeves - gripper fingers
- 5 Mounting screws - gripper
- 6 Maximum hollow - Ø of the mounting surface



Versions

CGS3-80

CGS3-80 with dust cover (similar to protection class IP64)

Type	CGS3-80-1-SA	CGS3-80-1-FA-SA	CGS3-80-1-FI-SA
Item no.	150001302	150001303	150001304
Weight	0.989 kg	1.174 kg	1.149 kg
L x W x H [mm]	110.9 x 100.3 x 54.8	110.9 x 100.3 x 69.8	110.9 x 100.3 x 69.8
Type	CGS3-80-2-SA	CGS3-80-2-FA-SA	CGS3-80-2-FI-SA
Item no.	150001305	150001306	150001307
Weight	0.989 kg	1.174 kg	1.149 kg
L x W x H [mm]	110.9 x 100.3 x 54.8	110.9 x 100.3 x 69.8	110.9 x 100.3 x 69.8

Other technical data correspond to the basic variants (see table on the left).



Suitable accessories

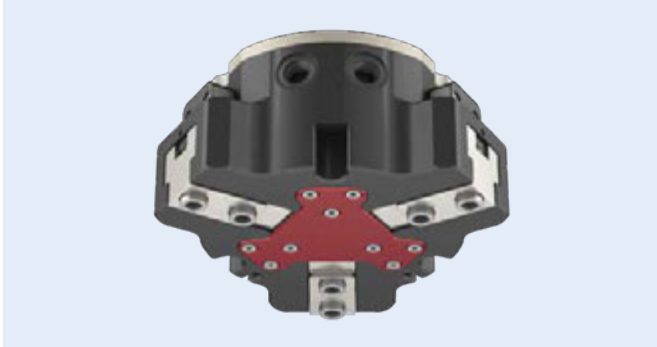
Type	Sensors	Double check valves	Gripper pads	Dust Cover	Pressure stars
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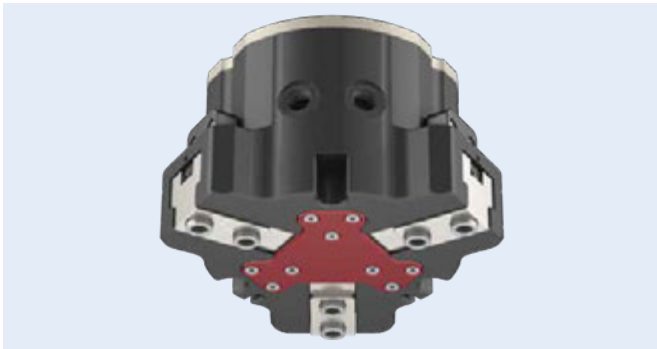
3-jaw universal centric gripper

CGS3-100

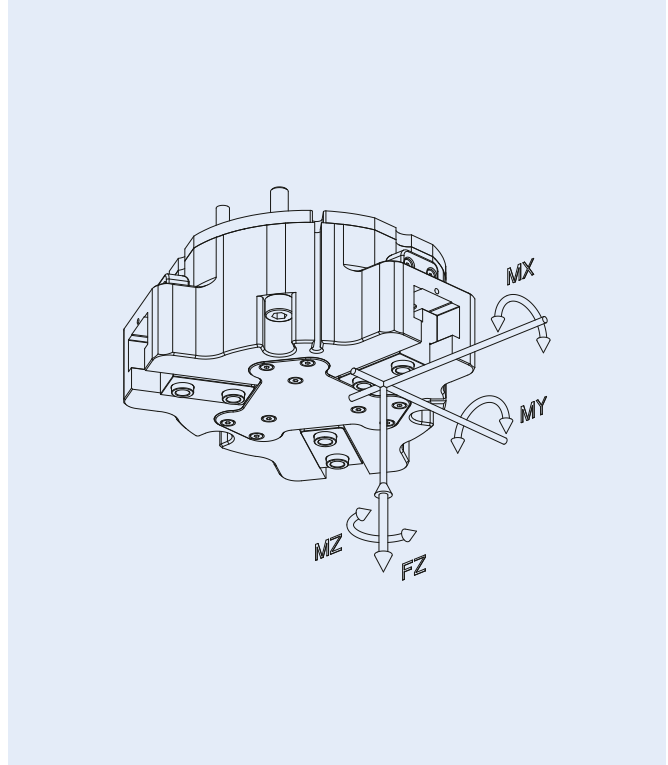
CGS3-100



CGS3-100 with spring (-FA/-FI)



Forces and moments

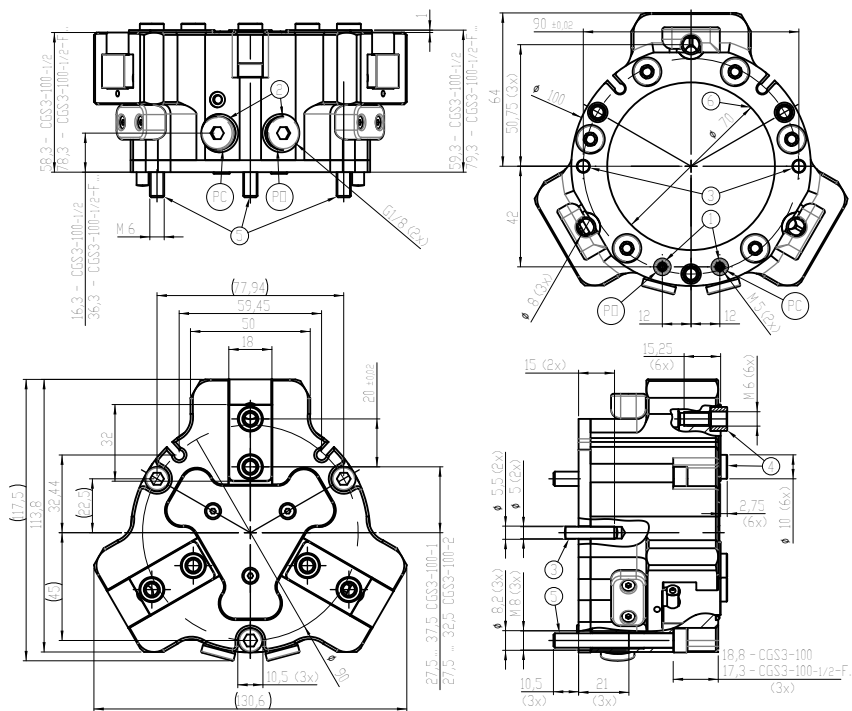


Technical data

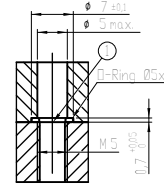
Type	CGS3-100-1	CGS3-100-1-FA	CGS3-100-1-FI	CGS3-100-2	CGS3-100-2-FA	CGS3-100-2-FI
Item no.	150001244	150001245	150001246	150001247	150001248	150001249
Recommended handling weight	9.5 kg	9.5 kg	9.5 kg	19 kg	19 kg	19 kg
Gripping force external gripping	1,900 N	2,580 N	-	3,800 N	5,200 N	-
Gripping force internal gripping	2,020 N	-	2,700 N	4,040 N	-	5,420 N
Min. spring force	-	680 N	680 N	-	1,400 N	1,400 N
Stroke per jaw	10 mm	10 mm	10 mm	5 mm	5 mm	5 mm
Max. finger length	150 mm	135 mm	135 mm	150 mm	135 mm	135 mm
Max. permissible mass per finger	1.1 kg	1.1 kg	1.1 kg	1.1 kg	1.1 kg	1.1 kg
Repeatability	+/- 0.01 mm	+/- 0.01 mm	+/- 0.01 mm	+/- 0.01 mm	+/- 0.01 mm	+/- 0.01 mm
Weight	1.53 kg	1.86 kg	1.86 kg	1.53 kg	1.91 kg	1.86 kg
Max. moment Mx	75 Nm	75 Nm	75 Nm	75 Nm	75 Nm	75 Nm
Max. moment My	108 Nm	108 Nm	108 Nm	108 Nm	108 Nm	108 Nm
Max. moment Mz	72 Nm	72 Nm	72 Nm	72 Nm	72 Nm	72 Nm
Max. tensile/compressive force Fz, Fd	2,030 N	2,030 N	2,030 N	2,030 N	2,030 N	2,030 N
Opening time	0.1 s	0.2 s	0.1 s	0.1 s	0.2 s	0.1 s
Closing time	0.1 s	0.1 s	0.2 s	0.1 s	0.1 s	0.2 s
Air consumption per cycle	0.819 l	1.4 l	1.449 l	0.819 l	1.4 l	1.449 l
Connection thread open/close	M3	M3	M3	M3	M3	M3
Operating pressure	3 ... 8 bar	4 ... 8 bar	4 ... 8 bar	3 ... 8 bar	4 ... 8 bar	4 ... 8 bar
Ambient temperature	+5 ... +80 °C	+5 ... +80 °C	+5 ... +80 °C	+5 ... +80 °C	+5 ... +80 °C	+5 ... +80 °C
Length x width x height [mm]	130.6 x 117.5 x 59.3	130.6 x 117.5 x 79.3	130.6 x 117.5 x 79.3	130.6 x 117.5 x 59.3	130.6 x 117.5 x 79.3	130.6 x 117.5 x 79.3
Customs tariff number (CTN)	84799070	84799070	84799070	84799070	84799070	84799070

All data apply at 6 bar nominal operating pressure

Technical drawing



- 1 Direct air connection
- 2 Main air connection
- 3 Centering option with cylindrical pins
- 4 Centering sleeves - gripper fingers
- 5 Mounting screws - gripper
- 6 Maximum hollow - Ø of the mounting surface



Versions

CGS3-100

CGS3-100 with dust cover (similar to protection class IP64)

Type	CGS3-100-1-SA	CGS3-100-1-FA-SA	CGS3-100-1-FI-SA
Item no.	150001308	150001309	150001310
Weight	1.752 kg	2.132 kg	2.082 kg
L x W x H [mm]	137.7 x 126.2 x 65.8	137.7 x 126.2 x 85.8	137.7 x 126.2 x 85.8
Type	CGS3-100-2-SA	CGS3-100-2-FA-SA	CGS3-100-2-FI-SA
Item no.	150001311	150001312	150001313
Weight	1.752 kg	2.132 kg	2.082 kg
L x W x H [mm]	137.7 x 126.2 x 65.8	137.7 x 126.2 x 85.8	137.7 x 126.2 x 85.8

Other technical data correspond to the basic variants (see table on the left).



Suitable accessories

Type	Sensors	Double check valves	Gripper pads	Dust Cover	Pressure stars
Further information	Page 117	Page 122	Page 123	Page 125	Page 126



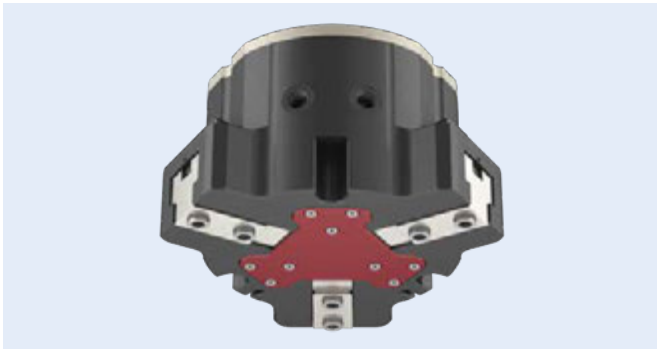
3-jaw universal centric gripper

CGS3-125

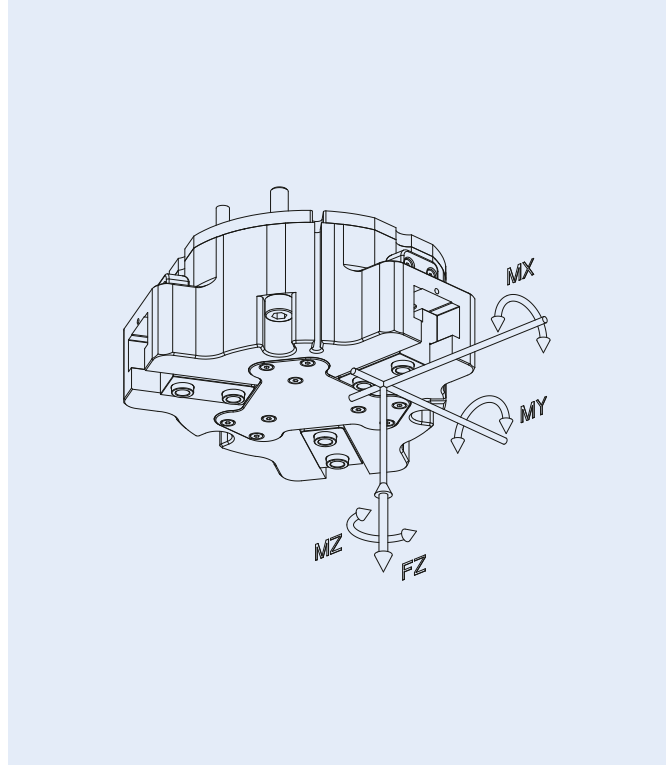
CGS3-125



CGS3-125 with spring (-FA/-FI)



Forces and moments

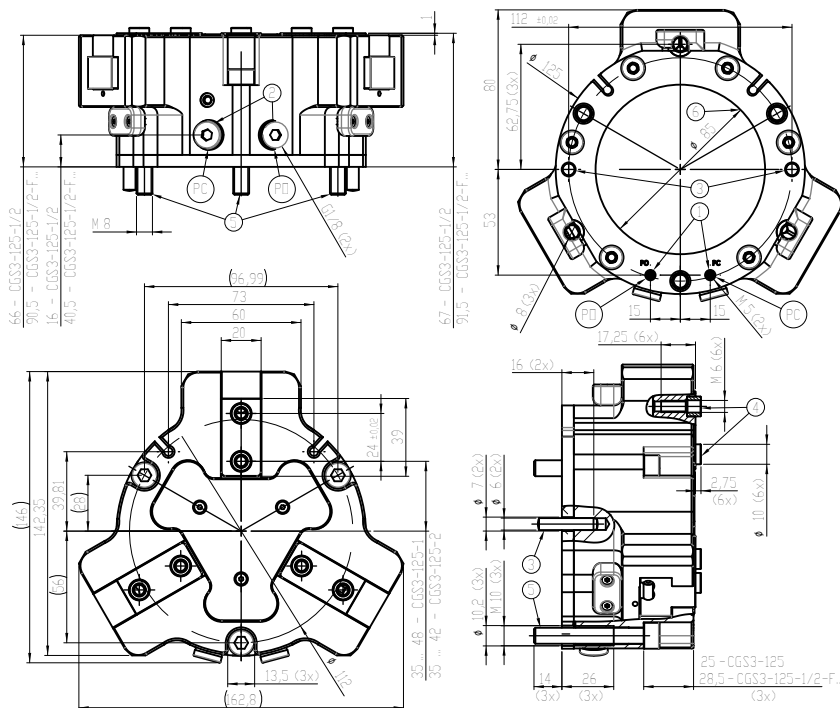


Technical data

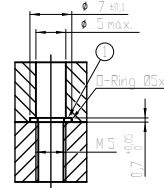
Type	CGS3-125-1	CGS3-125-1-FA	CGS3-125-1-FI	CGS3-125-2	CGS3-125-2-FA	CGS3-125-2-FI
Item no.	150001250	150001251	150001252	150001253	150001254	150001255
Recommended handling weight	15.5 kg	15.5 kg	15.5 kg	31 kg	31 kg	31 kg
Gripping force external gripping	3,090 N	4,010 N	-	6,620 N	8,600 N	-
Gripping force internal gripping	3,230 N	-	4,150 N	6,930 N	-	89,10 N
Min. spring force	-	920 N	920 N	-	1,980 N	1,980 N
Stroke per jaw	13 mm	13 mm	13 mm	6 mm	6 mm	6 mm
Max. finger length	180 mm	165 mm	165 mm	180 mm	165 mm	165 mm
Max. permissible mass per finger	2.1 kg	2.1 kg	2.1 kg	2.1 kg	2.1 kg	2.1 kg
Repeatability	+/- 0.01 mm	+/- 0.01 mm	+/- 0.01 mm	+/- 0.01 mm	+/- 0.01 mm	+/- 0.01 mm
Weight	2.64 kg	3.225 kg	3.18 kg	2.64 kg	3.225 kg	3.18 kg
Max. moment Mx	115 Nm	115 Nm	115 Nm	115 Nm	115 Nm	115 Nm
Max. moment My	135 Nm	135 Nm	135 Nm	135 Nm	135 Nm	135 Nm
Max. moment Mz	105 Nm	105 Nm	105 Nm	105 Nm	105 Nm	105 Nm
Max. tensile/compressive force Fz, Fd	2,900 N	2,900 N	2,900 N	2,900 N	2,900 N	2,900 N
Opening time	0.2 s	0.35 s	0.17 s	0.2 s	0.35 s	0.17 s
Closing time	0.2 s	0.17 s	0.35 s	0.2 s	0.17 s	0.35 s
Air consumption per cycle	1.68 l	2.87 l	2.87 l	1.68 l	2.87 l	2.87 l
Connection thread open/close	M3	M3	M3	M3	M3	M3
Operating pressure	3 ... 8 bar	4 ... 8 bar	4 ... 8 bar	3 ... 8 bar	4 ... 8 bar	4 ... 8 bar
Ambient temperature	+5 ... +80 °C	+5 ... +80 °C	+5 ... +80 °C	+5 ... +80 °C	+5 ... +80 °C	+5 ... +80 °C
Length x width x height [mm]	162.8 x 146 x 67	162.8 x 146 x 91.5	162.8 x 146 x 91.5	162.8 x 146 x 67	162.8 x 146 x 91.5	162.8 x 146 x 91.5
Customs tariff number (CTN)	84799070	84799070	84799070	84799070	84799070	84799070

All data apply at 6 bar nominal operating pressure

Technical drawing



- 1 Direct air connection (PO) Open
- 2 Main air connection (PC) Close
- 3 Centering option with cylindrical pins
- 4 Centering sleeves - gripper fingers
- 5 Mounting screws - gripper
- 6 Maximum hollow - Ø of the mounting surface



Versions

CGS3-125

CGS3-80 with dust cover (similar to protection class IP64)

Type	CGS3-125-1-SA	CGS3-125-1-FA-SA	CGS3-125-1-FI-SA
Item no.	150001314	150001315	150001316
Weight	2.938 kg	3.523 kg	3.478 kg
L x W x H [mm]	168.6 x 153.7 x 73.5	168.6 x 153.7 x 98	168.6 x 153.7 x 98
Type	CGS3-125-2-SA	CGS3-125-2-FA-SA	CGS3-125-2-FI-SA
Item no.	150001317	150001318	150001319
Weight	2.938 kg	3.523 kg	3.478 kg
L x W x H [mm]	168.6 x 153.7 x 73.5	168.6 x 153.7 x 98	168.6 x 153.7 x 98

Other technical data correspond to the basic variants (see table on the left).



Suitable accessories

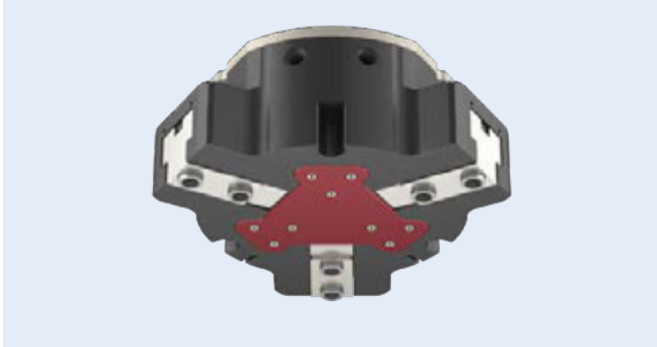
Type	Sensors	Double check valves	Gripper pads	Dust Cover	Pressure stars
Further information	Page 117	Page 122	Page 123	Page 125	Page 126



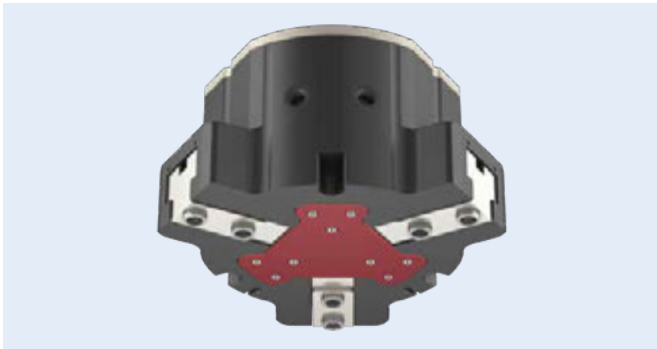
3-jaw universal centric gripper

CGS3-160

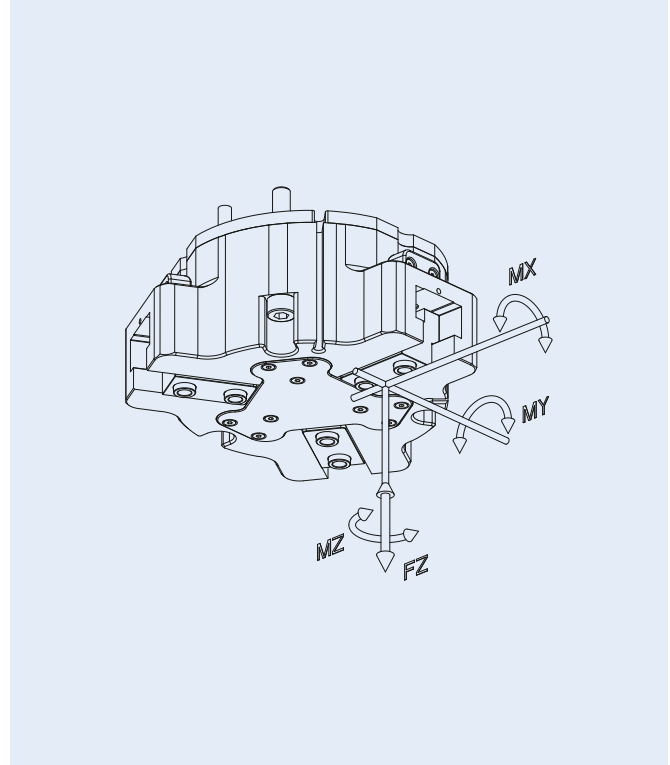
CGS3-160



CGS3-160 with spring (-FA/-FI)



Forces and moments

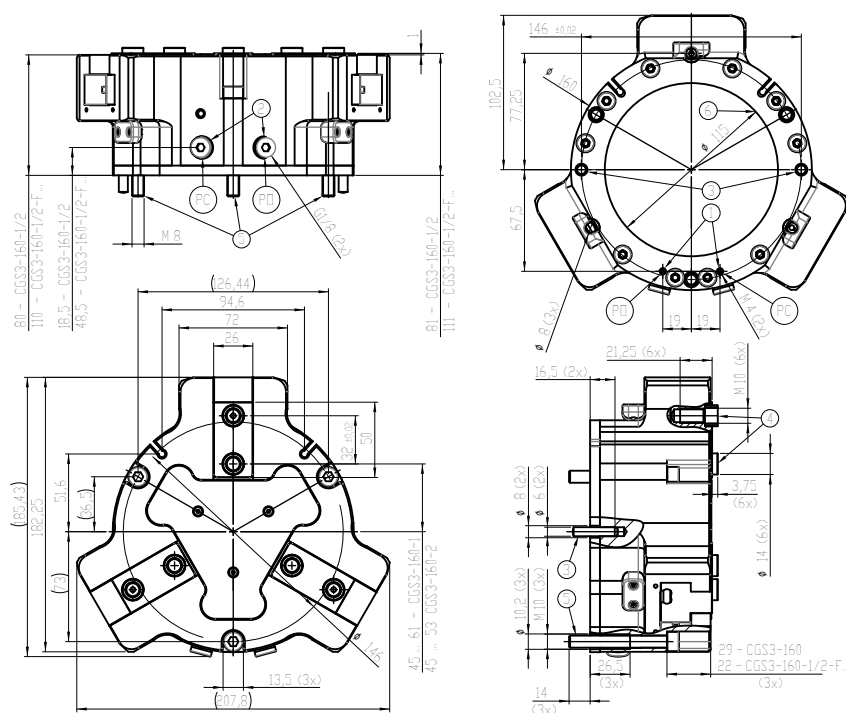


Technical data

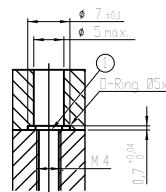
Type	CGS3-160-1	CGS3-160-1-FA	CGS3-160-1-FI	CGS3-160-2	CGS3-160-2-FA	CGS3-160-2-FI
Item no.	150001256	150001257	150001258	150001259	150001260	150001261
Recommended handling weight	27.6 kg	27.6 kg	27.6 kg	55 kg	55 kg	55 kg
Gripping force external gripping	5,530 N	7,720 N	-	11,060 N	14,440 N	-
Gripping force internal gripping	5,740 N	-	7,430 N	11,480 N	-	14,860 N
Min. spring force	-	1,690 N	3,380 N	-	1,690 N	3,380 N
Stroke per jaw	16 mm	16 mm	16 mm	8 mm	8 mm	8 mm
Max. finger length	220 mm	200 mm	200 mm	220 mm	200 mm	200 mm
Max. permissible mass per finger	3.5 kg	3.5 kg	3.5 kg	3.5 kg	3.5 kg	3.5 kg
Repeatability	+/- 0.01 mm	+/- 0.01 mm	+/- 0.01 mm	+/- 0.01 mm	+/- 0.01 mm	+/- 0.01 mm
Weight	5.09 kg	6.35 kg	6.25 kg	5.09 kg	6.35 kg	6.25 kg
Max. moment Mx	170 Nm	170 Nm	170 Nm	170 Nm	170 Nm	170 Nm
Max. moment My	170 Nm	170 Nm	170 Nm	170 Nm	170 Nm	170 Nm
Max. moment Mz	140 Nm	140 Nm	140 Nm	140 Nm	140 Nm	140 Nm
Max. tensile/compressive force Fz, Fd	4,700 N	4,700 N	4,700 N	4,700 N	4,700 N	4,700 N
Opening time	0.5 s	0.8 s	0.4 s	0.5 s	0.8 s	0.4 s
Closing time	0.5 s	0.4 s	0.8 s	0.5 s	0.4 s	0.8 s
Air consumption per cycle	3.64 l	6.125 l	1.47 l	3.64 l	6.125 l	1.47 l
Connection thread open/close	M3	M3	M3	M3	M3	M3
Operating pressure	3 ... 8 bar	4 ... 8 bar	4 ... 8 bar	3 ... 8 bar	4 ... 8 bar	4 ... 8 bar
Ambient temperature	+5 ... +80 °C	+5 ... +80 °C	+5 ... +80 °C	+5 ... +80 °C	+5 ... +80 °C	+5 ... +80 °C
Length x width x height [mm]	207.8 x 185.5 x 81	207.8 x 185.5 x 111	207.8 x 185.5 x 111	207.8 x 185.5 x 81	207.8 x 185.5 x 111	207.8 x 185.5 x 111
Customs tariff number (CTN)	84799070	84799070	84799070	84799070	84799070	84799070

All data apply at 6 bar nominal operating pressure

Technical drawing



- 1 Direct air connection PO Open
- 2 Main air connection PC Close
- 3 Centering option with cylindrical pins
- 4 Centering sleeves - gripper fingers
- 5 Mounting screws - gripper
- 6 Maximum hollow - Ø of the mounting surface



Versions

CGS3-160

CGS3-160 with dust cover (similar to protection class IP64)

Type	CGS3-160-1-SA	CGS3-160-1-FA-SA	CGS3-160-1-FI-SA
Item no.	150001320	150001321	150001322
Weight	5.628 kg	6.888 kg	6.788 kg
L x W x H [mm]	211.5 x 192.6 x 89.5	211.5 x 192.6 x 119.5	211.5 x 192.6 x 119.5
Type	CGS3-160-2-SA	CGS3-160-2-FA-SA	CGS3-160-2-FI-SA
Item no.	150001323	150001324	150001325
Weight	5.628 kg	6.888 kg	6.788 kg
L x W x H [mm]	211.5 x 192.6 x 89.5	211.5 x 192.6 x 119.5	211.5 x 192.6 x 119.5

Other technical data correspond to the basic variants (see table on the left).



Suitable accessories

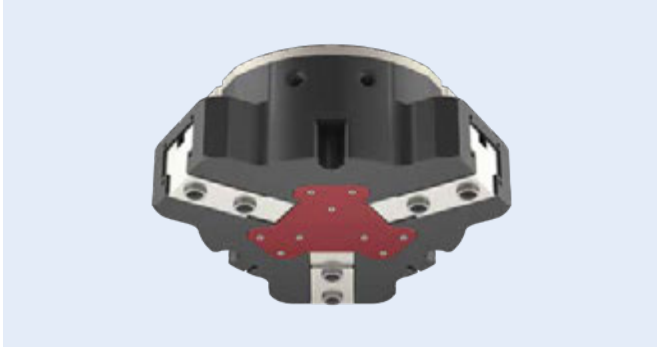
Type	Sensors	Double check valves	Gripper pads	Dust Cover	Pressure stars
Further information	Page 117	Page 122	Page 123	Page 125	Page 126



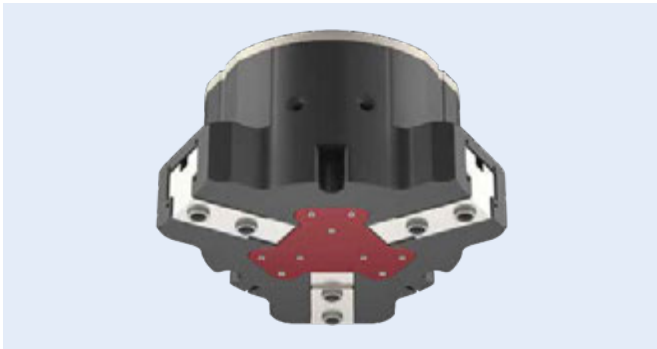
3-jaw universal centric gripper

CGS3-200

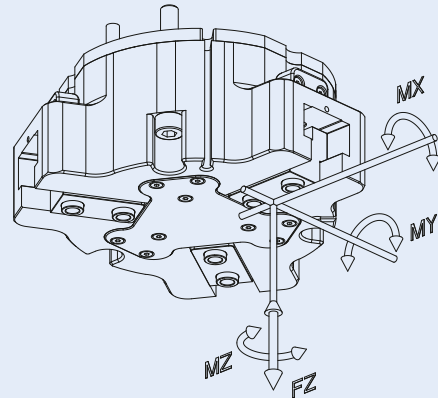
CGS3-200



CGS3-200 with spring (-FA/-FI)



Forces and moments

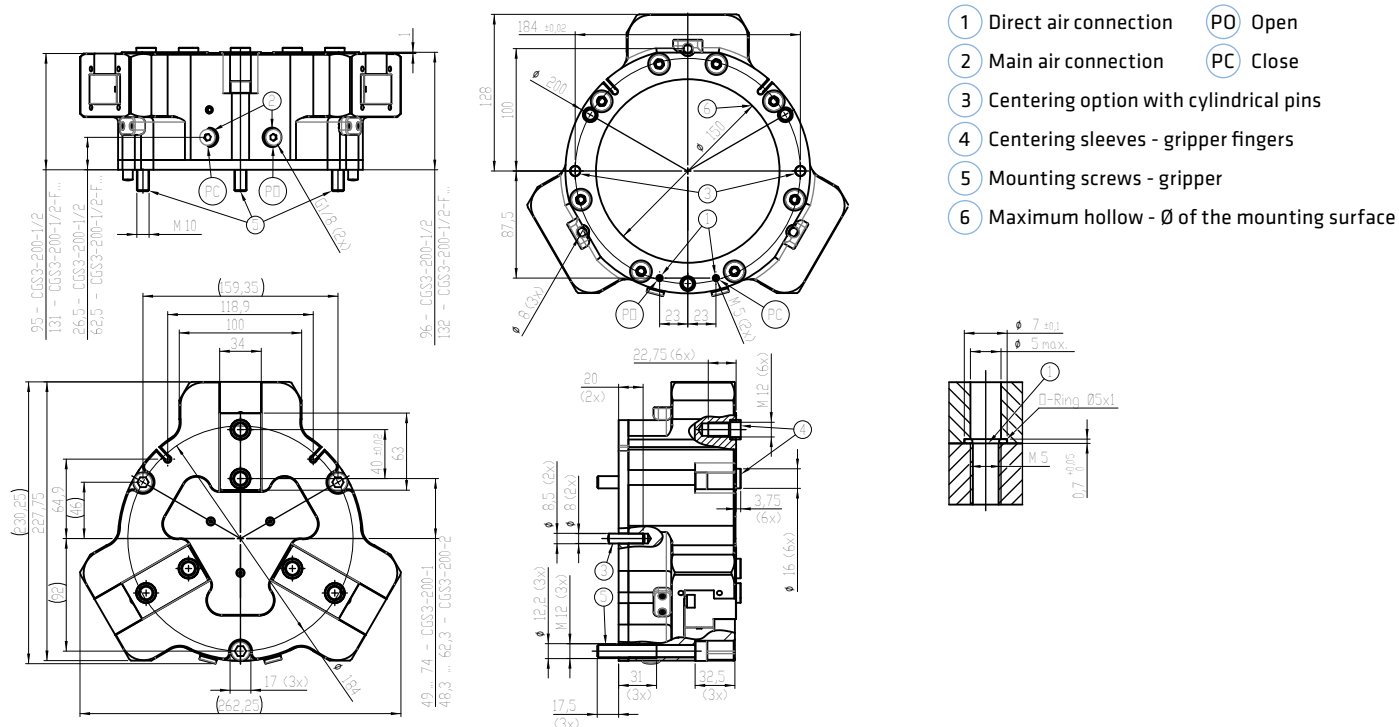


Technical data

Type	CGS3-200-1	CGS3-200-1-FA	CGS3-200-1-FI	CGS3-200-2	CGS3-200-2-FA	CGS3-200-2-FI
Item no.	150001262	150001263	150001264	150001265	150001266	150001267
Recommended handling weight	35.2 kg	35.2 kg	35.2 kg	70 kg	70 kg	70 kg
Gripping force external gripping	7,050 N	8,500 N	-	13,070 N	15,750 N	-
Gripping force internal gripping	7,300 N	-	8,750 N	13,550 N	-	16,230 N
Min. spring force	-	1,450 N	2,680 N	-	1,450 N	2,680 N
Stroke per jaw	25 mm	25 mm	25 mm	14 mm	14 mm	14 mm
Max. finger length	280 mm	230 mm	230 mm	280 mm	230 mm	230 mm
Max. permissible mass per finger	6.5 kg	6.5 kg	6.5 kg	6.5 kg	6.5 kg	6.5 kg
Repeatability	+/- 0.01 mm	+/- 0.01 mm	+/- 0.01 mm	+/- 0.01 mm	+/- 0.01 mm	+/- 0.01 mm
Weight	9.45 kg	11.6 kg	11.4 kg	9.45 kg	11.6 kg	11.4 kg
Max. moment Mx	180 Nm	180 Nm	180 Nm	180 Nm	180 Nm	180 Nm
Max. moment My	200 Nm	200 Nm	200 Nm	200 Nm	200 Nm	200 Nm
Max. moment Mz	150 Nm	150 Nm	150 Nm	150 Nm	150 Nm	150 Nm
Max. tensile/compressive force Fz, Fd	5,050 N	5,050 N	5,050 N	5,050 N	5,050 N	5,050 N
Opening time	1.2 s	1.5 s	1 s	1.2 s	1.5 s	1 s
Closing time	1.2 s	1 s	1.5 s	1.2 s	1 s	1.5 s
Air consumption per cycle	7.595 l	12.39 l	12.495 l	7.595 l	12.39 l	12.495 l
Connection thread open/close	M3	M3	M3	M3	M3	M3
Operating pressure	3 ... 8 bar	4 ... 8 bar	4 ... 8 bar	3 ... 8 bar	4 ... 8 bar	4 ... 8 bar
Ambient temperature	+5 ... +80 °C	+5 ... +80 °C	+5 ... +80 °C	+5 ... +80 °C	+5 ... +80 °C	+5 ... +80 °C
Length x width x height [mm]	262.3 x 230.3 x 96	262.3 x 230.3 x 132	262.3 x 230.3 x 132	262.3 x 230.3 x 96	262.3 x 230.3 x 132	262.3 x 230.3 x 132
Customs tariff number (CTN)	84799070	84799070	84799070	84799070	84799070	84799070

All data apply at 6 bar nominal operating pressure

Technical drawing



Versions

CGS3-200

CGS3-200 with dust cover (similar to protection class IP64)

Type	CGS3-200-1-SA	CGS3-200-1-FA-SA	CGS3-200-1-FI-SA
Item no.	150001326	150001327	150001328
Weight	10.297 kg	12.447 kg	12.47 kg
L x W x H [mm]	262.3 x 237.4 x 104.5	262.3 x 237.4 x 140.5	262.3 x 237.4 x 140.5
Type	CGS3-200-2-SA	CGS3-200-2-FA-SA	CGS3-200-2-FI-SA
Item no.	150001329	150001330	150001331
Weight	10.297 kg	12.447 kg	12.247 kg
L x W x H [mm]	262.3 x 237.4 x 104.5	262.3 x 237.4 x 140.5	262.3 x 237.4 x 140.5

Other technical data correspond to the basic variants (see table on the left).



Suitable accessories

Type	Sensors	Double check valves	Gripper pads	Dust Cover	Pressure stars
Further information	Page 117	Page 122	Page 123	Page 125	Page 126



WGS – Angular gripper

Key advantages of our WGS series

Fields of application

The gripper series was developed for particularly fast gripping processes and tight installation spaces. Due to the large opening angle of 30°, many different workpieces can be gripped and even confined spaces are no problem for the angular gripper due to the optional stroke limitation.

Function description

The vertical stroke movement of the oval piston is translated into a synchronized rotary movement of the jaws via lever-bone kinematics. Compressed air is applied to the pneumatic piston to open and close the gripper. The optional spring enables the gripping force to be maintained proportionally when the compressed air is released.

RESISTANT
POWER DENSITY
ROBUST

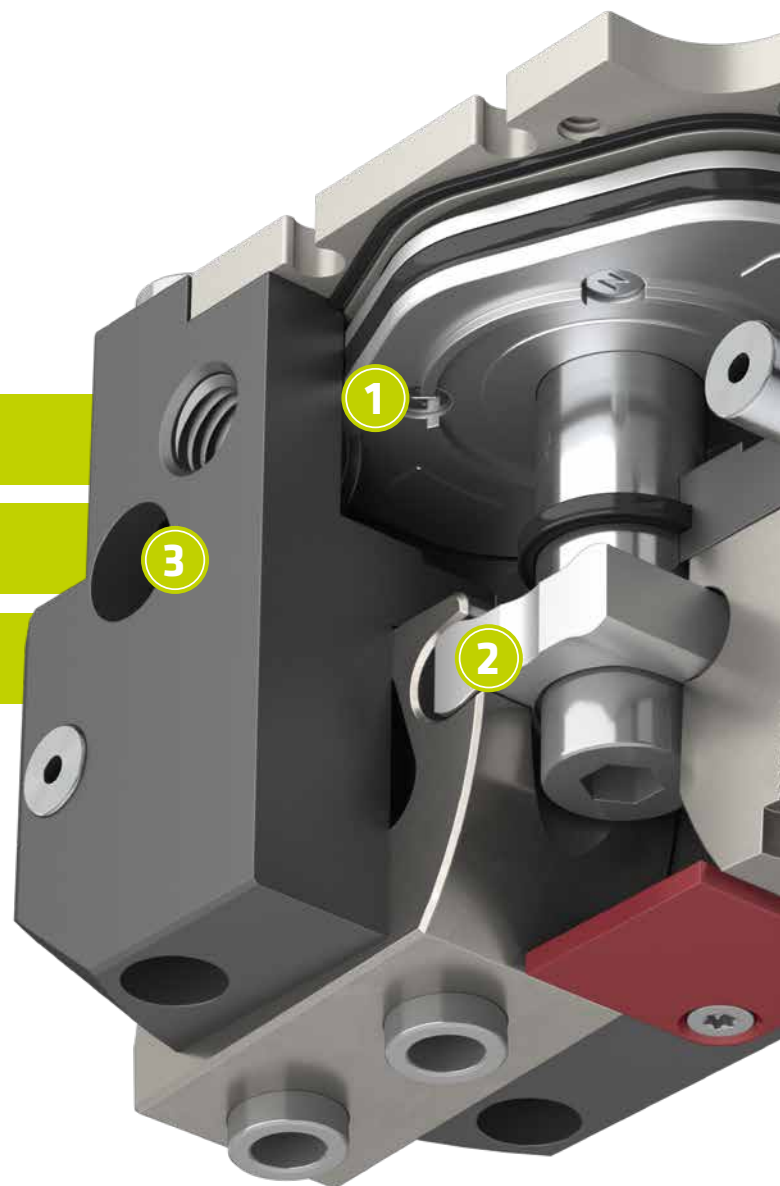


Figure shows WGS-100

Product advantages & benefits at a glance

- Exchangeable with commercially available angular grippers
- Robust kinematics with lever bones for converting the lifting movement into a rotary movement
- Optional stroke limitation, infinitely variable
- Optimized jaw position sensing for safe handling, type recognition and quality control
- Crash and impact resistant due to proven lever bone kinematics
- Compact dimensions with high performance and reliable functionality
- Oval piston for maximum power density and minimum interference contour
- Customary third-party sensors permissible (standardization of the customers can be matched)



1

Oval piston

The effective area of the piston has been optimized for the geometry of the base body to allow maximum gripping forces.

Spring for gripping force retention (depending on version)

Due to a spring installed in the piston chamber, the gripping force can be maintained even in the event of a drop in compressed air pressure.

Preparation for standard sensors

Standard sensors for sensing the opening angle can be mounted using optionally available mounting kits. In addition to that, commercially available magnetic sensors can be inserted into the C-slots in the housing.

2

Lever bone kinematics

The robust and reliable power transmission from the piston via the lever bone to the jaws enables precise gripping and high process reliability.

Mounting option for accessories integrated

Application-specific additional components such as stroke limits or supports can be mounted by means of holes under the kinematic cover.

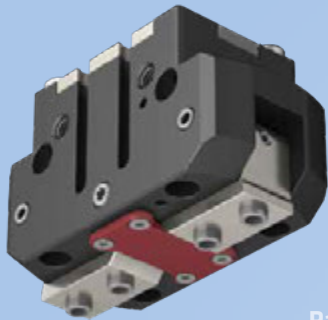
3

Mounting holes for lateral mounting

Different mounting options for fastening of the gripper offer maximum flexibility for any application.

The sizes of the WGS series

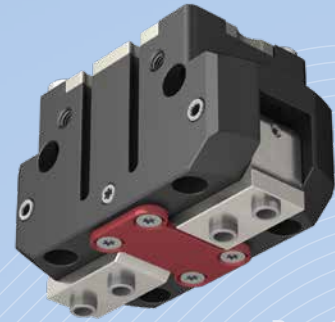
With a high number of variants
and versatile application possibilities



Page 102–103

WGS-50

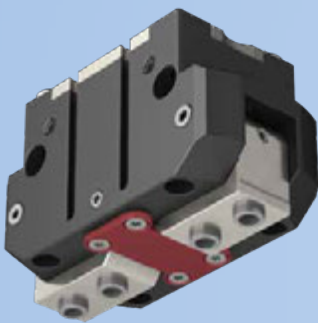
up to **0.38** kg



Page 104–105

WGS-64

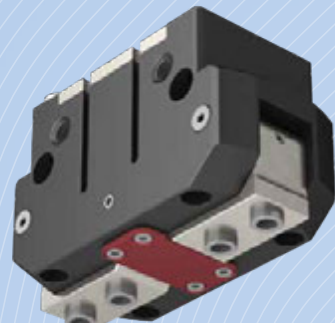
up to **0.67** kg



Page 106–107

WGS-80

up to **1.08** kg



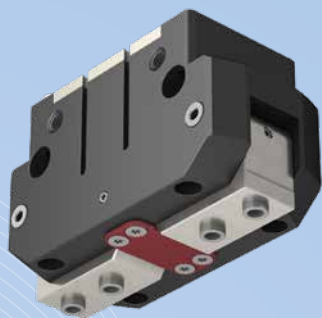
Page 108–109

WGS-100

up to **1.82** kg

Resistent. Power density. Robust.

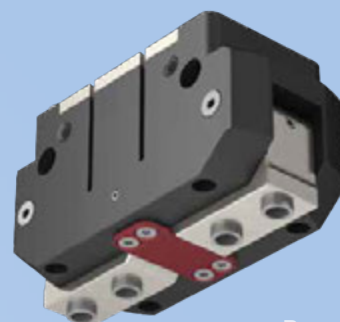
With handling weights
from 0.38 kg up to 9.20 kg



Page 110–111

WGS-125

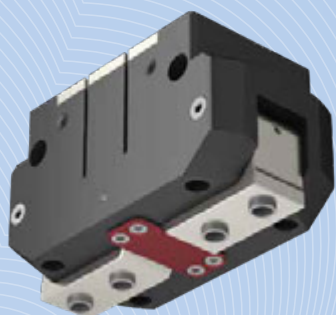
up to **2.97 kg**



Page 112–113

WGS-160

up to **4.40 kg**



Page 114–115

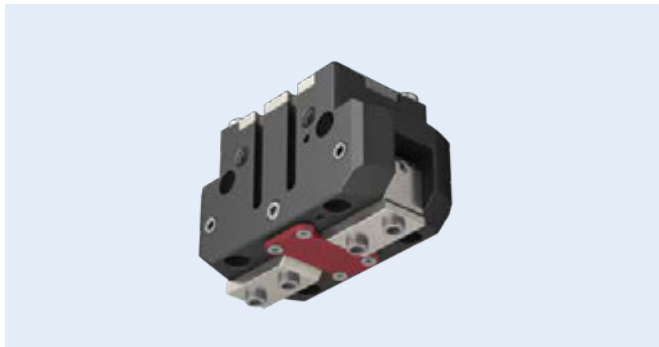
WGS-200

up to **9.20 kg**

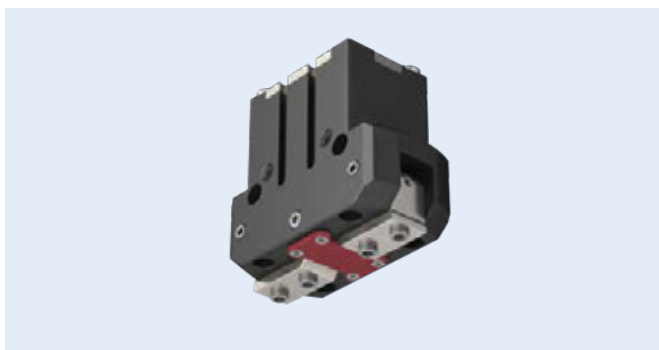
2-jaw universal angular gripper

WGS-50

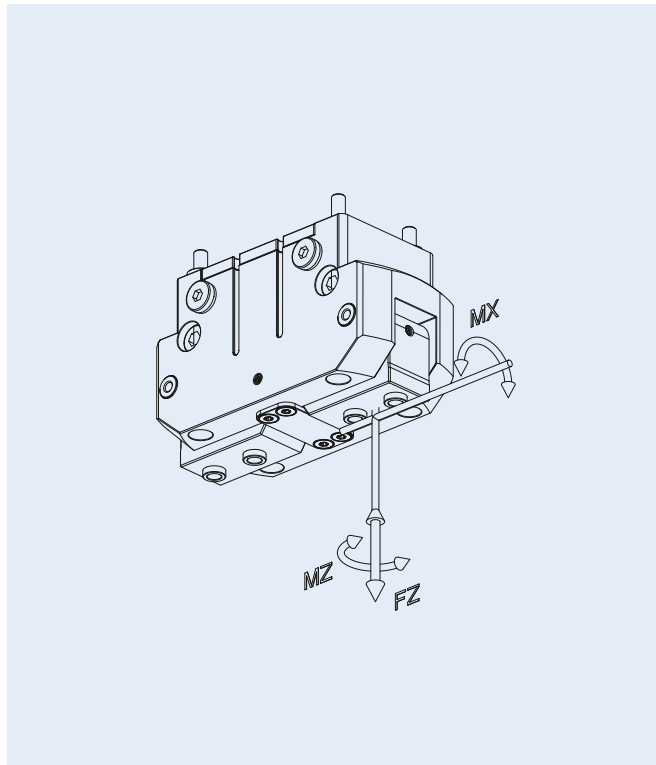
WGS-50



WGS-50 with spring (-FA)



Forces and moments

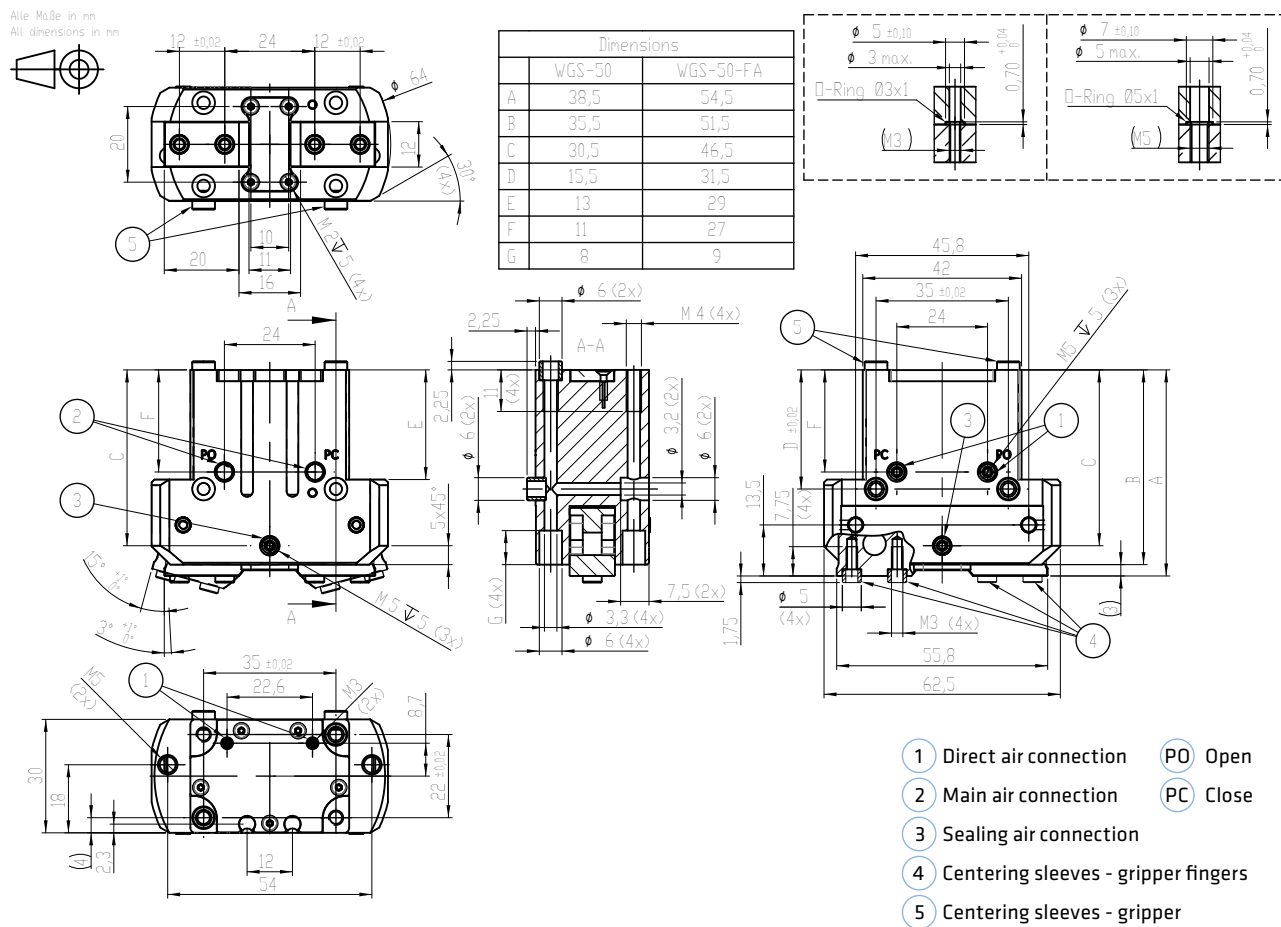


Technical data

Type	WGS-50	WGS-50-FA
Item no.	150001185	150001186
Recommended handling weight	0.38 kg	0.38 kg
Opening angle per jaw	15°	15°
Overstretch angle external gripping per jaw	3°	3°
Gripping moment outer gripping	3.5 Nm	5.1 Nm
Gripping force external gripping	76 N	112 N
Gripping torque by spring	-	1.6 Nm
Max. finger length	72 mm	72 mm
Repeatability	+/-0.02 mm	+/-0.02 mm
Weight	0.18 kg	0.22 kg
Max. moment Mx	14 Nm	14 Nm
Max. moment My	-	-
Max. moment Mz	15 Nm	15 Nm
Max. tensile/compressive force Fz, Fd	190 Nm	190 Nm
Max. perm. mass inertia per jaw	5.3 kg · cm ²	5.3 kg · cm ²
Opening time	0.06 s	0.1 s
Closing time	0.06 s	0.06 s
Air consumption per cycle	0.041 l	0.077 l
Connection thread open/close	M5	M5
Operating pressure	3 ... 8 bar	3 ... 8 bar
Ambient temperature	+5 ... +80 °C	+5 ... +80 °C
Length x width x height	62.5 x 30 x 38.5 mm	62.5 x 30 x 54.5 mm
Customs tariff number (CTN)	84799070	84799070

All data apply at 6 bar nominal operating pressure

Technical drawing



Suitable accessories

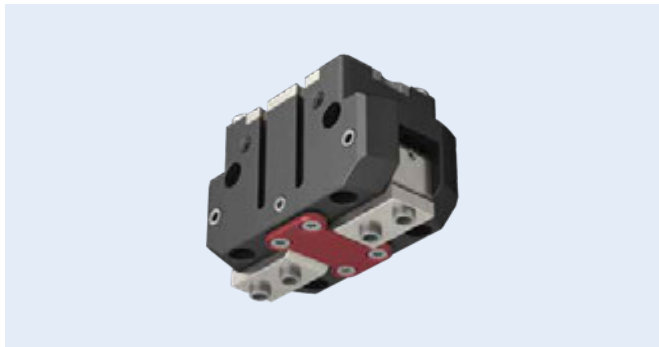
Type	Sensors	Stroke monitoring	Double check valves	Gripper pads	Stroke limitations
Further information	Page 117	Page 121	Page 122	Page 123	Page 127



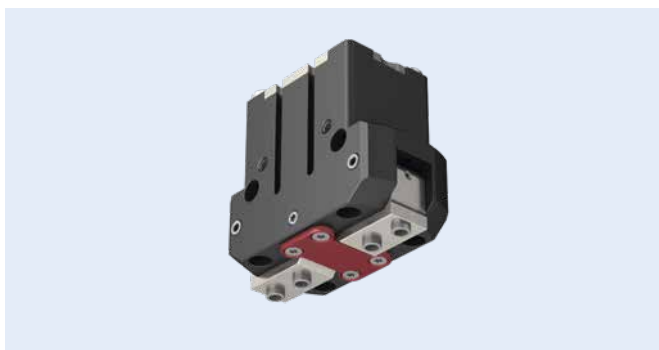
2-jaw universal angular gripper

WGS-64

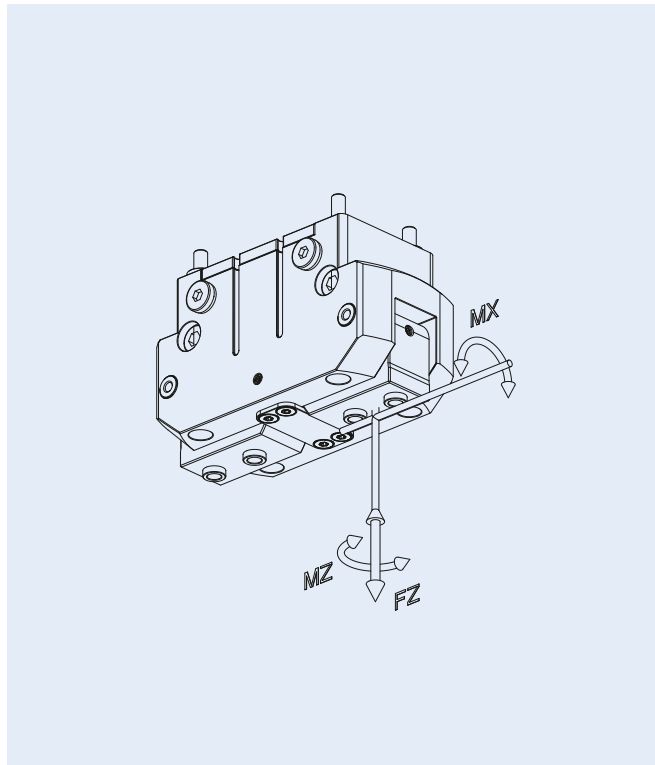
WGS-64



WGS-64 with spring (-FA)



Forces and moments

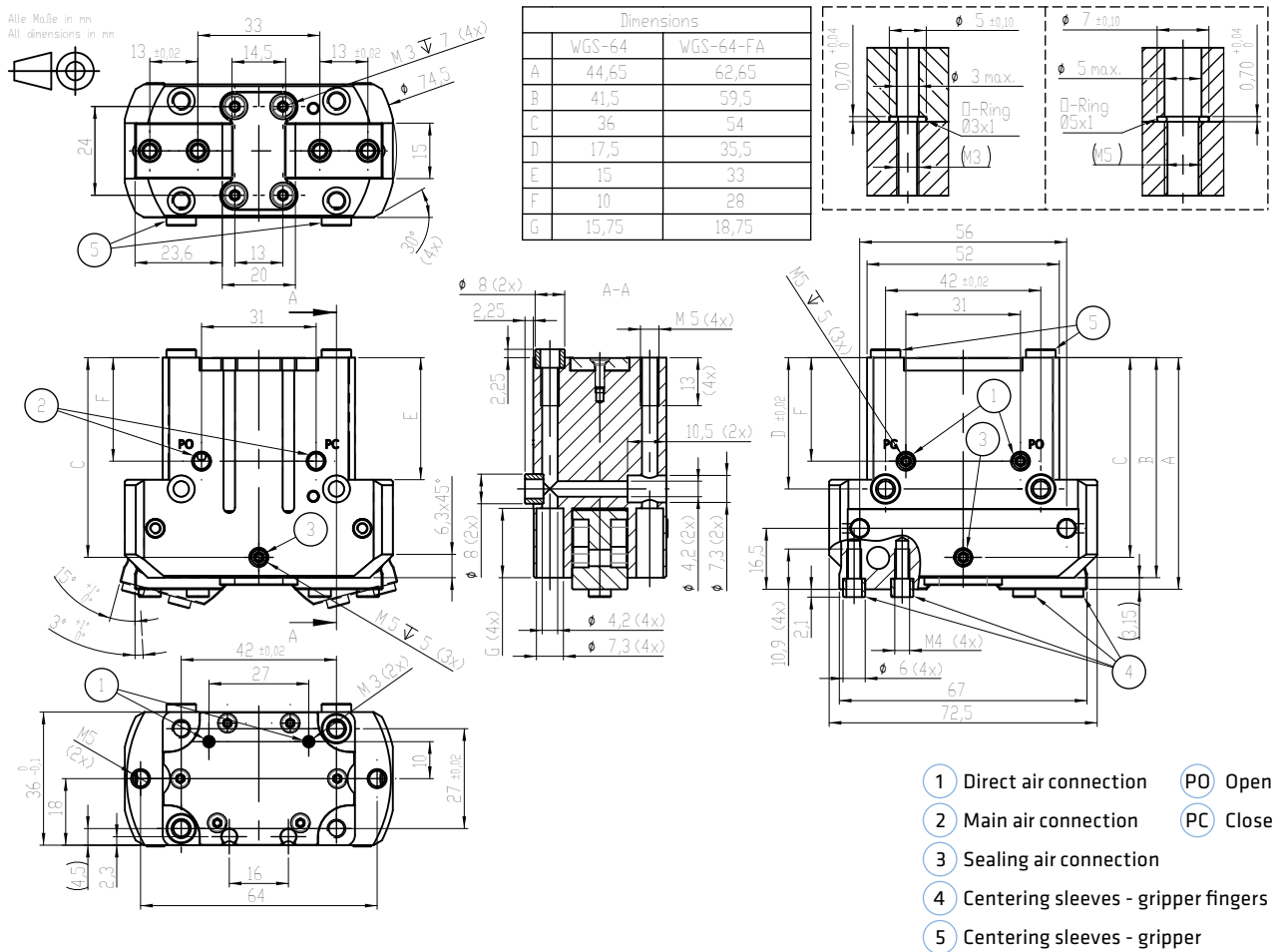


Technical data

Type	WGS-64	WGS-64-FA
Item no.	150001187	150001188
Recommended handling weight	0.67 kg	0.67 kg
Opening angle per jaw	15°	15°
Overstretch angle external gripping per jaw	3°	3°
Gripping moment outer gripping	7.6 Nm	11.1 Nm
Gripping force external gripping	135 N	197 N
Gripping torque by spring	-	3.5 Nm
Max. finger length	90 mm	90 mm
Repeatability	+/-0.02 mm	+/-0.02 mm
Weight	0.29 kg	0.37 kg
Max. moment Mx	16 Nm	16 Nm
Max. moment My	-	-
Max. moment Mz	38 Nm	38 Nm
Max. tensile/compressive force Fz, Fd	225 Nm	225 Nm
Max. perm. mass inertia per jaw	15 kg · cm ²	15 kg · cm ²
Opening time	0.07 s	0.13 s
Closing time	0.07 s	0.07 s
Air consumption per cycle	0.084 l	0.14 l
Connection thread open/close	M5	M5
Operating pressure	3 ... 8 bar	3 ... 8 bar
Ambient temperature	+5 ... +80 °C	+5 ... +80 °C
Length x width x height	72.5 x 36 x 44.7 mm	72.5 x 36 x 63 mm
Customs tariff number (CTN)	84799070	84799070

All data apply at 6 bar nominal operating pressure

Technical drawing



Suitable accessories

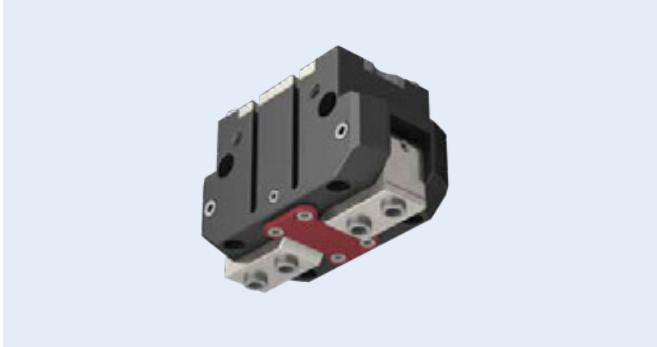
Type	Sensors	Stroke monitoring	Double check valves	Gripper pads	Stroke limitations
Further information	Page 117	Page 121	Page 122	Page 123	Page 127



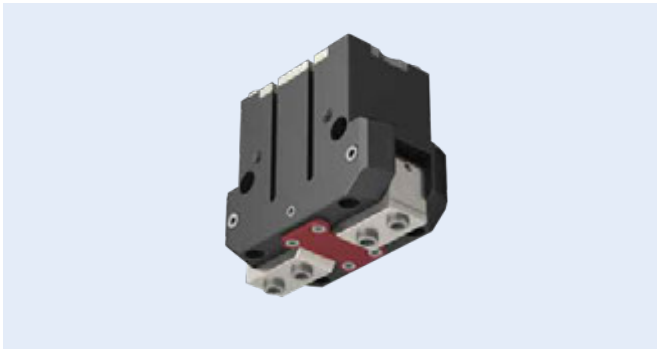
2-jaw universal angular gripper

WGS-80

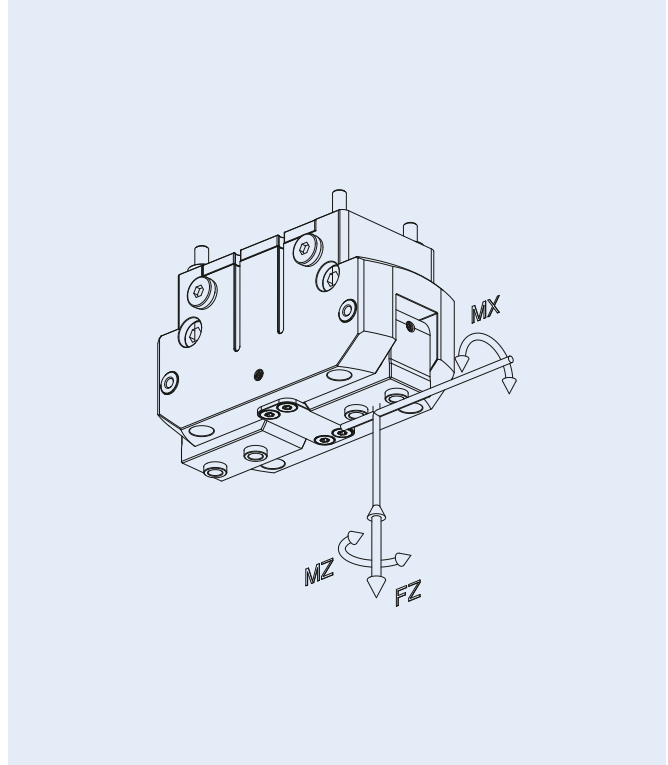
WGS-80



WGS-80 with spring (-FA)



Forces and moments



Technical data

Type	WGS-80	WGS-80-FA
Item no.	150001189	150001190
Recommended handling weight	1.08 kg	1.08 kg
Opening angle per jaw	15°	15°
Overstretch angle external gripping per jaw	3°	3°
Gripping moment outer gripping	15.2 Nm	22.2 Nm
Gripping force external gripping	217 N	317 N
Gripping torque by spring	-	7 Nm
Max. finger length	110 mm	110 mm
Repeatability	+/-0.02 mm	+/-0.02 mm
Weight	0.48 kg	0.59 kg
Max. moment Mx	37.5 Nm	37.5 Nm
Max. moment My	-	-
Max. moment Mz	55 Nm	55 Nm
Max. tensile/compressive force Fz, Fd	290 Nm	290 Nm
Max. perm. mass inertia per jaw	37.5 kg · cm ²	37.5 kg · cm ²
Opening time	0.08 s	0.15 s
Closing time	0.08 s	0.08 s
Air consumption per cycle	0.175 l	0.28 l
Connection thread open/close	M5	M5
Operating pressure	3 ... 8 bar	3 ... 8 bar
Ambient temperature	+5 ... +80 °C	+5 ... +80 °C
Length x width x height	86 x 42 x 53.5 mm	86 x 42 x 71.5 mm
Customs tariff number (CTN)	84799070	84799070

All data apply at 6 bar nominal operating pressure

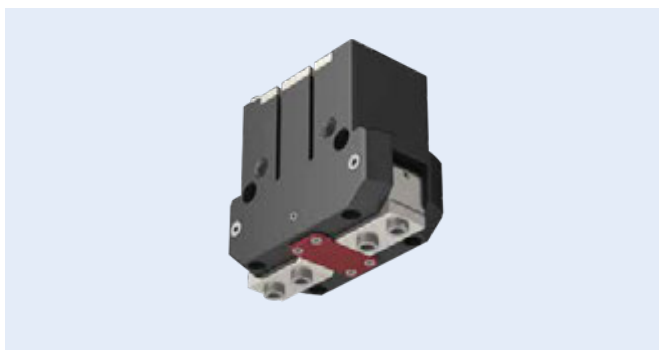
2-jaw universal angular gripper

WGS-100

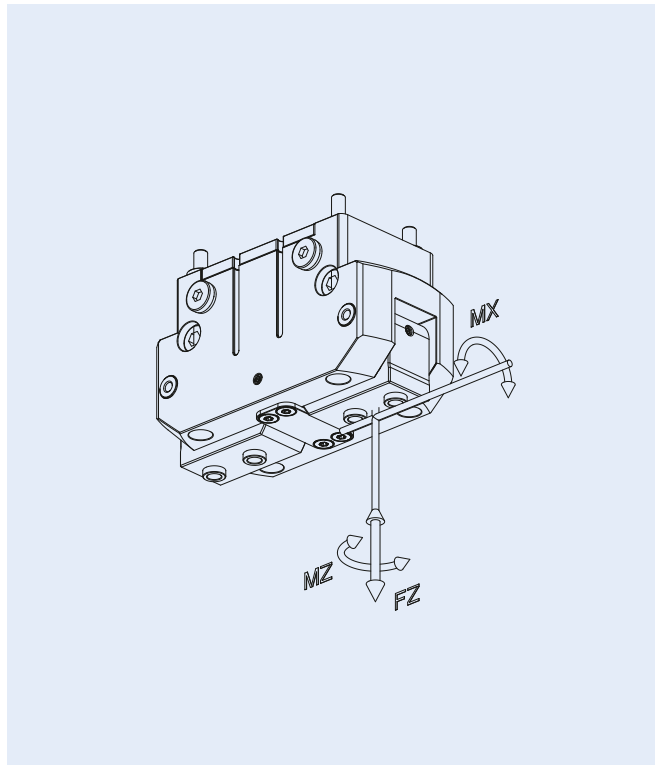
WGS-100



WGS-100 with spring (-FA)



Forces and moments

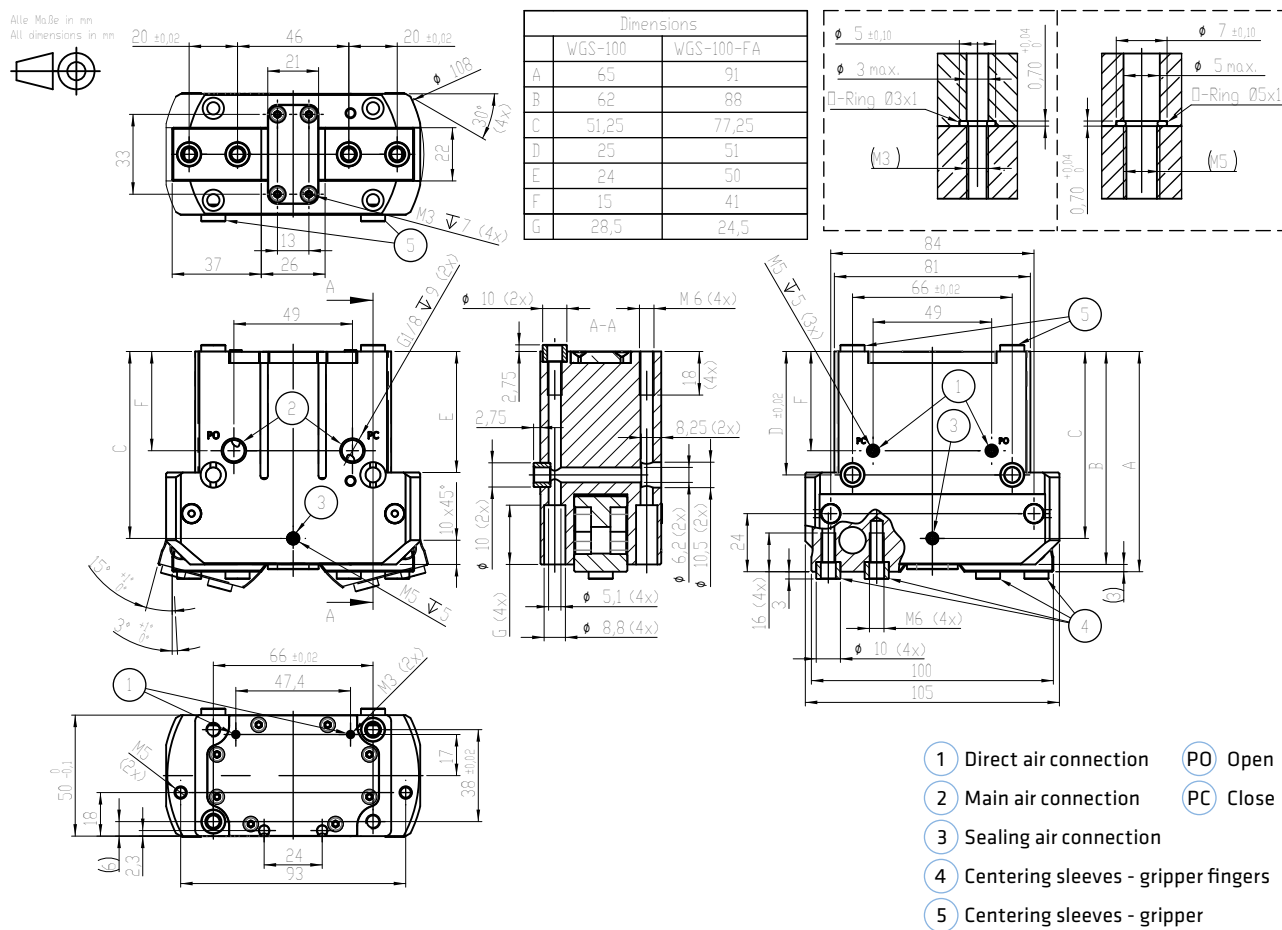


Technical data

Type	WGS-100	WGS-100-FA
Item no.	150001191	150001192
Recommended handling weight	1.82 kg	1.82 kg
Opening angle per jaw	15°	15°
Overstretch angle external gripping per jaw	3°	3°
Gripping moment outer gripping	32 Nm	47 Nm
Gripping force external gripping	365 N	534 N
Gripping torque by spring	-	14.9 Nm
Max. finger length	144 mm	144 mm
Repeatability	+/-0.02 mm	+/-0.02 mm
Weight	0.87 kg	1.1 kg
Max. moment Mx	60 Nm	60 Nm
Max. moment My	-	-
Max. moment Mz	70 Nm	70 Nm
Max. tensile/compressive force Fz, Fd	375 Nm	375 Nm
Max. perm. mass inertia per jaw	75 kg · cm ²	75 kg · cm ²
Opening time	0.12 s	0.18 s
Closing time	0.12 s	0.12 s
Air consumption per cycle	0.371 l	0.616 l
Connection thread open/close	M5	M5
Operating pressure	3 ... 8 bar	3 ... 8 bar
Ambient temperature	+5 ... +80 °C	+5 ... +80 °C
Length x width x height	105 x 50 x 65 mm	105 x 50 x 91 mm
Customs tariff number (CTN)	84799070	84799070

All data apply at 6 bar nominal operating pressure

Technical drawing



Suitable accessories

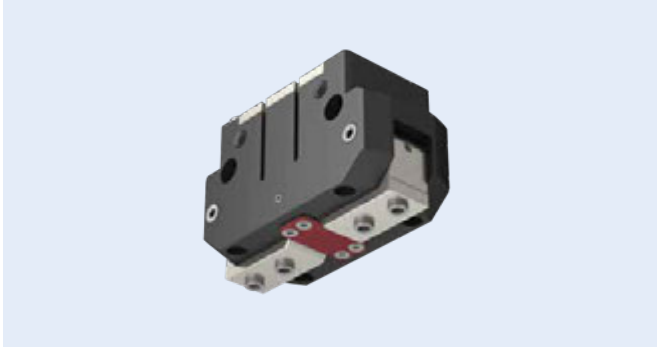
Type	Sensors	Stroke monitoring	Double check valves	Gripper pads	Stroke limitations
Further information	Page 117	Page 121	Page 122	Page 123	Page 127



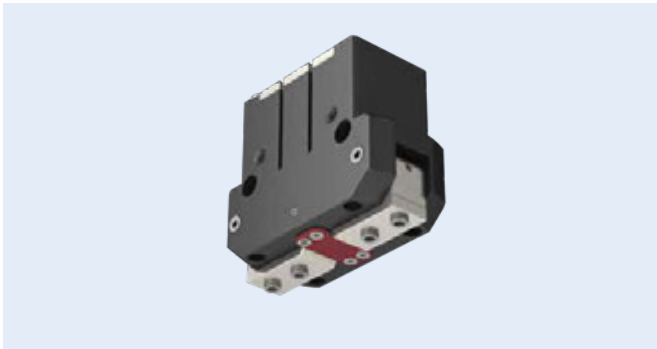
2-jaw universal angular gripper

WGS-125

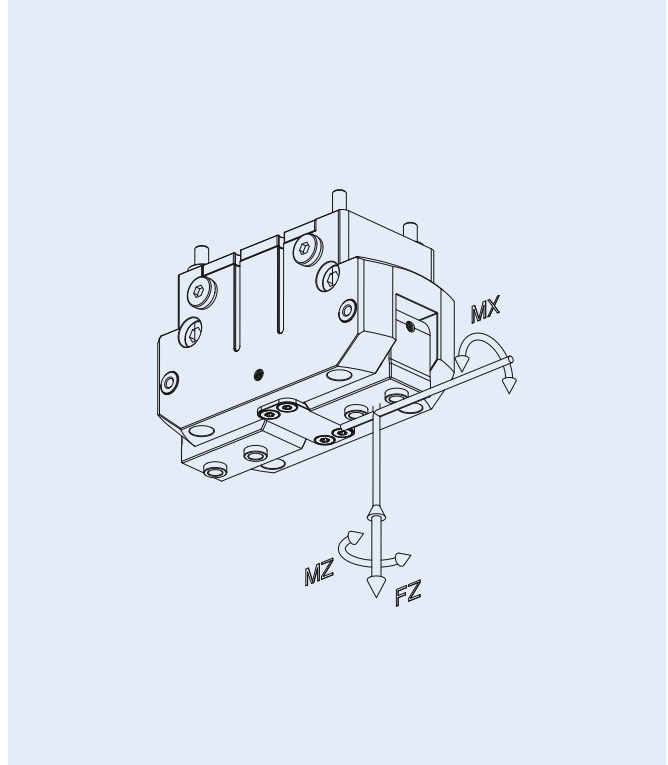
WGS-125



WGS-125 with spring (-FA)



Forces and moments

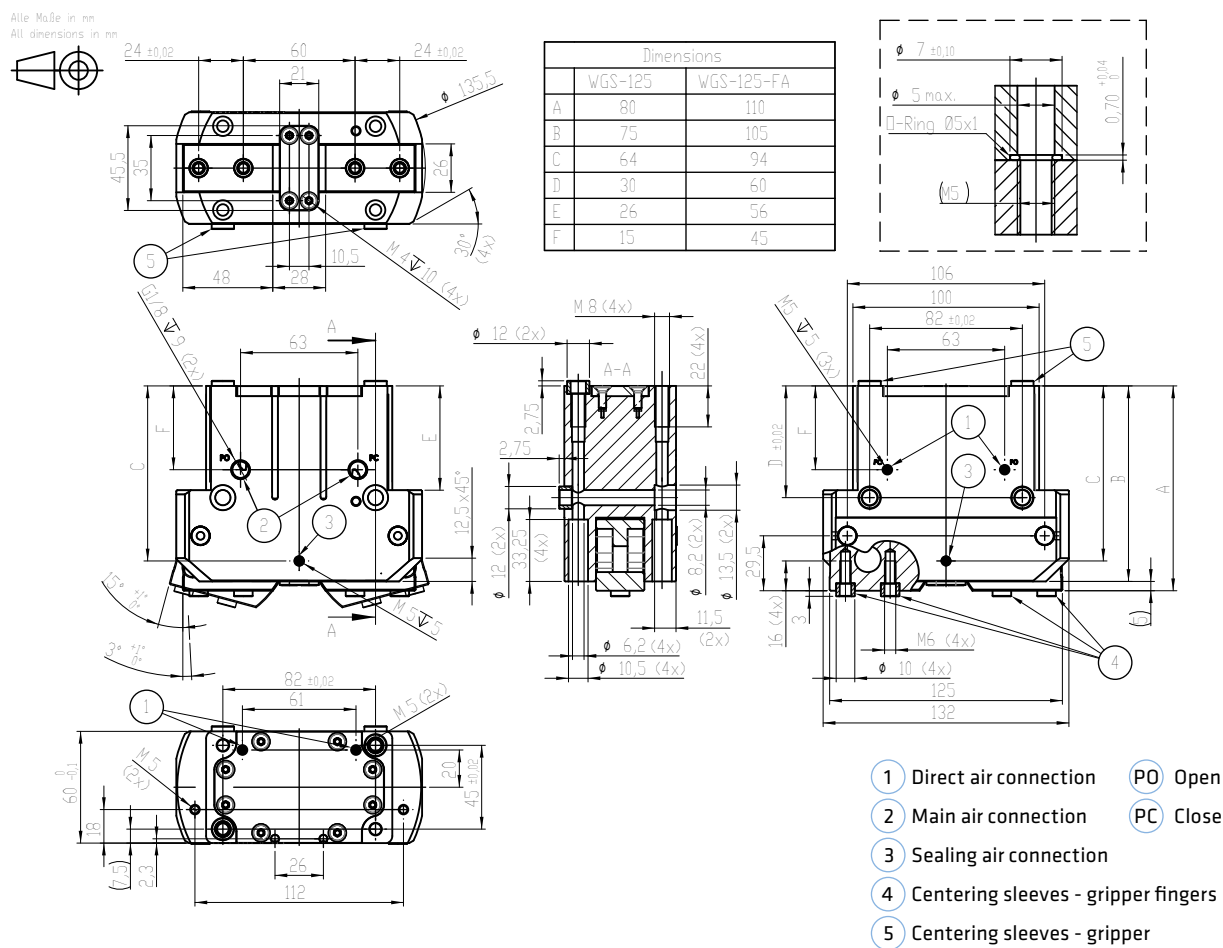


Technical data

Type	WGS-125	WGS-125-FA
Item no.	150001193	150001194
Recommended handling weight	2.97 kg	2.97 kg
Opening angle per jaw	15°	15°
Overstretch angle external gripping per jaw	3°	3°
Gripping moment outer gripping	65 Nm	95 Nm
Gripping force external gripping	595 N	868 N
Gripping torque by spring	-	30 Nm
Max. finger length	180 mm	180 mm
Repeatability	+/-0.02 mm	+/-0.02 mm
Weight	0.87 kg	2 kg
Max. moment Mx	85 Nm	85 Nm
Max. moment My	-	-
Max. moment Mz	95 Nm	95 Nm
Max. tensile/compressive force Fz, Fd	515 Nm	515 Nm
Max. perm. mass inertia per jaw	205 kg · cm ²	205 kg · cm ²
Opening time	0.14 s	0.2 s
Closing time	0.14 s	0.14 s
Air consumption per cycle	0.693 l	1.106 l
Connection thread open/close	M5	M5
Operating pressure	3 ... 8 bar	3 ... 8 bar
Ambient temperature	+5 ... +80 °C	+5 ... +80 °C
Length x width x height	132 x 60 x 80 mm	132 x 60 x 110 mm
Customs tariff number (CTN)	84799070	84799070

All data apply at 6 bar nominal operating pressure

Technical drawing



Suitable accessories

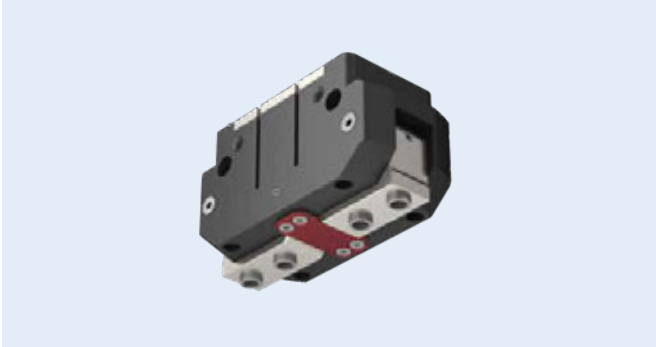
Type	Sensors	Stroke monitoring	Double check valves	Gripper pads	Stroke limitations
Further information	Page 117	Page 121	Page 122	Page 123	Page 127



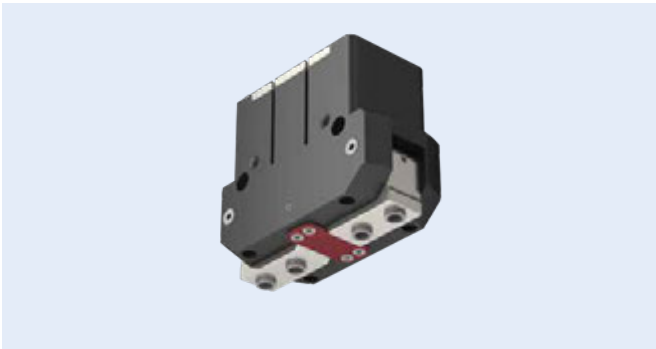
2-jaw universal angular gripper

WGS-160

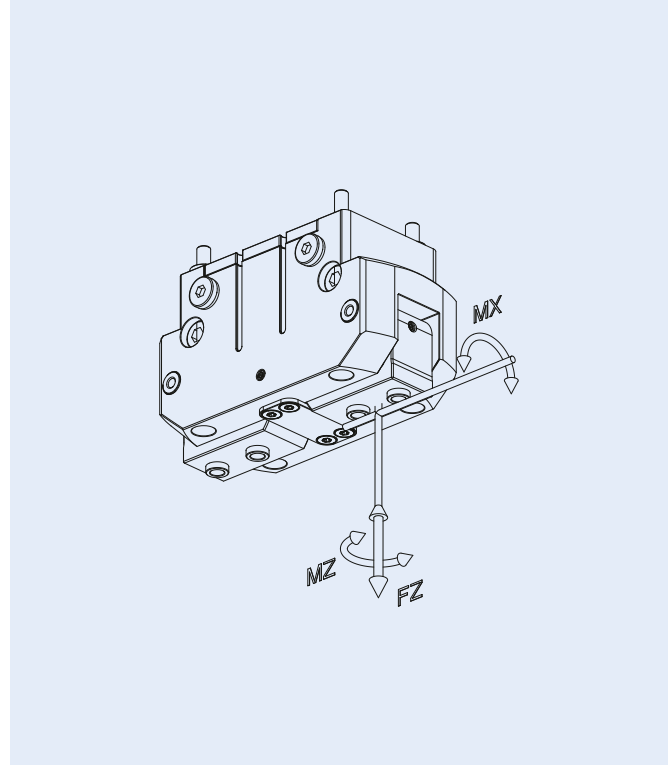
WGS-160



WGS-160 with spring (-FA)



Forces and moments

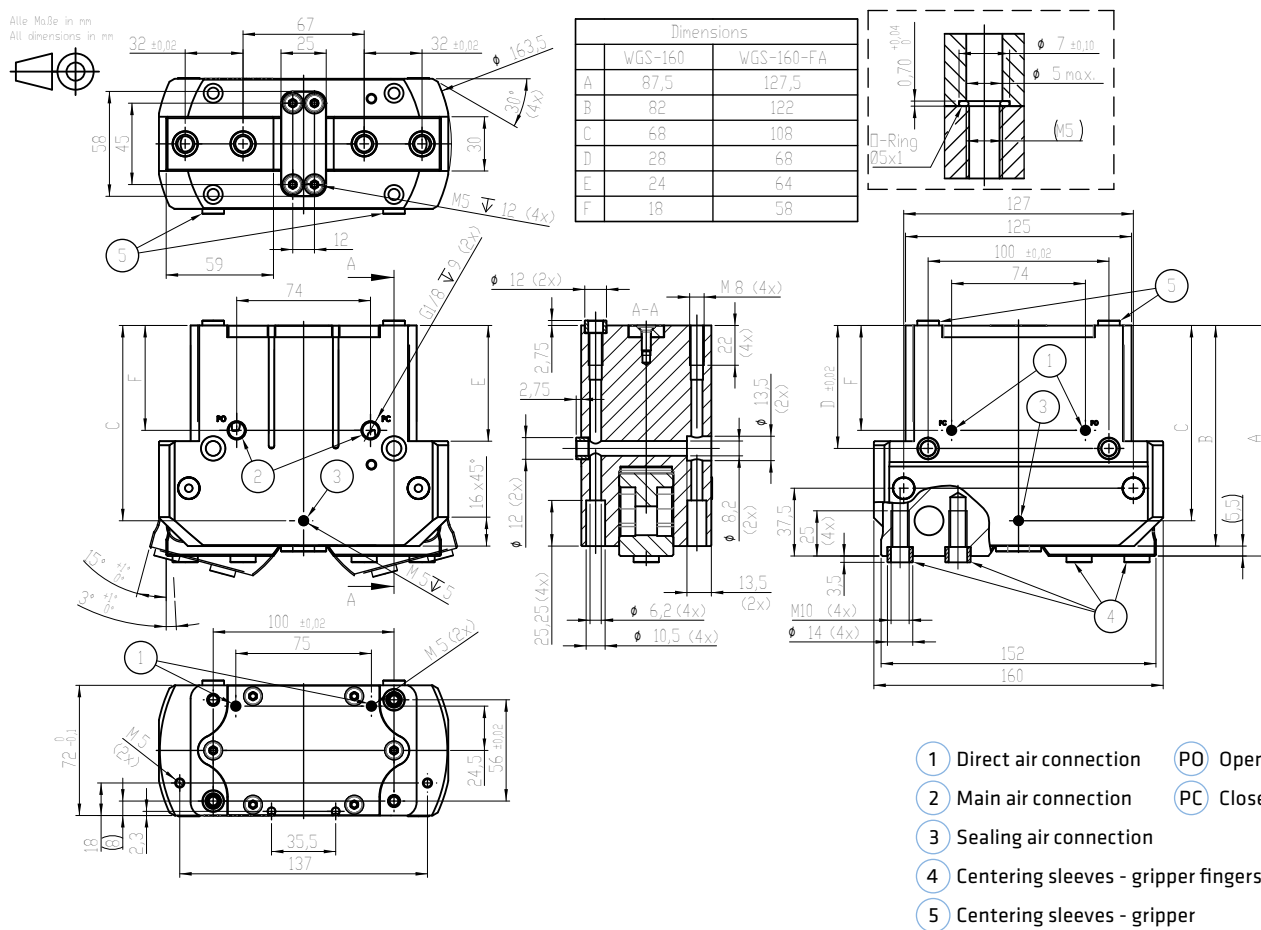


Technical data

Type	WGS-160	WGS-160-FA
Item no.	150001195	150001196
Recommended handling weight	4.4 kg	4.4 kg
Opening angle per jaw	15°	15°
Overstretch angle external gripping per jaw	3°	3°
Gripping moment outer gripping	121 Nm	177 Nm
Gripping force external gripping	880 N	1,291 N
Gripping torque by spring	-	56 Nm
Max. finger length	225 mm	225 mm
Repeatability	+/-0.02 mm	+/-0.02 mm
Weight	2.64 kg	3.41 kg
Max. moment Mx	110 Nm	110 Nm
Max. moment My	-	-
Max. moment Mz	105 Nm	105 Nm
Max. tensile/compressive force Fz, Fd	635 Nm	635 Nm
Max. perm. mass inertia per jaw	560 kg · cm ²	560 kg · cm ²
Opening time	0.16 s	0.21 s
Closing time	0.14 s	0.14 s
Air consumption per cycle	1.26 l	1.785 l
Connection thread open/close	M5	M5
Operating pressure	3 ... 8 bar	3 ... 8 bar
Ambient temperature	+5 ... +80 °C	+5 ... +80 °C
Length x width x height	160 x 72 x 87.5 mm	160 x 72 x 127.5 mm
Customs tariff number (CTN)	84799070	84799070

All data apply at 6 bar nominal operating pressure

Technical drawing



Suitable accessories

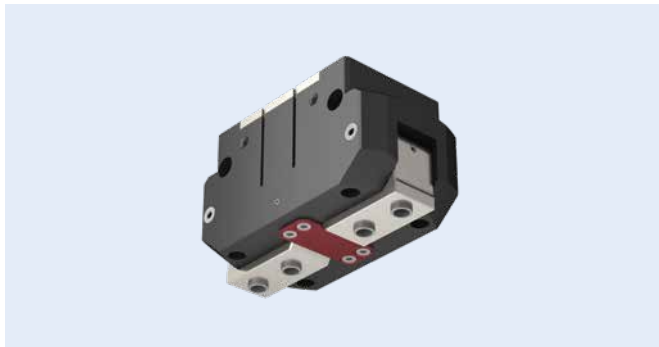
Type	Sensors	Stroke monitoring	Double check valves	Gripper pads	Stroke limitations
Further information	Page 117	Page 121	Page 122	Page 123	Page 127



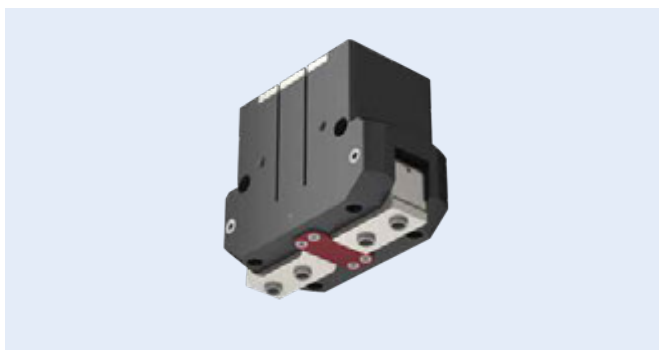
2-jaw universal angular gripper

WGS-200

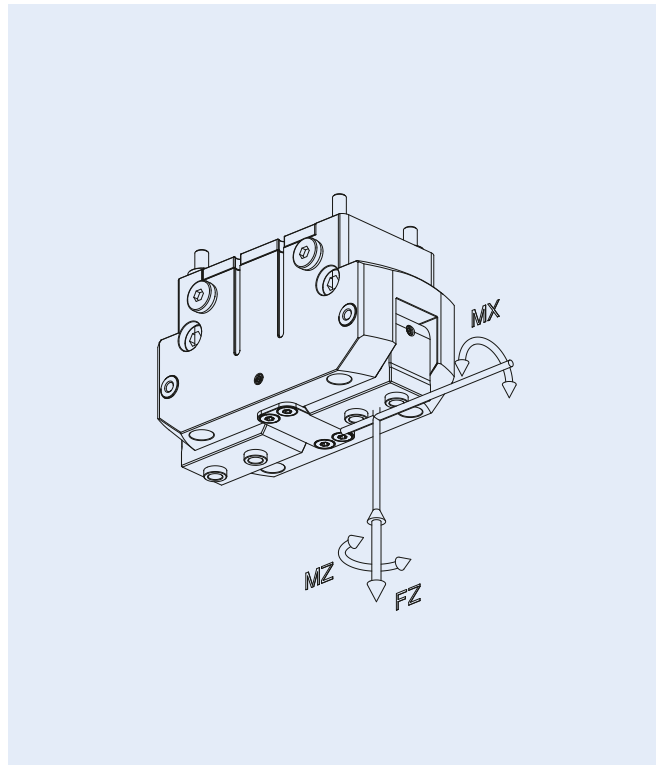
WGS-200



WGS-200 with spring (-FA)



Forces and moments

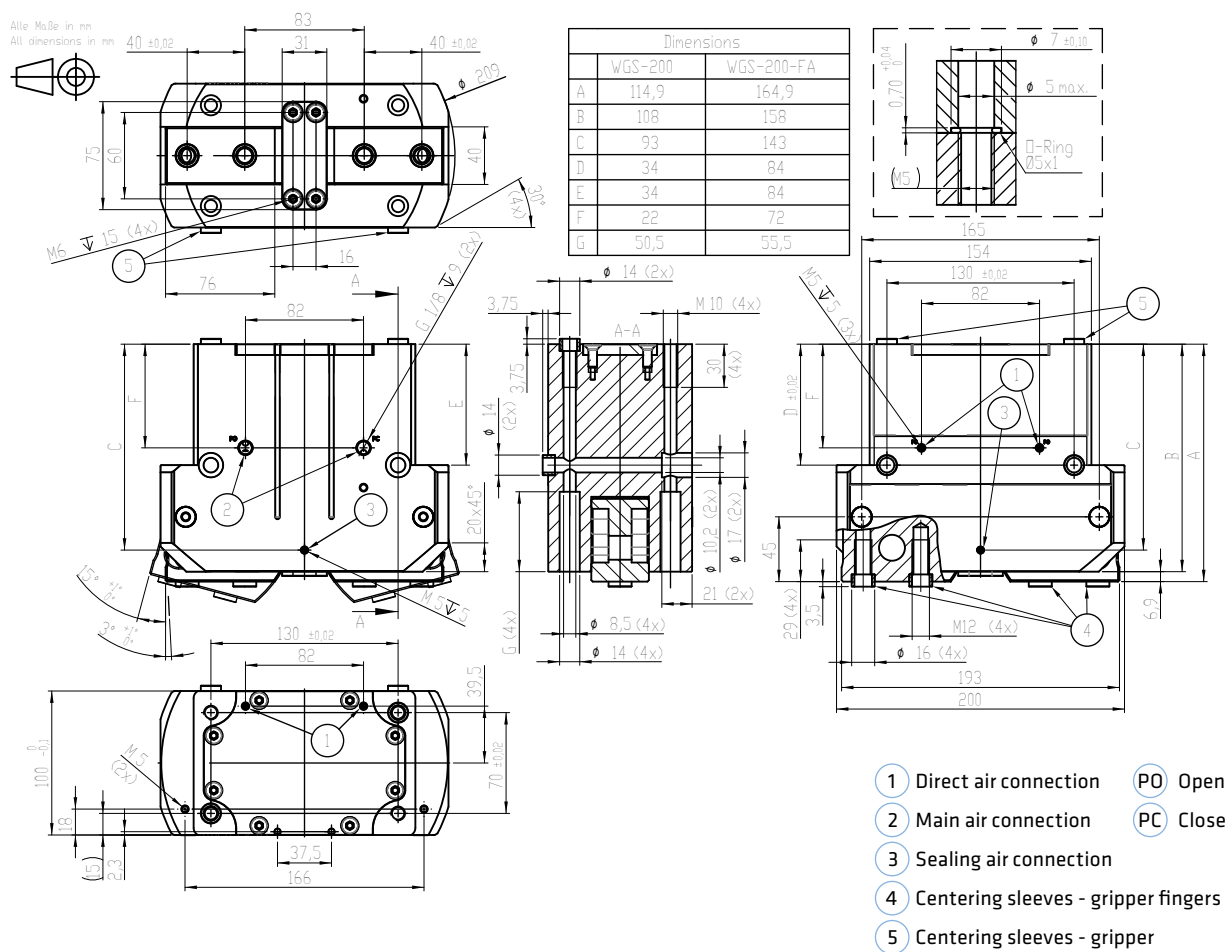


Technical data

Type	WGS-200	WGS-200-FA
Item no.	150001197	150001198
Recommended handling weight	9.2 kg	9.2 kg
Opening angle per jaw	15°	15°
Overstretch angle external gripping per jaw	3°	3°
Gripping moment outer gripping	304 Nm	437 Nm
Gripping force external gripping	1,845 N	2,646 N
Gripping torque by spring	-	132 Nm
Max. finger length	270 mm	270 mm
Repeatability	+/-0.02 mm	+/-0.02 mm
Weight	5.73 kg	7.5 kg
Max. moment Mx	120 Nm	120 Nm
Max. moment My	-	-
Max. moment Mz	130 Nm	130 Nm
Max. tensile/compressive force Fz, Fd	775 Nm	775 Nm
Max. perm. mass inertia per jaw	1,225 kg·cm ²	1,225 kg·cm ²
Opening time	0.3 s	0.35 s
Closing time	0.25 s	0.25 s
Air consumption per cycle	2.835 l	3.99 l
Connection thread open/close	M5	M5
Operating pressure	3 ... 8 bar	3 ... 8 bar
Ambient temperature	+5 ... +80 °C	+5 ... +80 °C
Length x width x height	200 x 100 x 114.9 mm	200 x 100 x 164.9 mm
Customs tariff number (CTN)	84799070	84799070

All data apply at 6 bar nominal operating pressure

Technical drawing



Suitable accessories

Type	Sensors	Stroke monitoring	Double check valves	Gripper pads	Stroke limitations
Further information	Page 117	Page 121	Page 122	Page 123	Page 127



Accessories

The right peripherals for gripping systems from IPR

All accessories are perfectly coordinated

The grippers from IPR only develop their full potential with the right accessories. Whether it's a simple pick-and-place application, a dirtprone removal operation or a complex assembly process with synchronized grippers – IPR offers the right peripherals for every application.

Sensors in magnetic or inductive design, rubber gripper pads for increased friction on the gripper finger or dust covers for use in particularly demanding environments enable the right configuration to suit your application. We will be happy to support you in your selection!



Sensors and stroke monitoring

Reliable query of process parameters directly at the gripper

Fields of application

You get full process transparency with our sensors. This allows the status of the grippers to be queried and monitored at any time. Depending on the gripper size, sensors are used for the C-slot, in Ø 4 mm or up to M12. Optionally mounted, they can be positioned individually and thus control any states.

Features

- Standardized sensors for all series
- Including suitable accessories for direct mounting and commissioning
- Variable and universally applicable

Sensors

Technical data

Type	Si-4-PNP	Si-5-PNP	Si-8-PNP	SI-12-PNP
Item no.	11800003	11800074	11800011	11800013
Measurement	inductive			
Outer diameter	4 mm	5 mm	8 mm	12 mm
Style	D4.0	M5x0.5	M8x1	M12x1
Range	1.5 mm	1.5 mm	2 mm	2 mm
Switching output	PNP normally open (NO)			
Switching frequency	5,000 Hz	5,000 Hz	5,000 Hz	3,500 Hz
Material cabinet	Stainless steel	Stainless steel	Stainless steel	Brass, nickel free plated
Connection Type	Cable 5 m (open end of cable)	Cable 5 m (open end of cable)	Connector plug M8x1 (3-pole)	Connector plug M12x1 (4-pole)
Operating voltage	10 V (DC) ... 30 V (DC)			
Ambient temperature	-25 °C ... +70 °C	-25 °C ... +70 °C	- 40 °C ... 85 °C	-25 °C ... +70 °C
IP rating	IP67	IP67	IP68	IP68
Suitable for	■ RP-25/50/100 ■ MGS ■ RPW-250 up to 500	■ universal	■ IRP ■ RPW-625 up to 750 ■ RP-35/40 ■ WGS ■ CGS2-64 up to 240 ■ CGS3-64 up to 200	■ universal

Type	Si-8-PNP	Sm-8-PNP short	Sm-8-C-PNP
Item no.	11800356	118000556	118000422
Measurement	inductive	Magnetic field	Magnetic field
Outer diameter	8 mm	-	-
Style	M8x1	C-slot	C-slot
Range	2 mm	-	-
Switching output	PNP normally open (NO)		
Switching frequency	1,500 Hz	30,000 Hz	7,000 Hz
Material cabinet	Stainless steel	Plastic	Plastic
Connection Type	Connector plug M8x1 (3-pole)	Cable 5 m (Connector plug 0° M8x1 – 3-pole)	Cable 0,3 m (Connector plug 0° M8x1 – 3-pole)
Operating voltage	10 V (DC) ... 30 V (DC)		
Ambient temperature	- 40 ° ... 85 °C	-25 °C ... +85 °C	-25 °C ... +85 °C
IP rating	IP68	IP67	IP67
Suitable for	■ CGS2-300/380	■ CGS2 ■ MGS ■ CGS3	■ CGS2-64 up to 380 ■ CGS3-64 up to 200

Si-8-PNP f.CGS2-300/380



Sm-8-PNP short f.CGS2-40/50



Stroke monitoring for MGS

4 mm without sensor

Type	HUW without sensor	HUW without sensor	HUW without sensor	HUW without sensor
Item no.	160100112	160100113	160100114	160100115
Series and size	MGS-16	MGS-20	MGS-25	MGS-32
Material	Aluminum / Stainless steel			
Weight	0.005 kg	0.007 kg	0.011 kg	0.011 kg
Possible sensors	Sensors with 4 mm diameter			
Suitable for	MGS-16 f.4mm	MGS-20 f.4mm	MGS-25 f.4mm	MGS-32 f.4mm

Type	HUW without sensor	HUW without sensor	HUW without sensor	HUW without sensor
Item no.	160100116	160100117	160100120	160100123
Series and size	MGS-40	MGS-50	MGS-64	MGS-80
Material	With 4 mm diameter			
Weight	0.012 kg	0.012 kg	0.012 kg	0.013 kg
Possible sensors	Sensors with 4 mm diameter			
Suitable for	MGS-40 f.4mm	MGS-50 f.4mm	MGS-64 f.4mm	MGS-80 f.4mm

Sm-C-slot without sensor

Type	HUW without sensor	HUW without sensor	HUW without sensor	HUW without sensor
Item no.	160100118	160100119	160100121	160100122
Series and size	MGS-50	MGS-50	MGS-64	MGS-64
Material	Aluminum / Stainless steel			
Weight	0.004 kg	0.006 kg	0.004 kg	0.006 kg
Possible sensors	Magnetic field sensors			
Suitable for	MGS-50-f.Sm-C-slot	MGS-50-FA/-FI f.Sm-C-slot	MGS-64-f.Sm-C-slot	MGS-64-FA/-FI f.Sm-C-slot

Type	HUW without sensor	HUW without sensor
Item no.	160100124	160100125
Series and size	MGS-80	MGS-80
Material	Aluminum / Stainless steel	
Weight	0.005 kg	0.007 kg
Possible sensors	Magnetic field sensors	
Suitable for	MGS-80-f.Sm-C-slot	MGS-80-FA/-FI f.Sm-C-slot



4 mm without sensor



Sm-C-slot without sensor

Stroke monitoring for IRP

M8x1 without sensor

Type	HUW without sensor	HUW without sensor	HUW without sensor
Item no.	16010014	16010020	16010011
Series and size	IRP-19	IRP-20	IRP-21
Material	Steel	Steel	Aluminum / Stainless steel
Weight	0.071 kg	0.071 kg	0.137 kg
Possible sensors	Sensors M8x1		
Suitable for	IRP-19 f.M8x1	IRP-20 f.M8x1	IRP-21 f.M8x1

Stroke monitoring for RP

4 mm without sensor

Type	HUW without sensor	HUW without sensor
Item no.	160100135	160100136
Series and size	RP-50-I	RP-25/100-I
Material	Aluminum	
Weight	0.006 kg	0.006 kg
Possible sensors	Sensors with 4 mm diameter	
Suitable for	RP-50-I f. 4 mm	RP-25/100-I f. 4 mm

M8x1 without sensor

Type	HUW without sensor
Item no.	16010005
Series and size	RP-35/40-I
Material	Aluminum / Stainless steel
Weight	0.019 kg
Possible sensors	Sensors M8x1
Suitable for	RP-35/40-I f. M8x1



Stroke monitoring for RPW

4 mm without sensor

Type	HUW without sensor	HUW without sensor	HUW without sensor	HUW without sensor
Item no.	16010083	16010084	16010085	16010086
Series and size	RPW-250-1	RPW-250-2	RPW-375-1	RPW-375-2
Material	Aluminum / Stainless steel			
Weight	0.019 kg	0.02 kg	0.022 kg	0.024 kg
Possible sensors	Sensors with 4 mm diameter			
Suitable for	RPW-250-1-I f.4mm	RPW-250-2-I f.4mm	RPW-375-1-I f.4mm	RPW-375-2-I f.4mm

Type	HUW without sensor	HUW without sensor	HUW without sensor	HUW without sensor
Item no.	160100104	160100099	160100100	160100101
Series and size	RPW-375-3	RPW-500-1	RPW-500-2	RPW-500-3
Material	Aluminum / Stainless steel			
Weight	0.028 kg	0.025 kg	0.028 kg	0.029 kg
Possible sensors	Sensors with 4 mm diameter			
Suitable for	RPW-375-3-I f.4mm	RPW-500-1-I f.4mm	RPW-500-2-I f.4mm	RPW-500-3-I f.4mm

Type	HUW without sensor
Item no.	160100102
Series and size	RPW-500-4
Material	Aluminum / Stainless steel
Weight	0.031 kg
Possible sensors	Sensors with 4 mm diameter
Suitable for	RPW-500-4-I f.4mm

M8x1 without sensor

Type	HUW without sensor	HUW without sensor
Item no.	160100103	160100105
Series and size	RPW-625-1/2	RPW-750-1
Material	Aluminum / Stainless steel	
Weight	0.029 kg	0.024 kg
Possible sensors	Sensors M8x1	
Suitable for	RPW-625-1/2-I f.M8x1	RPW-750-1-I f.M8x1

Stroke monitoring for WGS

M8x1 without sensor

Type	HUW without sensor	HUW without sensor	HUW without sensor	HUW without sensor
Item no.	160100126	160100127	160100128	160100129
Series and size	WGS-50	WGS-64	WGS-80	WGS-100
Material	Aluminum / Stainless steel			
Weight	0.042 kg	0.042 kg	0.042 kg	0.043 kg
Possible sensors	Sensors M8x1			
Suitable for	WGS-50 f.M8x1	WGS-64 f.M8x1	WGS-80 f.M8x1	WGS-100 f.M8x1

Type	HUW without sensor	HUW without sensor	HUW without sensor
Item no.	160100130	160100131	160100132
Series and size	WGS-125	WGS-160	WGS-200
Material	Aluminum / Stainless steel		
Weight	0.049 kg	0.049 kg	0.058 kg
Possible sensors	Sensors M8x1		
Suitable for	WGS-125 f.M8x1	WGS-160 f.M8x1	WGS-200 f.M8x1



Double check valves

Reliable protection against loss of parts in the event of an emergency stop or malfunction

Fields of application

The pressure maintenance valves for short-term and temporary function maintenance of pneumatic products in case of compressed air loss. The currently applied state is frozen and prevents spontaneous workpiece loss or unexpected product movements.

Description

The double check valve is mounted externally on the gripper modules. Four different sizes are available for selection. The pressure drop is < 0.2 bar at 2 cm³ test volume and 42 hours test time.

Features

- Maintaining functionality during compressed air dropouts in pneumatic grippers
- Prevents detachment of gripped workpieces in the event of compressed air failure

Double check valves

DSV-1 M5



DSV-3 G1/4"



Technical data

Type	DSV-1 M5	DSV-2 G1/8"	DSV-3 G1/4"	DSV-4 G1/2"
Item no.	152600002	15260000	15260001	152600003
Connection thread pneumatic feedthrough	M5	G1/8"	G1/4"	G1/2"
Nominal diameter	2.5 mm	4 mm	6.5 mm	8 mm
Weight	0.05 kg	0.1 kg	0.2 kg	0.7 kg
Flow coefficient Cv	0.22 m ³ /h	0.53 m ³ /h	0.9 m ³ /h	1.6 m ³ /h
Operating pressure	0.5 ... 10 bar	0.5 ... 10 bar	0.5 ... 10 bar	2 ... 10 bar

Gripper Pads

Improved friction and protection against clamping marks by the gripper finger

Fields of application

Our sandwich-type gripper pads have an aluminum core that serves to stabilize the shape and facilitate assembly. When shaped, the gripper pads not only increase the coefficient of friction and protect the surface of the workpieces from clamping marks, but can also be used for positive gripping at the same time.

Description

The gripper pads have a cylindrical dimple contour with a diameter of 2.5 mm. They are suitable for gripping coarse workpieces as well as the finest workpiece contours.

The gripper pads consist of an aluminum/elastomer compound. A choice can be made between an aluminum plate with a thickness of 2 mm and 3 mm, which enables high stability as well as an optimum connection to the gripper fingers.

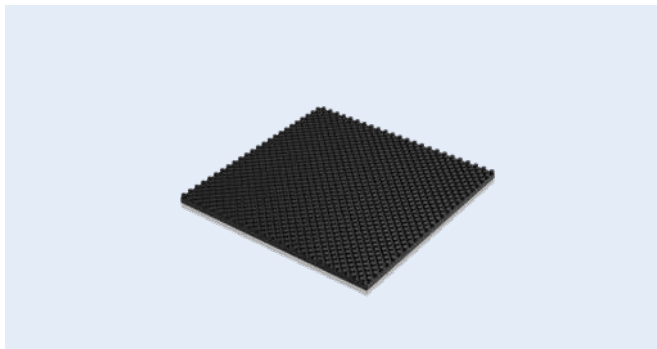
Features

- Optimum adhesion of workpieces in the gripper jaws
- Safe gripping and transport of workpieces
- Gentle handling of surface-sensitive parts

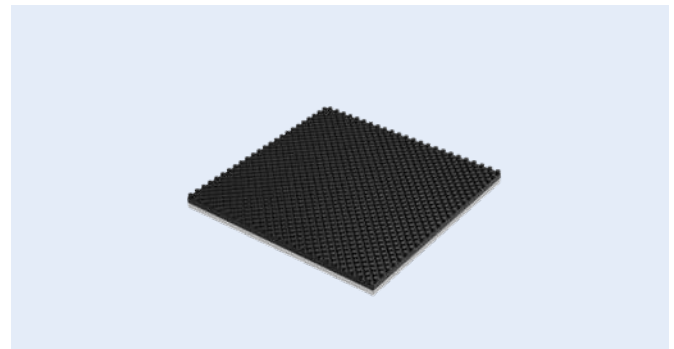


Gripper Pads for gripper fingers

HK-A2-10-GR



HK-A2-20-GR



Technical data

Type	HK-A2-10-GR	HK-A2-20-GR	HK-A3-10-GR	HK-A3-20-GR
Item no.	15170008	15170011	15170014	15170017
Length x Width x Height	120 x 120 x 5.5 mm	240 x 140 x 5.5 mm	120 x 120 x 7 mm	240 x 140 x 7 mm
Elastomer type	NBR (Perbunan)			
Shore hardness	65			
Coefficient of friction against steel	0.5 (dry)			
Operating temperature	-25 ... +80 °C			
Weight	0.15 kg	0.31 kg	0.2 kg	0.4 kg



Dust Covers for grippers

Increased tightness similar to IP64 for dirty and dusty environments

Fields of application

We have used our many years of experience in foundry and forging applications to protect our CGS2 from liquids and dusts with an optional dust cover. This continues to maintain service life even in these adverse environments. Special rubber seals between the moving parts ensure that even fine dusts cannot penetrate.

Description

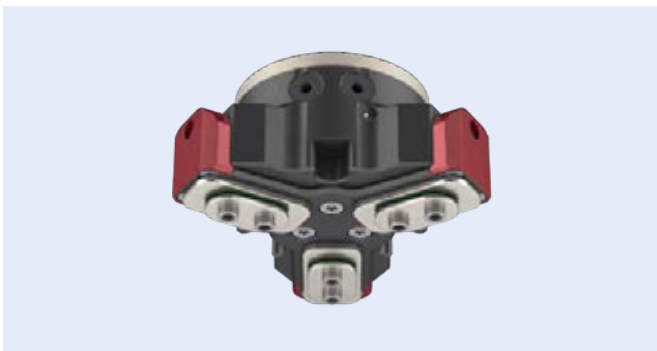
The dust cover is made entirely of steel and can be mounted directly on the gripper. Two lateral end blocks, a large cover plate on the guides and two smaller cover plates on the two base jaws, in combination with special seals, increase the gripper's resistance to external influences.

Features

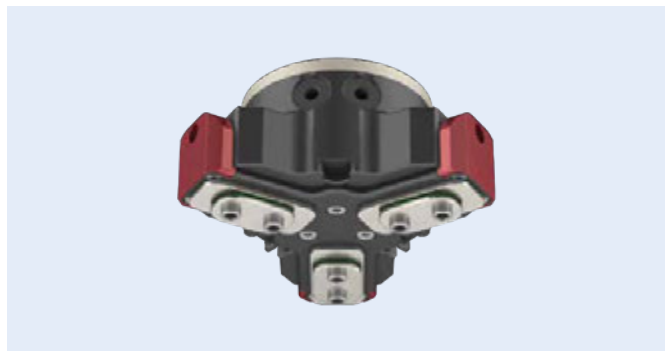
- Increases the gripper's resistance to external influences such as cooling lubricant, chips, oils, etc.
- Sealing similar to protection class IP64
- Can be retrofitted for all sizes of the CGS2 series

Dust Cover for CGS3

CGS3-40-SA



CGS3-50-1-SA



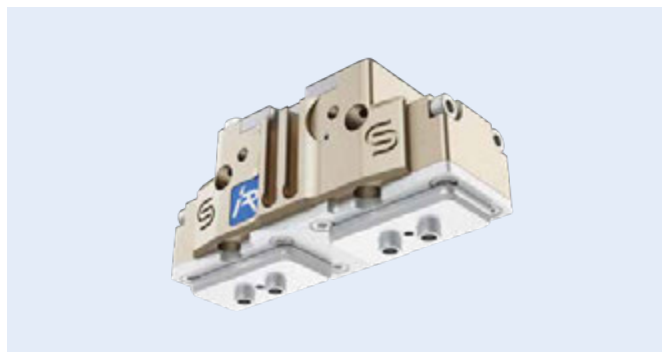
Technical data

Type	SA CGS3-40	SA CGS3-50	SA CGS3-64	SA CGS3-80
Item no.	150001279	150001280	150001281	150001282
IP rating	IP64			
Material	Aluminum			
Weight	0.027 kg	0.055 kg	0.088 kg	0.124 kg

Type	SA CGS3-100	SA CGS3-125	SA CGS3-160	SA CGS3-200
Item no.	150001283	150001284	150001285	150001286
IP rating	IP64			
Material	Aluminum			
Weight	0.22 kg	0.298 kg	0.538 kg	0.847 kg

Dust Cover for CGS2

CGS2-40-SA



CGS2-50-SA



Technical data

Type	SA CGS2-40	SA CGS2-50	SA CGS2-64	SA CGS2-80
Item no.	150001025	150001046	150000919	150001065
IP rating	IP64			
Material	Steel			
Weight	0.042 kg	0.069 kg	0.108 kg	0.171 kg

Type	SA CGS2-100	SA CGS2-125	SA CGS2-160	SA CGS2-200
Item no.	150001066	150001012	150001085	150001099
IP rating	IP64			
Material	Steel			
Weight	0.26 kg	0.36 kg	0.82 kg	1.15 kg

Type	SA CGS2-240	SA CGS2-300	SA CGS2-380
Item no.	150001112	150001138	150001125
IP rating	IP64		
Material	Steel		
Weight	1.466 kg	3.269 kg	6.496 kg



Pressure stars for robot grippers

Integrated spring element for joining without overloading the robot

Fields of application

A workpiece must be placed in the correct position and must not slip after the gripper is released? Our optionally available pressure star can help you here.

After opening the gripper and when the robot moves away, it presses the workpiece onto the workpiece carrier by means of an integrated spring.

Features

- Ideal for loading machine tools
- Retroactively mountable
- Minimizes wear and overload of the robot

Description

The pressure star for the CGS3 series integrates a spring-loaded element for pressing the workpiece directly into the centric gripper. The pressure star is mounted in the center between the three jaws of the gripper. When the workpiece is picked up, the springs are being compressed and held in this position. As soon as the gripper sets the workpiece down again and the jaws open, the pressure star is being pushed out by the springs and presses the workpiece against the stop of the fixture. This ensures that small shape and position tolerances have no influence on the defined deposit position of the workpiece. Additionally the robot does not have to apply increased pressure forces that could lead to excessive wear or malfunctions. The pressure star can be retrofitted to the CGS3 gripper.

Pressure stars for CGS3

AS CGS3-40



AS CGS3-50



Technical data

Type	AS CGS3-40	AS CGS3-50	AS CGS3-64	AS CGS3-80
Item no.	150001271	150001272	150001273	150001274
Material	Aluminum			
Weight	0.015 kg	0.035 kg	0.042 kg	0.064 kg

Type	AS CGS3-100	AS CGS3-125	AS CGS3-160	AS CGS3-200
Item no.	150001275	150001276	150001277	150001278
Material	Aluminum			
Weight	0.094 kg	0.163 kg	0.357 kg	0.568 kg

Stroke limitations for robot grippers

Limited opening angle to avoid collisions with angular grippers

Fields of application

You achieve the correct stroke with the WGS when using the stroke limiter (optionally available). The attachment kit enables stepless adjustment of the desired stroke.

Features

- Maximum opening angle stepless selectable
- Retroactively mountable
- Easily adjustable

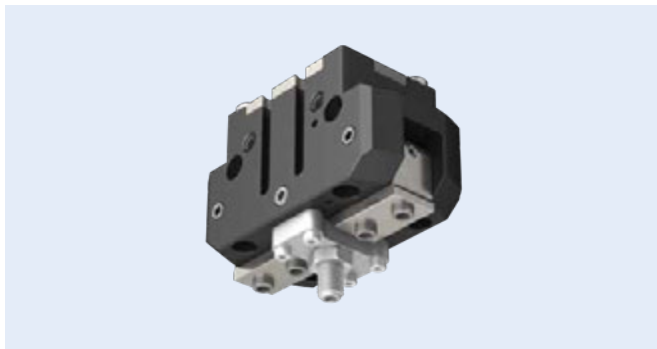
Description

The stroke limitation for the WGS series limits the opening angle of the gripper to a freely selectable and infinitely adjustable degree. This allows the angular gripper to be used even if there is little space around the workpiece in the application and a full opening angle of 30° (total) would lead to collisions.

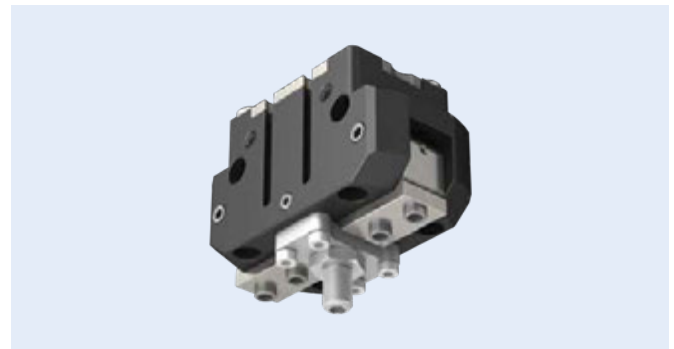
The stroke limitation can also be retrofitted to the WGS gripper and is quick and easy to adjust using an Allen key.

Stroke limitations for WGS

HB WGS-50



HB WGS-64



Technical data

Type	HB WGS-50	HB WGS-64	HB WGS-80	HB WGS-100
Item no.	150001342	150001343	150001344	150001345
Material	Steel			
Weight	0.017 kg	0.032 kg	0.034 kg	0.062 kg

Type	HB WGS-125	HB WGS-160	HB WGS-200
Item no.	150001346	150001347	150001348
Material	Steel		
Weight	0.072 kg	0.11 kg	0.21 kg



Standard is not enough for us

Solution competence made to measure

Our standard components can easily be adapted to customer-specific requirements. Various attachments and accessories are available for this purpose.

For more complex applications, where the modification of standard components no longer offers a sensible solution, we design special components that are precisely tailored to your applications. Many years of experience help us to find a technically and economically fit solution for you – quickly and effectively.

**Special nozzle
changer for seam
sealing applications**



Personal consulting

We are happy to provide advice on our components and technologies. Benefit from the long standing experience of the IPR advisors.

01



CONSULTING

Our expert employees specifically address your wishes and requirements and offer you competent advice on your application. With over 30 years of experience in the production of high-quality components and systems, IPR supports and supplies its customers world-wide, thereby creating valuable customer proximity.

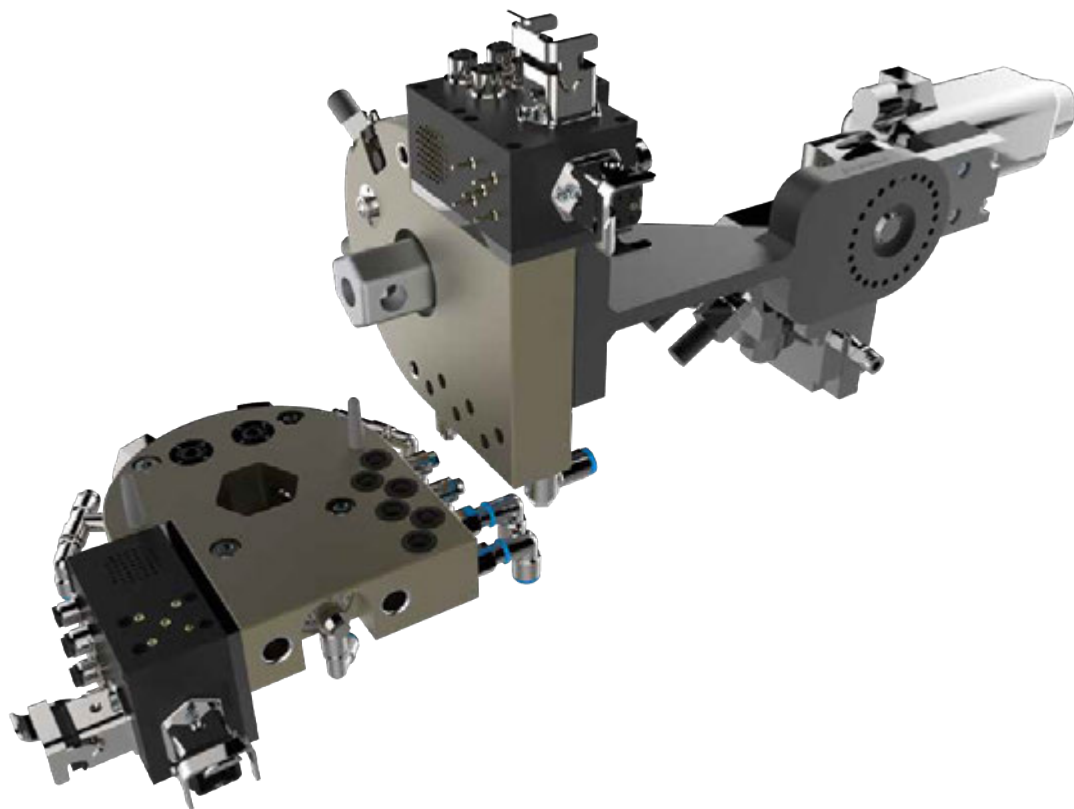
02



QUOTING & PROJECT PLANNING

In the next step, we develop a solution proposal for you and create a project plan in this context. This is followed by a cost-benefit optimization and a feasibility analysis. These include the technical designs as well as constructive tests by our engineering team.

**Complex
tool changer for
PVC applications**



03



**ENGINEERING
AND DESIGN**

Our engineers and designers are professionals in their field and have in-depth knowledge of all industries and processes. Our specialists implement individual projects professionally and on schedule. Look forward to first-class conception and implementation.

04



MANUFACTURING

A machine park equipped with the latest technologies and processes, great know-how in manufacturing as well as highly trained employees ensure that every single product is manufactured with the highest precision, quality and passion to your satisfaction.

05



ON SITE SERVICE

We offer you a unique support in every phase – even after commissioning: from maintenance and repair service to spare parts service and customer training on site or at IPR. Our professional services show that customer proximity is very important to us.



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