

Handling with sensitivity

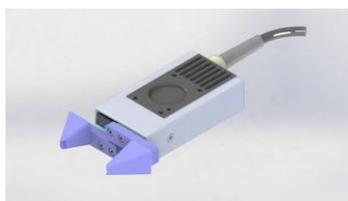
Servo-electric grippers with individually attuned gripping forces for your goods

SG30 SG50 SG150

excellent positioning accuracy and high clamping force even with small size

Our servo-electric gripper contains an internal memory to save gripping force, opening width, closing width and closing speed. This enables you to record the parameters of each single work step in your working programme individually. As for our incomparably small-sized and lightweight electric

gripper you neither need special software nor controller it is easily and quickly integrated in every process and laboratory automation. Our grippers have already proved themselves worldwide at robots of [Stäubli](#), [Yaskawa](#), [Motoman](#), [UR Universal Robots](#), [Kuka](#), [bionic robotics](#) and [epson scara](#).

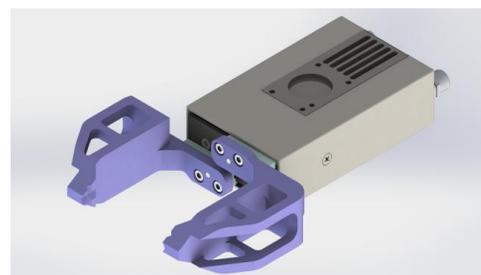


SG30 our lightweight

With a net weight of 195g, this gripper was especially developed for lightweight robots.

SG50 our all-rounder

With a clamping force of 50N, this gripper is the strongest one of its construction size.



SG150 our biggest one

With a stroke of 100mm, this gripper is the most compact of its construction size.

SG30 SG50 SG150

Data and facts

Interfaces

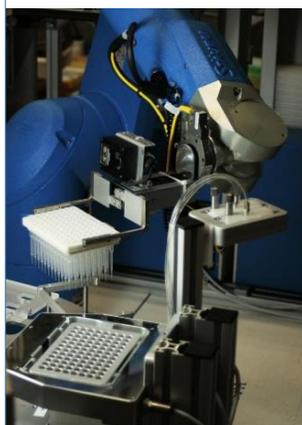
RS232 and RS485 is our standard. On request we offer other interfaces like Ethernet, PROFibus und CANbus.

Added value

We gladly offer you our installation know-how as well as:

- tool changers
- collision protection
- programming
- special gripper fingers

| Gripper | Max. gripping force | Min. gripping force | Stroke | Weight | Speed |
|---------|---------------------|---------------------|--------|--------|----------|
| SG30 | 30 N | 1,5 N | 30 mm | 220 g | 175 mm/s |
| SG50 | 50 N | 1,5 N | 50 mm | 390 g | 175 mm/s |
| SG150 | 50 N | 1,5 N | 100 mm | 430 g | 175 mm/s |



SG30-CR SG50-CR SG150-CR

Our CR-series for clean room

Our CR-series was especially developed for the application in clean rooms. They have been certified according to VDI 2083 and ISO 14644 as cleanroom-compatible Class 1 by an external institute. Their precise, fine-tuned construction ensures a nearly particle-free performance of all movements. They are used in all conceivable clean rooms: e.g. the production of implants, the production of sterile components or the dust-free assembly of sensors.

Application in laboratory automation

Due to its large stroke, the servo-driven gripper manages to clamp microplates at the long and short side without finger exchange as well as:

- pipettes
- cuvettes
- test tubes
- microplates
- microplate lids
- pipette holder



available
August 2016



CR

SG50-WP SG150-WP

Our waterproof WP-series

Our WP-series was especially developed for the application underwater. By means of a special process, all interfaces and electronics are protected safely against the ingress of water. Therefore, our grippers are usable

underwater according to protection class IP68. In hygienically critical applications, e.g. in the pharmaceutical industry or in laboratory environments, they are easy to clean; without edges or contours that are difficult to access.

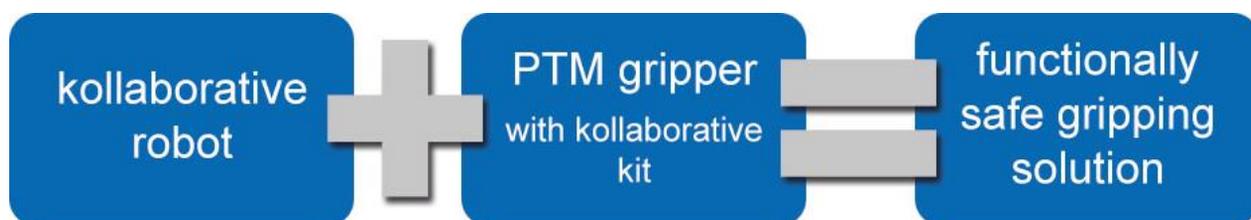


Human - Machine hand in hand

Functionally safe grippers for collaborative robots.

Our collaborative grippers cooperate safely and reliably with your collaborative robot where human and machine need to work together. For the first time, the gripping system does not longer constitute the safety gap between human and machine but fills it

seamlessly. In the first step, we analyse your gripping task together. Via our flexible modular system and with our technical expertise, we subsequently develop your customized and functionally safe gripping solution.



- MRK-bumper with rounded and soft outline
- gripping fingers with rounded gripping tips
- passive and active break
- redundant force sensors
- ultrasonic sensors
- capacitive recognition



SG50-WP SG150-WP

Even in case of power failure in safe hands.

In case of power failure the clamping force is maintained automatically by our Safetygrip Technology. Your goods are always safe. For our servoelectric grippers, the Safetygrip Technology is applied by a magnetic brake.

In case of interruptions it already closes at a voltage decrease of 10% and provides a constant tension through a magnetic break. Additionally, capacitors support the break by balancing the voltage fluctuations redundantly.

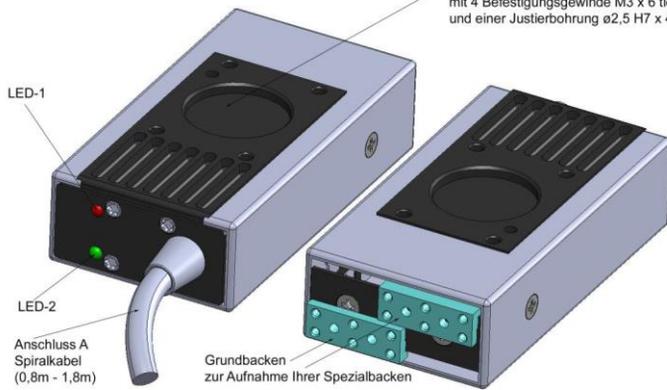


The active magnetic break is integrated in the robot flange

available September 2016

siehe auch die Technische Beschreibung

Zentrier- und Aufnahme $\varnothing 20$ H6 x 2 tief
mit 4 Befestigungsgewinde M3 x 6 tief
und einer Justierbohrung $\varnothing 2,5$ H7 x 4 tief



LED-1

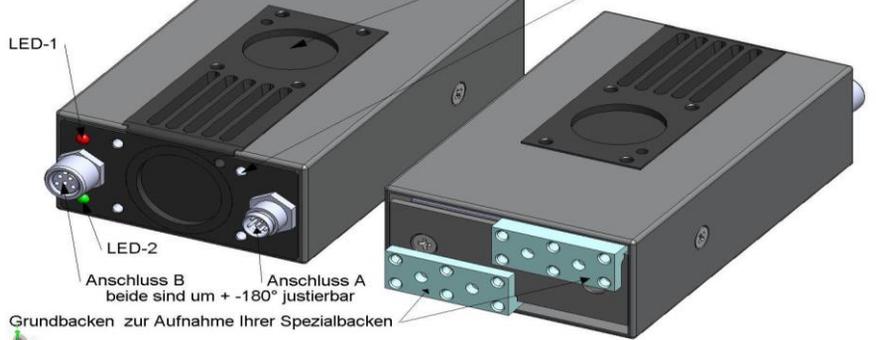
LED-2

Anschluss A
Spiralkabel
(0,8m - 1,8m)

Grundbacken
zur Aufnahme Ihrer Spezialbacken

siehe auch Technische Beschreibung

Zentrier- und Aufnahme $\varnothing 20$ H6 x 2 tief
mit 4 Befestigungsgewinde M3 x 6 tief
und einer Justierbohrung $\varnothing 2,5$ H7 x 4 tief



LED-1

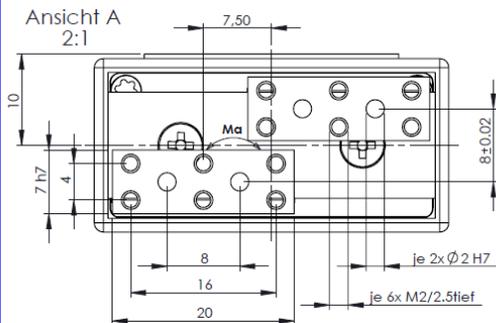
LED-2

Anschluss B
beide sind um + -180° justierbar

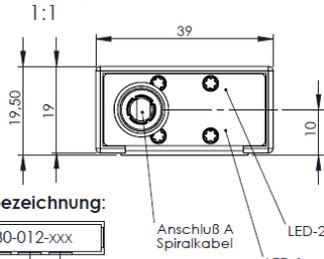
Anschluss A

Grundbacken zur Aufnahme Ihrer Spezialbacken

Ansicht A
2:1



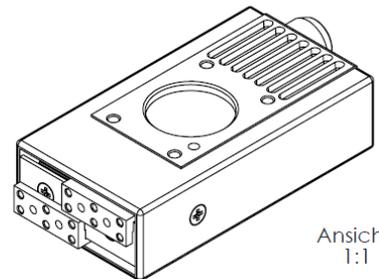
Ansicht B
1:1



Bestellbezeichnung:



Typen-
bezeichnung
Spannung
Volt V_{CC}
Schnitt-
stelle



Ansicht
1:1

TECHNISCHE DATEN:

| | | |
|----------------------------|---------------------------|--------------|
| Max. Spannkraft: | 30N ₀ (60N/2) | C = 0,55 kN |
| Min. Spannkraft: | 1,5N ₀ (3N/2) | Co = 0,96 kN |
| Max. Hub (2x25): | 30 mm ₀ (2x15) | Mo = 1,28 Nm |
| Max. Geschwindigkeit: | 150 mm/sec | Mb = 1,28 Nm |
| Max. Stromaufnahme: | 0,700 A | Mc = 1,74 Nm |
| Min. Zykluszeit: | 17,5 M | |
| Min. Zykluszeit: | 100 ms | |
| Betriebsspannung: | 12 Volt DC | |
| Toleranzbereich: | 11-13 Volt DC | |
| Positionsgenauigkeit: | +/- 0,05 mm | |
| Wiederholgenauigkeit: | 0,01 mm | |
| Betriebstemperaturbereich: | -20°C - +40°C | |
| Verpolschutz: | ja | |
| Temperaturschutz: | ja | |
| Kraftkompensation: | ja | |
| Gewicht: | 0,214 kg | |



Maßstab 1:1 (2:1) Gewicht: 214gr

Freimaß-
Toleranz
f (fein)
ISO 2768-1

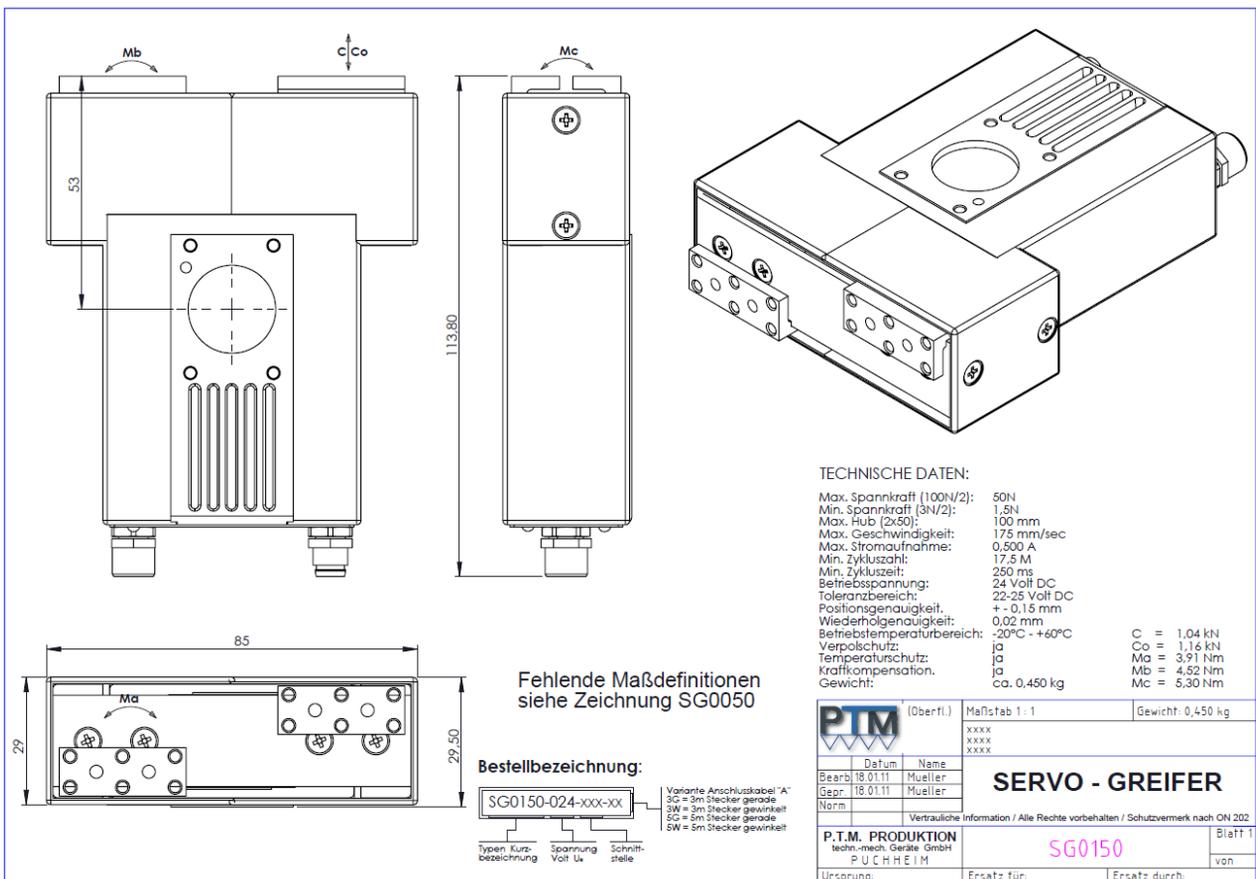
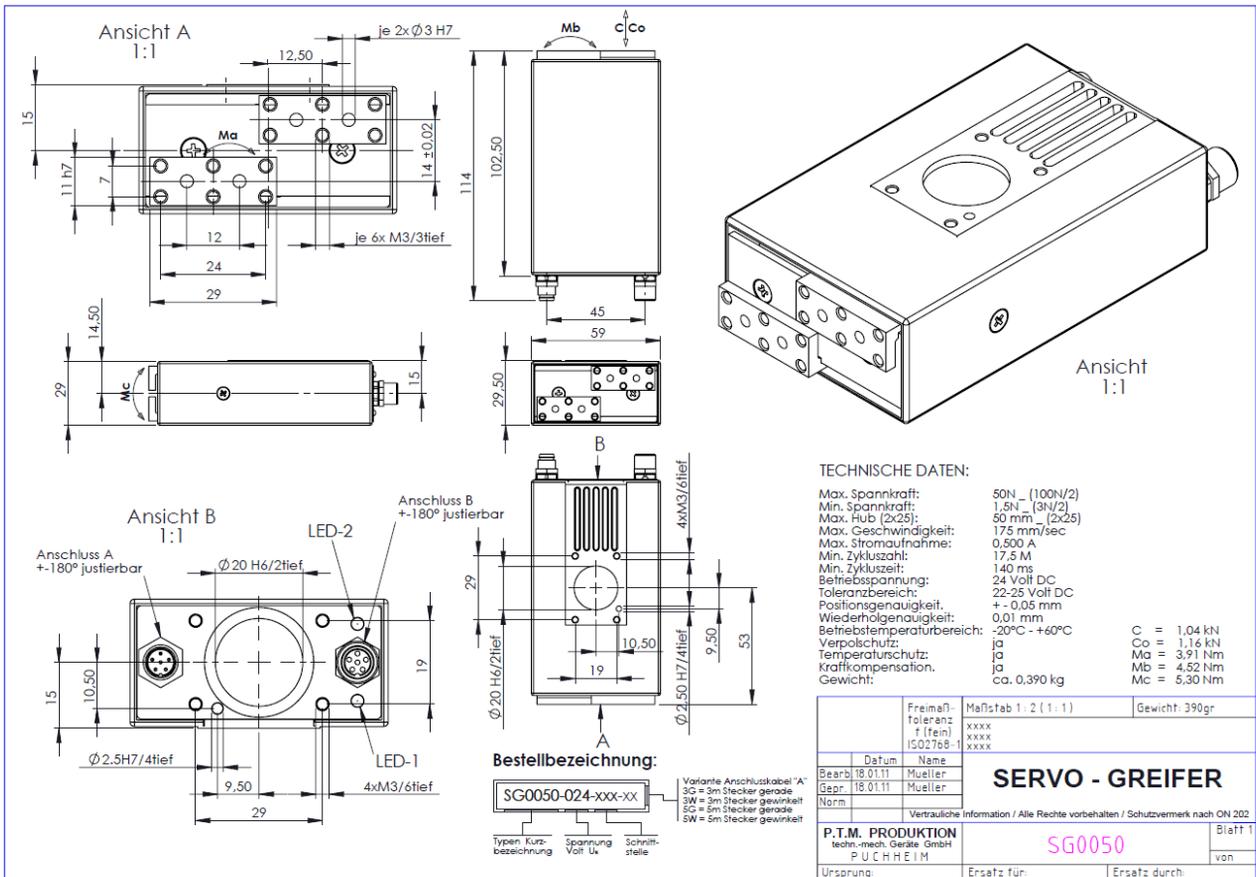
SERVO - GREIFER

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P.T.M. PRODUKTION
techn.-mech. Geräte GmbH
PUCHHEIM

Blatt 1
SG0030
von

Ursprung: Ersatz für: Ersatz durch:



Further products of PTM mechatronics GmbH

PTM
mechatronics

Designed,
developed and
made in Germany

leistungsstarke
Druckluftmotoren

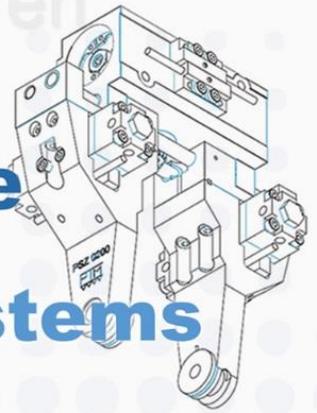


powerful
air motors



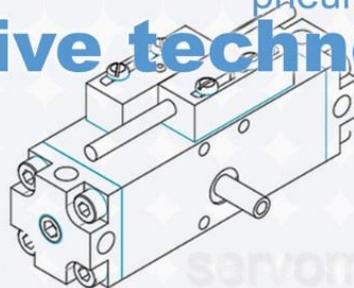
präzise
Greifsysteme

precise
gripping systems



pneumatische
Antriebstechnik

pneumatic
drive technology



www.ptm-mechatronics.com

PSZ - Our all-rounder

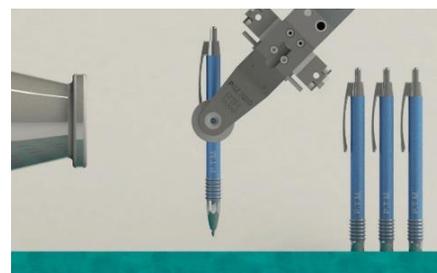
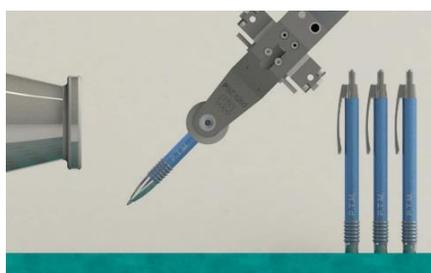
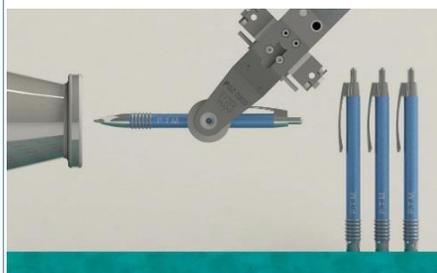
Pneumatic grippers with integrated rotary motion save time-consuming change of grip

Our pneumatic grippers are able to rotate your goods up to 180° in tensioned state. Our integrated [Swing Technology](#) allows quick changes between vertical and horizontal positioning for further processing or transport.

- absolutely centric
- maintenance-free
- standard jaws in two different lengths
- defined grip forces by means of optional spring tension
- safety in case of pressure loss by means of optional spring tension
- two additional opening positions by means of optional intermediate position

| | Max. gripping force | Stroke | Weight | Torque |
|---------------------|---------------------|-------------------------------------------------------------|----------------------------|----------|
| PSZ 200 filigree | 125 N 250 N | 13,5 mm und 27 mm 26 mm und 52 mm 52,5 mm und 105 mm | 900 g 1100 g 1600 g | 40 Ncm |
| PSZ 600 filigree | 250 N 500 N | 15 mm und 30 mm 30 mm und 60 mm | 1900 g 2200 g | 100 Ncm |
| PSZ 201 robust | 125 N 250 N | 613,5 mm und 27 mm 26 mm und 52 mm 52,5 mm und 105 mm | 1300 g 1500 g 1900 g | 40 Ncm |
| PSZ 601 robust | 250 N 500 N | 15 mm und 30 mm 30 mm und 60 mm | 2900 g 3500 g | 100 Ncm |
| PSZ 1201 robust | 600 N 1200 N | 40 mm 80 mm | 8800 g | 400 Ncm |
| PSZ 3001 robust | 1500 N 3000 N | 40 mm 80 mm | 13300 g | 1000 Ncm |

| | |
|-------------|----------------------------------------------------------------------------------------------------------------------|
| Optional | Digital end position control |
| Accessories | Spring tension for defined grip forces and safety in case of pressure loss (Safetygrip-Technology) |
| | Intermediate position for two additional opening positions (Quickstep-Technology) |
| | Limit switch with LED display |



A well-rounded solution

Absolutely concentric pneumatic three jaw grippers for big round parts.

Our three finger grippers with their precise planetary gears are our experts for the handling of round parts. They are able to grip circular objects at the outer diameter as well as the inner diameter with precise clamping force. Equipped with appropriately long grip jaws they manage extremely wide gripping strokes and clamp geometrically similar parts of different size without the necessity of conversion.

- absolutely concentric
- high repeat accuracy
- easy limiting of gripping stroke
- high clamping forces
- ATEX Certification



| | |
|-------------|----------------------------------------|
| Standard | IP 66 |
| Optional | ATEX certification |
| | Transmission 3:1 9:1 1:2 |
| | IP 68 resistant to seawater |
| | IP 68 stainless steel |
| | Speed control |
| | Silicone-free |
| | Viton FPM FKM |
| | Acetone-resistant EPDM PTFE |
| Accessories | Mounting bracket |
| | Mounting flange |
| | Adapter for air connection 45° and 90° |

| | Gripping torque | Weight |
|----------|-----------------|---------|
| DSG 450 | 6,5 Nm | 2,1 kg |
| | 19,5 Nm | 3,0 kg |
| | 58,5 Nm | 3,8 kg |
| DSG 900 | 13 Nm | 2,3 kg |
| | 39 Nm | 3,2 kg |
| | 117 Nm | 4,0 kg |
| DSG 1800 | 32 Nm | 5,9 kg |
| | 96 Nm | 8,6 kg |
| | 288 Nm | 10,4 kg |
| DSG 3600 | 65 Nm | 6,5 kg |
| | 195 Nm | 9,2 kg |
| | 585 Nm | 11,0 kg |

PTM
mechatronics

leistungsstarke
Druckluftmotoren
präzise
Greifsysteme
pneumatische
Antriebstechnik

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