



electrical





Order no.	Stroke per jaw [mm]	Gripping force in opening [N]	Gripping force in clothing [N]	Page
Product Information				6
GEP1402	2	140	14	10
GEP1406C	6	350	-	12
GEP1406O	6	-	350	12
GEP1602	2	115	115	14
GEP1606C	6	280	-	16
GEP1606O	6	-	280	16



20	,	
		Product Information
900 24	40	GEH8240S
3200 26	60	GEH8660S
3200 26	60	GEH8660S

Order no.	Stroke per jaw [mm]	Gripping force in opening [N]	Gripping force in closing [N]	Page
Product Information				30
GED1302	2	140	140	34
GED1306C	6	350	-	36
GED13060	6	-	350	36
GED1502	2	115	115	38
GED1506C	6	290	-	40
GED1506O	6	-	290	40









GEP1402 up to GEP1606



Parallel gripper electrical

Features

- compact electrically driven parallel gripper with gripping force up to 350 N and 6 mm stroke per jaw
- easiest energy supply using 24V machine voltage, independent of pneumatics and hydraulics
- position inquiry, regulable gripping force and mechanical gripping force safety (on version with 6 mm stroke per jaw)

Functional diagram



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Terms

Gripping force:	arithmetic sum of the individual forces occurring at the jaws	
Closing/opening time:	required time for the gripper jaws to cover the maximum stroke distance	
Repeatability:	at end stops after 50/100 consecutive cycles	
Gripping force safety:	the gripping force is guaranteed by the shape of curve disc. It is only available if the curve disc travels to its stroke end during gripping. Only on versions with 6 mm stroke per jaw.	
Cycle:	angle of rotation covered by the drive motor in an open and close movement	
Maintenance:	recommended at 5 mil. cycles (please see the owner's manual for conditions, download from www.sommer-automatic.com)	
	 long maintenance intervals keep costs down 	
	• long lifespan	

Model

C :	For external gripping, gripping force safety on stroke end by shape of the curve disc
0:	For internal gripping, gripping force safety on stroke end by shape of the curve disc

Order no.	Stroke per jaw	Gripping force in opening	Gripping force in closing	Gripping force safety from
GEP1402	2 mm	140 N	140 N	-
GEP1406C	6 mm	350 N	-	Curve disc on stroke end
GEP14060	6 mm	-	350 N	Curve disc on stroke end
GEP1602	2 mm	115 N	115 N	-
GEP1606C	6 mm	280 N	-	Curve disc on stroke end
GEP1606O	6 mm	-	280 N	Curve disc on stroke end



Parallel gripper electrical



Drive

Electrical transmission motor 24VDC

C and O design

In conjunction with curve disc for rapid stroke and force stroke

- high drive force when opening (O) or closing (C)
- gripping force up to 350N
- rapid cycle times



Guide

Polished T-slot guide in surface hardened steel (series 1400)

- T groove guide for maximum force and torque intake
- high precision due to low play design

Not in illustration: sealed round guide (series 1600)

- sealed
- for adverse environmental influences



Force transfer

Positively driven curve disc

- rapid stroke and force stroke on version with 6 mm stroke per jaw
- optimum force steering of drive force in gripping force
- self- centering
- synchronisation
- high repeat accuracy



Gripping jaw intake

From individual gripping jaw via centring sleeve

- precise positioning of individual gripping jaws
- quick, cost- effective and thereforce economical jaw changing



Gripping force safety

C and O design

- curve disc with narrowing radius for mechanical self limitation at stroke end
- maintenance of gripping force even under drop in voltage



Machine connection

Energy feed, fixing and positioning possibilities on several sides

- optimum integration into the workroom through individiual mounting situation
- standardised interface



Position sensing

Indirecte Position sensing

- process safe
- compact
- no additional interference contours

The control electronics included in the delivery contain an adjustable min. and max. value for the power. A blocking gripper drive motor at the stroke end (gripping or end position) causes a rise in power. The corresponding output signal can be used as a position sensing.



Parallel gripper electrical



Gripping force diagram

Gripping force against to the jaw length.



Forces and Moments

Max allowable forces and torques on jaws.



Included in the delivery



Centering sleeves
Order no. BDST2900

Accessory list



Cable straight plug Order no. KAG500



Cable angled plug

Order no. KAW500





Order no.:	GEP1402	
Stroke per jaw [mm]:	2	
Gripping force in closing and opening (adjustable) [N]:	140	
Recommended workpiece weight [g]*:	700	
Closing time/opening time [s]:	0,2	
Repeatability +/- [mm]:	0,02	
Voltage [V]**:	24	
Max. current regulable by potentiometer [mA]:	140	
Min./max. operating temperature [°C]:	5/80	
Protection class:	IP 52	
Weight [g]:	300	

* Value determined with friction coefficient μ =0.1 and safety factor ν = 2

** 12 Voltage on request





Parallel gripper electrical



Gripping force diagram

Gripping force against to the jaw length.



Forces and Moments

Max allowable forces and torques on jaws.



Included in the delivery



Centering sleeves
Order no. BDST40800

Accessory list



Cable straight plug Order no. KAG500











Order no.:	GEP1406C	GEP1406O
Stroke per jaw [mm]:	6	6
Gripping force in closing (adjustable) [N]:	350	-
Gripping force in opening (adjustable) [N]:	-	350
Recommended workpiece weight [kg]*:	1,78	1,78
Closing time/opening time [s]:	0,4	0,4
Repeatability +/- [mm]:	0,02	0,02
Voltage [V]**:	24	24
Max. current regulable by potentiometer [mA]:	210	210
Min./max. operating temperature [°C]:	5/80	5/80
Protection class:	IP 52	IP 52
Weight [kg]:	1	1

* Value determined with friction coefficient μ =0.1 and safety factor ν = 2

** 12 Voltage on request





Parallel gripper electrical



Gripping force diagram

Gripping force against to the jaw length.



Forces and Moments

Max allowable forces and torques on jaws.



Included in the delivery



Centering sleeves
Order no. BDST2900

Accessory list



Cable straight plug Order no. KAG500



Control

Cable angled plug Order no. KAW500





Order no.:	GEP1602
Stroke per jaw [mm]:	2
Gripping force in closing and opening (adjustable) [N]:	115
Recommended workpiece weight [g]*:	58
Closing time/opening time [s]:	0,2
Repeatability +/- [mm]:	0,02
Voltage [V]**:	24
Max. current regulable by potentiometer [mA]:	140
Min./max. operating temperature [°C]:	5/80
Protection class:	IP 67
Weight [g]:	300

* Value determined with friction coefficient μ =0.1 and safety factor ν = 2

** 12 Voltage on request





Parallel gripper electrical



Gripping force diagram

Gripping force against to the jaw length.



Forces and Moments

Max allowable forces and torques on jaws.



Included in the delivery



Centering sleeves
Order no. BDST40800

Accessory list



Cable straight plug Order no. KAG500



Control

Cable angled plug Order no. KAW500





with sealed round guide GEP1606

Order no.:	GEP1606C	GEP1606O
Stroke per jaw [mm]:	6	6
Gripping force in closing (adjustable) [N]:	280	-
Gripping force in opening (adjustable) [N]:	-	280
Recommended workpiece weight [kg]*:	1,42	1,42
Closing time/opening time [s]:	0,4	0,4
Repeatability +/- [mm]:	0,02	0,02
Voltage [V]**:	24	24
Max. current regulable by potentiometer [mA]:	210	210
Min./max. operating temperature [°C]:	5/80	5/80
Protection class:	IP 67	IP 67
Weight [kg]:	1,5	1,5

* Value determined with friction coefficient μ =0.1 and safety factor ν = 2

** 12 Voltage on request







Long stroke grippers



GEH8240S GEH8660S



Electrical Long stroke grippers

🔁 Features

- a large stroke gripper driven by an AC servo motor, gripping force up to 3200 N and with a stroke per jaw up to 60 mm.
- programmable, positionable and regulable torque
- data interface for standard market systems such as Profibus, Sercos, CANopen and DeviceNet and Parallel Interface
- highly loadable linear guide with wiper, ideal for highest shear forces and torques, also suitable for use in adverse environment
- sealed in accordance with protection category IP 65

Functional diagram



Terms

Gripping force:	arithmetic sum of the individual forces occurring at the jaws	
Closing/opening time:	required time for the gripper jaws to cover the maximum stroke distance	
Repeatability:	at end stops after 50/100 consecutive cycles	
Gripping force safety:	the gripping force safety is guaranted by the transmission. It of a worm wheel and gear	
Cycle:	angle of rotation covered by the drive motor in an open and close movement	
Maintenance:	recommended at 5 mil. cycles (please see the owner's manual for conditions, download from www.sommer-automatic.com)	
	 long maintenance intervals keep costs down 	

• long lifespan

Model

S:

AC servo motor

Order no.	Stroke per jaw	Retention force max.	
GEH8240S	40 mm	900 N	
GEH8660S	60 mm	3200 N	



Electrical Long stroke grippers



Drive

AC servo motor

In conjunction with pinion-worm gear

- high drive force when opening and closing
- gripping force can be regulated up to 3200 N
- programmable and positionable
- data interface for standard market systems such as Profibus, Sercos, CANopen, DeviceNet and Parallel Interface



Guide

Heavy load linear guide

- ideal for the highest transverse forces and torque intake
- 2 x 2 guide wagon with wipers
- for use under extreme conditions



Force transfer

Pinion worm gear

- optimum force steering of drive force in gripping force
- self- centering
- synchronised
- high repeat accuracy



Gripping jaw intake

From individual gripping jaw via centring sleeve

- precise positioning of individual gripping jaws
- quick, cost-effective and therefore economical jaw changing



Gripping force safety

Pinion-worm gear

- mechanical self limitation
- gripping force ensured in power failure



Machine connection

Energy feed, fixing and positioning options

- optimum integration into the workroom through individual mounting situation
- standardised interface



Position sensing

Indirect via absolute encoder

- process safe due to maintenance of the reference even under drop in voltage
- precise
- no additional interference contours



Gripping force

Defined via the extension speed

- optimum adaptation of gripping force on the workpiece
- variable adjustment



Electrical Long stroke grippers



Forces and Moments

Max allowable forces and torques on jaws



Included in the delivery



Centering sleeves
Order no. BDST41000

Accessory list



Connecting cabel motorservo amplifier (10m) Order no. ZUBKA-10M



Interface cabel PC-control unite (5m) **Order no. ZUBKA05-R**



Software CD Order no. CD0003



Connecting cabel encoderservo amplifier (10m) Order no. ZUBKA-10D



Servo amplifier Order no. ZUBDKC-C (CANopen) Order no. ZUBDKC-D (DeviceNet) Order no. ZUBDKC-P (Profibus) Order no. ZUBDKC-S (Sercos) Order no. ZUBDKC-PAI (Parallel Interface)

Gripping force diagram

Gripping force against the extension speed at 100% motor efficiency



Gripping force against the jaw lenght.



Adjustable gripping force against the motor efficiency at smoothly extending



Motor efficiency in opening against the gripping force.







H8240S	Order no.:
servo motor	Drive:
	Stroke per jaw [mm]:
)	Max. retention force (at 100 % opening usage) [N]:
	Retention force min. [N]:
k/worm gear	Self limitation:
k/worm gear	Force transfer:
	Closing and opening time at max. stroke [s]:
5	Repeatability +/- [mm]:
0	Min./max. operating temperature [°C]:
35	Protection class:
	Weight [kg]:
	Power supply servo regulator:
200-240 VAC 50Hz	Net input voltage:
A	Continuous current:
A	Surge current:
	Transmission:
volution	Load transmission input rotation
evolution	Load transmission output rotation:
400 mm/ revolution	Feed constant:
k/worm gear 5 0 35 200-240 VAC 50Hz A A A evolution evolution 400 mm/ revolution	Force transfer: Closing and opening time at max. stroke [s]: Repeatability +/- [mm]: Min./max. operating temperature [°C]: Protection class: Weight [kg]: Power supply servo regulator: Net input voltage: Continuous current: Surge current: Transmission: Load transmission input rotation: Load transmission output rotation: Feed constant:



Subject to change without prior notice



Electrical Long stroke grippers



Gripping force diagram

0

0

200

800 600 400

Gripping force against the extension speed at 100% motor efficiency



2600 2400 2200 2000 1800 1800 1600 1400 1200 [mm/min]

2800

Gripping force against the jaw lenght.



Forces and Moments

Max allowable forces and torques on jaws



Adjustable gripping force against the motor efficiency at smoothly extending



Motor efficiency in opening against the gripping force.



Included in the delivery



Centering sleeves Order no. BDST41600

Accessory list



Connecting cabel motorservo amplifier (10m) Order no. ZUBKA-10M



Interface cabel PC-control unite (5m) **Order no. ZUBKA05R**



Order no. CD0001





Connecting cabel encoderservo amplifier (10m) Order no. ZUBKA-10D



Servo amplifier Order no. ZUBDKC-C (CANopen) Order no. ZUBDKC-D (DeviceNet) Order no. ZUBDKC-P (Profibus) Order no. ZUBDKC-S (Sercos) Order no. ZUBDKC-PAI (Parallel Interface)





AC-servo motor
60
3200
100
Rack/worm gear
Rack/worm gear
1,5
0,05
5/80
IP 65
10
1 x 200-240 VAC 50Hz
100 W / 1,1 A
100 W/3,0 A
375 revolution
49 revolution
3,1415 mm/ revolution











GED1302 up to GED1506 Series



Three-jaw gripper electrical

🕇 Features

- compact electrically driven three-jaw gripper with gripping force up to 350 N and 6 mm stroke per jaw
- easiest energy supply using 24V machine voltage, independent of pneumatics and hydraulics
- position inquiry, regulable gripping force and mechanical gripping force safety (on version with 6 mm stroke per jaw)

Functional diagram



Terms

Gripping force:	arithmetic sum of the individual forces occurring at the jaws
Closing/opening time:	required time for the gripper jaws to cover the maximum stroke distance
Repeatability:	at end stops after 50/100 consecutive cycles
Gripping force safety:	the gripping force safety is guaranteed by the shape of curve disc. It is only available if the curve disc travels to its stroke end during gripping. Only on versions with 6 mm stroke per jaw.
Cycle:	angle of rotation covered by the drive motor in an open and close movement
Maintenance:	recommended at 5 mil. cycles (please see the owner's manual for conditions, download from www.sommer-automatic.com)
	 long maintenance intervals keep costs down
	• long lifespan

Model

C :	For external gripping, gripping force safety on stroke end by shape of the curve disc
0:	For internal gripping, gripping force safety on stroke end by shape of the curve disc

Order no.	Stroke per jaw	Gripping force in opening	Gripping force in closing	Gripping force safety from
GED1302	2 mm	140 N	140 N	-
GED1306C	6 mm	350 N	-	Curve disc on stroke end
GED1306O	6 mm	-	350 N	Curve disc on stroke end
GED1502	2 mm	115 N	115 N	-
GED1506C	6 mm	290 N	-	Curve disc on stroke end
GED1506O	6 mm	-	290 N	Curve disc on stroke end



Three-jaw gripper electrical



Drive

Electrical transmission motor 24V DC

C and O design

In conjunction with curve disc for rapid stroke and force stroke

- high drive force when opening (O) or closing (C)
- gripping force up to 350 N
- rapid cycle times



Guide

Sealed round guide (series 1500)

- sealed
- for adverse environmental influences

Not in illustration: polished T-slot guide in surface hardened steel (series 1300)

- T groove guide for maximum force and torque intake
- high precision due to low play design



Force transfer

Positively driven curve disc

- rapid stroke and force stroke on version with 6 mm stroke per jaw
- optimum force steering of drive force in gripping force
- self-centering
- synchronisation
- high repeat accuracy



Gripping jaw intake

From individual gripping jaw via centering sleeve

- precise positioning of individual gripping jaws
- quick, cost-effective and therefore economical jaw changing
- space-saving fixing





Machine connection

Energy feed, fixing and positioning possibilities on several sides

- optimum integration into the workroom through individiual mounting situation
- standardised interface



Gripping force safety

C and O design

- curve disc with narrowing radius for mechanical self limitation at stroke end
- only on version with 6 mm stroke per jaw, only achieved at stroke end



Position sensing

Indirect

- process safe
- compact
- no additional interference contours

The control electronics included in the delivery contain an adjustable min. and max. value for the power. A blocking gripper drive motor at the stroke end (gripping or end position) causes a rise in power. The corresponding output signal can be used as a position sensing.



Three-jaw gripper electrical



Gripping force diagram

Gripping force against to the jaw length.



Forces and Moments

Max allowable forces and torques on jaws.



Included in the delivery



Centering sleeves
Order no. BDST2900

Accessory list



Cable straight plug Order no. KAG500



Control

Order no. ELEGR01

Cable angled plug Order no. KAW500





withT-slot guide GED1302

Order no.:	GED1302
Stroke per jaw [mm]:	2
Gripping force in closing and opening (adjustable) [N]:	140
Recommended workpiece weight [g]*:	700
Closing time/opening time [s]:	0,2
Repeatability +/- [mm]:	0,02
Voltage [V]**:	24
Max. current regulable by potentiometer [mA]:	140
Min./max. operating temperature [°C]:	5/80
Protection class:	IP 52
Weight [g]:	250

Value determined with friction coefficient $\mu = 0.1$ and safety factor n = 2





Three-jaw gripper electrical



Gripping force diagram

Gripping force against to the jaw length.





Max allowable forces and torques on jaws.



Included in the delivery



Centering sleeves
Order no. BDST40800

Accessory list



Cable straight plug Order no. KAG500



Control

Order no. ELEGR04

Cable angled plug Order no. KAW500



Subject to change without prior notice

withT-slot guide GED1306

Order no :	GED1306C	GED13060
Stroke per jaw [mm]:	6	6
Gripping force in closing (adjustable) [N]:	350	-
Gripping force in opening (adjustable) [N]:	-	350
Recommended workpiece weight [kg]*:	1,78	1,78
Closing time/opening time [s]:	0,2	0,2
Repeatability +/- [mm]:	0,02	0,02
Voltage [V]**:	24	24
Max. current regulable by potentiometer [mA]:	210	210
Min./max. operating temperature [°C]:	5/80	5/80
Protection class:	IP 52	IP 52
Weight [kg]:	1,7	1,7

* Value determined with friction coefficient $\mu = 0.1$ and safety factor n = 2** High-temperature-resistant model (up to 150°C) add T to part number





Three-jaw gripper electrical



Gripping force diagram

Gripping force against to the jaw length.



Forces and Moments

Max allowable forces and torques on jaws.



Included in the delivery



Centering sleeves
Order no. BDST2900

Accessory list



Cable straight plug Order no. KAG500



Cable angled plug Order no. KAW500





with sealed round guide GED1502

Order no :	GED1502
Stroke per jaw [mm]:	2
Gripping force in closing and opening (adjustable) [N]:	115
Recommended workpiece weight [g]*:	58
Closing time/opening time [s]:	0,2
Repeatability +/- [mm]:	0,02
Voltage [V]**:	24
Max. current regulable by potentiometer [mA]:	210
Min./max. operating temperature [°C]:	5/80
Protection class:	IP 67
Weight [g]:	320

* Value determined with friction coefficient $\mu = 0.1$ and safety factor n = 2

** High-temperature-resistant model (up to 150°C) add T to part number





Three-jaw gripper electrical



Gripping force diagram

Gripping force against to the jaw length.



Forces and Moments

Max allowable forces and torques on jaws.



Included in the delivery



Centering sleeves
Order no. BDST40800

Accessory list



Cable straight plug Order no. KAG500



Cable angled plug

Order no. KAW500



Subject to change without prior notice

Data, Drawings, 3-D models, Operating Instructions - www.sommer-automatic.com



with sealed round guide GED1506

Order no.:	GED1506C	GED1506O	
Stroke per jaw [mm]:	6	6	
Gripping force in closing (adjustable) [N]:	290	-	
Gripping force in opening (adjustable) [N]:	-	290	
Recommended workpiece weight [kg]*:	1,47	1,47	
Closing time/opening time [s]:	0,4	0,4	
Repeatability +/- [mm]:	0,02	0,02	
Voltage [V]**:	24	24	
Max. current regulable by potentiometer [mA]:	210	210	
Min./max. operating temperature [°C]:	5/80	5/80	
Protection class:	IP 67	IP 67	
Weight [kg]:	2	2	

* Value determined with friction coefficient $\mu = 0.1$ and safety factor n = 2

** High-temperature-resistant model (up to 150°C) add T to part number





Grippers pneumatic Grippers electrical **Grippers** hydraulic Grippers Special Grip & Rotate Modules pneumatic Separators **_Swivel Units** pneumatic Swivel Units electrical **_Swivel Units** hydraulic **Rotation Jaws** pneumatic Axial Compensation Modules **Tool Changers Robotics** Accessories Linear Cylinders Shock Absorber Air Vane Motors Rotary Cylinders Vacuum Components



