



 **Gripper**

*electrical*

**SOMMER**  
*automatic*





Order no.	Stroke per jaw [mm]	Gripping force in opening [N]	Gripping force in closing [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



Order no.	Stroke per jaw [mm]	Retention force max. [N]	Page
Product Information			20
GEH8240S	40	900	24
GEH8660S	60	3200	26



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
GED1306O	6	-	350	36
GED1502	2	115	115	38
GED1506C	6	290	-	40
GED1506O	6	-	290	40





# *Parallel gripper*

*electrical*



*GEP1402 up to GEP1606*

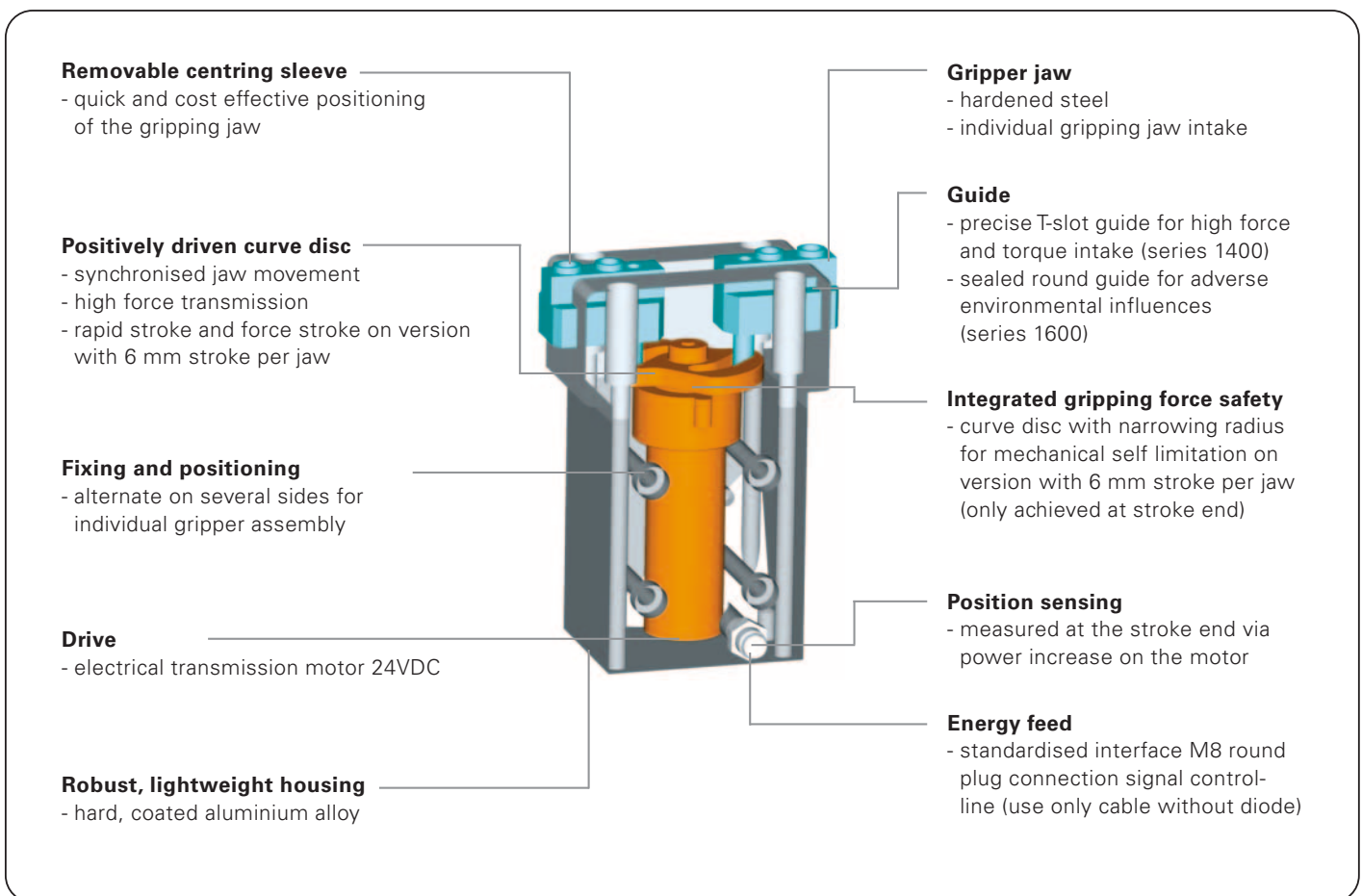
**SOMMER**  
*automatic*

# 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





## 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](http://www.sommer-automatic.com))
- long maintenance intervals keep costs down
  - long lifespan

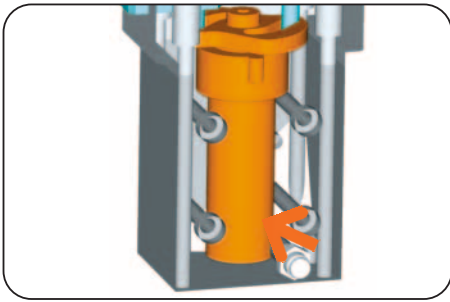
## Model

- C:** For external gripping, gripping force safety on stroke end by shape of the curve disc
- O:** 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
GEP1406O	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



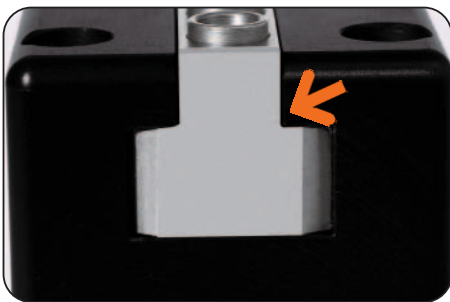
## Drive

### 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



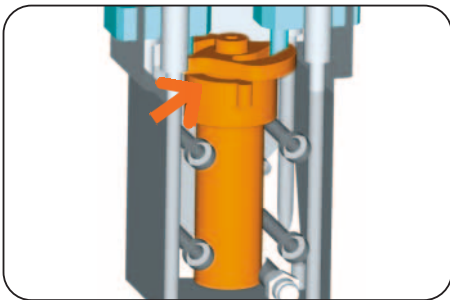
## Guide

### 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)

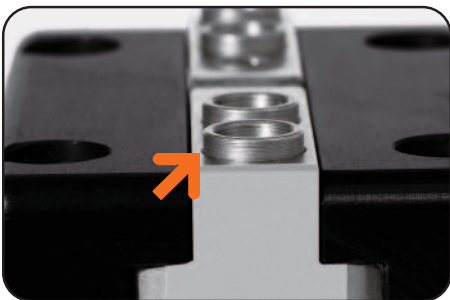
- sealed
- for adverse environmental influences



## 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

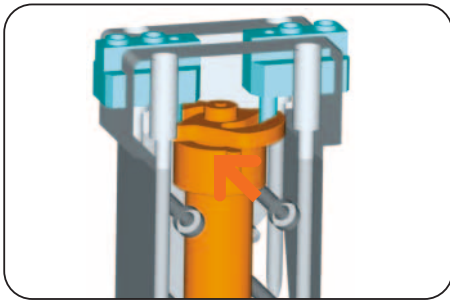


## Gripping jaw intake

### From individual gripping jaw via centring sleeve

- precise positioning of individual gripping jaws
- quick, cost-effective and therefore 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 individual mounting situation
- standardised interface



## Position sensing

### Indirect Position sensing

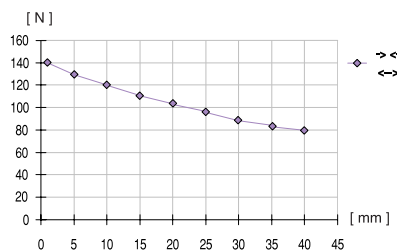
- process safe
- compact
- no additional interference contours

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

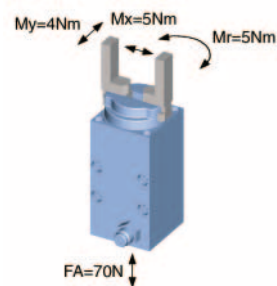
## Gripping force diagram

Gripping force against to the jaw length.

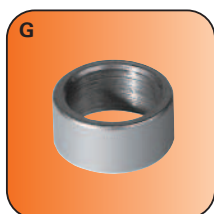


## Forces and Moments

Max allowable forces and torques on jaws.



## Included in the delivery

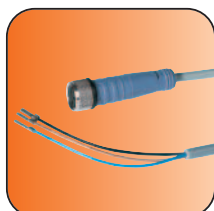


Centering sleeves  
Order no. BDST2900



Control  
Order no. ELEGR01

## Accessory list

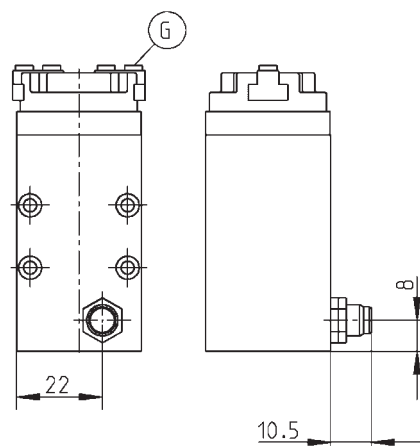


Cable straight plug  
Order no. KAG500



Cable angled plug  
Order no. KAW500

## Accessories



Subject to change without prior notice

\* Value determined with friction coefficient  $\mu=0.1$  and safety factor  $v = 2$   
 \*\* 12 Voltage on request



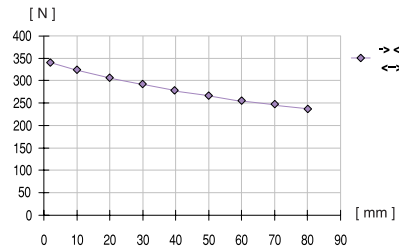
**SOMMER**  
*automatic*

# Parallel **gripper** electrical



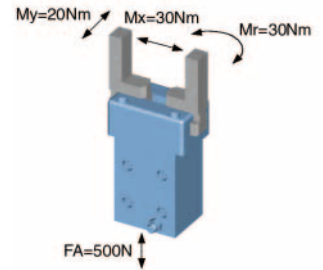
## Gripping force diagram

Gripping force against to the jaw length.

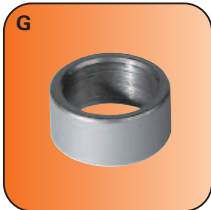


## Forces and Moments

Max allowable forces and torques on jaws.



## Included in the delivery

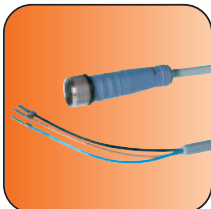


Centering sleeves  
Order no. BDST40800



Control  
Order no. ELEGR04

## Accessory list

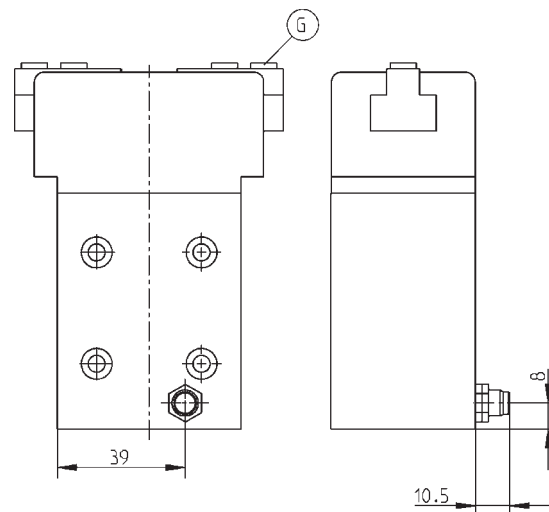


Cable straight plug  
Order no. KAG500



Cable angled plug  
Order no. KAW500

## Accessories



Subject to change without prior notice

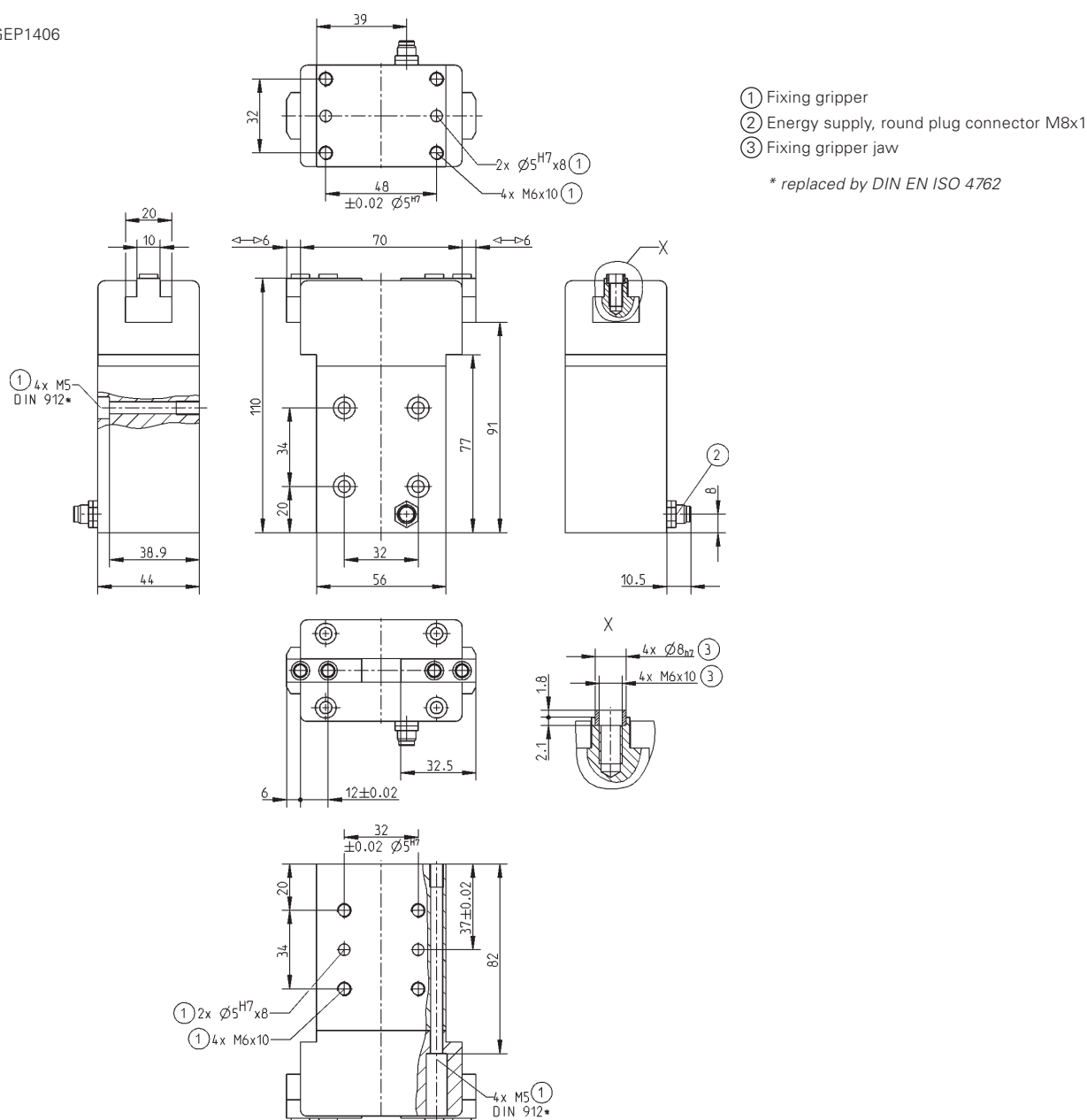


Order no.:	GEP1406C	GEP1406O
Stroke per jaw [mm]:	6	6
Gripping force in closing (adjustable) [N]:	350	-
Gripping force in opening (adjustable) [N]:	-	350
Recommended workpiece weight [kg]*:	1,78	1,78
Closing time/opening time [s]:	0,4	0,4
Repeatability +/- [mm]:	0,02	0,02
Voltage [V]**:	24	24
Max. current 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  $\mu=0.1$  and safety factor  $v = 2$

\*\* 12 Voltage on request

GEP1406



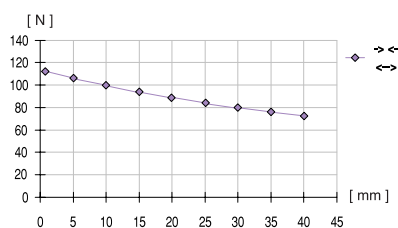
Subject to change without prior notice

# Parallel **gripper** electrical



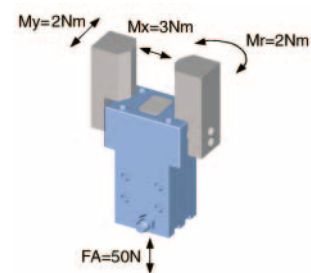
## Gripping force diagram

Gripping force against to the jaw length.

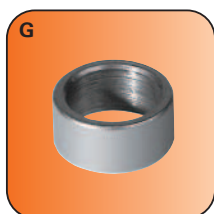


## Forces and Moments

Max allowable forces and torques on jaws.



## Included in the delivery

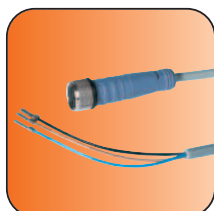


Centering sleeves  
Order no. BDST2900



Control  
Order no. ELEGR01

## Accessory list

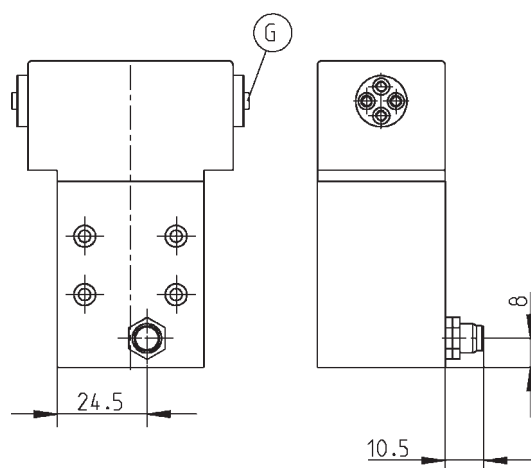


Cable straight plug  
Order no. KAG500



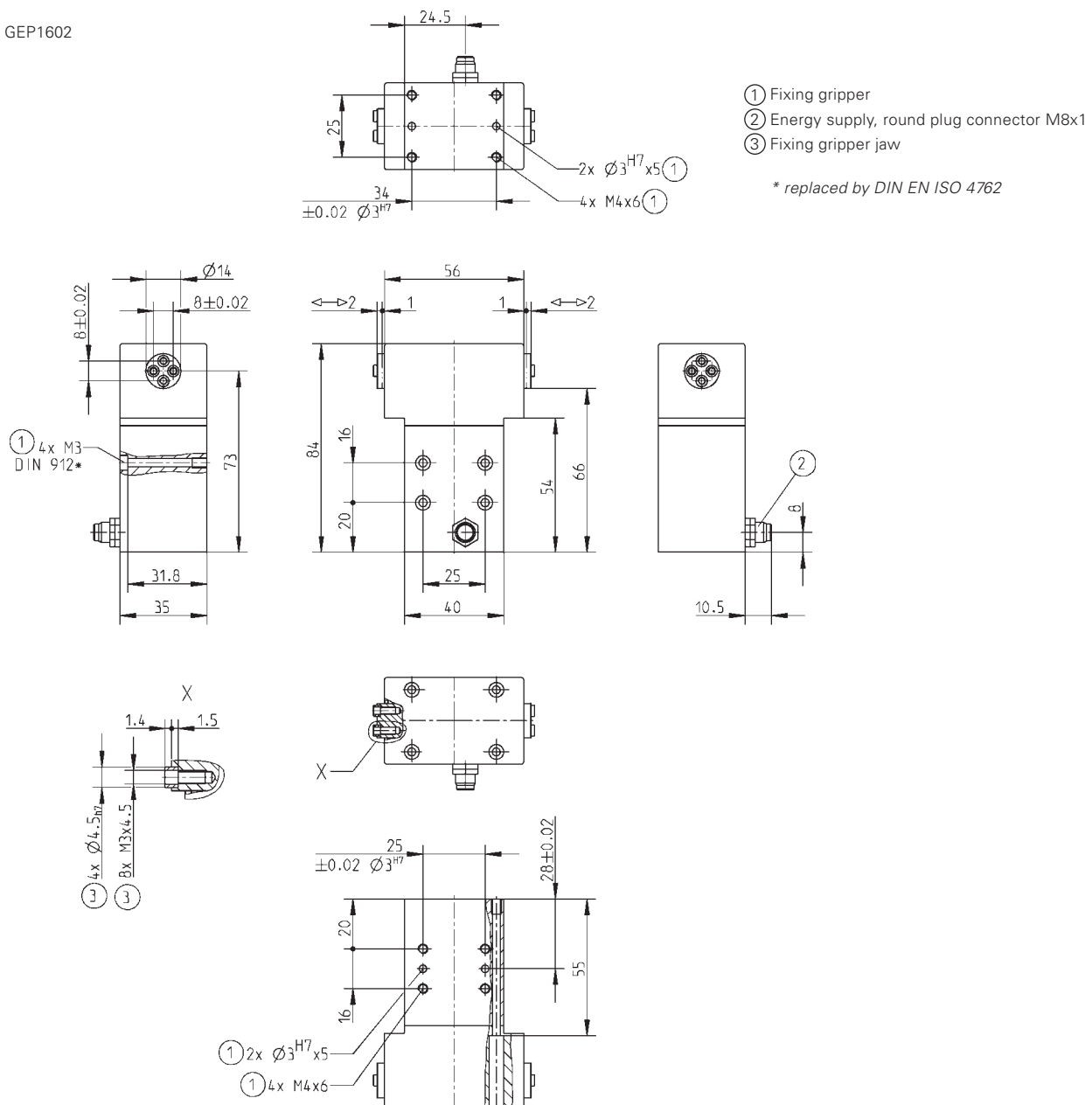
Cable angled plug  
Order no. KAW500

## Accessories



Subject to change without prior notice

\* Value determined with friction coefficient  $\mu=0.1$  and safety factor  $\nu = 2$   
 \*\* 12 Voltage on request



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*automatic*

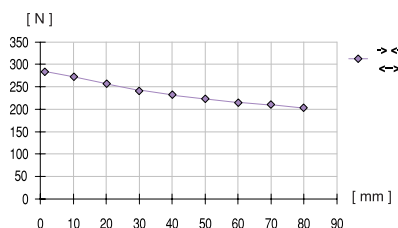


# Parallel **gripper** electrical



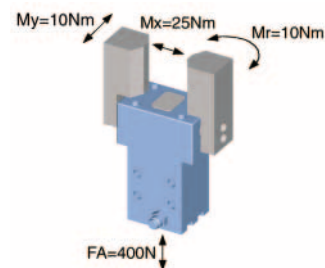
## Gripping force diagram

Gripping force against to the jaw length.

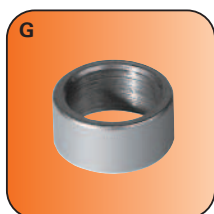


## Forces and Moments

Max allowable forces and torques on jaws.



## Included in the delivery

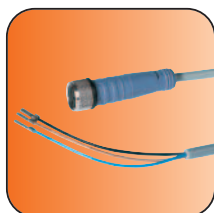


Centering sleeves  
Order no. BDST40800



Control  
Order no. ELEGR04

## Accessory list

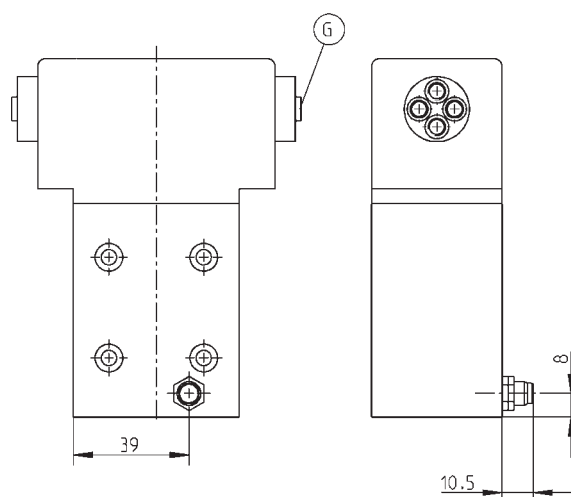


Cable straight plug  
Order no. KAG500



Cable angled plug  
Order no. KAW500

## Accessories



Subject to change without prior notice

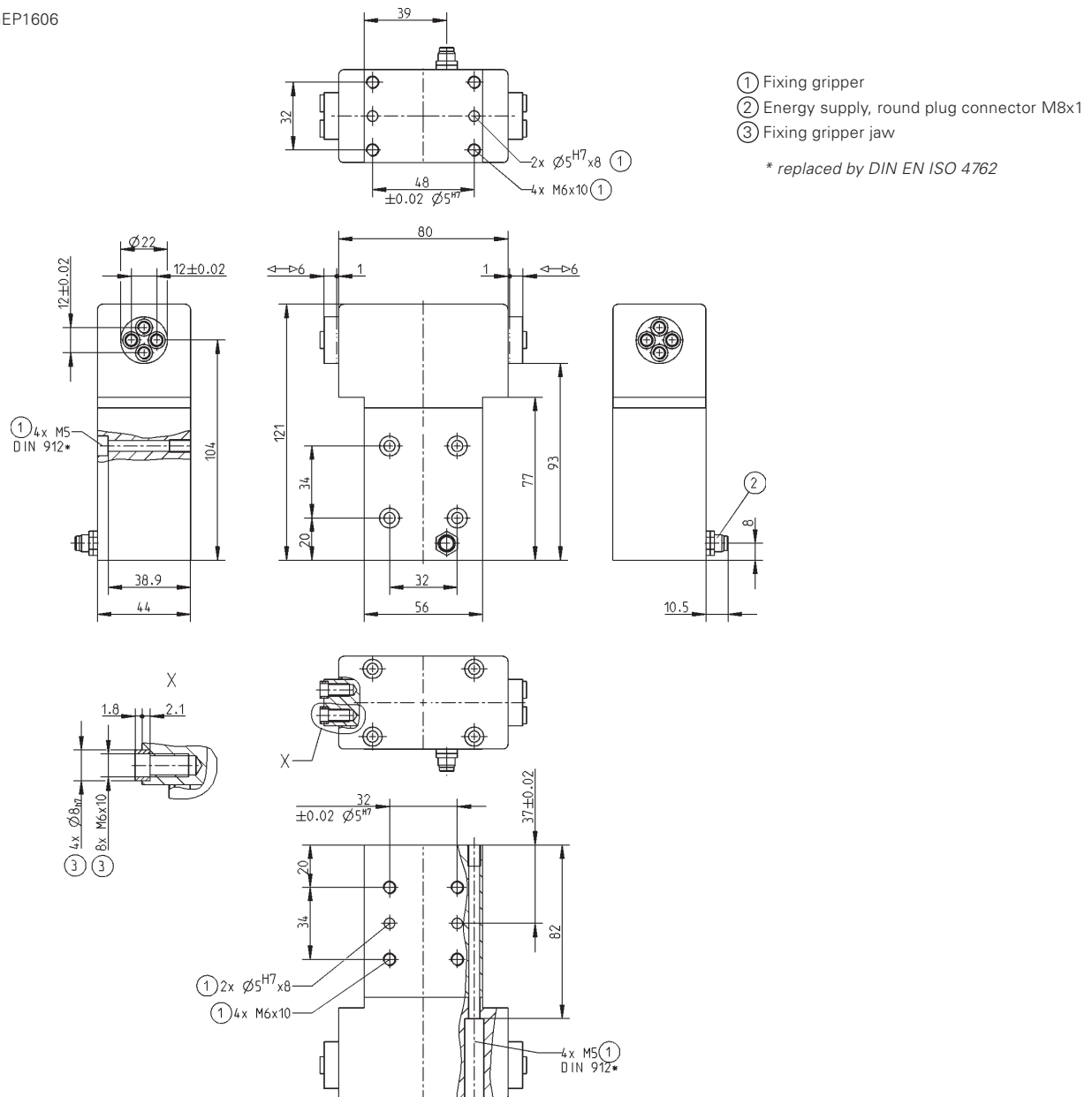


Order no.:	GEP1606C	GEP1606O
Stroke per jaw [mm]:	6	6
Gripping force in closing (adjustable) [N]:	280	-
Gripping force in opening (adjustable) [N]:	-	280
Recommended workpiece weight [kg]*:	1,42	1,42
Closing time/opening time [s]:	0,4	0,4
Repeatability +/- [mm]:	0,02	0,02
Voltage [V]**:	24	24
Max. current 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  $\mu=0.1$  and safety factor  $v = 2$

\*\* 12 Voltage on request

GEP1606



Subject to change without prior notice



# *Long stroke **grippers***

*electrical*



GEH8240S  
GEH8660S

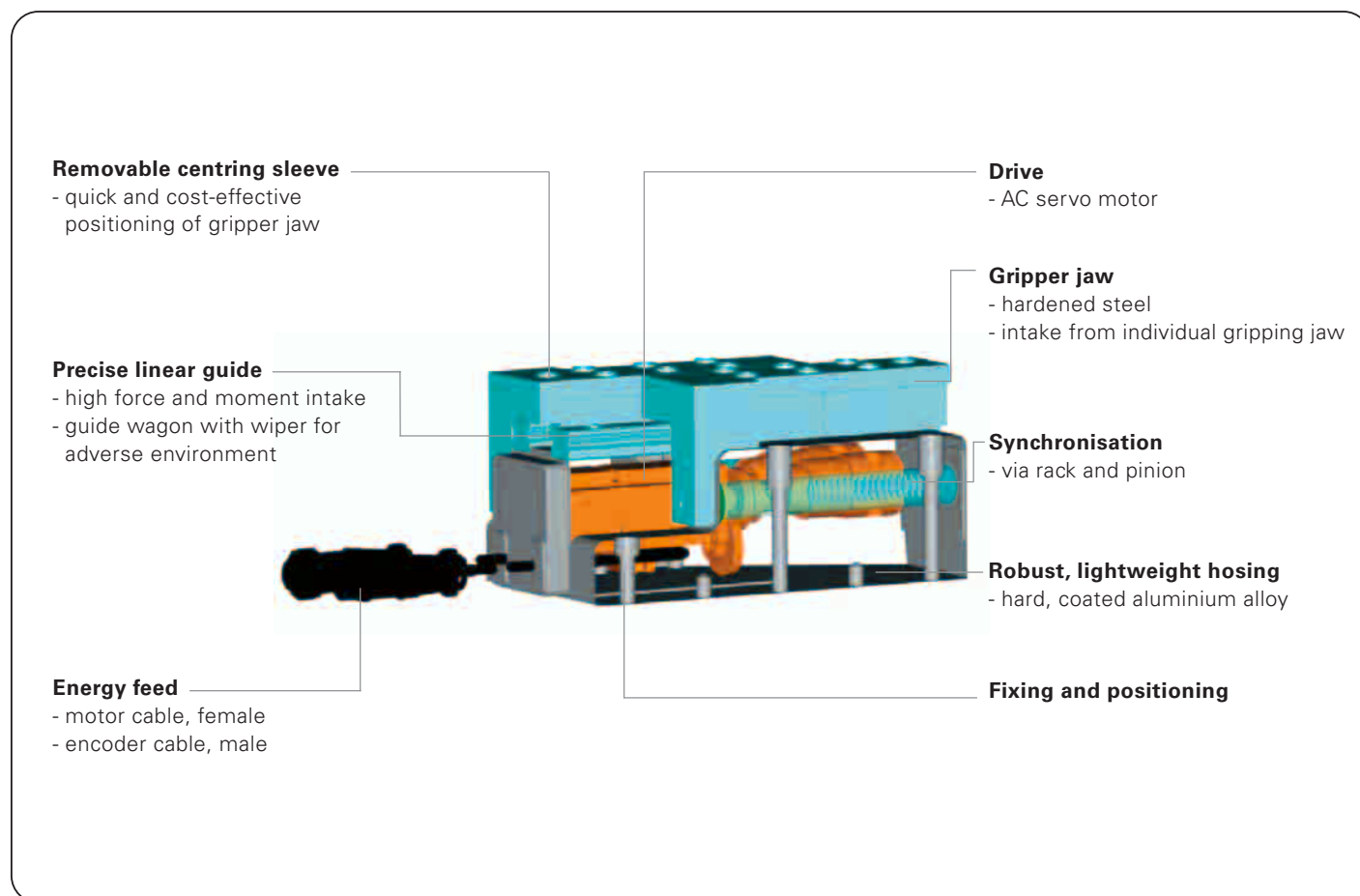
**SOMMER**  
*automatic*

# 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

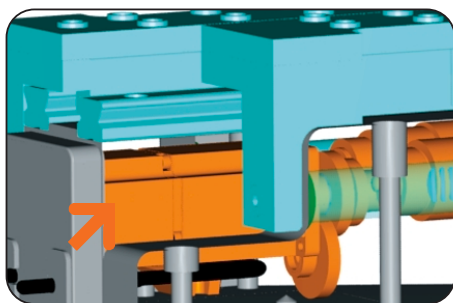
- Gripping force:** arithmetic sum of the individual forces occurring at the jaws
- Closing/opening time:** required time for the gripper jaws to cover the maximum stroke distance
- Repeatability:** at end stops after 50/100 consecutive cycles
- Gripping force safety:** the gripping force safety is guaranteed 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](http://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**

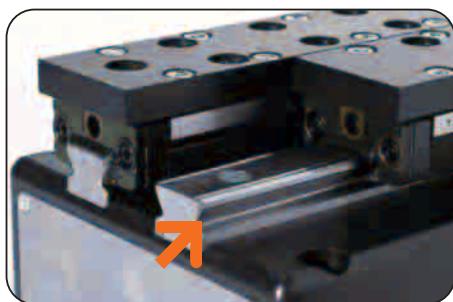


## Drive

### AC servo motor

In conjunction with pinion-worm gear

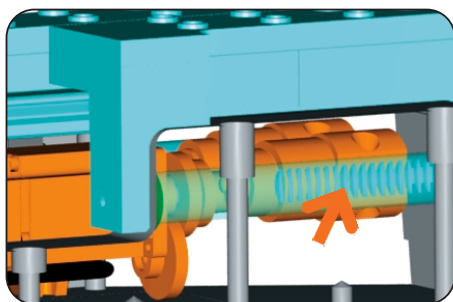
- high drive force when opening and closing
- gripping force can be regulated up to 3200 N
- programmable and positionable
- data interface for standard market systems such as Profibus, Sercos, CANopen, DeviceNet and Parallel Interface



## Guide

### Heavy load linear guide

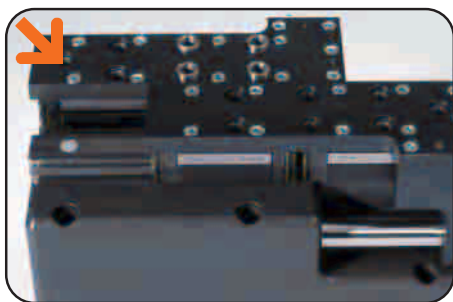
- ideal for the highest transverse forces and torque intake
- 2 x 2 guide wagon with wipers
- for use under extreme conditions



## Force transfer

### Pinion worm gear

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

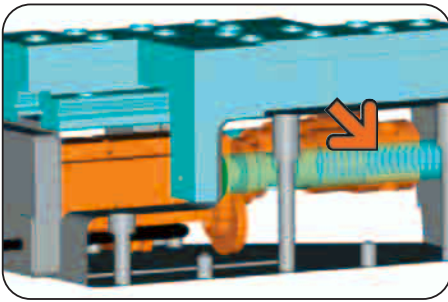


## Gripping jaw intake

### From individual gripping jaw via centring sleeve

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

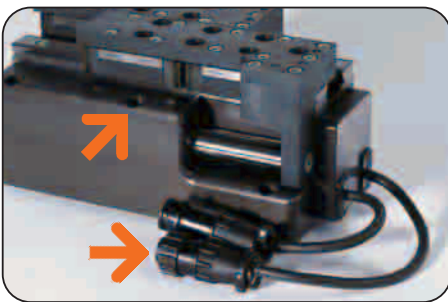




## Gripping force safety

### Pinion-worm gear

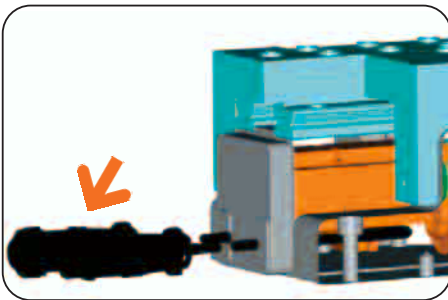
- mechanical self limitation
- gripping force ensured in power failure



## Machine connection

### Energy feed, fixing and positioning options

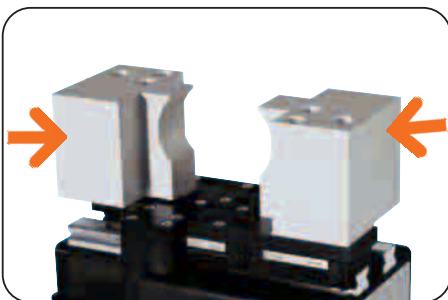
- optimum integration into the workroom through individual mounting situation
- standardised interface



## Position sensing

### Indirect via absolute encoder

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

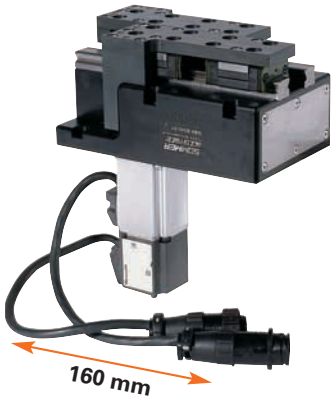


## Gripping force

### Defined via the extension speed

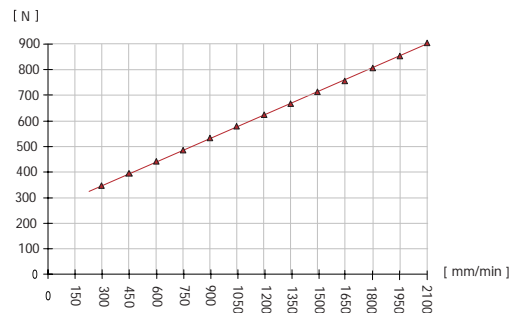
- optimum adaptation of gripping force on the workpiece
- variable adjustment

# Electrical Long stroke grippers

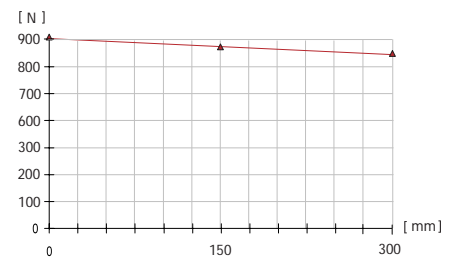


## Gripping force diagram

Gripping force against the extension speed at 100% motor efficiency

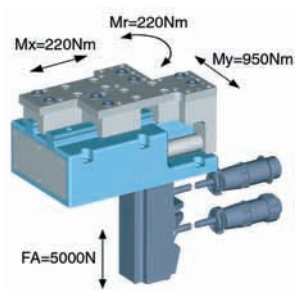


Gripping force against the jaw length.

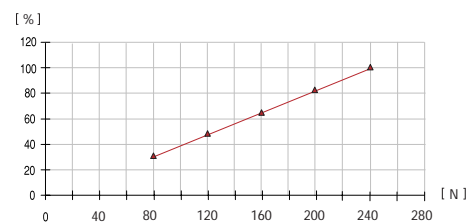


## Forces and Moments

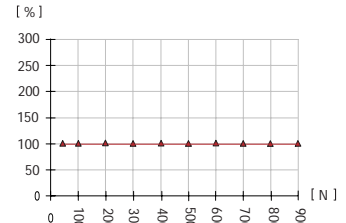
Max allowable forces and torques on jaws



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. BDST41000



Software CD  
Order no. CD0003

## Accessory list



Connecting cable motor-servo amplifier (10m)  
Order no. ZUBKA-10M



Connecting cable encoder-servo amplifier (10m)  
Order no. ZUBKA-10D

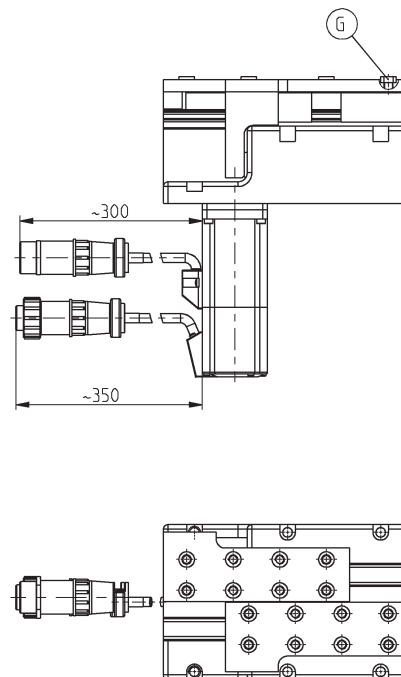


Interface cable PC-control unit (5m)  
Order no. ZUBKA05-R



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)

## Accessories

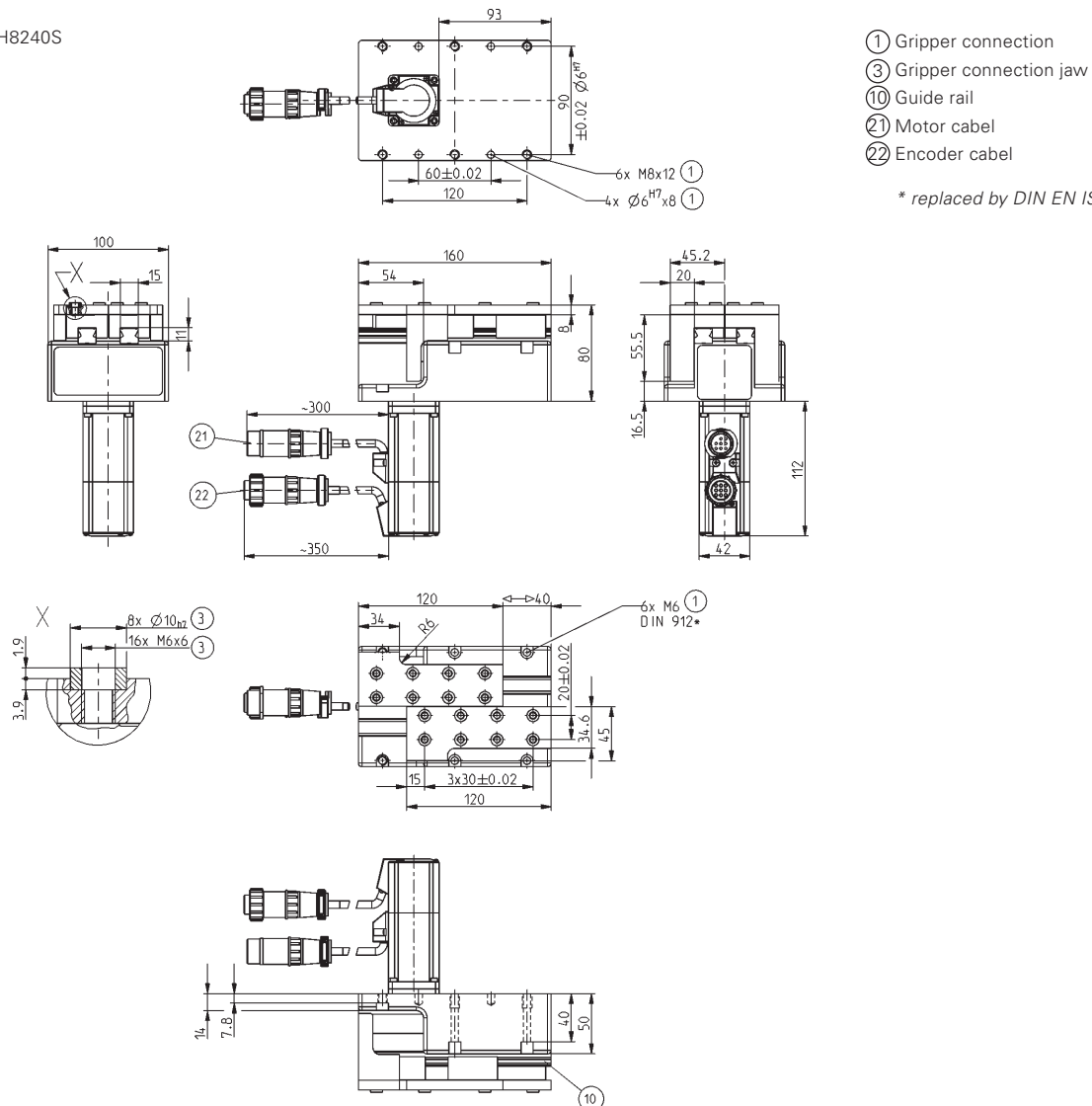


Subject to change without prior notice



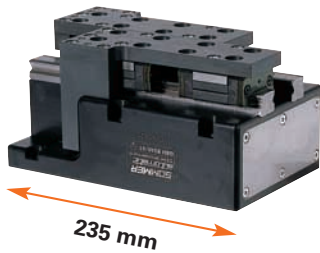
<b>Order no.:</b>	<b>GEH8240S</b>
Drive:	AC-servo motor
Stroke per jaw [mm]:	40
Max. retention force (at 100 % opening usage) [N]:	900
Retention force min. [N]:	80
Self limitation:	Rack/worm gear
Force transfer:	Rack/worm gear
Closing and opening time at max. stroke [s]:	1,5
Repeatability +/- [mm]:	0,05
Min./max. operating temperature [°C]:	5/80
Protection class:	IP 65
Weight [kg]:	4,6
<b>Power supply servo regulator:</b>	
Net input voltage:	1 x 200-240 VAC 50Hz
Continuous current:	0,9A
Surge current:	3,0A
<b>Transmission:</b>	
Load transmission input rotation:	2 revolution
Load transmission output rotation:	1 revolution
Feed constant:	2,3400 mm/ revolution

GEH8240S



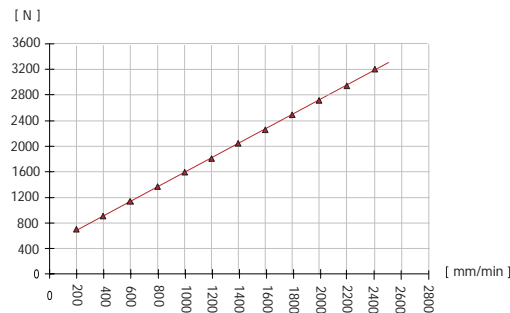
Subject to change without prior notice

# Electrical Long stroke grippers

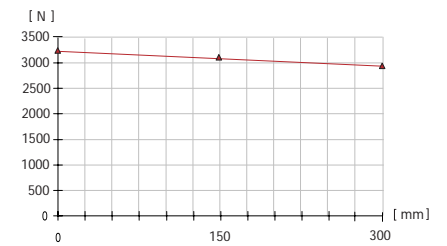


## Gripping force diagram

Gripping force against the extension speed at 100% motor efficiency

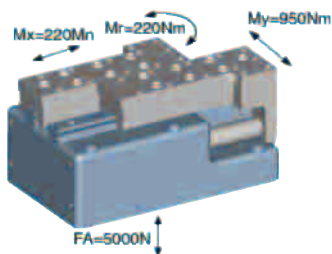


Gripping force against the jaw length.

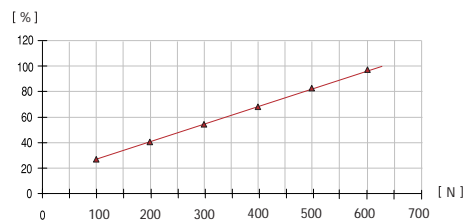


## Forces and Moments

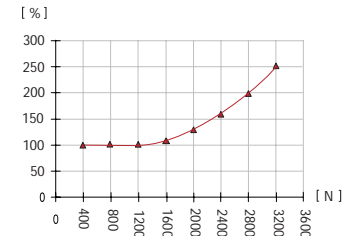
Max allowable forces and torques on jaws



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



Software CD  
Order no. CD0001

## Accessory list



Connecting cable motor-servo amplifier (10m)  
Order no. ZUBKA-10M



Connecting cable encoder-servo amplifier (10m)  
Order no. ZUBKA-10D

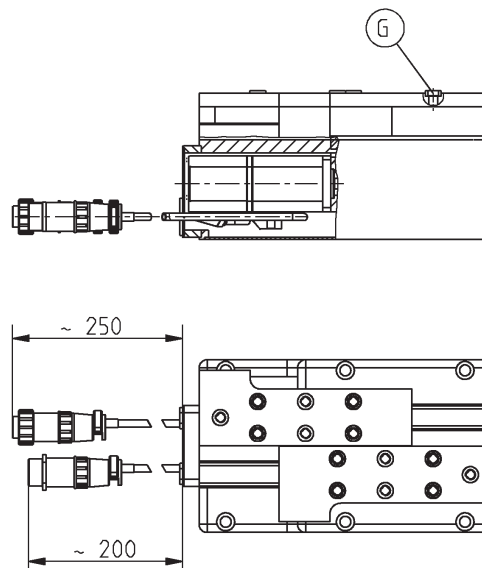


Interface cable  
PC-control unit (5m)  
Order no. ZUBKA05R



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)

## Accessories

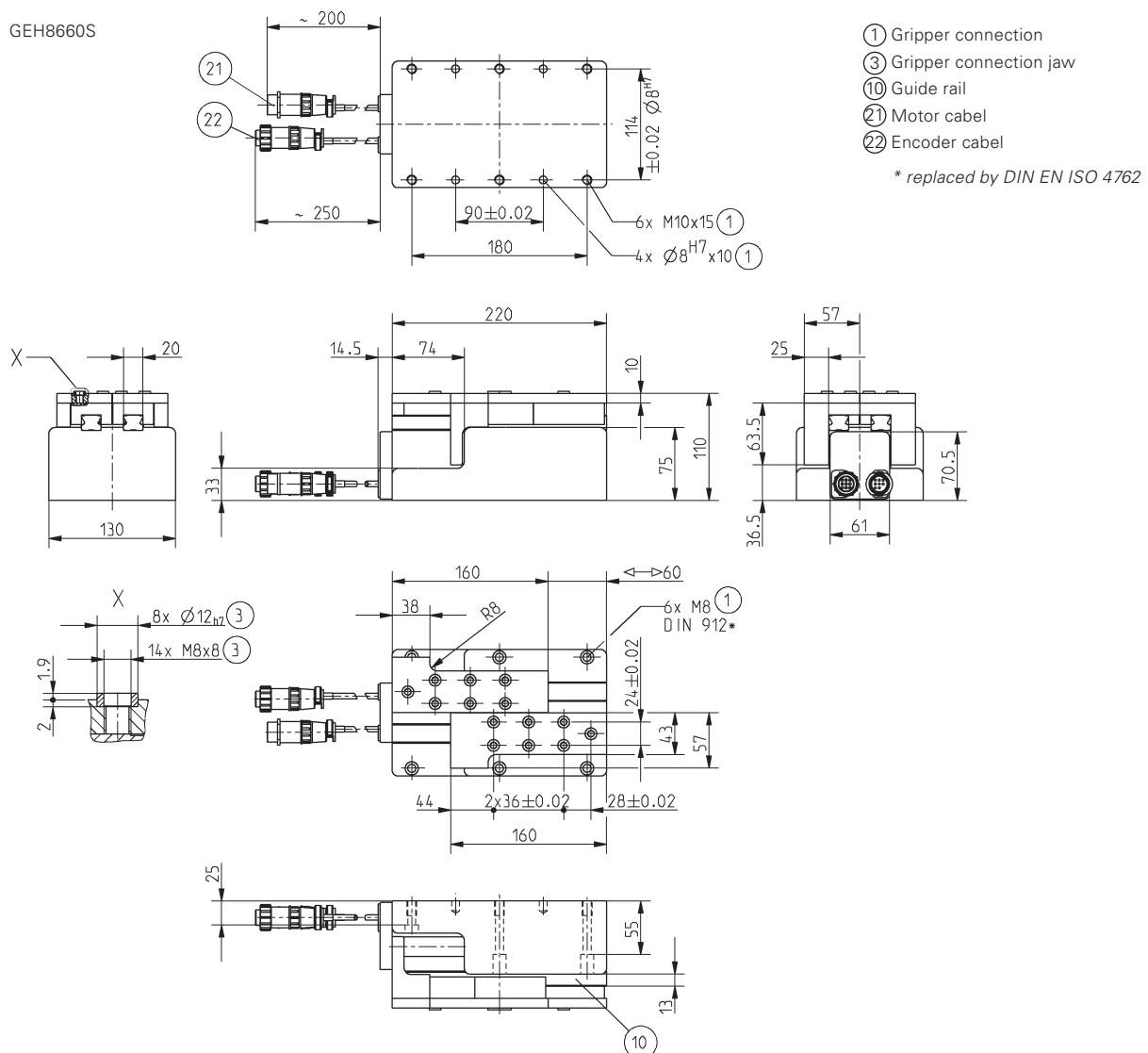


Subject to change without prior notice



<b>Order no.:</b>	<b>GEH8660S</b>
Drive:	AC-servo motor
Stroke per jaw [mm]:	60
Max. retention force [N]:	3200
Retention force min. [N]:	100
Self limitation:	Rack/worm gear
Force transfer:	Rack/worm gear
Closing and opening time at max. stroke [s]:	1,5
Repeatability +/- [mm]:	0,05
Min./max. operating temperature [°C]:	5/80
Protection class:	IP 65
Weight [kg]:	10
<b>Power supply servo regulator:</b>	
Net input voltage:	1 x 200-240 VAC 50Hz
Continuous current:	100 W / 1,1 A
Surge current:	100 W/3,0 A
<b>Transmission:</b>	
Load transmission input rotation:	375 revolution
Load transmission output rotation:	49 revolution
Feed constant:	3,1415 mm/ revolution

GEH8660S

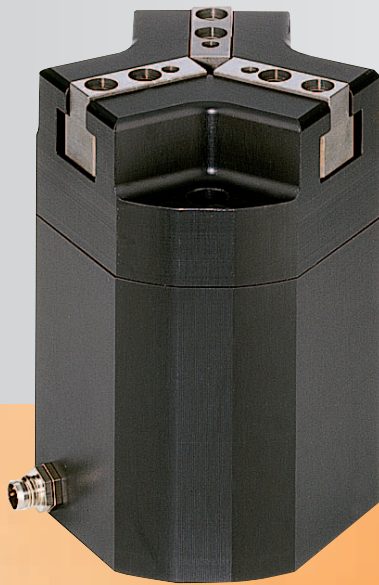


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# *Three-jaw **gripper***

*electrical*



*GED1302 up to GED1506 Series*

**SOMMER**  
*automatic*

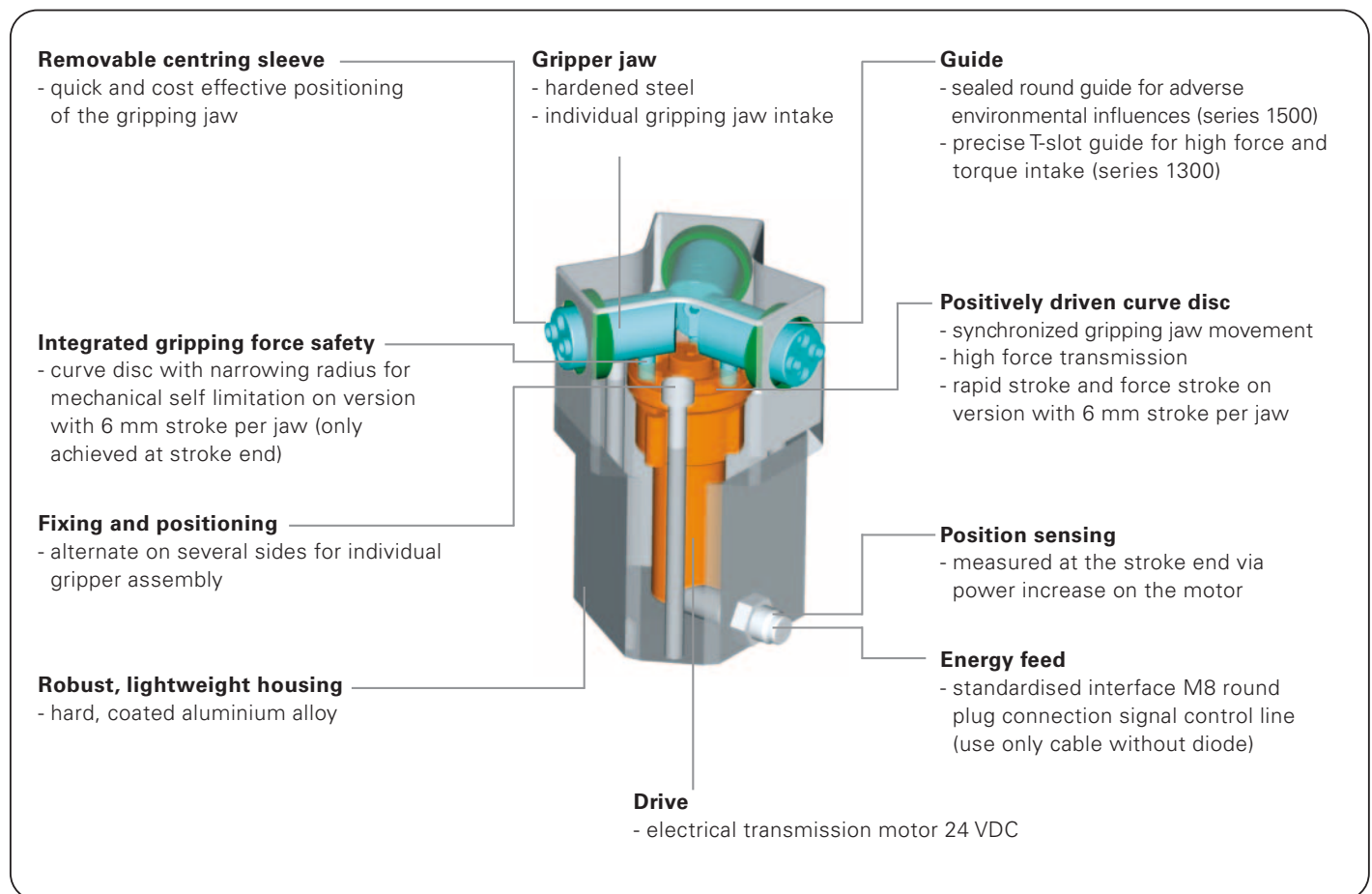


# Three-jaw *gripper* electrical

## ➤ 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

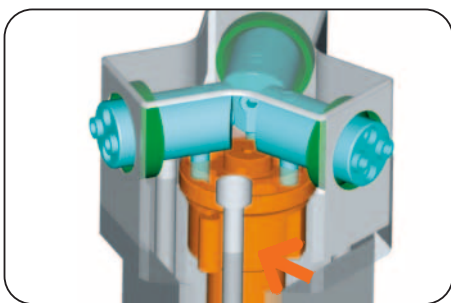
- Gripping force:** arithmetic sum of the individual forces occurring at the jaws
- Closing/opening time:** required time for the gripper jaws to cover the maximum stroke distance
- Repeatability:** at end stops after 50/100 consecutive cycles
- Gripping force safety:** the gripping force safety is guaranteed 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](http://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
- O:** 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



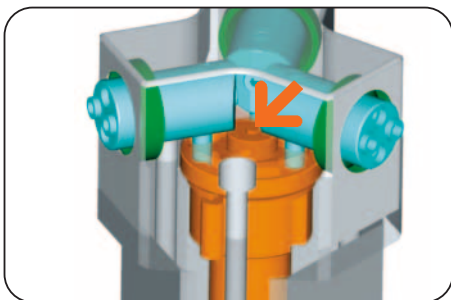
## Guide

### 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

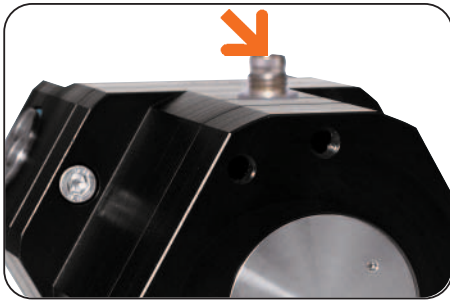
- rapid stroke and force stroke on version with 6 mm stroke per jaw
- optimum force steering of drive force in gripping force
- self-centering
- synchronisation
- high repeat accuracy



## Gripping jaw intake

### From individual gripping jaw via centering sleeve

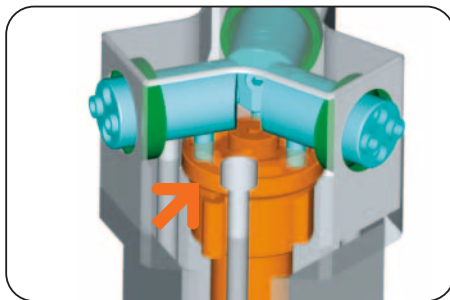
- precise positioning of individual gripping jaws
- quick, cost-effective and therefore economical jaw changing
- space-saving fixing



## Machine connection

**Energy feed, fixing and positioning possibilities on several sides**

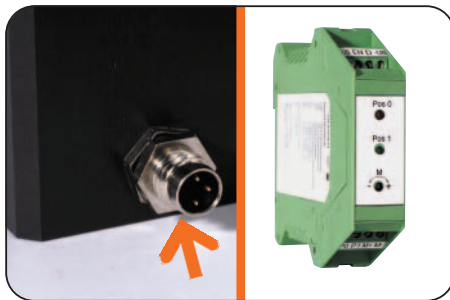
- optimum integration into the workroom through individual mounting situation
- standardised interface



## 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

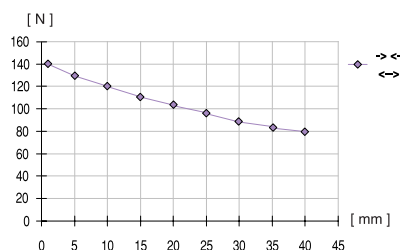
The control electronics included in the delivery contain an adjustable min. and max. value for the power. A blocking gripper drive motor at the stroke end (gripping or end position) causes a rise in power. The corresponding output signal can be used as a position sensing.

# Three-jaw **gripper** electrical



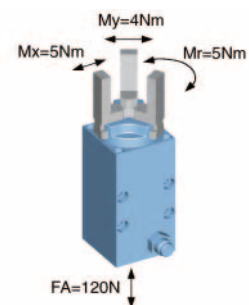
## Gripping force diagram

Gripping force against to the jaw length.



## Forces and Moments

Max allowable forces and torques on jaws.



## Included in the delivery

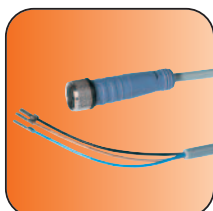


Centering sleeves  
Order no. BDST2900



Control  
Order no. ELEGR01

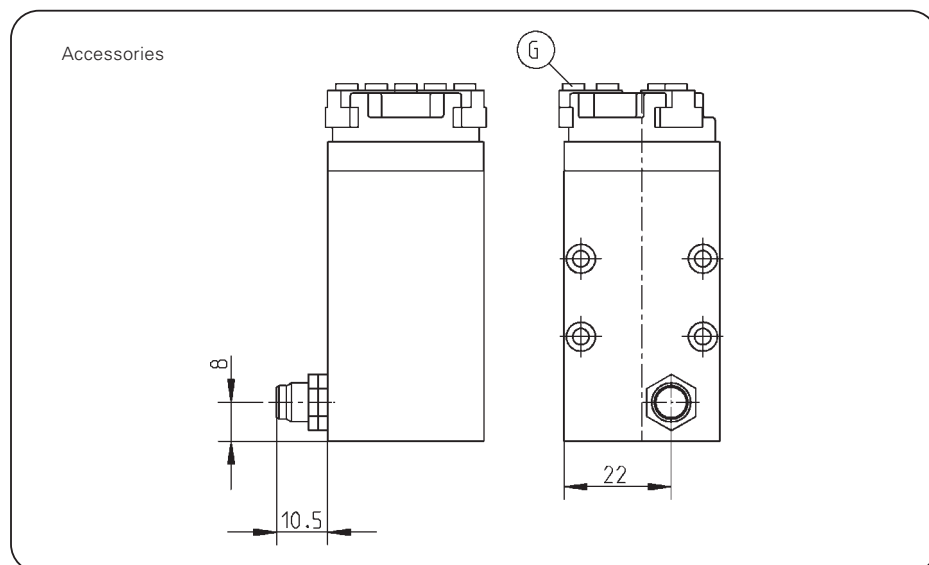
## Accessory list



Cable straight plug  
Order no. KAG500

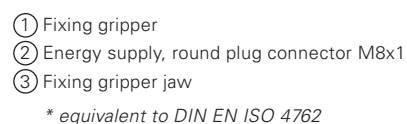


Cable angled plug  
Order no. KAW500



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\* 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



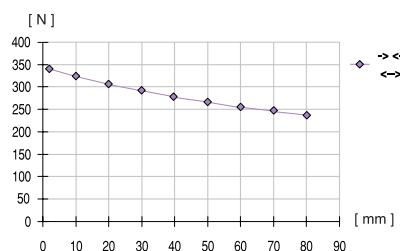
# Three-jaw **gripper** electrical



ø 85 mm

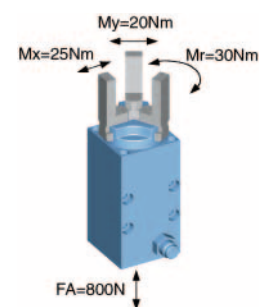
## Gripping force diagram

Gripping force against to the jaw length.



## Forces and Moments

Max allowable forces and torques on jaws.



## Included in the delivery

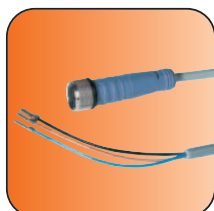


Centering sleeves  
Order no. BDST40800



Control  
Order no. ELEGR04

## Accessory list

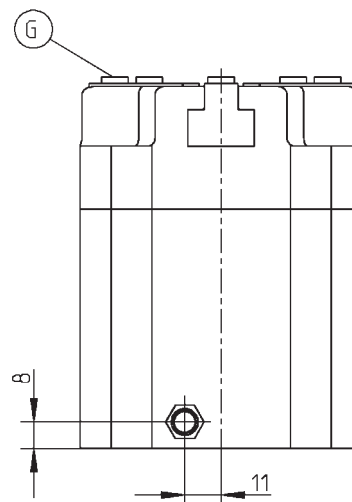
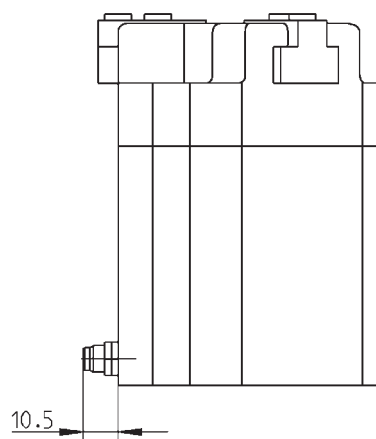


Cable straight plug  
Order no. KAG500



Cable angled plug  
Order no. KAW500

## Accessories



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Order no.:	GED1306C	GED1306O
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

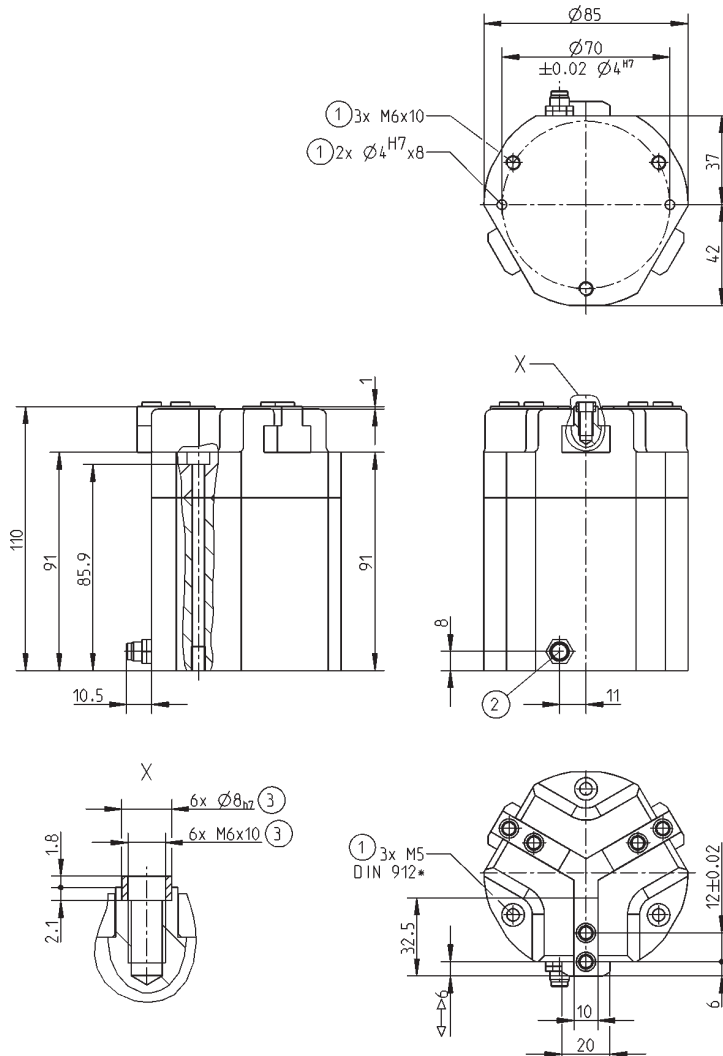
\* Value determined with friction coefficient  $\mu = 0.1$  and safety factor  $n = 2$

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

GED1306

- ① Fixing gripper
- ② Energy supply, round plug connector M8x1
- ③ Fixing gripper jaw

\* equivalent to DIN EN ISO 4762



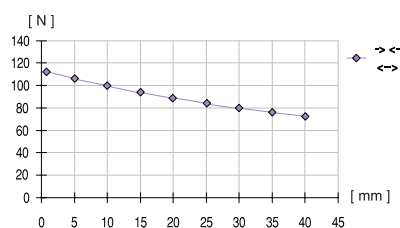
Subject to change without prior notice

# Three-jaw **gripper** electrical



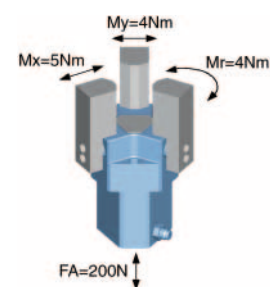
## Gripping force diagram

Gripping force against to the jaw length.

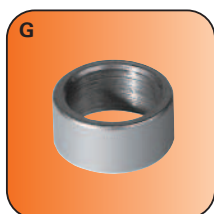


## Forces and Moments

Max allowable forces and torques on jaws.



## Included in the delivery

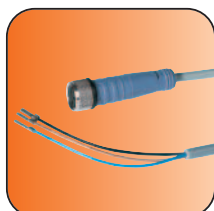


Centering sleeves  
Order no. BDST2900



Control  
Order no. ELEGR01

## Accessory list

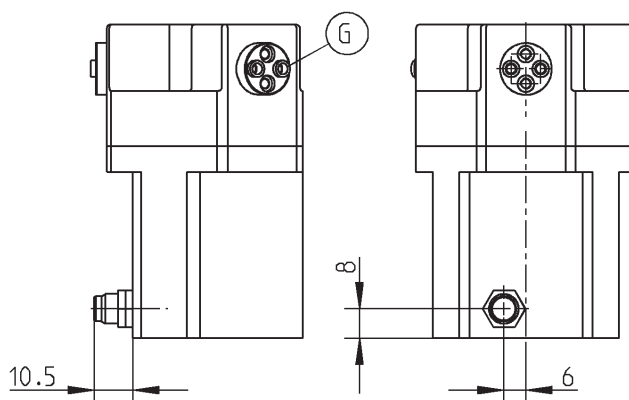


Cable straight plug  
Order no. KAG500



Cable angled plug  
Order no. KAW500

## Accessories



Subject to change without prior notice

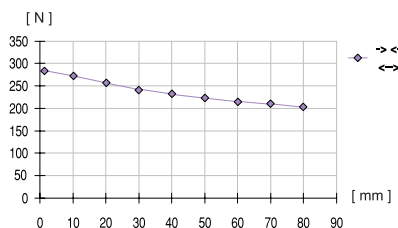


# Three-jaw **gripper** electrical



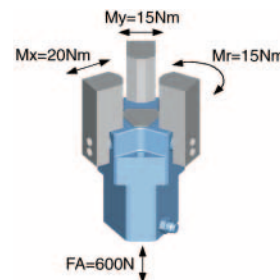
## Gripping force diagram

Gripping force against to the jaw length.



## Forces and Moments

Max allowable forces and torques on jaws.



## Included in the delivery

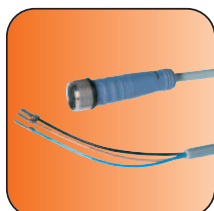


Centering sleeves  
Order no. BDST40800



Control  
Order no. ELEGR04

## Accessory list

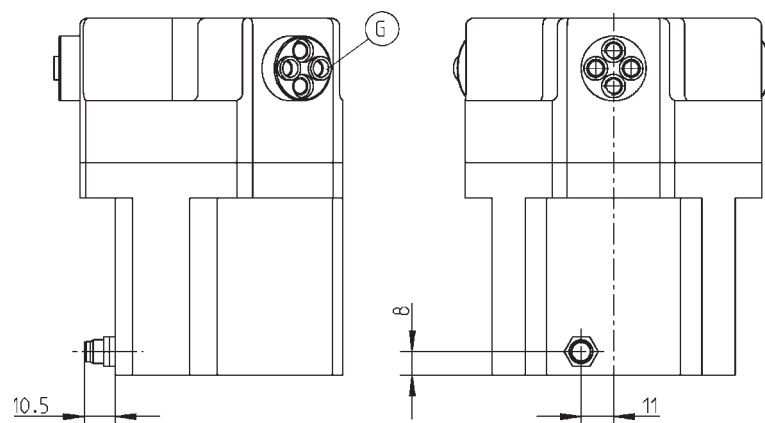


Cable straight plug  
Order no. KAG500



Cable angled plug  
Order no. KAW500

## Accessories



Subject to change without prior notice

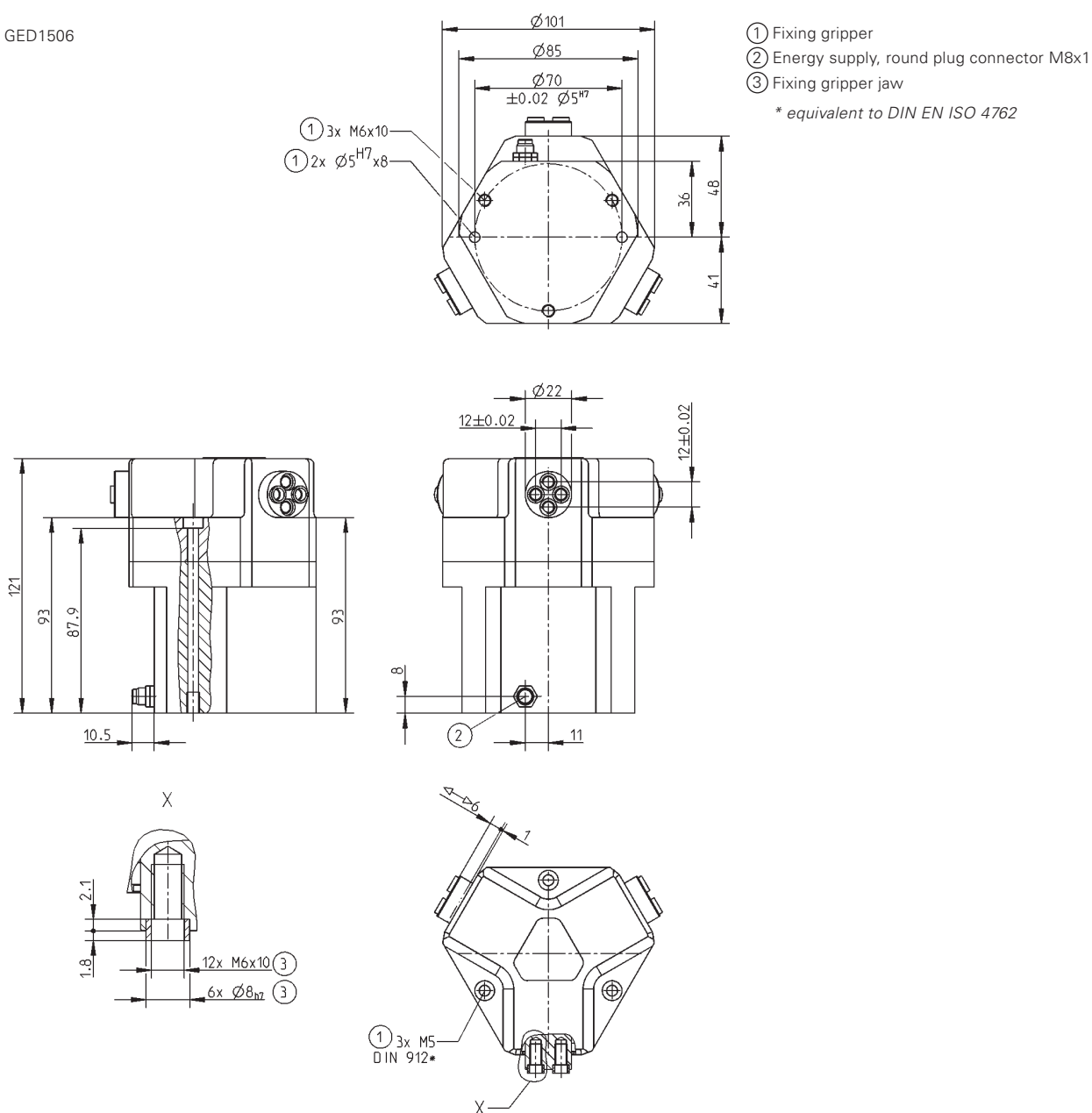


Order no.:	GED1506C	GED1506O
Stroke per jaw [mm]:	6	6
Gripping force in closing (adjustable) [N]:	290	-
Gripping force in opening (adjustable) [N]:	-	290
Recommended workpiece weight [kg]*:	1,47	1,47
Closing time/opening time [s]:	0,4	0,4
Repeatability +/- [mm]:	0,02	0,02
Voltage [V]**:	24	24
Max. current 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

GED1506



Subject to change without prior notice



➤ <b>Grippers</b> <i>pneumatic</i>	01
➤ <b>Grippers</b> <i>electrical</i>	02
➤ <b>Grippers</b> <i>hydraulic</i>	03
➤ <b>Grippers</b> <i>Special</i>	04
➤ <b>Grip &amp; Rotate Modules</b> <i>pneumatic</i>	05
➤ <b>Separators</b>	06
➤ <b>Swivel Units</b> <i>pneumatic</i>	07
➤ <b>Swivel Units</b> <i>electrical</i>	08
➤ <b>Swivel Units</b> <i>hydraulic</i>	09
➤ <b>Rotation Jaws</b> <i>pneumatic</i>	10
➤ <b>Axial Compensation Modules</b>	11
➤ <b>Tool Changers</b>	12
➤ <b>Robotics Accessories</b>	13
➤ <b>Linear Cylinders</b>	14
➤ <b>Shock Absorber</b>	15
➤ <b>Air Vane Motors</b>	16
➤ <b>Rotary Cylinders</b>	17
➤ <b>Vacuum Components</b>	18
➤ <b>Accessorios</b>	19