



Superior Clamping and Gripping



## Product Information

Universal gripper EGN

# EGN

Universal gripper

## Robust. Flexible. Strong.

### EGN universal gripper

Servo-electric 2-finger parallel gripper with high gripping force and moment loads due to the multi-tooth guidance

#### Field of application

Optimal standard solution for many areas of application; flexible use due to controllable gripping force, position, and speed

#### Advantages – Your benefits

**Drive design of servomotor** for flexible use

**With external electronics** for simple integration into existing servo-controlled concepts via Profibus-DP, or CAN bus

**Pre-positioning capability** to reduce cycle times through a short working stroke

**Robust multi-tooth guidance** for precise handling

**High maximum moments possible** suitable for using long gripper fingers

**Mounting from two sides in three screw directions** for universal and flexible gripper assembly



Sizes  
Quantity: 3



Weight  
0.84 .. 3.4 kg



Gripping force  
400 .. 1000 N



Stroke per jaw  
8 .. 16 mm

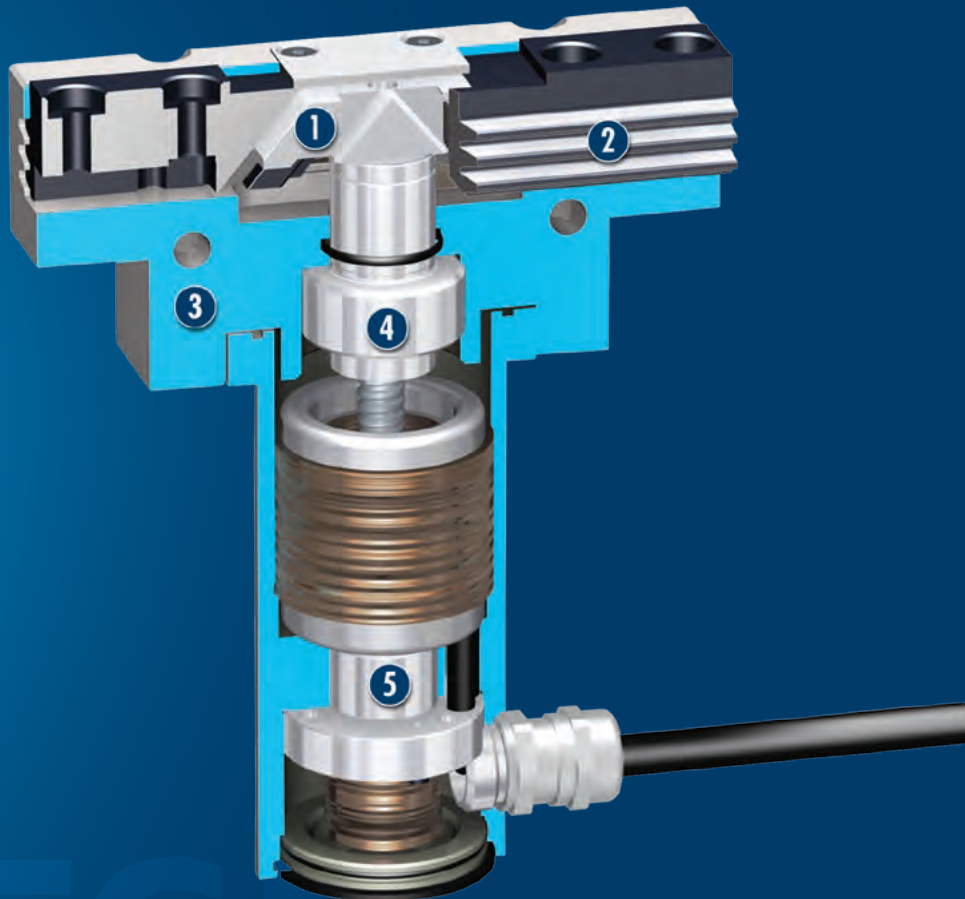


Workpiece weight  
2 .. 5 kg

## Functional description

The spindle nut which is mounted on bearings, transfers the rotary motion of the servomotor into an axial motion.

The angled active surfaces of the wedge-hook produce a synchronized, parallel jaw motion.



- ① **Wedge-hook design**  
for high force transmission and centric gripping
- ② **Multi-tooth guidance**  
precise gripping even with longer gripper fingers due to a heavy-duty base jaw with minimal play

- ③ **Housing**  
Weight-optimized due to the use of high-strength aluminum alloy
- ④ **Spindle nut**  
transforms the rotational movement into the axial movement of the wedge-hook
- ⑤ **Drive**  
DC servomotor with resolver

CAD data, operating manuals and other current product documents can be found online.

## General notes about the series

**Operating principle:** Wedge-hook kinematics

**Housing material:** Aluminum alloy, DNC coating

**Base jaw material:** Steel

**Actuation:** servo-electric, via brushless DC servomotor and spindle drive

**Warranty:** 24 months

**Scope of Delivery:** Accessory pack with centering sleeves and assembly and operating manual with declaration of incorporation. An external ECM controller is required for operation of the EGN gripper . Connection cables are also required for the EGN-S plug version . The controller and connection cable are optionally available and not included in the scope of delivery.

**Gripping force:** is the arithmetic total of the gripping force applied to each gripper jaw at distance P (see illustration).

**Finger length:** is measured from the reference surface as the distance P in direction to the main axis.

**Repeat accuracy:** is defined as the spread of the end position during 100 consecutive strokes.

**Workpiece weight:** is calculated for force-fit gripping with a coefficient of static friction of 0.1 and a safety factor of 2 against workpiece slippage at acceleration due to gravity g. For form-fit or capture gripping, there are significantly higher permissible workpiece weights.

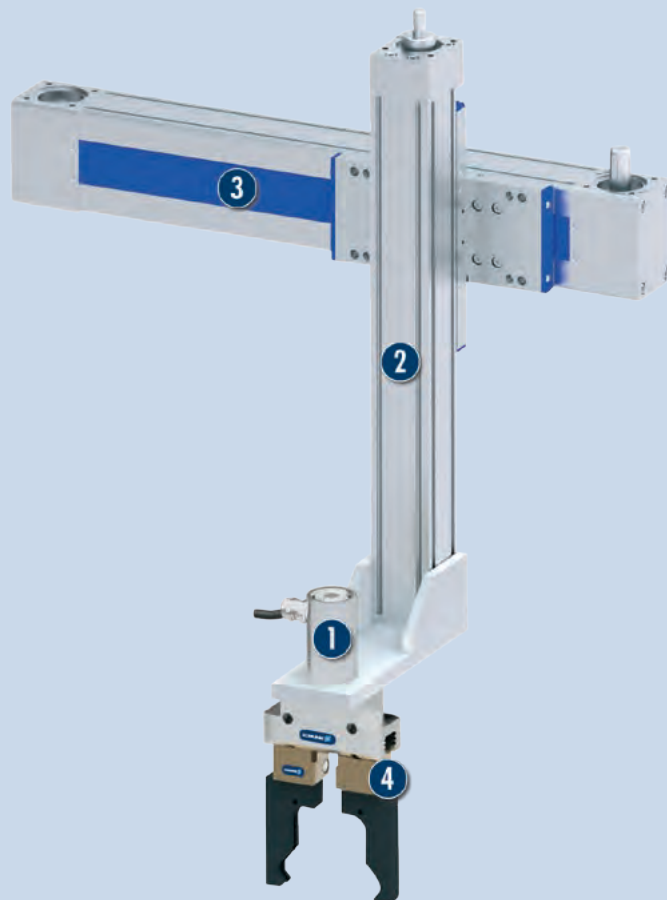
**Closing and opening times:** Minimum closing and opening times are only the movement times of the base jaws or fingers at max. speed, max. acceleration without electrical restrictions (maximum current) and observance of the maximum permissible mass per finger.

**Nominal Currents:** can be permanently actuated. With regard to all the currents which are ranging above the nominal current up to the maximum current, the notes of the individual product documentation has to be respected.

## Application example

Completely electrically actuated axis gantry for loading and unloading pallets with various greatly differing components.

- 1 EGN servo-electric 2-finger parallel gripper
- 2 Vertical axis with Beta spindle drive
- 3 Beta belt-driven axes
- 4 BSWS jaw quick-change system



## SCHUNK offers more ...

The following components make the product EGN even more productive – the suitable addition for the highest functionality, flexibility, reliability, and controlled production.



Controller



Jaw quick-change system



Force-measuring jaws



Finger blanks



Protection cover

① Additional information regarding the products can be found on the following product pages or at [www.schunk.com](http://www.schunk.com). Please contact us for further information: SCHUNK technical hotline +49-7133-103-2696

## Options and special information

**Control via external ECM controller:** The electrical control of the gripper takes place via the separately available ECM controller. Connection of the controller to the higher level servo controlled concept can take place via Profibus or CAN bus. Both communication interfaces ensure simple integration into the higher level control system and enable the design of industrial bus topologies.

**Plug version EGN-S:** Plug version EGN-S is available for the ECM controller in addition to the standard variant with 5 m attached connection cable. The gripper has a 30 cm cable and stepped Y-plug in this version. Drag-chain-compatible or robot-compatible power and sensor cables have to be ordered separately.

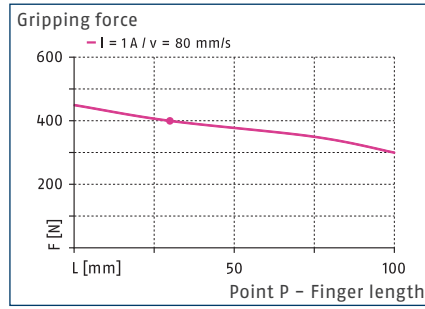
**Dust-tight version SD:** absolutely dust-tight, increased degree of protection against the penetration of materials.

# EGN 80

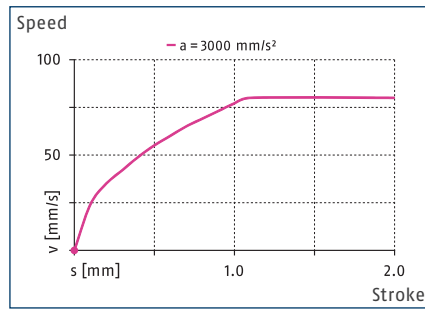
Universal gripper



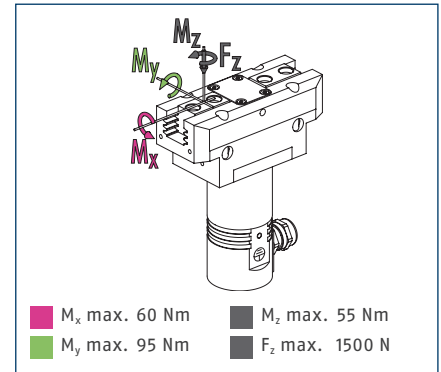
## Gripping force



## Speed



## Finger load



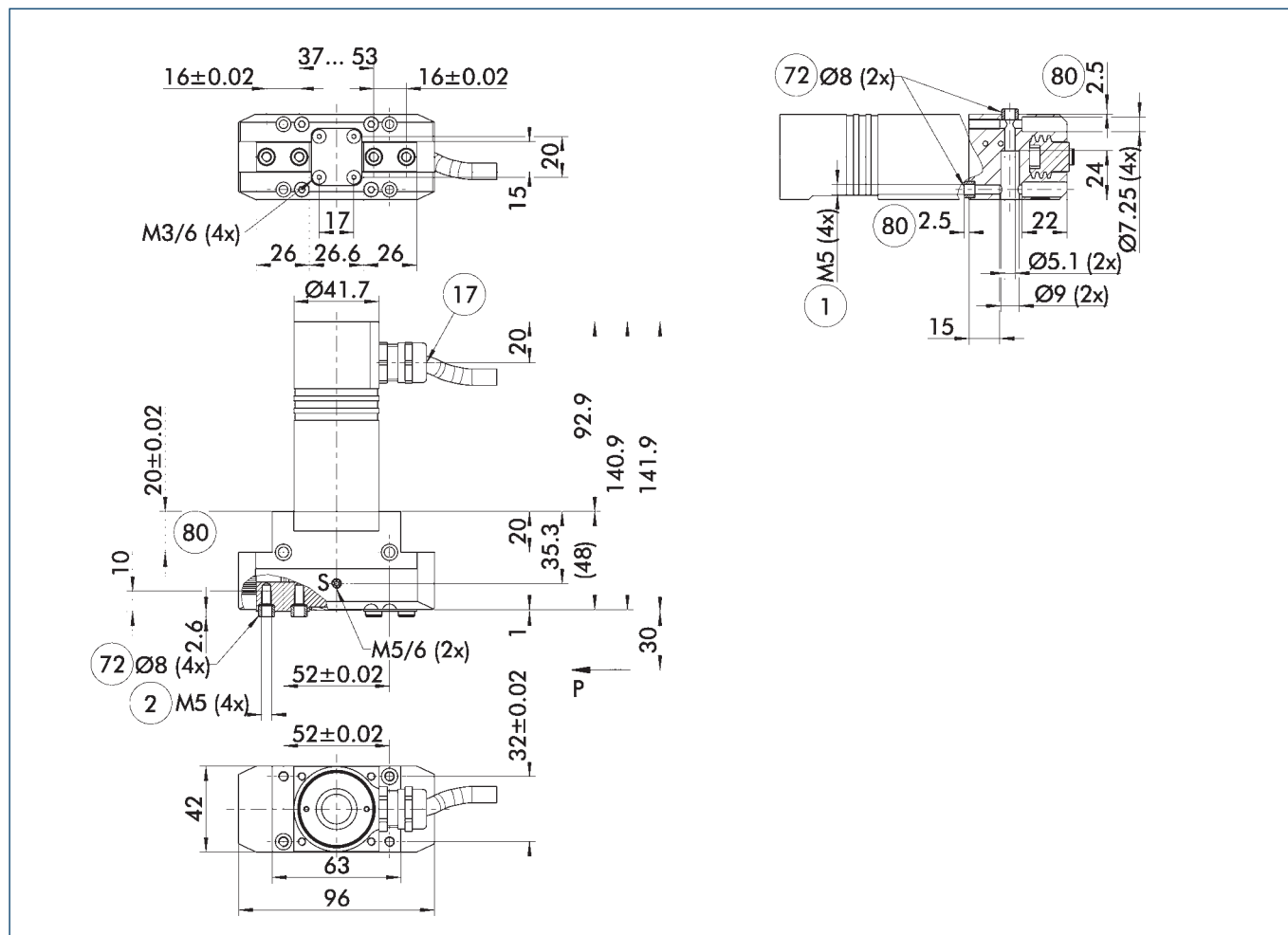
① The specified torques and forces are static values, apply for each base jaw, and may occur simultaneously.  $M_y$  may arise in addition to the moment generated by the gripping force itself.

## Technical data

Description	EGN 80	EGN 80-S
ID	0306100	0306104
<b>General operating data</b>		
Stroke per jaw	[mm] 8	8
min. / max. gripping force	[N] 170/400	170/400
recommended workpiece weight	[kg] 2	2
max. admissible finger length	[mm] 100	100
max. admissible weight per finger	[kg] 0.6	0.6
Repeat accuracy	[mm] $\pm 0.01$	$\pm 0.01$
closing/opening time	[s] 0.35/0.35	0.35/0.35
max. speed	[mm/s] 80	80
max. acceleration	[mm/s <sup>2</sup> ] 3000	3000
Weight	[kg] 0.84	0.84
min./max. ambient temperature	[°C] 5/55	5/55
Protection class IP	41	41
<b>Electrical operating data</b>		
Nominal voltage	[V DC] 24	24
Nominal current	[A] 1	1
max. current	[A] 4	4
Controller electronics	external	external
Controller type	ECM-EGN080	ECM-EGN080
Communication interface	see ECM controller	see ECM controller

① Plug version EGN-S is available for the ECM controller in addition to the standard variant with 5 m attached connection cable. The gripper has a 30 cm cable and stepped Y-plug in this version. Drag-chain-compatible or robot-compatible power and sensor cables have to be ordered separately.

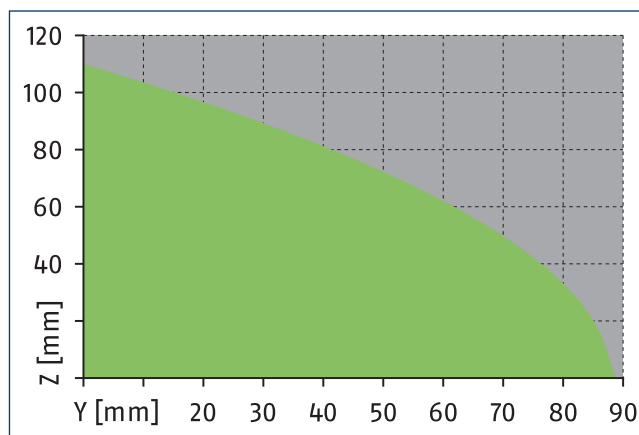
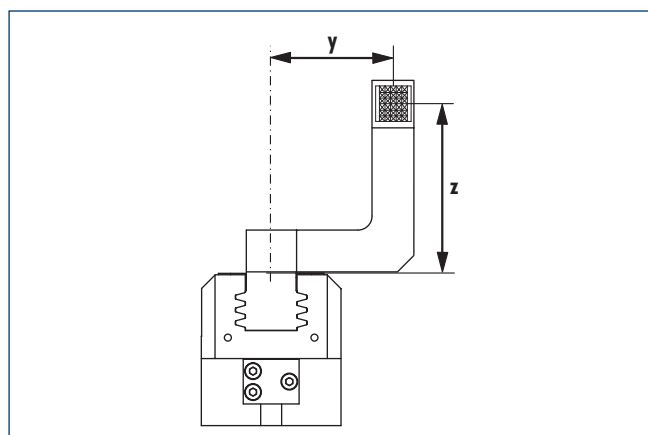
## Main view



The drawing shows the gripper in the basic version with closed jaws, without dimensional consideration of the options described below.

- ① Gripper connection
- ② Finger connection
- ⑰ Cable outlet
- ⑺ Fit for centering sleeves
- ⑻ Depth of the centering sleeve hole in the counter part
- S Air purge connection (0.5 ... 1 bar)

## Maximum permitted finger projection



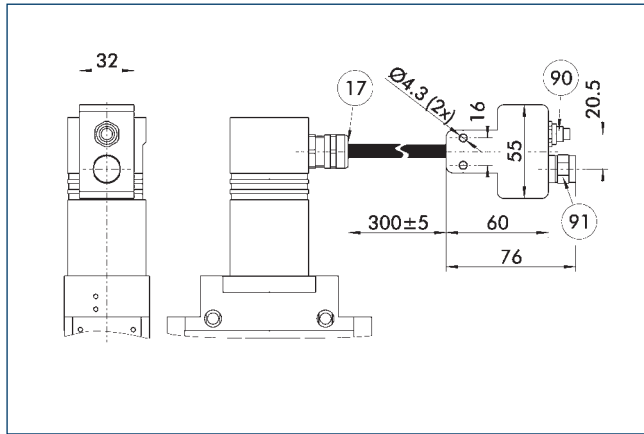
■ Permitted range      ■ Inadmissible range

The curve applies to the basic version (stroke -1). For other versions, the curve will be parallel but offset in line with the max. permitted finger length.

# EGN 80

Universal gripper

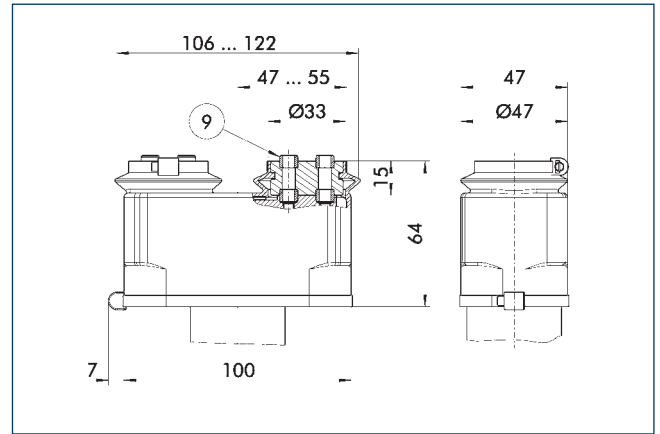
## Plug version



- ① Cable outlet
- ② Sensor plug (M12) for sensor cable
- ③ Motor plug (M17) for power cable

The drawing shows the plug version. It comprises a Y-plug and approximately 30 cm of cable between the module and plug.

## Protective cover HUE EGN 80

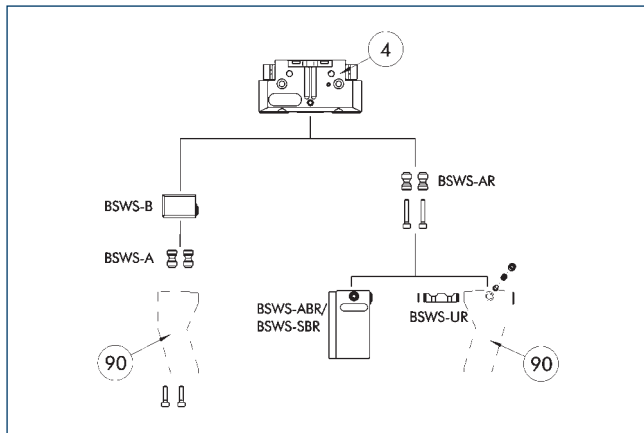


- ④ For mounting screw connection diagram, see basic version

The HUE protective cover completely protects the gripper against external influences up to IP65 if an additional sealing of the cover bottom is provided as part of the application. The mounting diagram shifts by the height of the intermediate jaw.

Description	ID	Protection class IP
Protection cover		
HUE EGN 80	0307040	65

## BSWS jaw quick-change jaw systems



- ④ Grippers
- ⑤ Customized gripper fingers

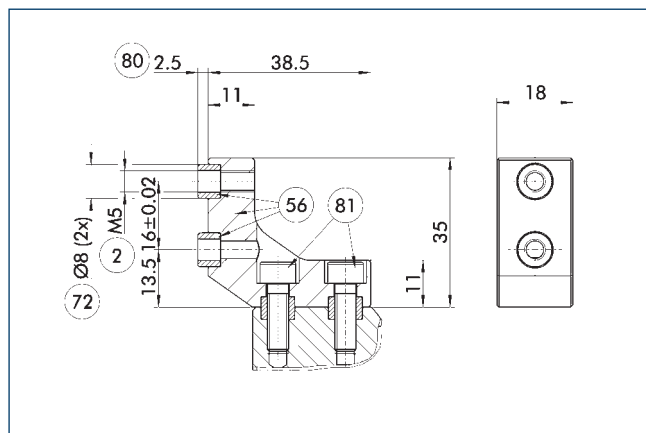
There are various jaw quick-change systems available for the gripper. For detailed information, please refer to the corresponding product.

Description	ID	
<b>Quick-change jaw system adapter</b>		
BSWS-A 80	0303024	
BSWS-AR 80	0300093	
<b>Quick-change jaw system base</b>		
BSWS-B 80	0303025	
<b>Finger blanks with quick-change jaw system</b>		
BSWS-ABR-PGZN-plus 80	0300073	
BSWS-SBR-PGZN-plus 80	0300083	
<b>Quick-change Jaw System reversed</b>		
BSWS-UR 80	0302992	

⑥ Only systems that are listed in the table, can be used.



**ZBA L-plus 80 intermediate jaw**

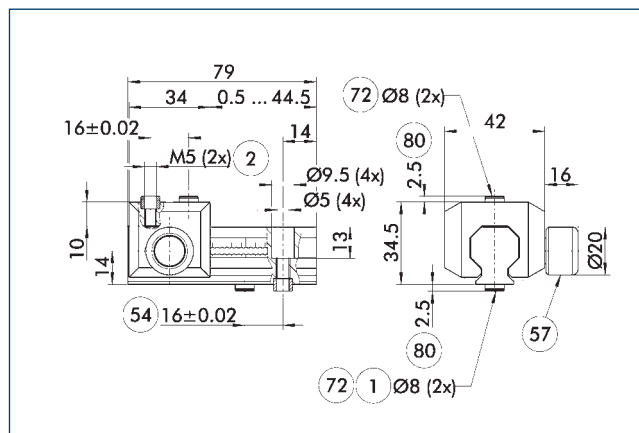


- ② Finger connection
- ⑤⑥ Included in the scope of delivery
- ⑦② Fit for centering sleeves
- ⑧⑩ Depth of the centering sleeve hole in the counter part
- ⑧① Not included in the scope of delivery

Optionally intermediate jaws can be used, enabling direct connection and alignment of top jaws and various standard accessories in Z-direction.

Description	ID	Material	Scope of Delivery
Intermediate jaws			
ZBA-L-plus 80	0311732	Aluminum	1

**UZZ 80 universal intermediate jaw**

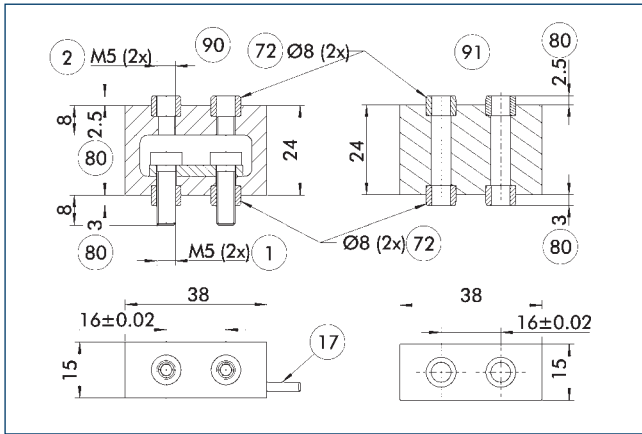


- ① Gripper connection
- ② Finger connection
- ⑤④ Optional right or left connection
- ⑤⑦ Locking
- ⑦② Fit for centering sleeves
- ⑧⑩ Depth of the centering sleeve hole in the counter part

The universal intermediate jaw allows fast tool-free and reliable plugging and shifting of top jaws at the gripper.

Description	ID	Grid dimension
Universal intermediate jaw		
UZZ 80	0300043	2
UZZ-S 80	5518271	2
Finger blanks		
ABR-PGZN-plus 80	0300011	
SBR-PGZN-plus 80	0300021	

### Force-measuring jaws FMS-ZBA/ ZBP 80



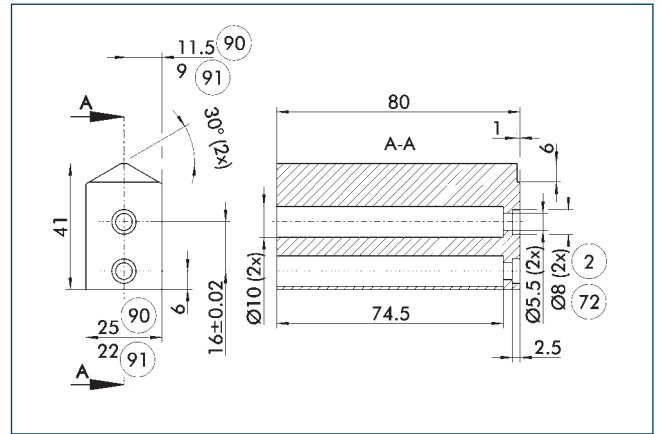
- ① Gripper connection
- ② Finger connection
- ⑦ Cable outlet
- ⑦ Fit for centering sleeves
- ⑧ Depth of the centering sleeve hole in the counter part
- ⑨ Active intermediate jaws
- ⑩ Passive intermediate jaws

Force-measuring jaws measure gripping forces, but can also determine workpiece weights or dimensional deviations. There are active and passive intermediate jaws (FMS-ZBA or FMS-ZBP). At least one active force-measuring jaw is required per gripper, the rest can be passive. For each active jaw, a FMS-A1 evaluation unit and a FMS-A connection cable are required.

Description	ID	Often combined
<b>Active intermediate jaws</b>		
FMS-ZBA 80	0301834	
<b>Passive intermediate jaws</b>		
FMS-ZBP 80	0301835	
<b>Connection cables</b>		
FMS-AK0200	0301820	●
FMS-AK0500	0301821	
FMS-AK1000	0301822	
FMS-AK2000	0301823	
<b>Evaluation electronics</b>		
FMS-A1	0301810	

- ① Due to the screw length, the FMS system can not be used in combination with the option dust-proof (SD) of the gripper. Please note that the admissible force range of the force measuring jaw (see catalog chapter FMS) should not be exceeded for the chosen gripper version.

### Finger blanks ABR- / SBR-PGZN-plus 80

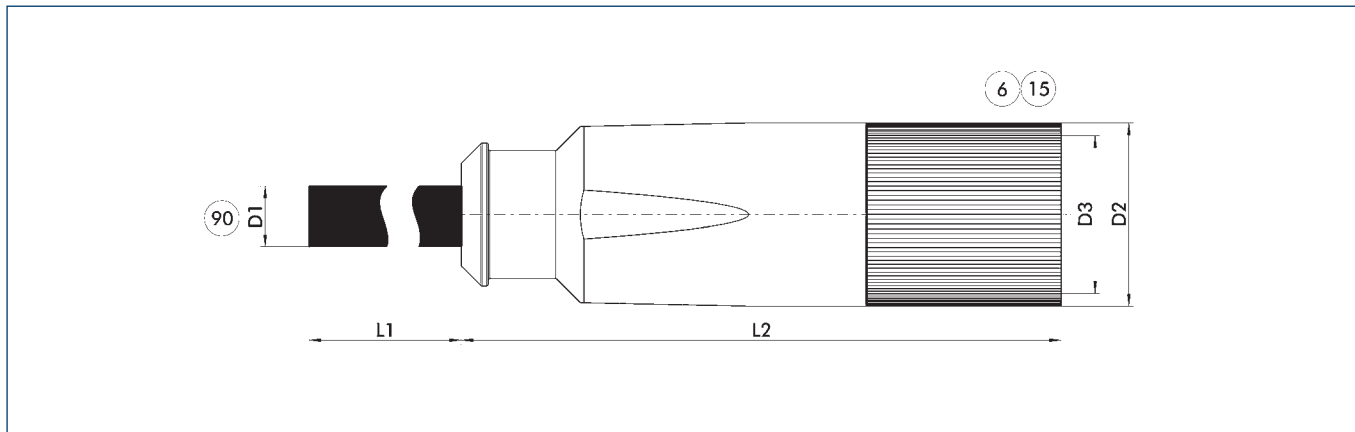


- ② Finger connection
- ⑦ Fit for centering sleeves
- ⑨ ABR-PGZN-plus
- ⑩ SBR-PGZN-plus

Finger blanks for customized remachining.

Description	ID	Material	Scope of Delivery
<b>Finger blanks</b>			
ABR-PGZN-plus 80	0300011	Aluminum	1
SBR-PGZN-plus 80	0300021	16MnCr5	1

Power supply cable



Connection cables such as power cables and sensor cables are specifically designed for connecting SCHUNK products with drive control units. We will gladly help you to select the right connection cables.

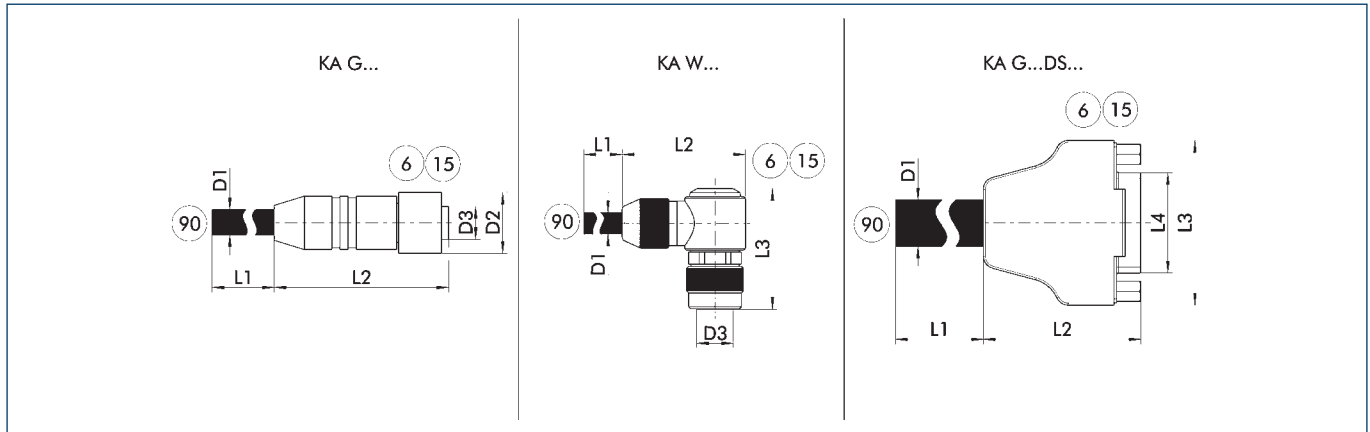
- ⑥ Connection module side
- ⑮ Socket

- ⑨⑩ Prefabricated to connect to the higher-level components

Description	ID	L1	D1	L2	D2	D3
		[m]	[mm]	[mm]	[mm]	
Kein Werte für Produktgruppe						
KA GLN1707-LK-00500-7	0306480	5	8.4	54	21	M17
KA GLN1707-LK-01000-7	0306481	10	8.4	54	21	M17
KA GLN1707-LK-01500-7	0306482	15	8.4	54	21	M17
KA GLN1707-LK-02000-7	0306483	20	8.4	54	21	M17
KAR GLN1707-LK-00500-7	0306485	5	8.2	54	21	M17
KAR GLN1707-LK-01000-7	0306486	10	8.2	54	21	M17
KAR GLN1707-LK-01500-7	0306487	15	8.2	54	21	M17
KAR GLN1707-LK-02000-7	0306488	20	8.2	54	21	M17

① Please observe the min. bending radius for cable track-compatible cables or the max. torsion angle for torsion-compatible cables. These are generally 10 times the cable diameter or +/- 180°/m.

### Encoder cable



KA G... encoder cable with straight plug  
 KA W... encoder cable with angled plug  
 KA G...DS... Sub D encoder cable

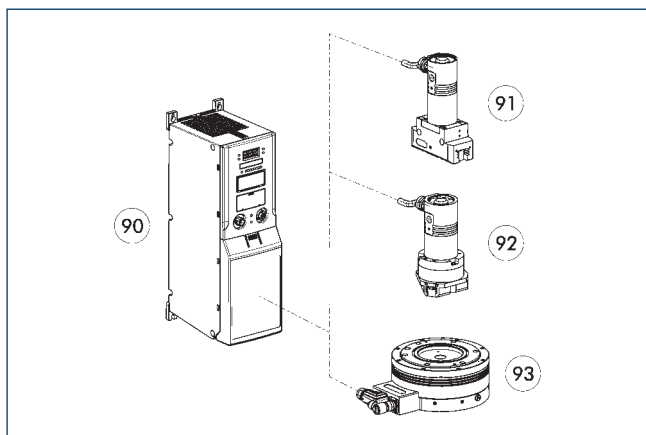
⑥ Connection module side  
 ⑩ Socket  
 ⑨⑩ Prefabricated for connection to the drive controller

Connection cables such as power cables and sensor cables are specifically designed for connecting SCHUNK products with drive control units. We will gladly help you to select the right connection cables.

Description	ID	L1	D1	L2	D2	D3
		[m]	[mm]	[mm]	[mm]	
Kein Werte für Produktgruppe						
KA GLN0908-GK-01500-7	0306472	15	9.7	57	20	M12
KA GLN1208-GK-00500-7	0306470	5	9.7	57	20	M12
KA GLN1208-GK-01000-7	0306471	10	9.7	57	20	M12
KA GLN1208-GK-02000-7	0306473	20	9.7	57	20	M12
KAR GLN1208-GK-00500-7	0306475	5	8.6	57	20	M12
KAR GLN1208-GK-01000-7	0306476	10	8.6	57	20	M12
KAR GLN1208-GK-01500-7	0306477	15	8.6	57	20	M12
KAR GLN1208-GK-02000-7	0306478	20	8.6	57	20	M12

ⓘ Please observe the min. bending radius for cable track-compatible cables or the max. torsion angle for torsion-compatible cables. These are generally 10 times the cable diameter or +/- 180°/m.

## ECM motor controller



- 90 Controller
- 91 EGN 2-finger parallel gripper
- 92 EZN 3-finger centric gripper
- 93 ERS universal rotary module

The ECM is required for operating the ERS rotary module (48 V) and the EGN, EZN and EVG electric grippers.

Description	Power supply (logic) [V]	Power supply (load) [V]
<b>Controller</b>		
ECM – EGN 80	24	24

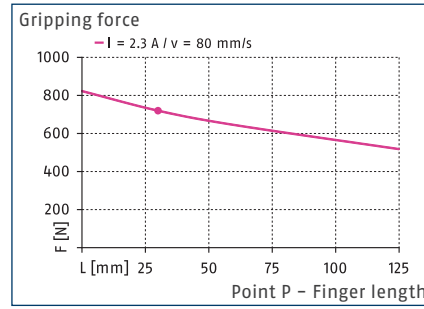
- ① We will be happy to help you select the right controller. Please contact us for assistance.

# EGN 100

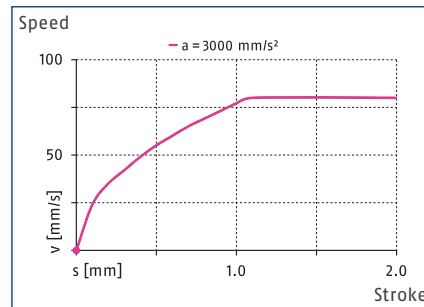
Universal gripper



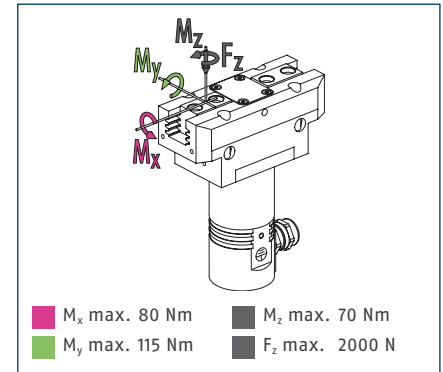
## Gripping force



## Speed



## Finger load



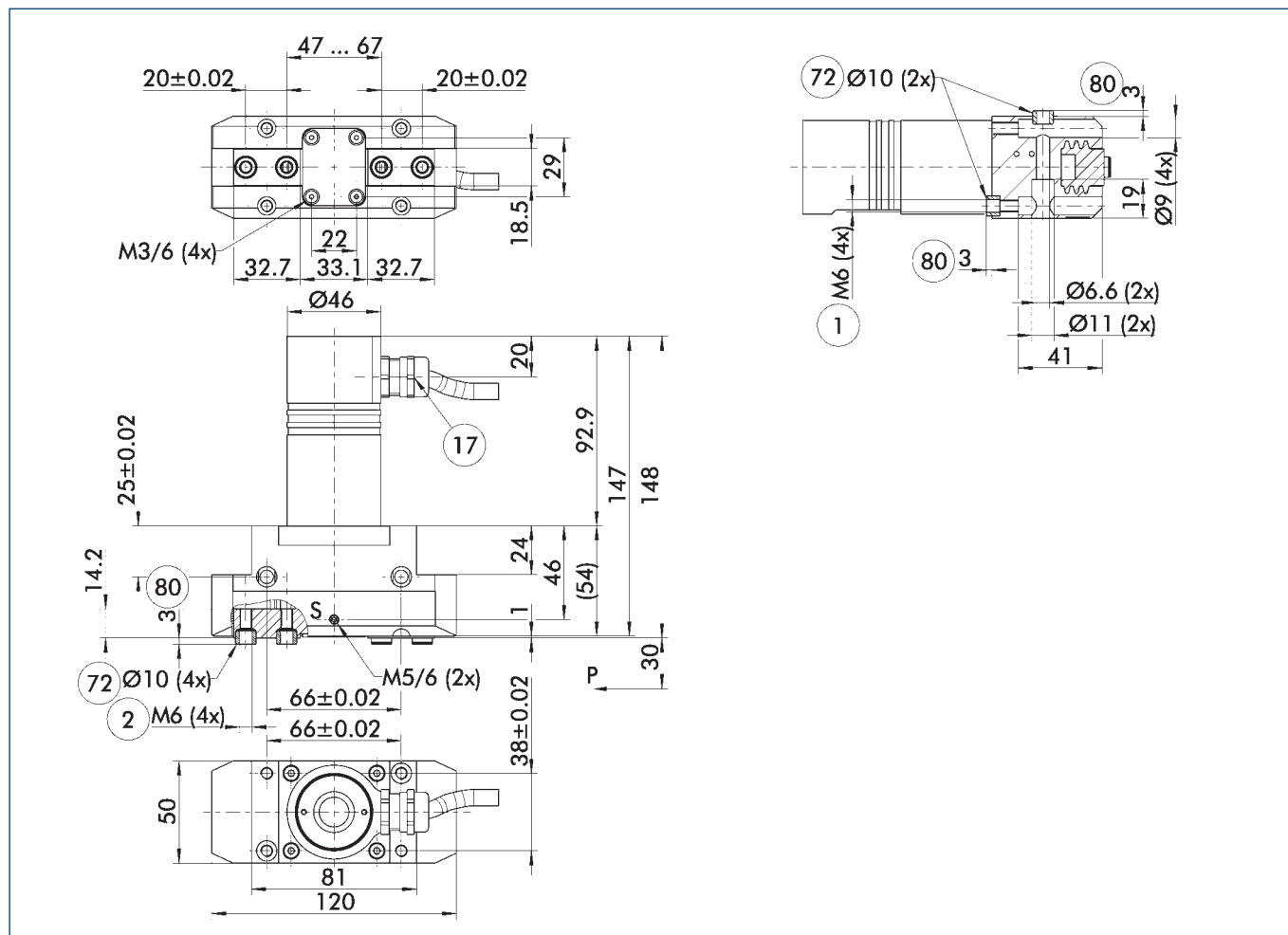
① The specified torques and forces are static values, apply for each base jaw, and may occur simultaneously.  $M_y$  may arise in addition to the moment generated by the gripping force itself.

## Technical data

Description		EGN 100	EGN 100-S
ID		0306101	0306105
<b>General operating data</b>			
Stroke per jaw	[mm]	10	10
min. / max. gripping force	[N]	170/720	170/720
recommended workpiece weight	[kg]	3.6	3.6
max. admissible finger length	[mm]	125	125
max. admissible weight per finger	[kg]	1.1	1.1
Repeat accuracy	[mm]	± 0.01	± 0.01
closing/opening time	[s]	0.35/0.35	0.35/0.35
max. speed	[mm/s]	80	80
max. acceleration	[mm/s <sup>2</sup> ]	3000	3000
Weight	[kg]	1.35	1.35
min./max. ambient temperature	[°C]	5/55	5/55
Protection class IP		41	41
<b>Electrical operating data</b>			
Nominal voltage	[V DC]	24	24
Nominal current	[A]	1.8	1.8
max. current	[A]	4	4
Controller electronics		external	external
Controller type		ECM-EGN100	ECM-EGN100
Communication interface		see ECM controller	see ECM controller
<b>Options and their characteristics</b>			
Dust-tight version		37306101	37306105
Protection class IP		64	64
Weight	[kg]	1.53	1.53

① Plug version EGN-S is available for the ECM controller in addition to the standard variant with 5 m attached connection cable. The gripper has a 30 cm cable and stepped Y-plug in this version. Drag-chain-compatible or robot-compatible power and sensor cables have to be ordered separately.

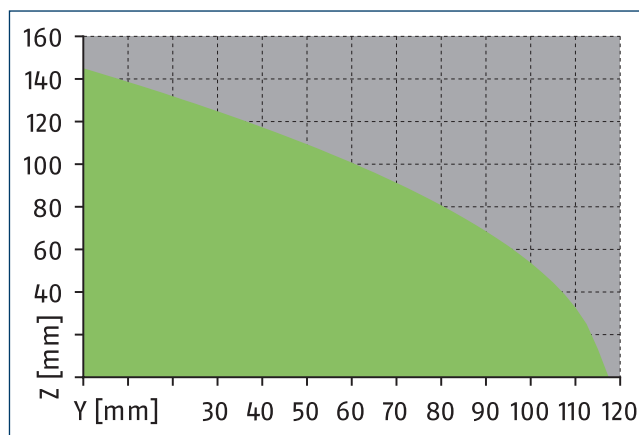
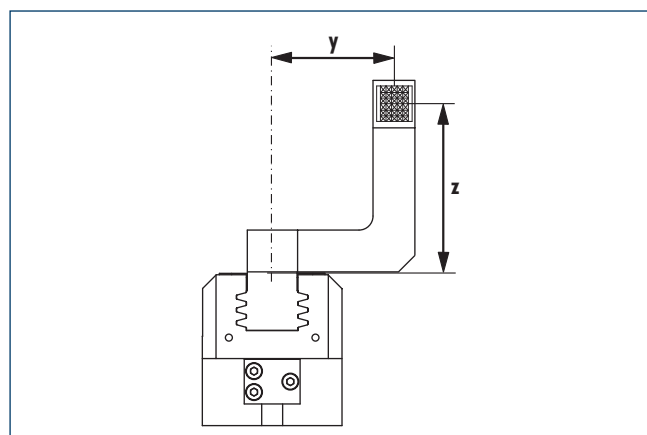
Main view



The drawing shows the gripper in the basic version with closed jaws, without dimensional consideration of the options described below.

- ① Gripper connection
- ② Finger connection
- ⑰ Cable outlet
- ⑺ Fit for centering sleeves
- ⑧ Depth of the centering sleeve hole in the counter part
- S Air purge connection (0.5 ... 1 bar)

Maximum permitted finger projection



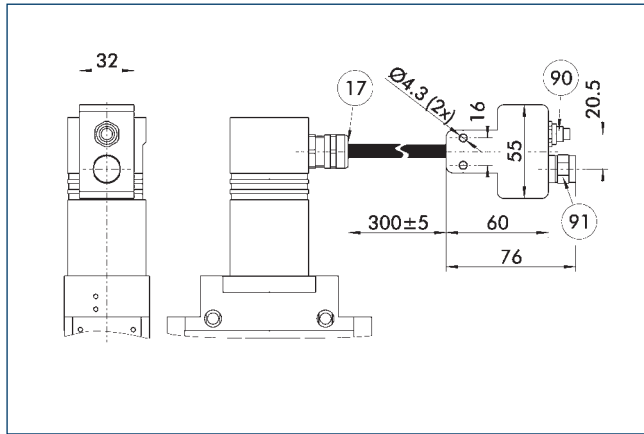
■ Permitted range      ■ Inadmissible range

The curve applies to the basic version (stroke -1). For other versions, the curve will be parallel but offset in line with the max. permitted finger length.

# EGN 100

Universal gripper

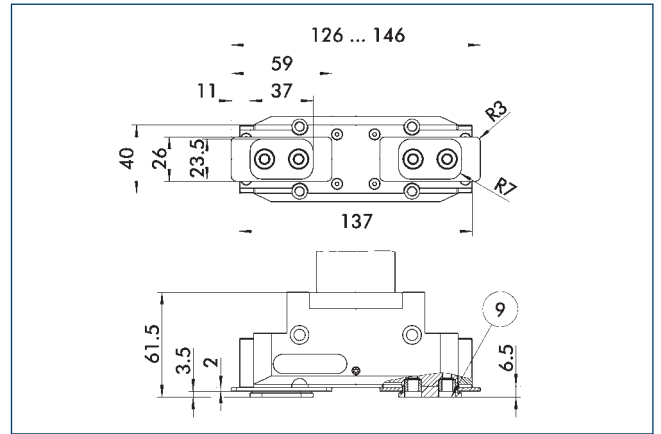
## Plug version



- ①7 Cable outlet
- ①9 Motor plug (M17) for power cable
- ①0 Sensor plug (M12) for sensor cable

The drawing shows the plug version. It comprises a Y-plug and approximately 30 cm of cable between the module and plug.

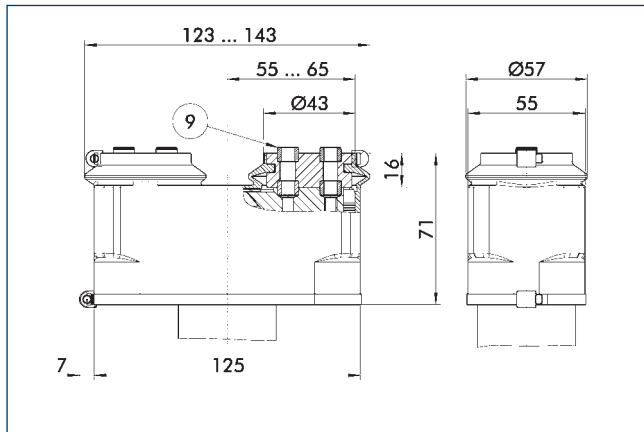
## Dust-tight version



- ①9 For mounting screw connection diagram, see basic version

The dust cover option increases the protection against external particles. The assembly diagram shifts by the height of the intermediate jaw. The finger length is still measured from the upper edge of the gripper housing.

## Protective cover HUE EGN 100

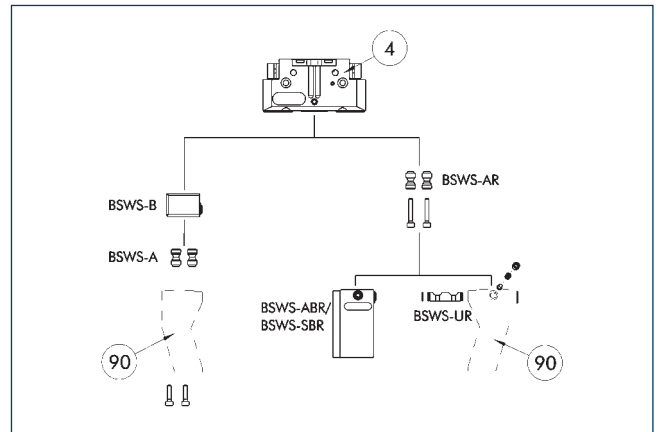


- ①9 For mounting screw connection diagram, see basic version

The HUE protective cover completely protects the gripper against external influences up to IP65 if an additional sealing of the cover bottom is provided as part of the application. The mounting diagram shifts by the height of the intermediate jaw.

Description	ID	Protection class IP
Protection cover		
HUE EGN 100	0307041	65

## BSWS jaw quick-change jaw systems



- ①4 Grippers
- ①0 Customized gripper fingers

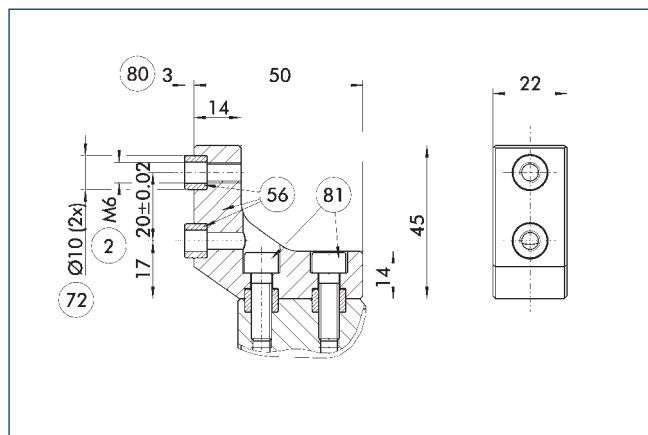
There are various jaw quick-change systems available for the gripper. For detailed information, please refer to the corresponding product.

Description	ID	
<b>Quick-change jaw system adapter</b>		
BSWS-A 100	0303026	
BSWS-AR 100	0300094	
<b>Quick-change jaw system base</b>		
BSWS-B 100	0303027	
<b>Finger blanks with quick-change jaw system</b>		
BSWS-ABR-PGZN-plus 100	0300074	
BSWS-SBR-PGZN-plus 100	0300084	
<b>Quick-change Jaw System reversed</b>		
BSWS-UR 100	0302993	

- ① Only systems that are listed in the table, can be used.



ZBA L-plus 100 intermediate jaw

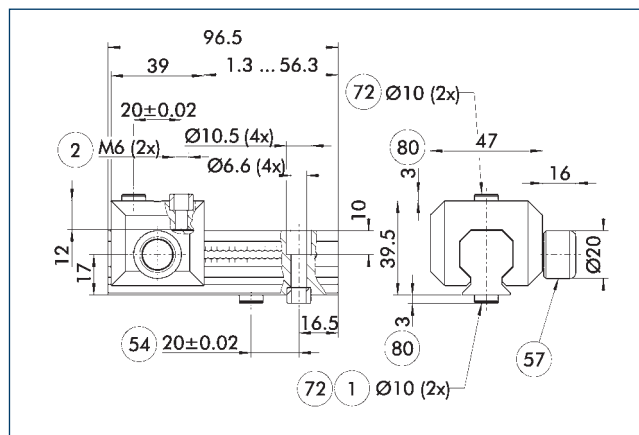


- ② Finger connection
- ⑤⑥ Included in the scope of delivery
- ⑦② Fit for centering sleeves
- ⑧① Depth of the centering sleeve hole in the counter part
- ⑧① Not included in the scope of delivery

Optionally intermediate jaws can be used, enabling direct connection and alignment of top jaws and various standard accessories in Z-direction.

Description	ID	Material	Scope of Delivery
Intermediate jaws			
ZBA-L-plus 100	0311742	Aluminum	1

UZB 100 universal intermediate jaw

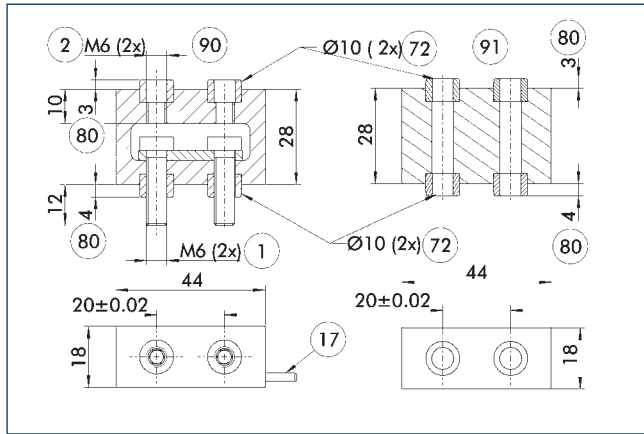


- ① Gripper connection
- ② Finger connection
- ⑤④ Optional right or left connection
- ⑤⑦ Locking
- ⑦② Fit for centering sleeves
- ⑧① Depth of the centering sleeve hole in the counter part

The universal intermediate jaw allows fast tool-free and reliable plugging and shifting of top jaws at the gripper.

Description	ID	Grid dimension
Universal intermediate jaw		
UZB 100	0300044	2.5
UZB-S 100	5518272	2.5
Finger blanks		
ABR-PGZN-plus 100	0300012	
SBR-PGZN-plus 100	0300022	

## Force-measuring jaws FMS-ZBA/ ZBP 100



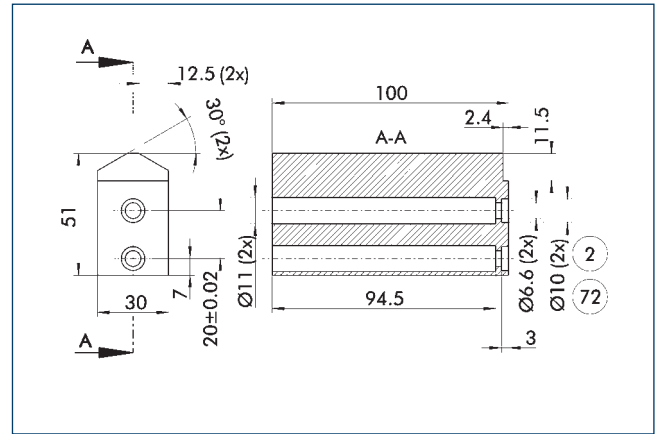
- ① Gripper connection
- ② Finger connection
- ⑬ Cable outlet
- ⑰ Fit for centering sleeves
- ⑸ Depth of the centering sleeve hole in the counter part
- ⑹ Active intermediate jaws
- ⑺ Passive intermediate jaws

Force-measuring jaws measure gripping forces, but can also determine workpiece weights or dimensional deviations. There are active and passive intermediate jaws (FMS-ZBA or FMS-ZBP). At least one active force-measuring jaw is required per gripper, the rest can be passive. For each active jaw, a FMS-A1 evaluation unit and a FMS-A connection cable are required.

Description	ID	Often combined
<b>Active intermediate jaws</b>		
FMS-ZBA 100	0301836	
<b>Passive intermediate jaws</b>		
FMS-ZBP 100	0301837	
<b>Connection cables</b>		
FMS-AK0200	0301820	●
FMS-AK0500	0301821	
FMS-AK1000	0301822	
FMS-AK2000	0301823	
<b>Evaluation electronics</b>		
FMS-A1	0301810	

- ① Due to the screw length, the FMS system can not be used in combination with the option dust-proof (SD) of the gripper. Please note that the admissible force range of the force measuring jaw (see catalog chapter FMS) should not be exceeded for the chosen gripper version.

## Finger blanks ABR- / SBR-PGZN-plus 100

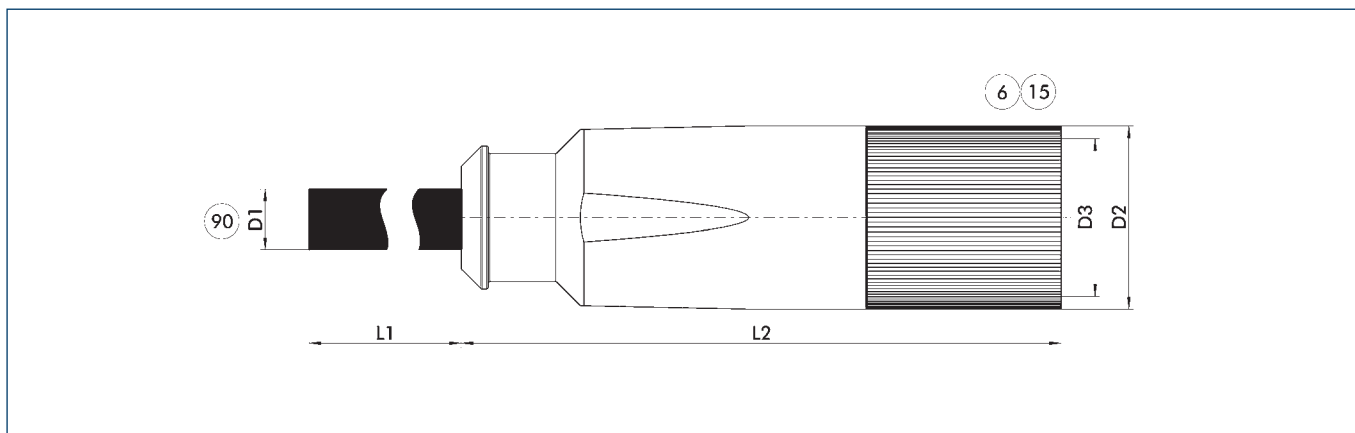


- ② Finger connection
- ⑰ Fit for centering sleeves

Finger blanks for customized remachining.

Description	ID	Material	Scope of Delivery
<b>Finger blanks</b>			
ABR-PGZN-plus 100	0300012	Aluminum	1
SBR-PGZN-plus 100	0300022	16MnCr5	1

Power supply cable



Connection cables such as power cables and sensor cables are specifically designed for connecting SCHUNK products with drive control units. We will gladly help you to select the right connection cables.

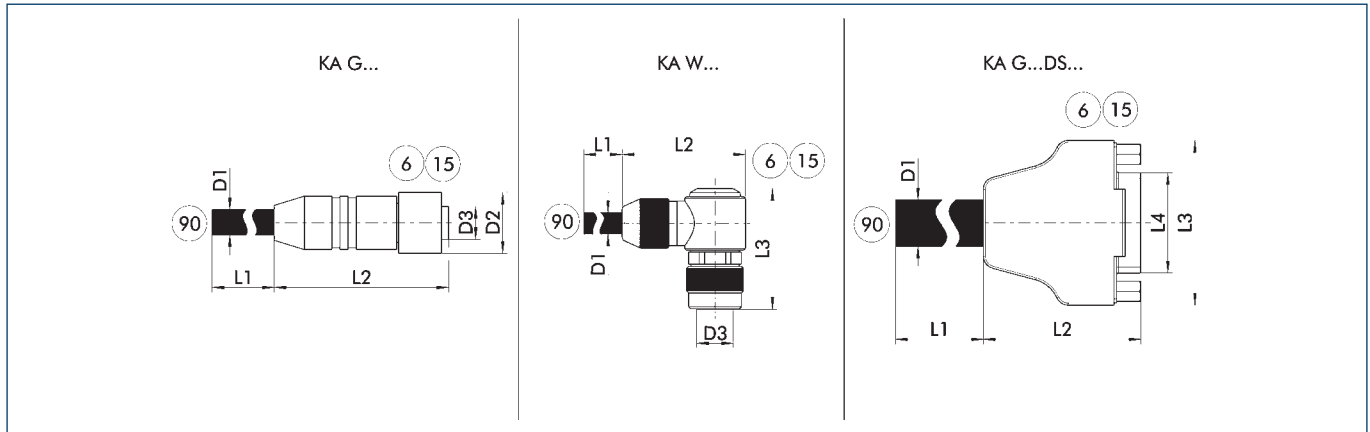
- ⑥ Connection module side
- ⑮ Socket

- ⑨⑩ Prefabricated to connect to the higher-level components

Description	ID	L1	D1	L2	D2	D3
		[m]	[mm]	[mm]	[mm]	
Kein Werte für Produktgruppe						
KA GLN1707-LK-00500-7	0306480	5	8.4	54	21	M17
KA GLN1707-LK-01000-7	0306481	10	8.4	54	21	M17
KA GLN1707-LK-01500-7	0306482	15	8.4	54	21	M17
KA GLN1707-LK-02000-7	0306483	20	8.4	54	21	M17
KAR GLN1707-LK-00500-7	0306485	5	8.2	54	21	M17
KAR GLN1707-LK-01000-7	0306486	10	8.2	54	21	M17
KAR GLN1707-LK-01500-7	0306487	15	8.2	54	21	M17
KAR GLN1707-LK-02000-7	0306488	20	8.2	54	21	M17

① Please observe the min. bending radius for cable track-compatible cables or the max. torsion angle for torsion-compatible cables. These are generally 10 times the cable diameter or +/- 180°/m.

## Encoder cable



KA G... encoder cable with straight plug  
 KA W... encoder cable with angled plug  
 KA G...DS... Sub D encoder cable

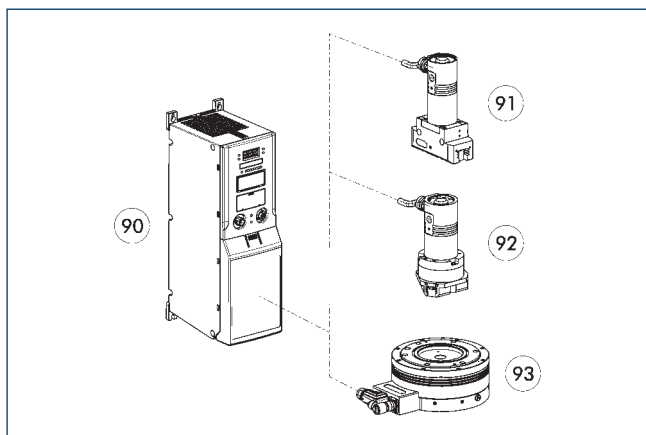
⑥ Connection module side  
 ⑮ Socket  
 ⑨⑩ Prefabricated for connection to the drive controller

Connection cables such as power cables and sensor cables are specifically designed for connecting SCHUNK products with drive control units. We will gladly help you to select the right connection cables.

Description	ID	L1	D1	L2	D2	D3
		[m]	[mm]	[mm]	[mm]	
Kein Werte für Produktgruppe						
KA GLN0908-GK-01500-7	0306472	15	9.7	57	20	M12
KA GLN1208-GK-00500-7	0306470	5	9.7	57	20	M12
KA GLN1208-GK-01000-7	0306471	10	9.7	57	20	M12
KA GLN1208-GK-02000-7	0306473	20	9.7	57	20	M12
KAR GLN1208-GK-00500-7	0306475	5	8.6	57	20	M12
KAR GLN1208-GK-01000-7	0306476	10	8.6	57	20	M12
KAR GLN1208-GK-01500-7	0306477	15	8.6	57	20	M12
KAR GLN1208-GK-02000-7	0306478	20	8.6	57	20	M12

ⓘ Please observe the min. bending radius for cable track-compatible cables or the max. torsion angle for torsion-compatible cables. These are generally 10 times the cable diameter or +/- 180°/m.

**ECM motor controller**



- ⑨⑩ Controller
- ⑨① EGN 2-finger parallel gripper
- ⑨② EZN 3-finger centric gripper
- ⑨③ ERS universal rotary module

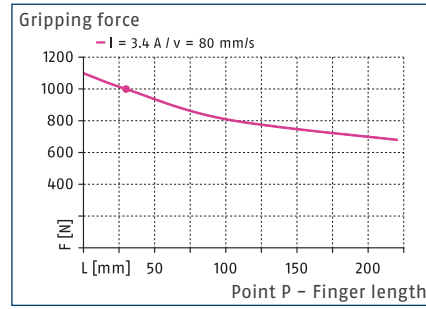
The ECM is required for operating the ERS rotary module (48 V) and the EGN, EZN and EVG electric grippers.

Description	Power supply (logic)	Power supply (load)
	[V]	[V]
<b>Controller</b>		
ECM – EGN 100	24	24

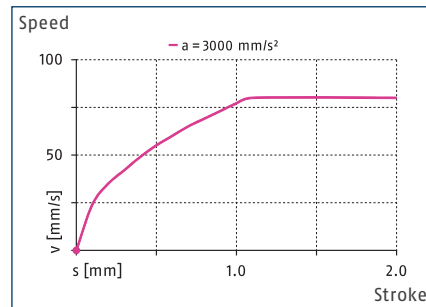
① We will be happy to help you select the right controller. Please contact us for assistance.



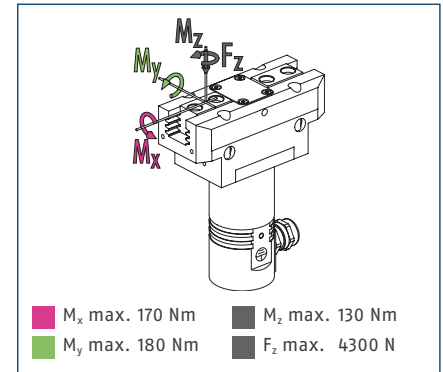
### Gripping force



### Speed



### Finger load



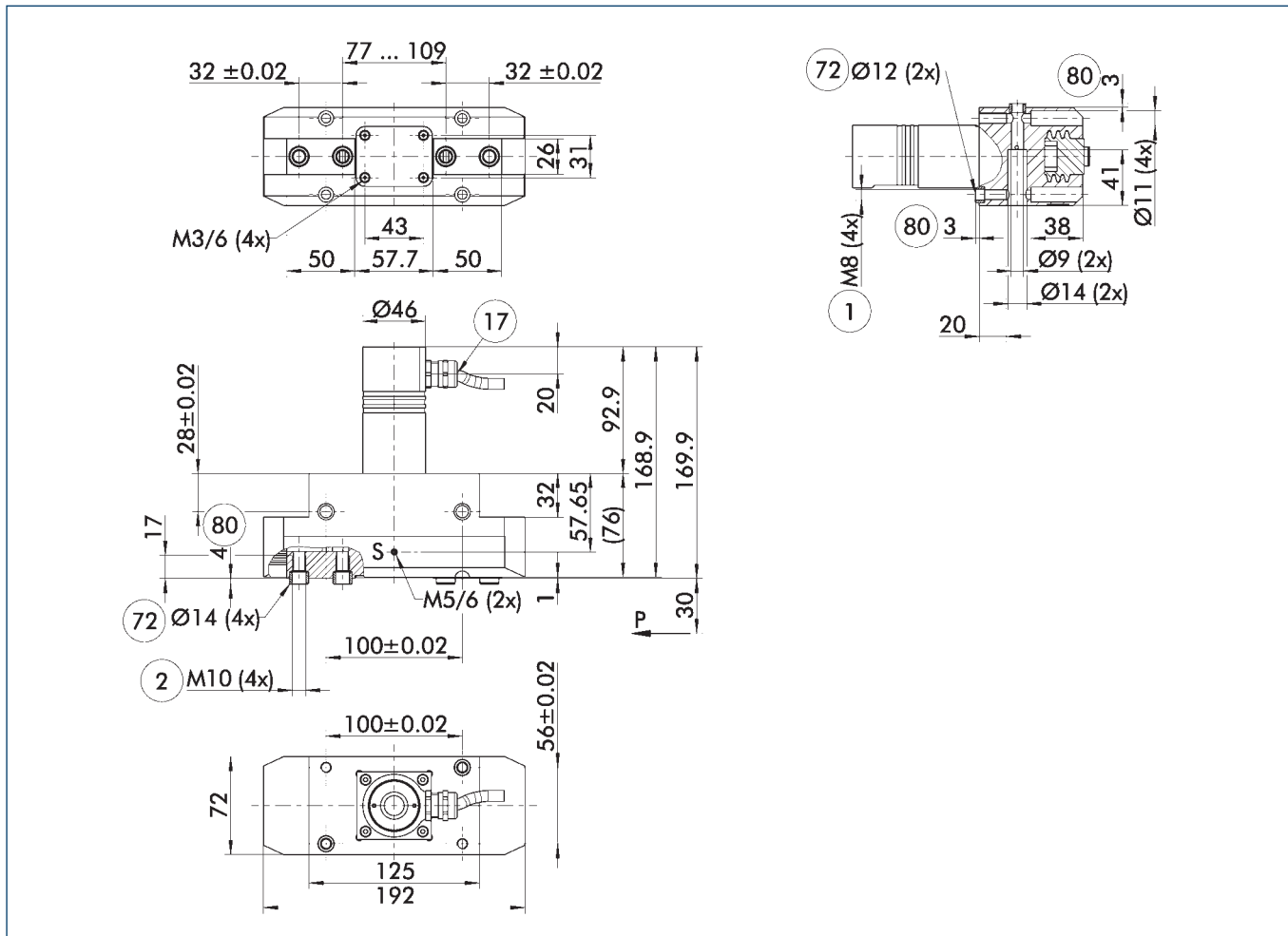
① The specified torques and forces are static values, apply for each base jaw, and may occur simultaneously.  $M_y$  may arise in addition to the moment generated by the gripping force itself.

### Technical data

Description		EGN 160	EGN 160-S
ID		0306103	0306106
<b>General operating data</b>			
Stroke per jaw	[mm]	16	16
min. / max. gripping force	[N]	250/1000	250/1000
recommended workpiece weight	[kg]	5	5
max. admissible finger length	[mm]	200	200
max. admissible weight per finger	[kg]	3.5	3.5
Repeat accuracy	[mm]	± 0.01	± 0.01
closing/opening time	[s]	0.5/0.5	0.5/0.5
max. speed	[mm/s]	80	80
max. acceleration	[mm/s <sup>2</sup> ]	3000	3000
Weight	[kg]	3	3
min./max. ambient temperature	[°C]	5/55	5/55
Protection class IP		41	41
<b>Electrical operating data</b>			
Nominal voltage	[V DC]	24	24
Nominal current	[A]	2.6	2.6
max. current	[A]	4	4
Controller electronics		external	external
Controller type		ECM-EGN160	ECM-EGN160
Communication interface		see ECM controller	see ECM controller
<b>Options and their characteristics</b>			
Dust-tight version		37306103	37306106
Protection class IP		64	64
Weight	[kg]	3.4	3.4

① Plug version EGN-S is available for the ECM controller in addition to the standard variant with 5 m attached connection cable. The gripper has a 30 cm cable and stepped Y-plug in this version. Drag-chain-compatible or robot-compatible power and sensor cables have to be ordered separately.

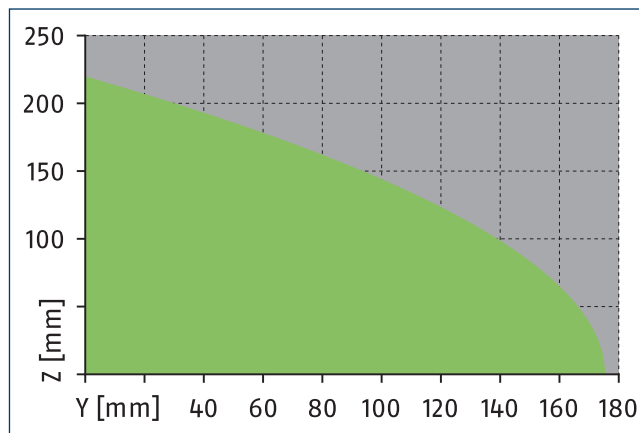
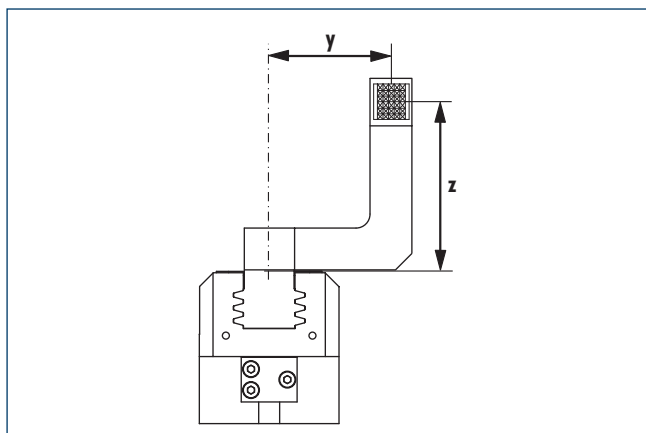
Main view



The drawing shows the gripper in the basic version with closed jaws, without dimensional consideration of the options described below.

- ① Gripper connection
- ② Finger connection
- ⑰ Cable outlet
- ⑦② Fit for centering sleeves
- ⑧② Depth of the centering sleeve hole in the counter part
- S Air purge connection (0.5 ... 1 bar)

Maximum permitted finger projection



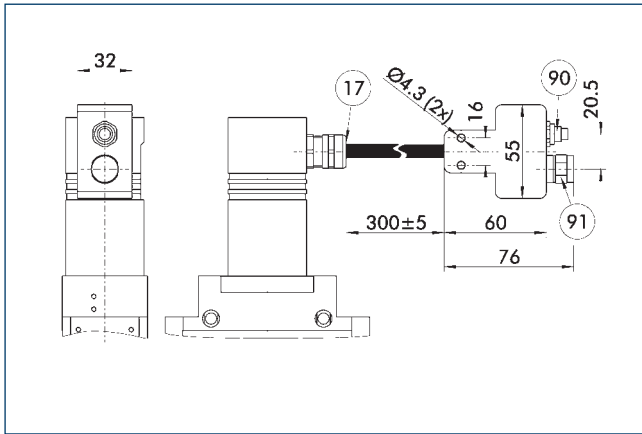
■ Permitted range      ■ Inadmissible range

The curve applies to the basic version (stroke -1). For other versions, the curve will be parallel but offset in line with the max. permitted finger length.

# EGN 160

Universal gripper

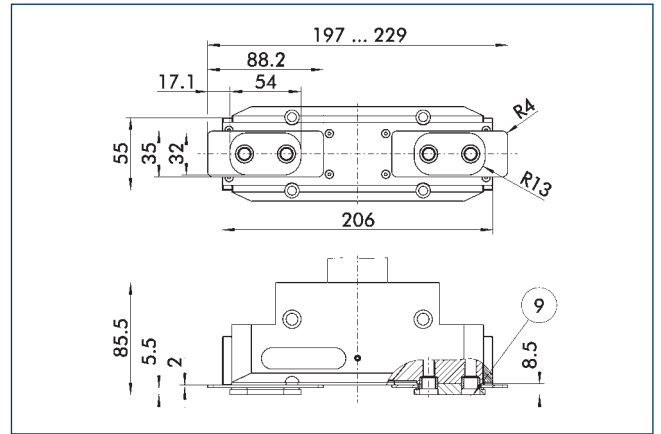
## Plug version



- ⑰ Cable outlet
- ⑨① Motor plug (M17) for power cable
- ⑨① Sensor plug (M12) for sensor cable

The drawing shows the plug version. It comprises a Y-plug and approximately 30 cm of cable between the module and plug.

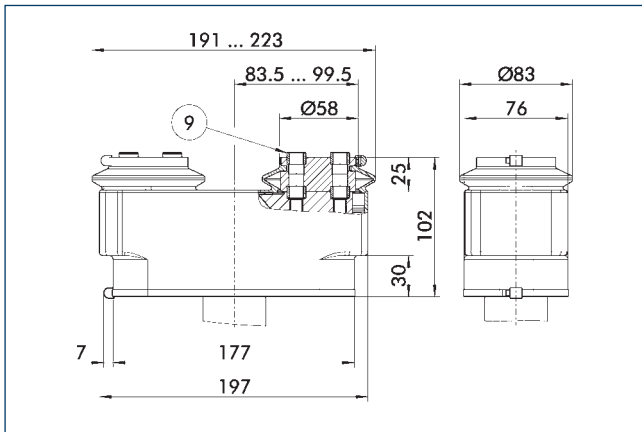
## Dust-tight version



- ⑨ For mounting screw connection diagram, see basic version

The dust cover option increases the protection against external particles. The assembly diagram shifts by the height of the intermediate jaw. The finger length is still measured from the upper edge of the gripper housing.

## Protective cover HUE EGN 160

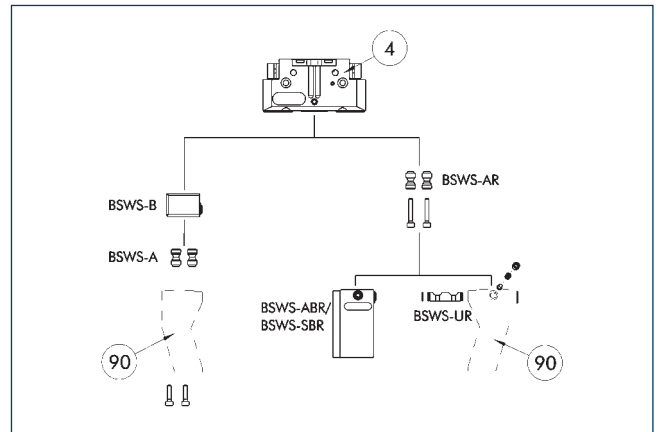


- ⑨ For mounting screw connection diagram, see basic version

The HUE protective cover completely protects the gripper against external influences up to IP65 if an additional sealing of the cover bottom is provided as part of the application. The mounting diagram shifts by the height of the intermediate jaw.

Description	ID	Protection class IP
Protection cover		
HUE EGN 160	0307042	65

## BSWS jaw quick-change jaw systems



- ④ Grippers
- ⑨① Customized gripper fingers

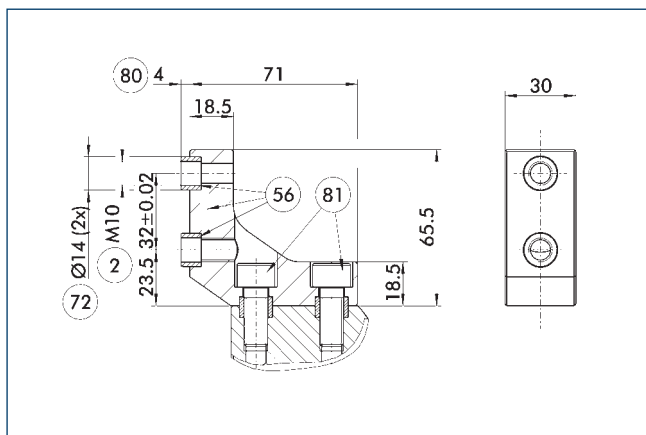
There are various jaw quick-change systems available for the gripper. For detailed information, please refer to the corresponding product.

Description	ID	
<b>Quick-change jaw system adapter</b>		
BSWS-A 160	0303030	
BSWS-AR 160	0300096	
<b>Quick-change jaw system base</b>		
BSWS-B 160	0303031	
<b>Finger blanks with quick-change jaw system</b>		
BSWS-ABR-PGZN-plus 160	0300076	
BSWS-SBR-PGZN-plus 160	0300086	
<b>Quick-change Jaw System reversed</b>		
BSWS-UR 160	0302995	

- ④ Only systems that are listed in the table, can be used.



ZBA L-plus 160 intermediate jaw

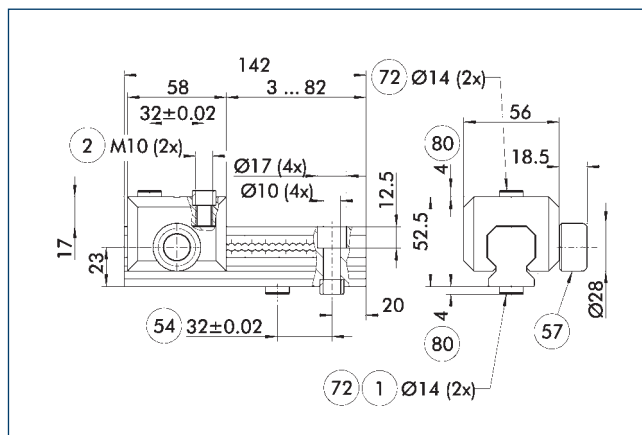


- ② Finger connection
- ⑤⑥ Included in the scope of delivery
- ⑦② Fit for centering sleeves
- ⑧① Depth of the centering sleeve hole in the counter part
- ⑧① Not included in the scope of delivery

Optionally intermediate jaws can be used, enabling direct connection and alignment of top jaws and various standard accessories in Z-direction.

Description	ID	Material	Scope of Delivery
Intermediate jaws			
ZBA-L-plus 160	0311762	Aluminum	1

UZB 160 universal intermediate jaw

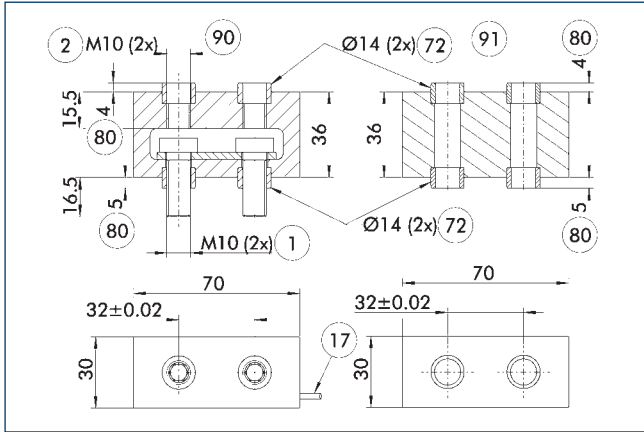


- ① Gripper connection
- ② Finger connection
- ⑤④ Optional right or left connection
- ⑤⑦ Locking
- ⑦② Fit for centering sleeves
- ⑧① Depth of the centering sleeve hole in the counter part

The universal intermediate jaw allows fast tool-free and reliable plugging and shifting of top jaws at the gripper.

Description	ID	Grid dimension
[mm]		
Universal intermediate jaw		
UZB 160	0300046	4
UZB-S 160	5518274	4
Finger blanks		
ABR-PGZN-plus 160	0300014	
SBR-PGZN-plus 160	0300024	

## Force-measuring jaws FMS-ZBA/ ZBP 160



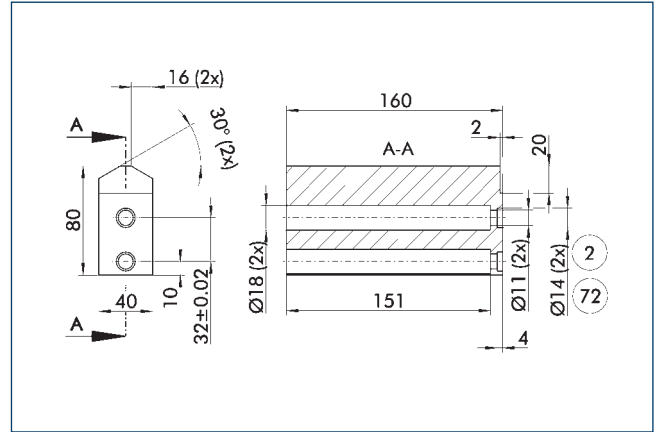
- ① Gripper connection
- ② Finger connection
- ⑦ Cable outlet
- ⑦ Fit for centering sleeves
- ⑧ Depth of the centering sleeve hole in the counter part
- ⑨ Active intermediate jaws
- ⑩ Passive intermediate jaws

Force-measuring jaws measure gripping forces, but can also determine workpiece weights or dimensional deviations. There are active and passive intermediate jaws (FMS-ZBA or FMS-ZBP). At least one active force-measuring jaw is required per gripper, the rest can be passive. For each active jaw, a FMS-A1 evaluation unit and a FMS-A connection cable are required.

Description	ID	Often combined
<b>Active intermediate jaws</b>		
FMS-ZBA 160	0301840	
<b>Passive intermediate jaws</b>		
FMS-ZBP 160	0301841	
<b>Connection cables</b>		
FMS-AK0200	0301820	●
FMS-AK0500	0301821	
FMS-AK1000	0301822	
FMS-AK2000	0301823	
<b>Evaluation electronics</b>		
FMS-A2	0301811	

① Due to the screw length, the FMS system can not be used in combination with the option dust-proof (SD) of the gripper. Please note that the admissible force range of the force measuring jaw (see catalog chapter FMS) should not be exceeded for the chosen gripper version.

## Finger blanks ABR- / SBR-PGZN-plus 160

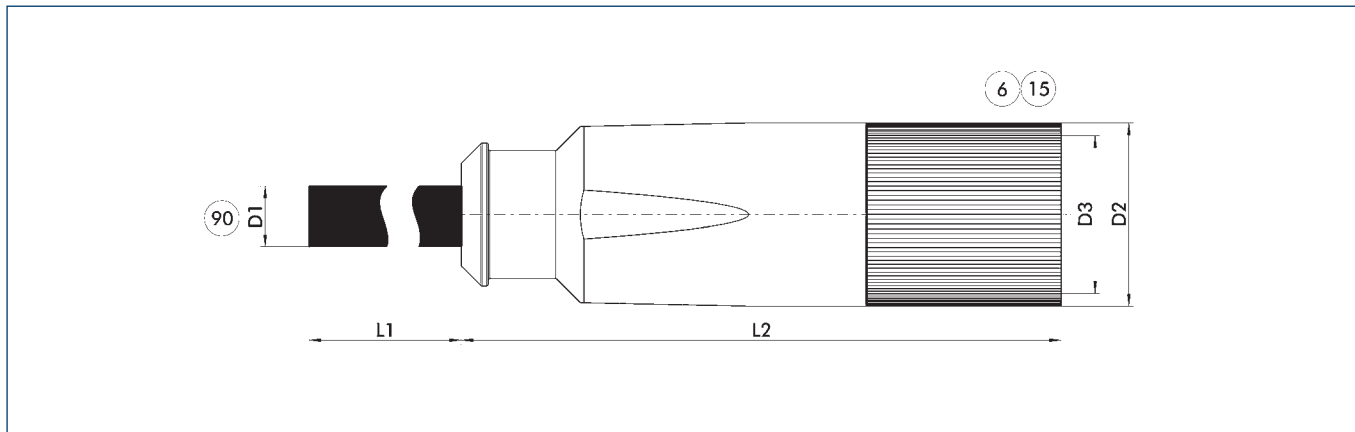


- ② Finger connection
- ⑦ Fit for centering sleeves

Finger blanks for customized remachining.

Description	ID	Material	Scope of Delivery
<b>Finger blanks</b>			
ABR-PGZN-plus 160	0300014	Aluminum	1
SBR-PGZN-plus 160	0300024	16MnCr5	1

Power supply cable



Connection cables such as power cables and sensor cables are specifically designed for connecting SCHUNK products with drive control units. We will gladly help you to select the right connection cables.

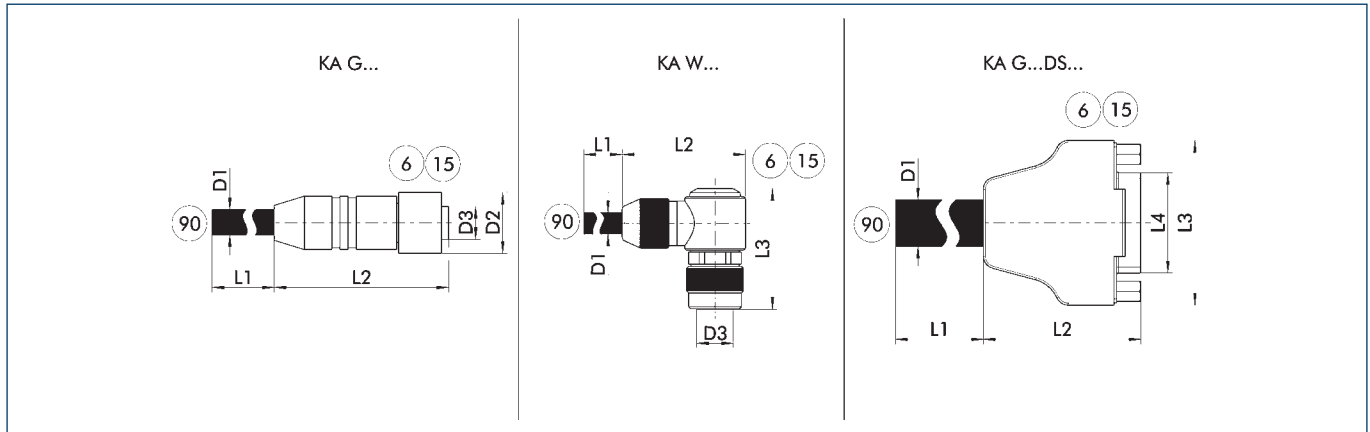
- ⑥ Connection module side
- ⑮ Socket

- ⑨⑩ Prefabricated to connect to the higher-level components

Description	ID	L1	D1	L2	D2	D3
		[m]	[mm]	[mm]	[mm]	
Kein Werte für Produktgruppe						
KA GLN1707-LK-00500-7	0306480	5	8.4	54	21	M17
KA GLN1707-LK-01000-7	0306481	10	8.4	54	21	M17
KA GLN1707-LK-01500-7	0306482	15	8.4	54	21	M17
KA GLN1707-LK-02000-7	0306483	20	8.4	54	21	M17
KAR GLN1707-LK-00500-7	0306485	5	8.2	54	21	M17
KAR GLN1707-LK-01000-7	0306486	10	8.2	54	21	M17
KAR GLN1707-LK-01500-7	0306487	15	8.2	54	21	M17
KAR GLN1707-LK-02000-7	0306488	20	8.2	54	21	M17

① Please observe the min. bending radius for cable track-compatible cables or the max. torsion angle for torsion-compatible cables. These are generally 10 times the cable diameter or +/- 180°/m.

## Encoder cable



KA G... encoder cable with straight plug  
 KA W... encoder cable with angled plug  
 KA G...DS... Sub D encoder cable

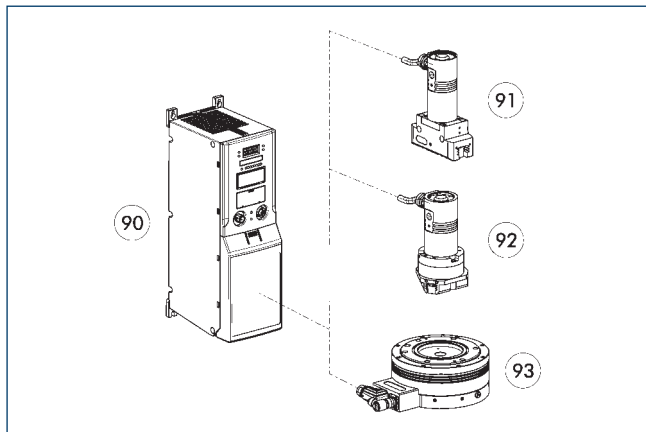
⑥ Connection module side  
 ⑩ Socket  
 ⑨⑩ Prefabricated for connection to the drive controller

Connection cables such as power cables and sensor cables are specifically designed for connecting SCHUNK products with drive control units. We will gladly help you to select the right connection cables.

Description	ID	L1	D1	L2	D2	D3
		[m]	[mm]	[mm]	[mm]	
Kein Werte für Produktgruppe						
KA GLN0908-GK-01500-7	0306472	15	9.7	57	20	M12
KA GLN1208-GK-00500-7	0306470	5	9.7	57	20	M12
KA GLN1208-GK-01000-7	0306471	10	9.7	57	20	M12
KA GLN1208-GK-02000-7	0306473	20	9.7	57	20	M12
KAR GLN1208-GK-00500-7	0306475	5	8.6	57	20	M12
KAR GLN1208-GK-01000-7	0306476	10	8.6	57	20	M12
KAR GLN1208-GK-01500-7	0306477	15	8.6	57	20	M12
KAR GLN1208-GK-02000-7	0306478	20	8.6	57	20	M12

① Please observe the min. bending radius for cable track-compatible cables or the max. torsion angle for torsion-compatible cables. These are generally 10 times the cable diameter or +/- 180°/m.

**ECM motor controller**



- ⑨⑩ Controller
- ⑨① EGN 2-finger parallel gripper
- ⑨② EZN 3-finger centric gripper
- ⑨③ ERS universal rotary module

The ECM is required for operating the ERS rotary module (48 V) and the EGN, EZN and EVG electric grippers.

Description	Power supply (logic) [V]	Power supply (load) [V]
<b>Controller</b>		
ECM – EGN 160	24	24

① We will be happy to help you select the right controller. Please contact us for assistance.

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*J. Lehmann*

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