



Superior Clamping and Gripping



Product Information

Universal gripper EGN

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

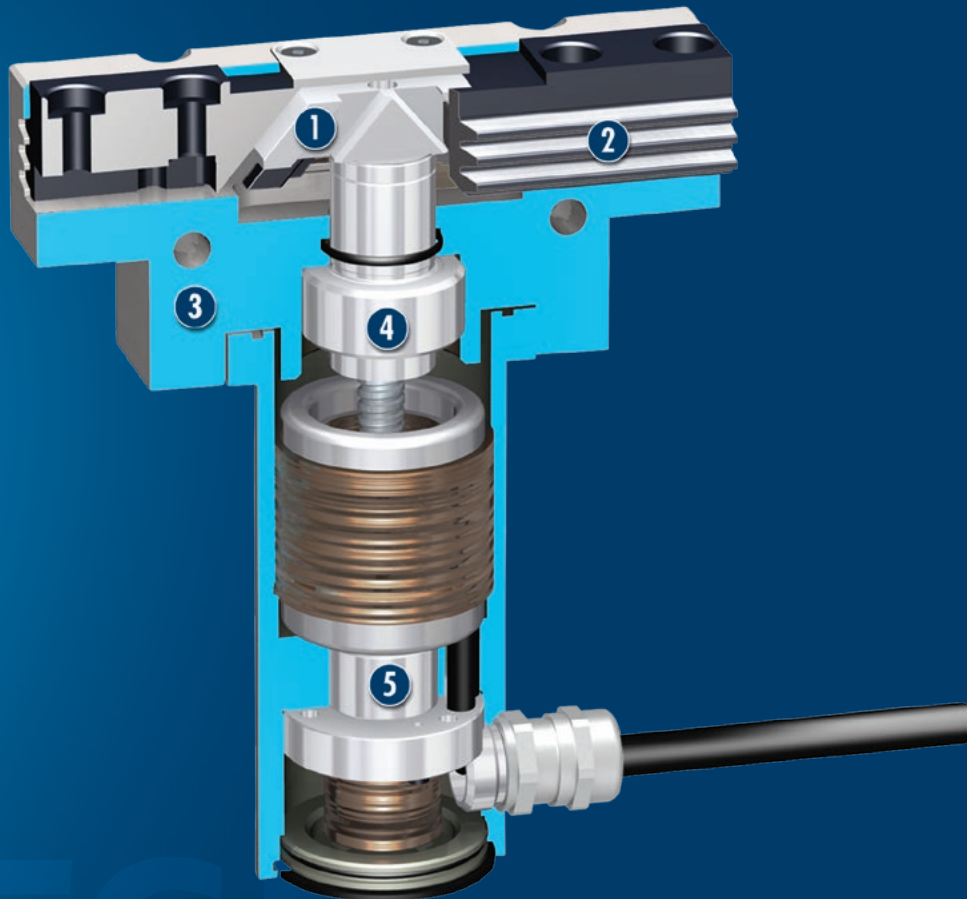


Workpiece weight
2 .. 5 kg

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, coated

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.

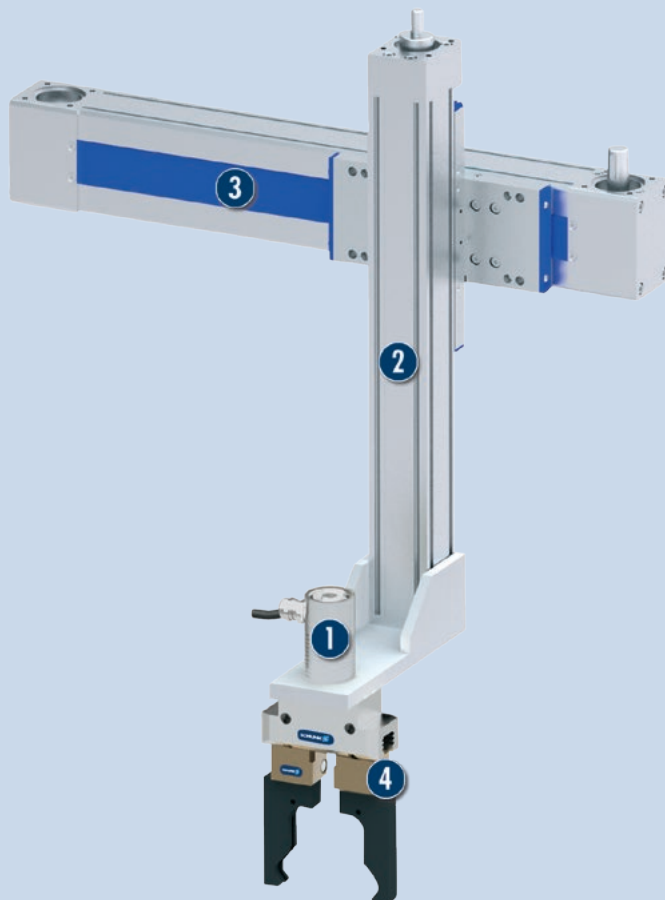
Closing and opening times: Minimum closing and opening times are only the movement times of the base jaws or fingers at max. speed, max. acceleration without electrical restrictions (maximum current) and observance of the maximum permissible mass per finger.

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.

- ❶ EGN servo-electric 2-finger parallel gripper
- ❷ Vertical axis with Beta spindle drive
- ❸ Beta belt-driven axes
- ❹ 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. Please contact us for further information: SCHUNK technical hotline +49-7133-103-2696

Options and special information

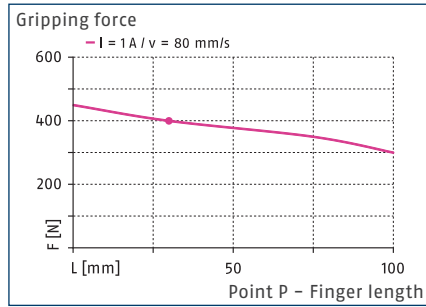
Control via external ECM controller: The electrical control of the gripper takes place via the separately available ECM controller. Connection of the controller to the higher level servo controlled concept can take place via Profibus or CAN bus. Both communication interfaces ensure simple integration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

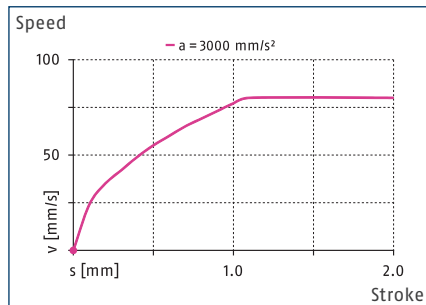
Dust-tight version SD: absolutely dust-tight, increased degree of protection against the penetration of materials.



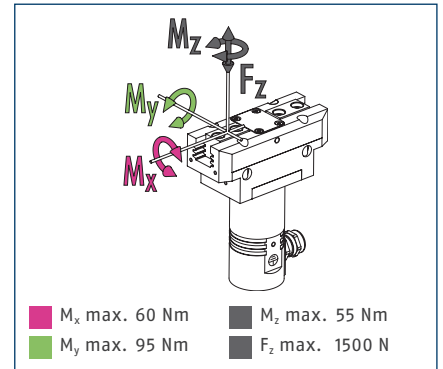
Gripping force



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
General operating data			
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]	± 0.01	± 0.01
min. / max. air purge pressure	[bar]	0.5/1	0.5/1
Closing/opening time	[s]	0.35/0.35	0.35/0.35
max. speed	[mm/s]	80	80
max. acceleration	[mm/s²]	3000	3000
Weight	[kg]	0.84	0.84
min./max. ambient temperature	[°C]	5/55	5/55
Protection class IP		41	41
Electrical operating data			
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
Options and their characteristics			
Dust-tight version		37306100	37306104
Protection class IP		64	64
Weight	[kg]	0.94	0.94

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.

Technical drawing of a hydraulic cylinder assembly, showing three views: front view (top), side view (middle), and end view (bottom).

Front View Dimensions:

- Total width: 16 ± 0.02 , $37...53$, 16 ± 0.02
- Port diameter: M3/6 (4x)
- Port spacing: 17, 26, 26.6, 26
- Mounting flange diameter: $\varnothing 41.7$
- Mounting flange thickness: 17
- Mounting flange height: 20

Side View Dimensions:

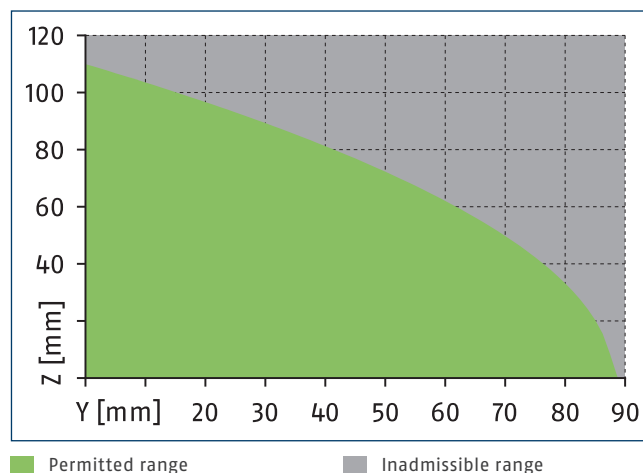
- Top flange diameter: 80
- Top flange thickness: 20
- Top flange height: 92.9
- Body diameter: 140.9
- Body length: 141.9
- Bottom flange diameter: 80
- Bottom flange thickness: 20
- Bottom flange height: 35.3 (48)
- Bottom flange mounting holes: 72 $\varnothing 8$ (4x)
- Bottom flange mounting holes: 2 M5 (4x)
- Bottom flange mounting holes: 2.6
- Bottom flange mounting holes: 52 ± 0.02
- Bottom flange mounting holes: M5/6 (2x)
- Bottom flange mounting holes: S
- Bottom flange mounting holes: 32 ± 0.02
- Bottom flange mounting holes: 52 ± 0.02
- Bottom flange mounting holes: 42
- Bottom flange mounting holes: 63
- Bottom flange mounting holes: 96

End View Dimensions:

- Port diameter: M5 (4x)
- Port spacing: 15
- Port diameter: $\varnothing 8$ (2x)
- Port diameter: 80
- Port diameter: 2.5
- Port diameter: 24
- Port diameter: 22
- Port diameter: $\varnothing 5.1$ (2x)
- Port diameter: $\varnothing 9$ (2x)
- Port diameter: $\varnothing 7.25$ (4x)

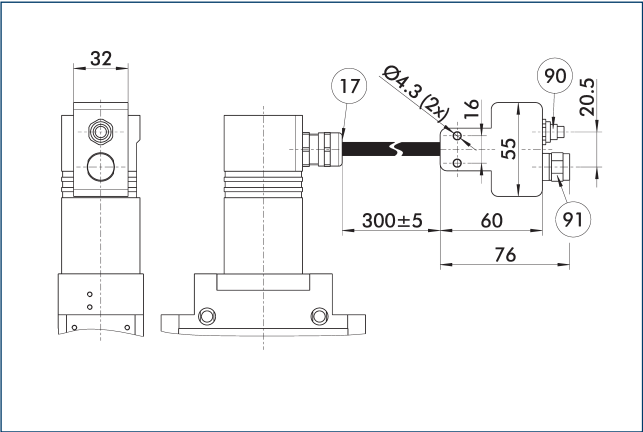
① Gripper connection	⑧⑩ Depth of the centering sleeve
② Finger connection	hole in the counter part
⑩⑪ Cable outlet	S Air purge connection
⑦⑨ Fit for centering sleeves	

A schematic diagram of a mechanical system. A vertical rod passes through a block containing a spring. The rod is connected to a mass (a rectangle with a cross-hatch pattern) that can move vertically. The distance from the top of the rod to the center of the mass is labeled y . The distance from the bottom of the rod to the center of the mass is labeled z .



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.

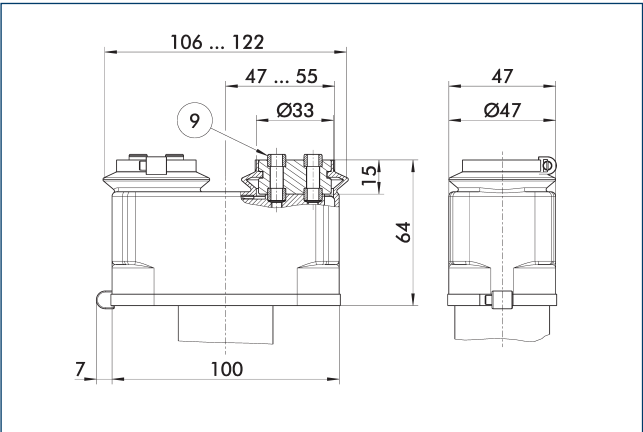
Plug version



- 17 Cable outlet
- 91 Motor plug (M17) for power cable
- 90 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.

Protective cover HUE EGN 80

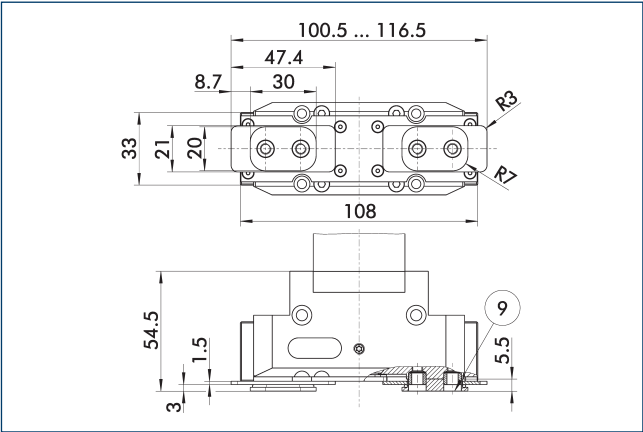


- 9 For mounting screw connection diagram, see basic version

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

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

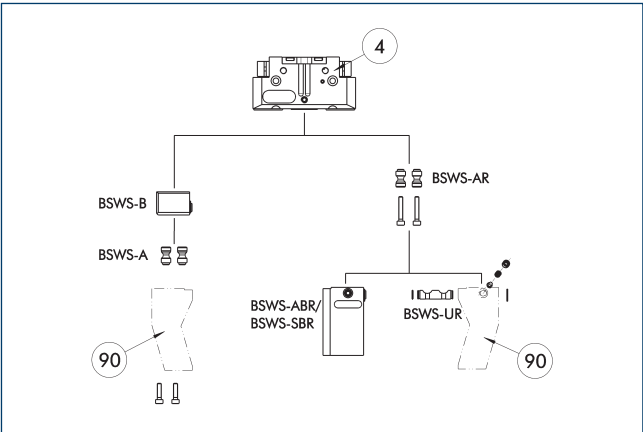
Dust-tight version



- 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.

BSWS jaw quick-change jaw systems



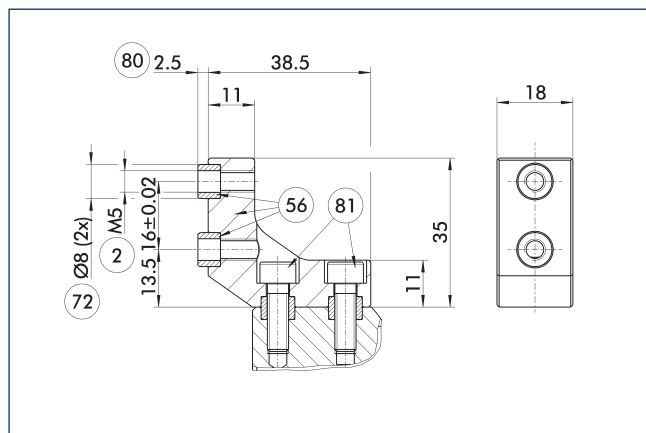
- 4 Grippers
- 90 Customized gripper fingers

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

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

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

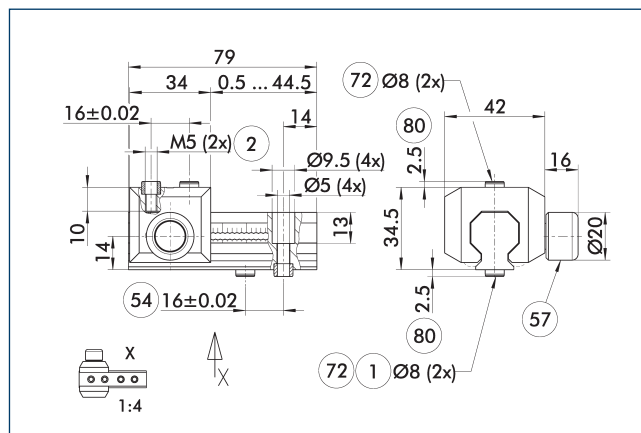
UZH 80 universal intermediate jaw



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

The optional ZBA-L-plus intermediate jaws allow the screw connection diagram of the top jaws to be rotated by 90°. This makes it easier to design and produce top jaws (particularly for long versions) because no deep through-bores are required.

Description	ID	Material	Finger interface	Scope of delivery
Intermediate jaws				
ZBA-L-plus 80	0311732	Aluminum	PGN-plus 80	1

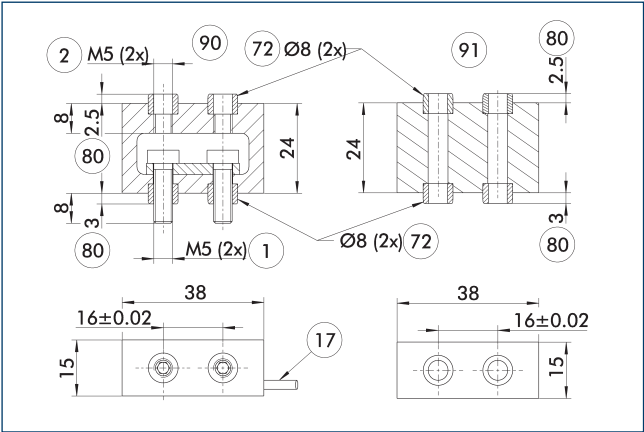


- ① Gripper connection
- ② Finger connection
- ⑤④ Optional right or left connection
- ⑤⑦ Locking
- ⑦② Fit for centering sleeves
- ⑧① Depth of the centering sleeve hole in the counter part

The drawing shows the UZB universal intermediate jaw. The fully removable UZB-S slide (can also be ordered separately) allows for a quick jaw change.

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

Force-measuring jaws FMS-ZBA/ ZBP 80



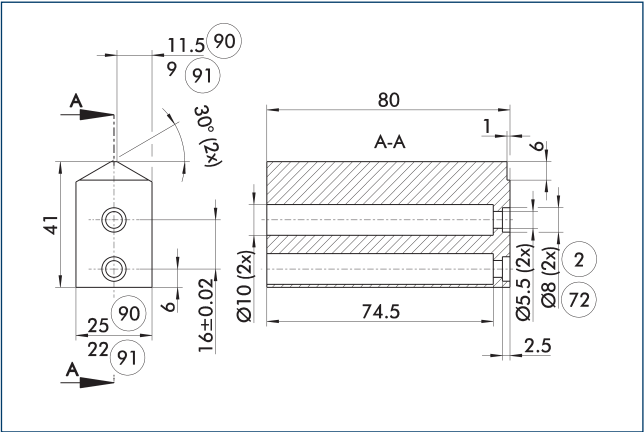
- ① Gripper connection
- ② Finger connection
- ⑦ Cable outlet
- ⑦ Fit for centering sleeves
- ⑧ Depth of the centering sleeve hole in the counter part
- ⑨ Active intermediate jaws
- ⑩ Passive intermediate jaws

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
Active intermediate jaws		
FMS-ZBA 80	0301834	
Passive intermediate jaws		
FMS-ZBP 80	0301835	
Connection cables		
FMS-AK0200	0301820	●
FMS-AK0500	0301821	
FMS-AK1000	0301822	
FMS-AK2000	0301823	
Evaluation electronics		
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

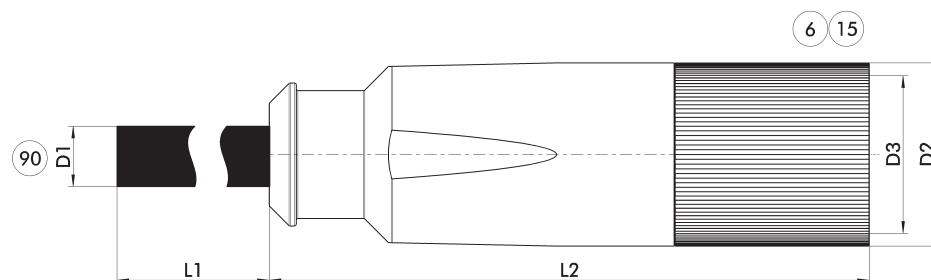


- ② Finger connection
- ⑦ Fit for centering sleeves
- ⑨ ABR-PGZN-plus
- ⑩ SBR-PGZN-plus

Finger blanks for customized remachining.

Description	ID	Material	Scope of delivery
Finger blanks			
ABR-PGZN-plus 80	0300011	Aluminum	1
SBR-PGZN-plus 80	0300021	16MnCr5	1

Power cable



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

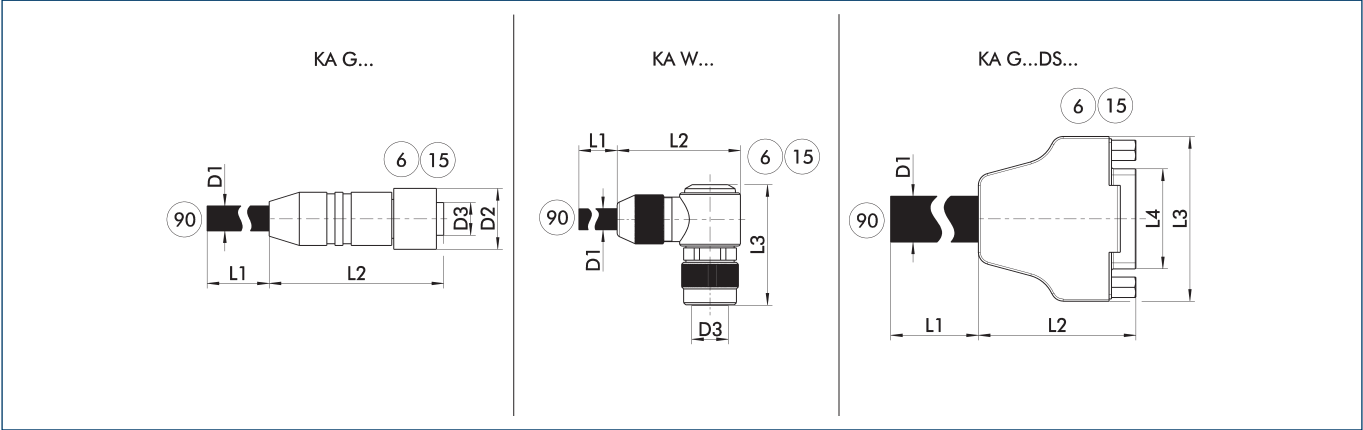
⑥ Connection module side
⑮ Socket

⑨⑩ Prefabricated to connect to the higher-level components

Description	ID	L1	D1	L2	D2	D3
		[m]	[mm]	[mm]	[mm]	
Power cable for SCHUNK ECM - cable track compatible						
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
Power cable für SCHUNK ECM - torsion compatible						
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



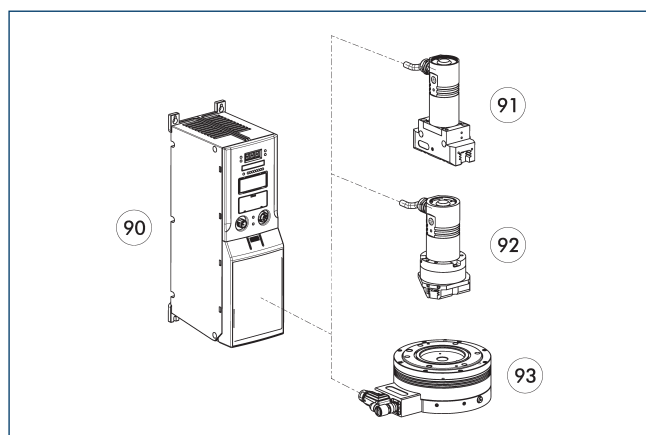
KA G...	encoder cable with straight plug	⑥	Connection module side	⑨⑩	Prefabricated for connection to the drive controller
KA W...	encoder cable with angled plug	⑮	Socket		
KA G...DS...	Sub D encoder cable				

Connection cables such as power cables and encoder 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]	
Sensor cable for SCHUNK ECM – cable track compatible						
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-01500-7	0306472	15	9.7	57	20	M12
KA GLN1208-GK-02000-7	0306473	20	9.7	57	20	M12
Sensor cable for SCHUNK ECM – torsion compatible						
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.

SCHUNK ECM Drive controller



- ⑨① Controller
- ⑨② EGN 2-finger parallel gripper
- ⑨③ EZN 3-finger centric gripper
- ⑨④ ERS universal rotary module

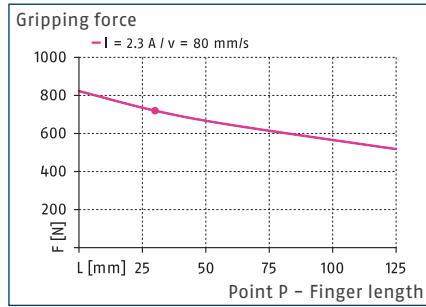
The drive controller can be used for the rotary unit ERS 48V as well as for the grippers EGN and EZN. It is available with the communication interfaces Profinet, Profibus and CAN-Bus.

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

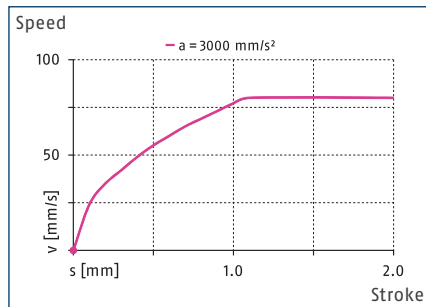
- ① We will be happy to help you select the right controller. Please contact us for assistance.



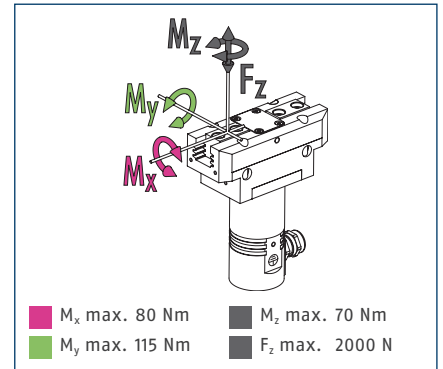
Gripping force



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 100	EGN 100-S
ID		0306101	0306105
General operating data			
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
min. / max. air purge pressure	[bar]	0.5/1	0.5/1
Closing/opening time	[s]	0.35/0.35	0.35/0.35
max. speed	[mm/s]	80	80
max. acceleration	[mm/s ²]	3000	3000
Weight	[kg]	1.35	1.35
min./max. ambient temperature	[°C]	5/55	5/55
Protection class IP		41	41
Electrical operating data			
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
Options and their characteristics			
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.

Technical drawing of a 4-way valve assembly, showing three views: top, side, and front.

Top View Dimensions:

- Overall width: 120
- Overall height: 50
- Port spacing (center-to-center): 81
- Port diameter: $\varnothing 10$ (4x)
- Port thread: $M5/6$ (2x)
- Port offset: 38 ± 0.02
- Port diameter (inner): $\varnothing 6.6$ (2x)
- Port diameter (outer): $\varnothing 11$ (2x)
- Port length: 41
- Port offset (inner): 80
- Port offset (outer): 80
- Port offset (inner): 3
- Port offset (outer): 3
- Port offset (inner): 19
- Port offset (outer): 19
- Port offset (inner): 19
- Port offset (outer): 19
- Port offset (inner): 19
- Port offset (outer): 19

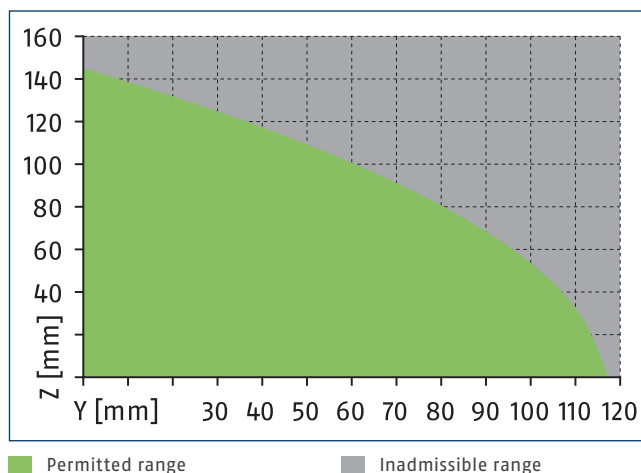
Side View Dimensions:

- Overall height: 148
- Overall width: 147
- Overall width (inner): 92.9
- Overall width (outer): 147
- Overall width (inner): 147
- Overall width (outer): 147
- Overall width (inner): 147
- Overall width (outer): 147
- Overall width (inner): 147
- Overall width (outer): 147
- Overall width (inner): 147
- Overall width (outer): 147

Front View Dimensions:

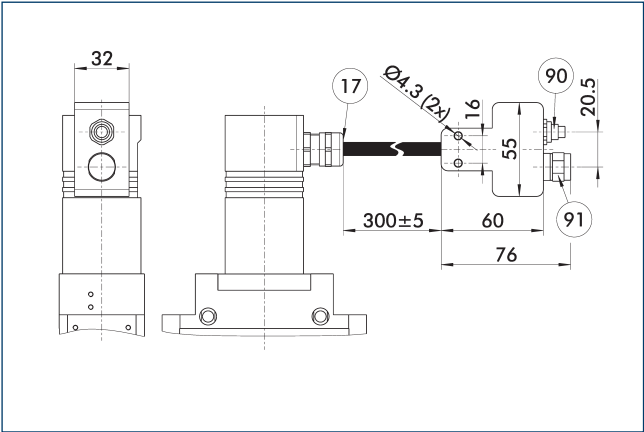
- Overall width: 120
- Overall height: 50
- Port spacing (center-to-center): 81
- Port diameter: $\varnothing 10$ (4x)
- Port thread: $M5/6$ (2x)
- Port offset: 38 ± 0.02
- Port diameter (inner): $\varnothing 6.6$ (2x)
- Port diameter (outer): $\varnothing 11$ (2x)
- Port length: 41
- Port offset (inner): 80
- Port offset (outer): 80
- Port offset (inner): 3
- Port offset (outer): 3
- Port offset (inner): 19
- Port offset (outer): 19
- Port offset (inner): 19
- Port offset (outer): 19
- Port offset (inner): 19
- Port offset (outer): 19

① Gripper connection	⑧⑩ Depth of the centering sleeve
② Finger connection	hole in the counter part
⑩ Cable outlet	S Air purge connection
⑦⑩ Fit for centering sleeves	



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.

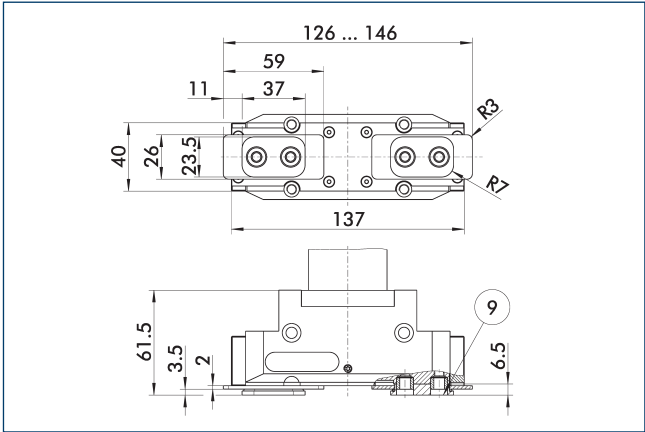
Plug version



- 17 Cable outlet
- 90 Sensor plug (M12) for sensor cable
- 91 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.

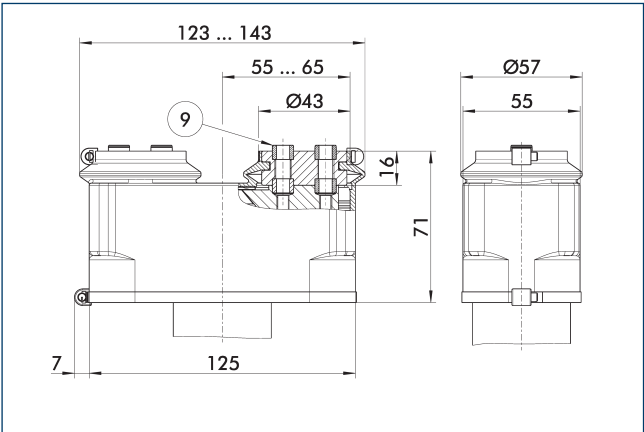
Dust-tight version



- 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 100

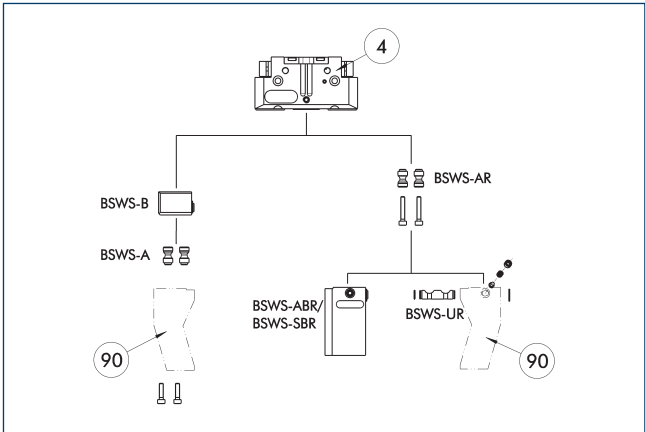


- 9 For mounting screw connection diagram, see basic version

The HUE protective cover fully protects the gripper against external influences. The cover is rated up to IP65 if an additional sealing of the cover bottom is provided as part of the application. The connection 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



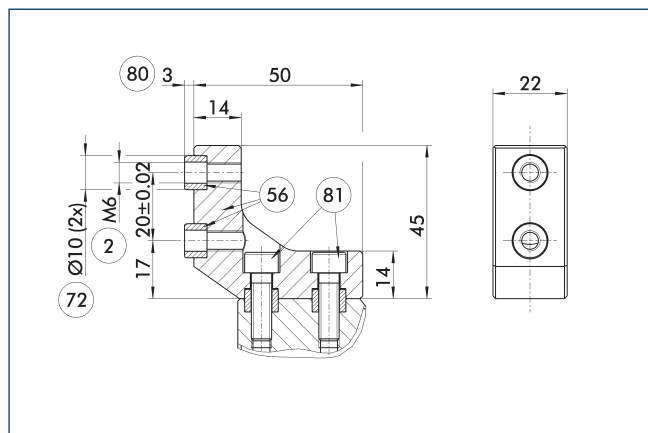
- 4 Grippers
- 90 Customized gripper fingers

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

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

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

ZBA-L-plus 100 intermediate jaws

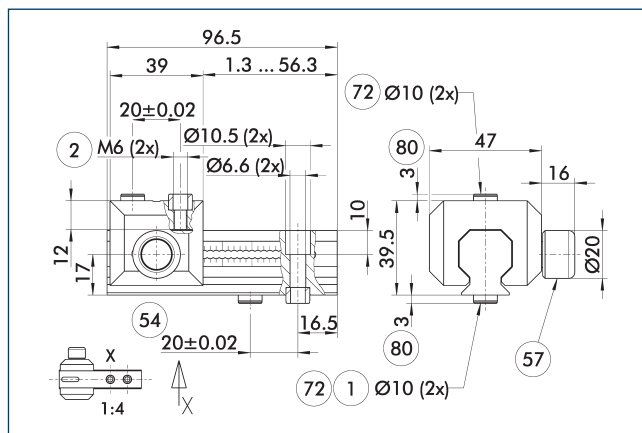


- ② Finger connection
- ⑤⑥ Included in the scope of delivery
- ⑦② Fit for centering sleeves
- ⑧① Depth of the centering sleeve hole in the counter part
- ⑧① Not included in the scope of delivery

The optional ZBA-L-plus intermediate jaws allow the screw connection diagram of the top jaws to be rotated by 90°. This makes it easier to design and produce top jaws (particularly for long versions) because no deep through-bores are required.

Description	ID	Material	Finger interface	Scope of delivery
Intermediate jaws				
ZBA-L-plus 100	0311742	Aluminum	PGN-plus 100	1

UZZ 100 universal intermediate jaw

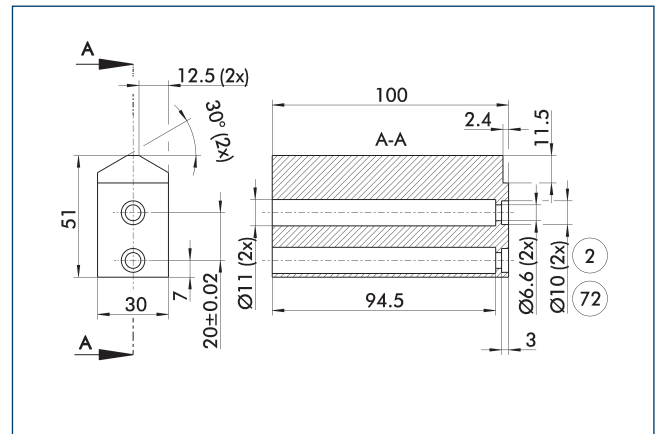


- ① Gripper connection
- ② Finger connection
- ⑤④ Optional right or left connection
- ⑤⑦ Locking
- ⑦② Fit for centering sleeves
- ⑧① Depth of the centering sleeve hole in the counter part

The drawing shows the UZZ universal intermediate jaw. The fully removable UZZ-S slide (can also be ordered separately) allows for a quick jaw change.

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

Finger blanks ABR- / SBR-PGZN-plus 100



- ② Finger connection 72 Fit for centering sleeves

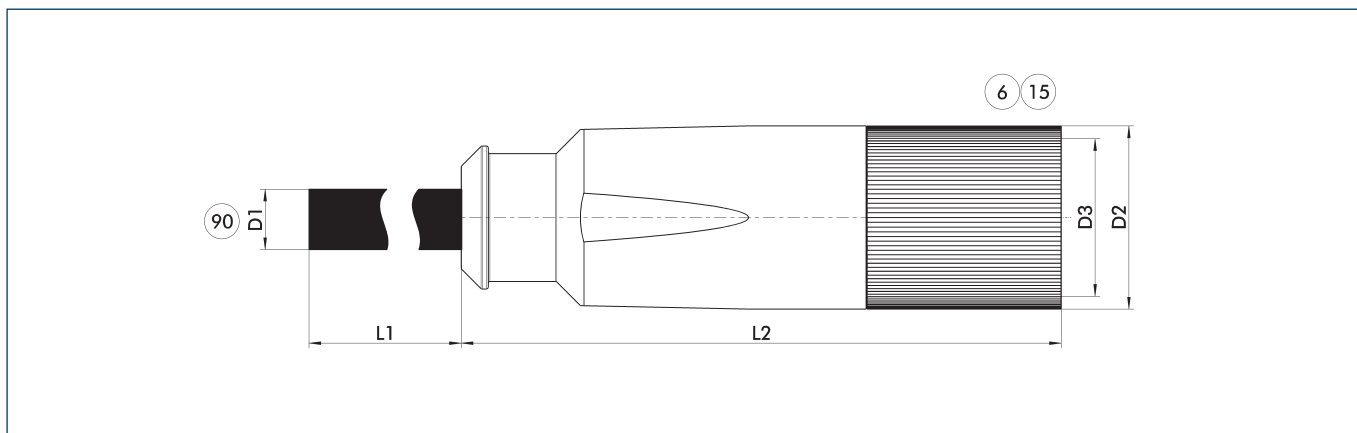
Finger blanks for customized remachining.

Description	ID	Material	Scope of delivery
Finger blanks			
ABR-PGZN-plus 100	0300012	Aluminum	1
SBR-PGZN-plus 100	0300022	16MnCr5	1

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

- 18

Power cable



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

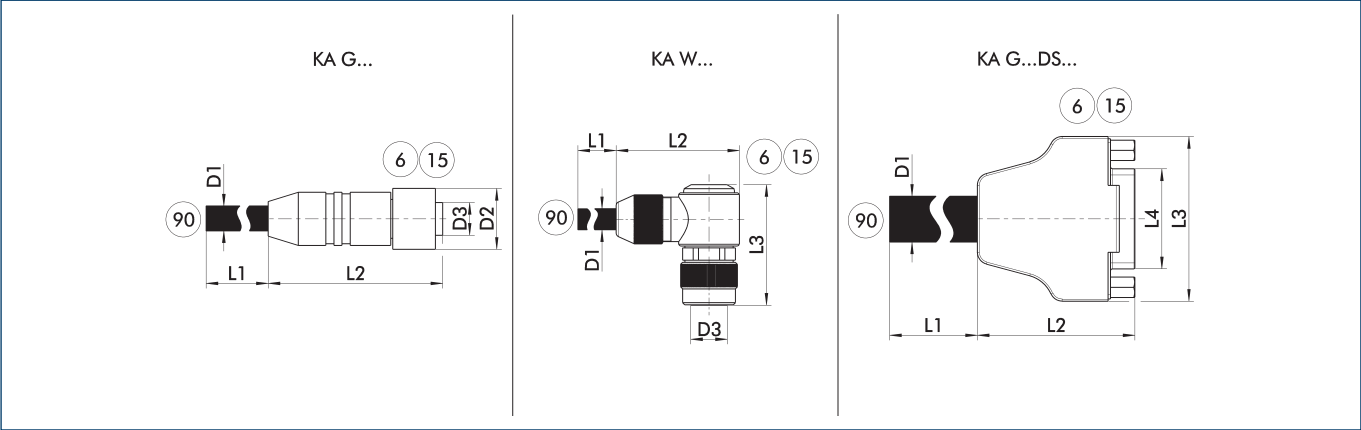
⑥ Connection module side
⑮ Socket

⑨⑩ Prefabricated to connect to the higher-level components

Description	ID	L1	D1	L2	D2	D3
		[m]	[mm]	[mm]	[mm]	
Power cable for SCHUNK ECM - cable track compatible						
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
Power cable für SCHUNK ECM - torsion compatible						
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

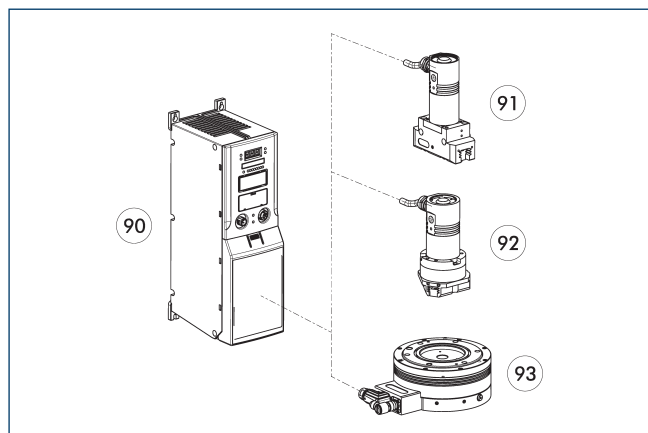
⑥ Connection module side
⑮ Socket
⑨⑩ Prefabricated for connection to the drive controller

Connection cables such as power cables and encoder 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]	
Sensor cable for SCHUNK ECM – cable track compatible						
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-01500-7	0306472	15	9.7	57	20	M12
KA GLN1208-GK-02000-7	0306473	20	9.7	57	20	M12
Sensor cable for SCHUNK ECM – torsion compatible						
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.

SCHUNK ECM Drive controller



- ⑨① Controller
- ⑨② EGN 2-finger parallel gripper
- ⑨③ EZN 3-finger centric gripper
- ⑨④ ERS universal rotary module

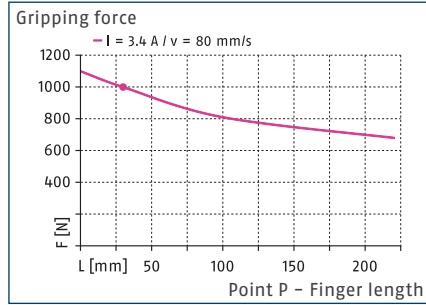
The drive controller can be used for the rotary unit ERS 48V as well as for the grippers EGN and EZN. It is available with the communication interfaces Profinet, Profibus and CAN-Bus.

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

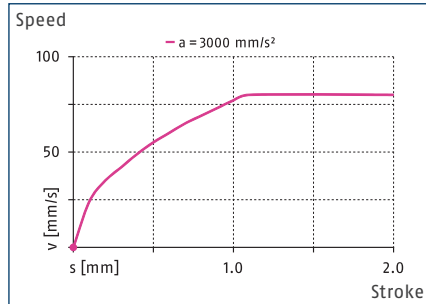
- ① We will be happy to help you select the right controller. Please contact us for assistance.



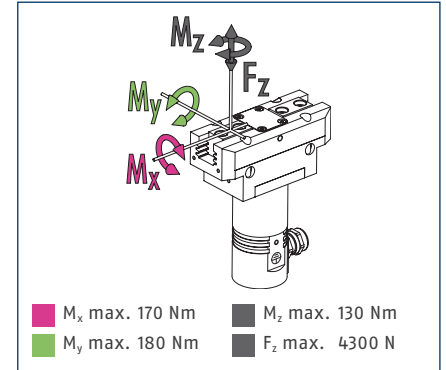
Gripping force



Speed



Finger load



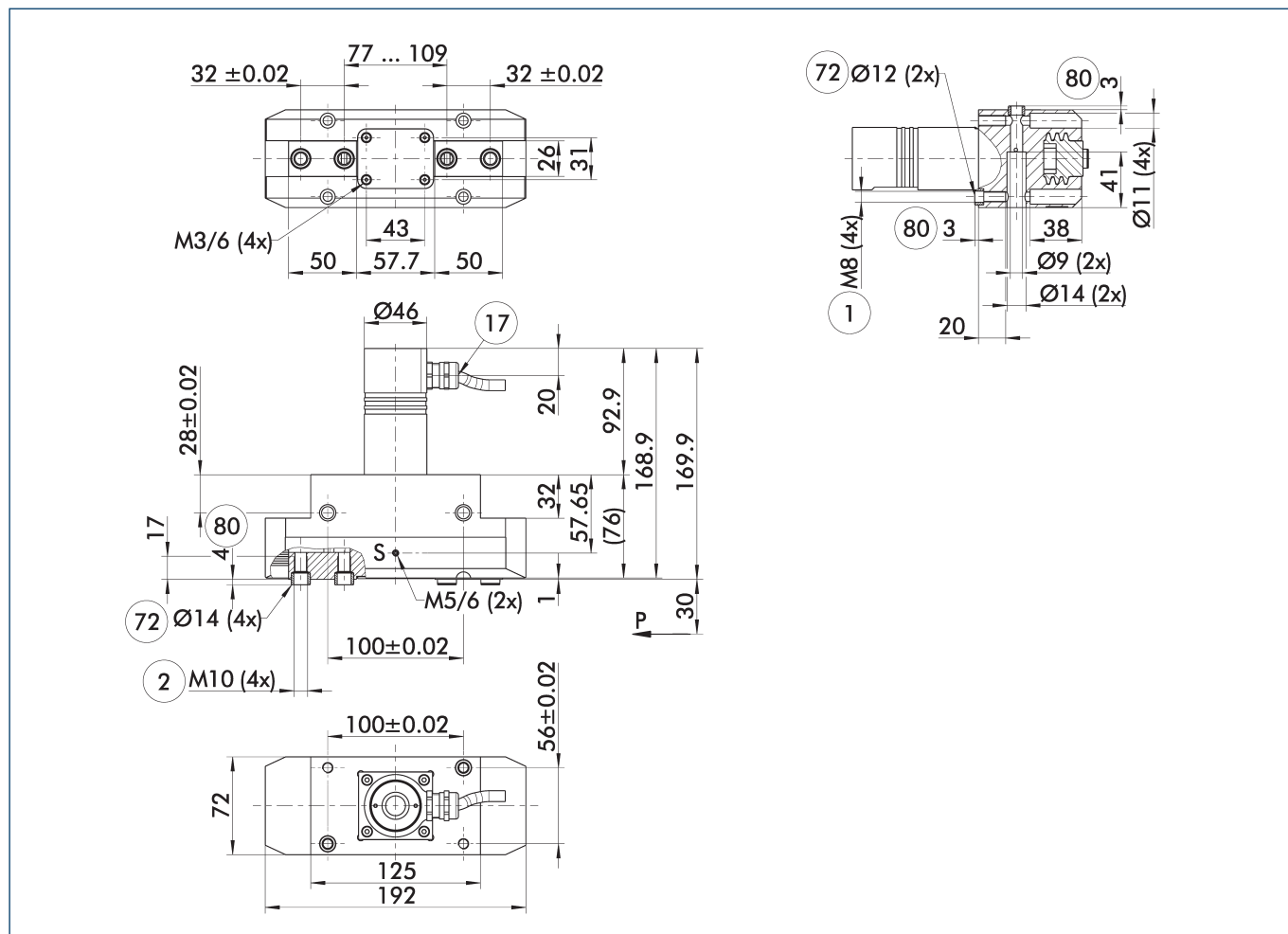
① The specified torques and forces are static values, apply for each base jaw, and may occur simultaneously. M_y may arise in addition to the moment generated by the gripping force itself.

Technical data

Description		EGN 160	EGN 160-S
ID		0306103	0306106
General operating data			
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/s²]	3000	3000
Weight	[kg]	3	3
min./max. ambient temperature	[°C]	5/55	5/55
Protection class IP		41	41
Electrical operating data			
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
Options and their characteristics			
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.

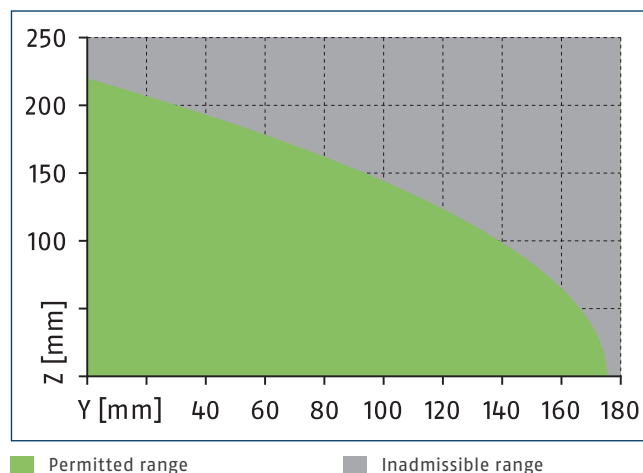
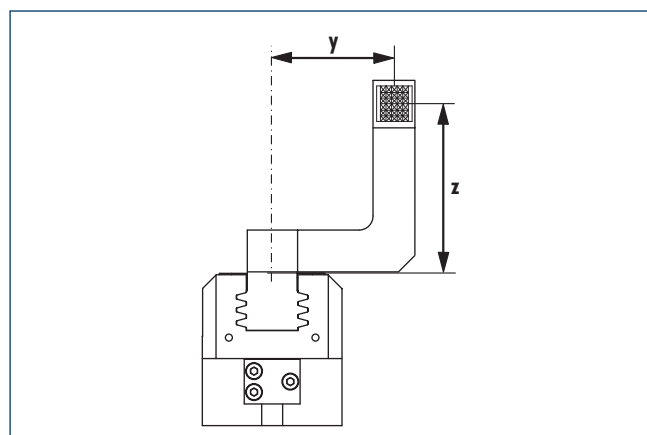
Main view



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
- ⑦ Fit for centering sleeves
- ⑧ Depth of the centering sleeve hole in the counter part
- S Air purge connection

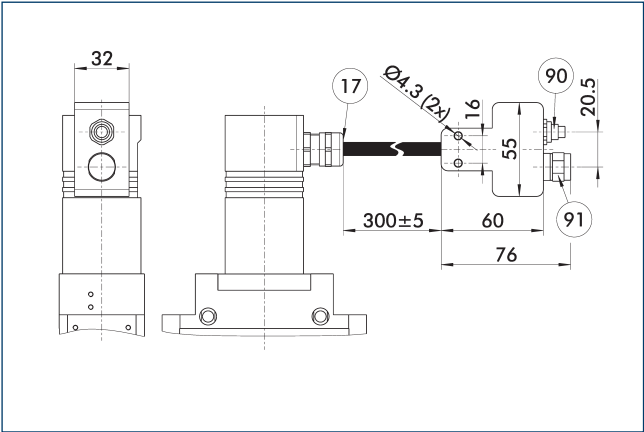
Maximum permitted finger projection



■ 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.

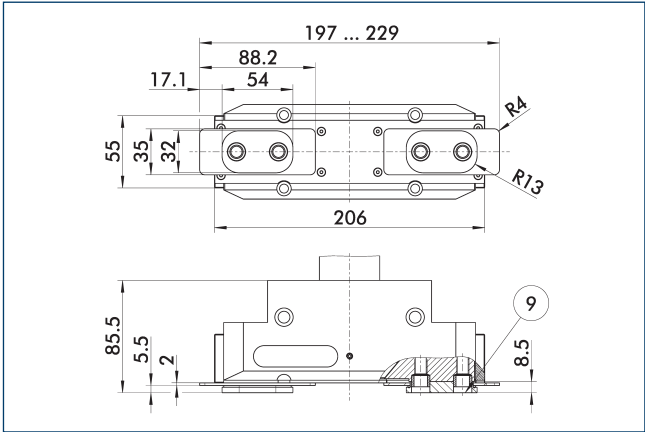
Plug version



- 17 Cable outlet
- 91 Motor plug (M17) for power cable
- 90 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.

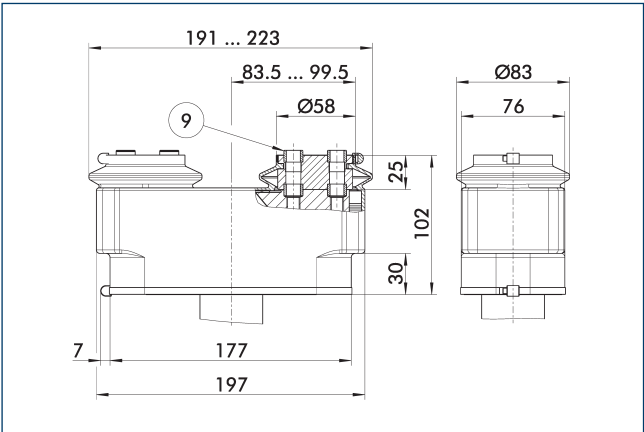
Dust-tight version



- 9 For mounting screw connection diagram, see basic version
- 90 Sensor plug (M12) for sensor cable

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

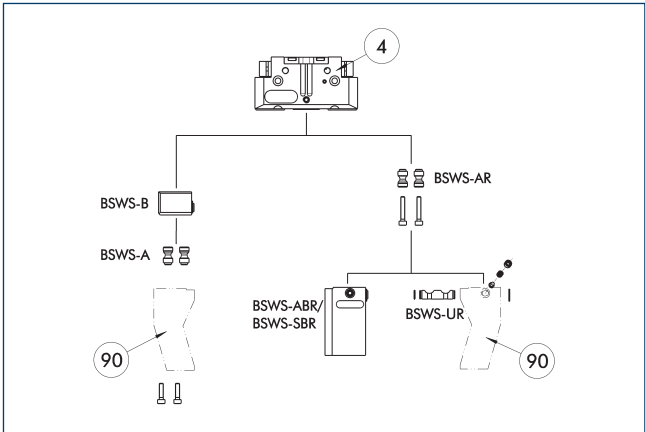


- 9 For mounting screw connection diagram, see basic version

The HUE protective cover fully protects the gripper against external influences. The cover is rated up to IP65 if an additional sealing of the cover bottom is provided as part of the application. The connection 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



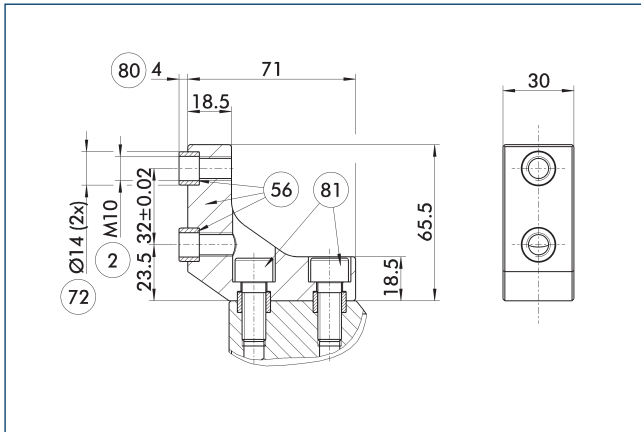
- 4 Grippers
- 90 Customized gripper fingers

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

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

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

ZBA-L-plus 160 intermediate jaws

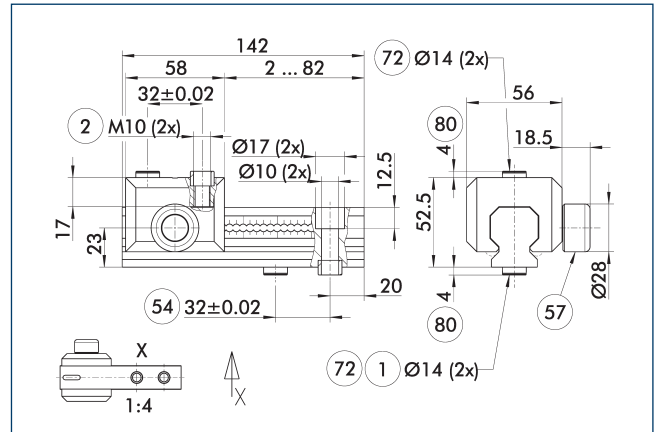


- ② Finger connection
- ⑤⑥ Included in the scope of delivery
- ⑦② Fit for centering sleeves
- ⑧① Depth of the centering sleeve hole in the counter part
- ⑧① Not included in the scope of delivery

The optional ZBA-L-plus intermediate jaws allow the screw connection diagram of the top jaws to be rotated by 90°. This makes it easier to design and produce top jaws (particularly for long versions) because no deep through-bores are required.

Description	ID	Material	Finger interface	Scope of delivery
Intermediate jaws				
ZBA-L-plus 160	0311762	Aluminum	PGN-plus 160	1

UZH 160 universal intermediate jaw

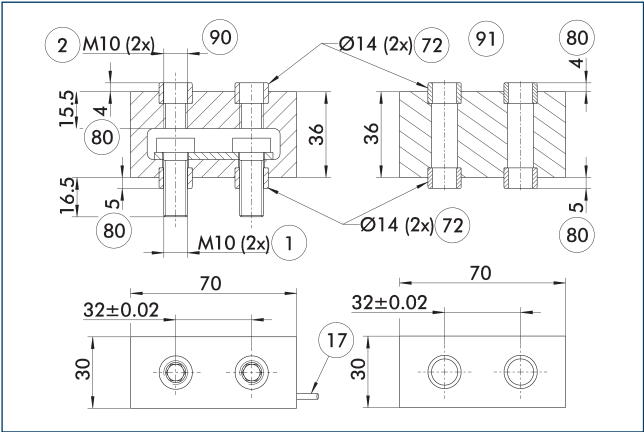


- ① Gripper connection
- ② Finger connection
- ⑤④ Optional right or left connection
- ⑤⑦ Locking
- ⑦② Fit for centering sleeves
- ⑧① Depth of the centering sleeve hole in the counter part

The drawing shows the UZH universal intermediate jaw. The fully removable UZH-S slide (can also be ordered separately) allows for a quick jaw change.

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

Force-measuring jaws FMS-ZBA/ ZBP 160



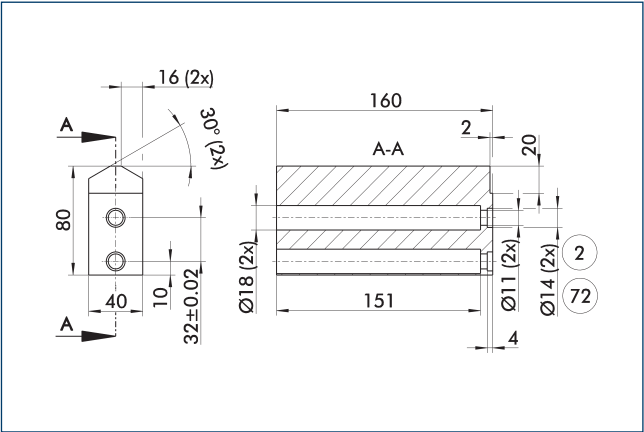
- ① Gripper connection
- ② Finger connection
- ①⑦ Cable outlet
- ⑦② Fit for centering sleeves
- ⑧① Depth of the centering sleeve hole in the counter part
- ⑨① Active intermediate jaws
- ⑨① Passive intermediate jaws

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
Active intermediate jaws		
FMS-ZBA 160	0301840	
Passive intermediate jaws		
FMS-ZBP 160	0301841	
Connection cables		
FMS-AK0200	0301820	●
FMS-AK0500	0301821	
FMS-AK1000	0301822	
FMS-AK2000	0301823	
Evaluation electronics		
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

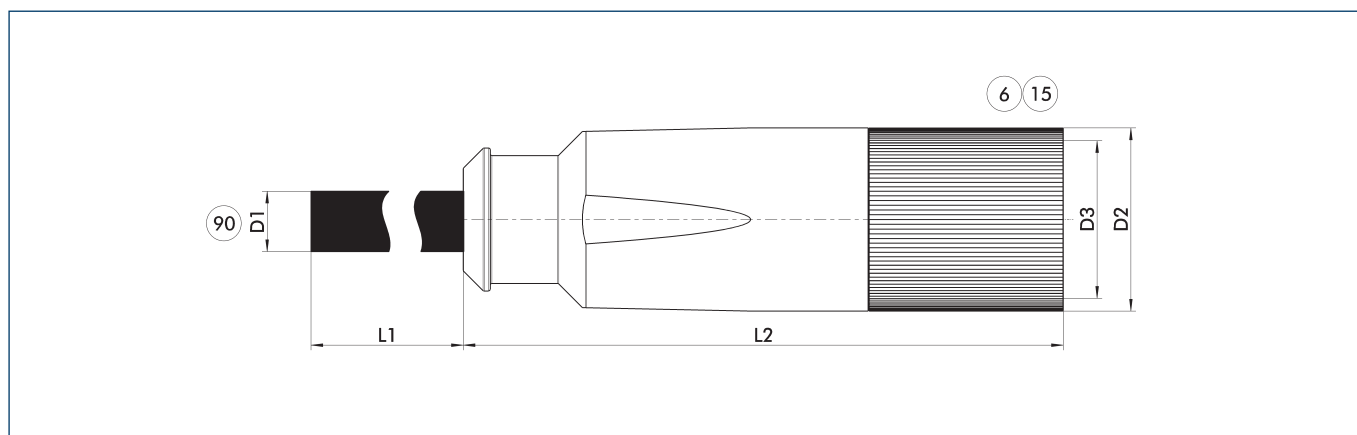


- ② Finger connection
- ⑦② Fit for centering sleeves

Finger blanks for customized remachining.

Description	ID	Material	Scope of delivery
Finger blanks			
ABR-PGZN-plus 160	0300014	Aluminum	1
SBR-PGZN-plus 160	0300024	16MnCr5	1

Power cable



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

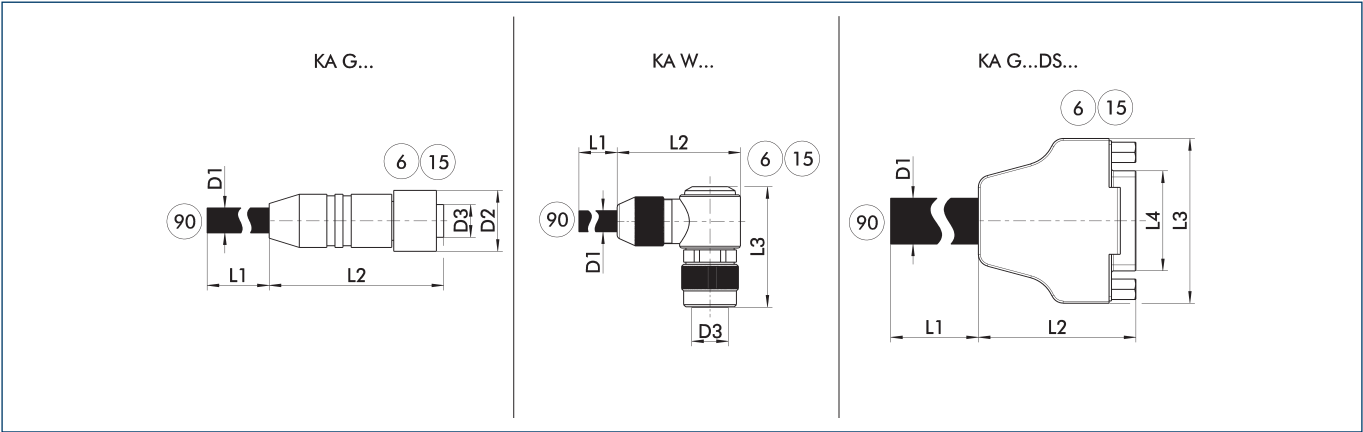
⑥ Connection module side
⑮ Socket

⑨⑩ Prefabricated to connect to the higher-level components

Description	ID	L1	D1	L2	D2	D3
		[m]	[mm]	[mm]	[mm]	
Power cable for SCHUNK ECM - cable track compatible						
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
Power cable für SCHUNK ECM - torsion compatible						
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



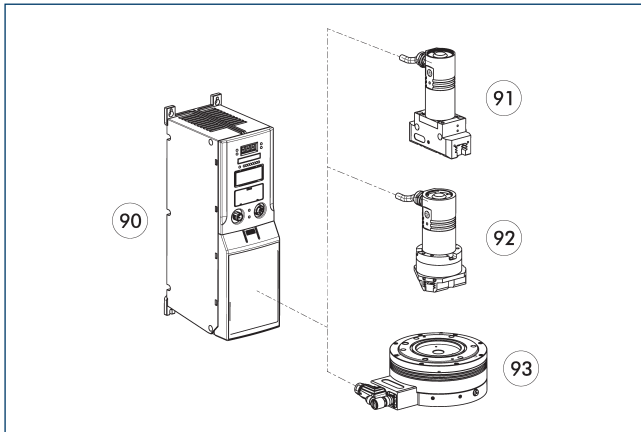
KA G...	encoder cable with straight plug	⑥	Connection module side	⑨⑩	Prefabricated for connection to the drive controller
KA W...	encoder cable with angled plug	①⑤	Socket		
KA G...DS...	Sub D encoder cable				

Connection cables such as power cables and encoder 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]	
Sensor cable for SCHUNK ECM – cable track compatible						
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-01500-7	0306472	15	9.7	57	20	M12
KA GLN1208-GK-02000-7	0306473	20	9.7	57	20	M12
Sensor cable for SCHUNK ECM – torsion compatible						
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.

SCHUNK ECM Drive controller



- ⑨① Controller
- ⑨② EGN 2-finger parallel gripper
- ⑨③ EZN 3-finger centric gripper
- ⑨④ ERS universal rotary module

The drive controller can be used for the rotary unit ERS 48V as well as for the grippers EGN and EZN. It is available with the communication interfaces Profinet, Profibus and CAN-Bus.

Description	Power supply (logic) [V]	Power supply (load) [V]
Controller		
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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