Flexible. Compact. High Performance Density.

MEG Small Components Gripper

Electric 2-finger parallel gripper with smooth-running base jaws guided on roller bearings

Field of Application

Gripping and movement of small to medium-sized workpieces with flexible force, stroke, and speed in low-contamination environment

Advantages – Your benefit

Drive design of step motor for independent actuation without pneumatics or hydraulics

External electronic system for control-intensive handling tasks with pre-positioning capability

Cross roller guidance for precise gripping through base jaw guidance with minimum play

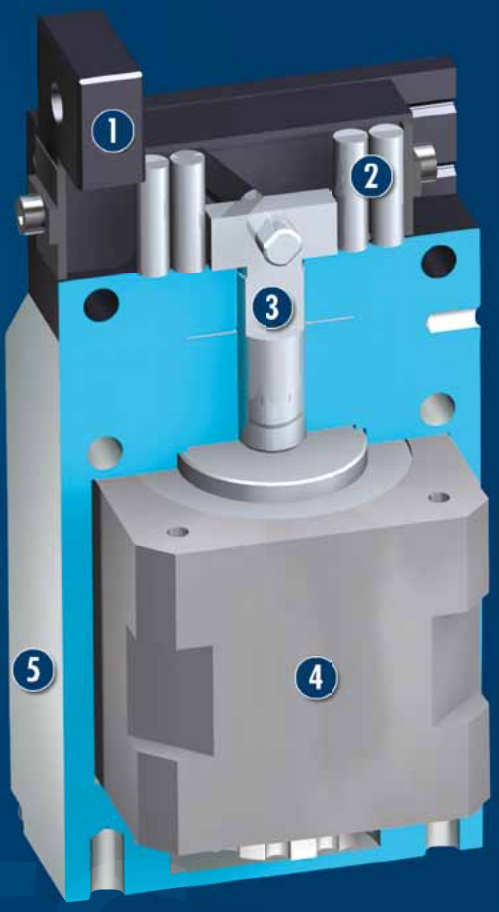
Base jaws guided on double roller bearings for low friction and smooth running

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

Sizes	Weight	Gripping force	Stroke per jaw	Workpiece weight
Quantity: 3	0.47 .. 1.42 kg	40 .. 140 N	6 .. 10 mm	0.2 .. 0.7 kg

Functional Description

The spindle is moved upwards or downwards via a step motor drive.
The lateral hooks on top of the spindle guide the angled groove of both base jaws, and this motion transfers into a synchronized opening or closing of the base fingers.



① **Base jaw**
for the connection of workpiece-specific gripper fingers

② **Cross roller guidance**
Precise gripping through base jaw guide with minimum play

③ **Wedge-hook design**
for high power transmission and centric gripping

④ **Drive**
Step motor with spindle

⑤ **Housing**
Weight-optimized through application of high-strength aluminum alloy

CAD data, operating manuals and other current product documents are available at **www.schunk.com**

General Notes about the Series

Operating principle: Wedge-hook kinematics

Housingmaterial: Aluminum alloy, coated

Base jaw material: Steel

Actuation: electrically, via step motor or spindle

Warranty: 24 months (details, general terms and conditions and operating manuals can be downloaded at www.schunk.com)

Scope of delivery: Enclosed pack with centering sleeve, assembly and operating manual with declaration of incorporation. An MEG_C external controller and a KA connection cable or similar are required for operation of the MEG gripper. These are optionally available and are 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 upper edge of the gripper housing in the direction of the main axis. The breach of the max. permitted finger length can bring higher abrasion.

Repeat accuracy: is defined as the spread of the limit position after 100 consecutive strokes.

Workpiece weight: is calculated for a force-fit connection with a coefficient of friction of 0.1 and a safety factor of 2 against slippage of the workpiece on acceleration due to gravity g. Considerably heavier workpiece weights are permitted with form-fit gripping.

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

Nominal currents: may be permanently applied. The information in the respective product documentation must be observed for all current levels beyond the rated current up to the maximum current.

Application example

Compact dual triple-axis system, electrically powered, as an automatic loading unit for small components

1. LDM Universal Linear Module
2. LDT Universal Linear Module
3. LDN Universal Linear Module
4. MEG electric 2-Finger Parallel Gripper

SCHUNK offers more ...

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

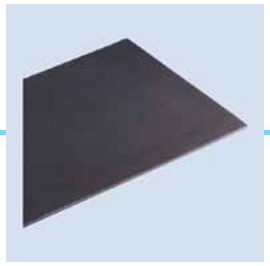
Centering Sleeves

KA Connection Cable

Control Unit

Finger Blanks

Plastic Inserts



Gripper Pads

Carbide Clamping Inserts

ⓘ Further 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

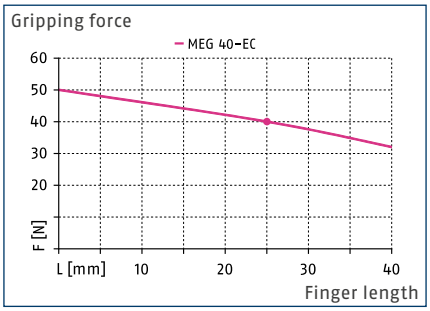
Options and special Information

External electronic system: The control of the MEG-EC gripper takes place via the separately available MEG-C external controller.
Simple homing: Via digital and analog inputs the gripper parameters force, position and speed as well as the various operating modes are predefined. The status of the gripper can be monitored via digital and analog outputs.
Connection cable KA: Connection cables in various lengths with angled or straight sleeves can be ordered for the connection of gripper and controller.

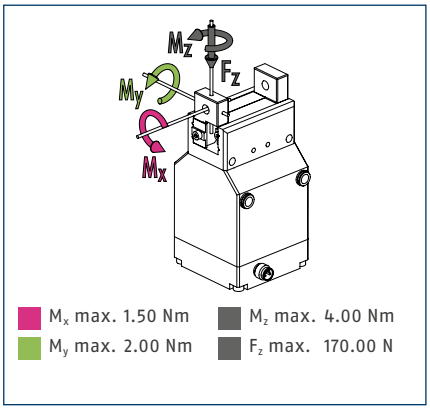
MEG 40

SCHUNK Grippers electric | 2-Finger Parallel Grippers | Small Components Gripper

Gripping force



Finger load

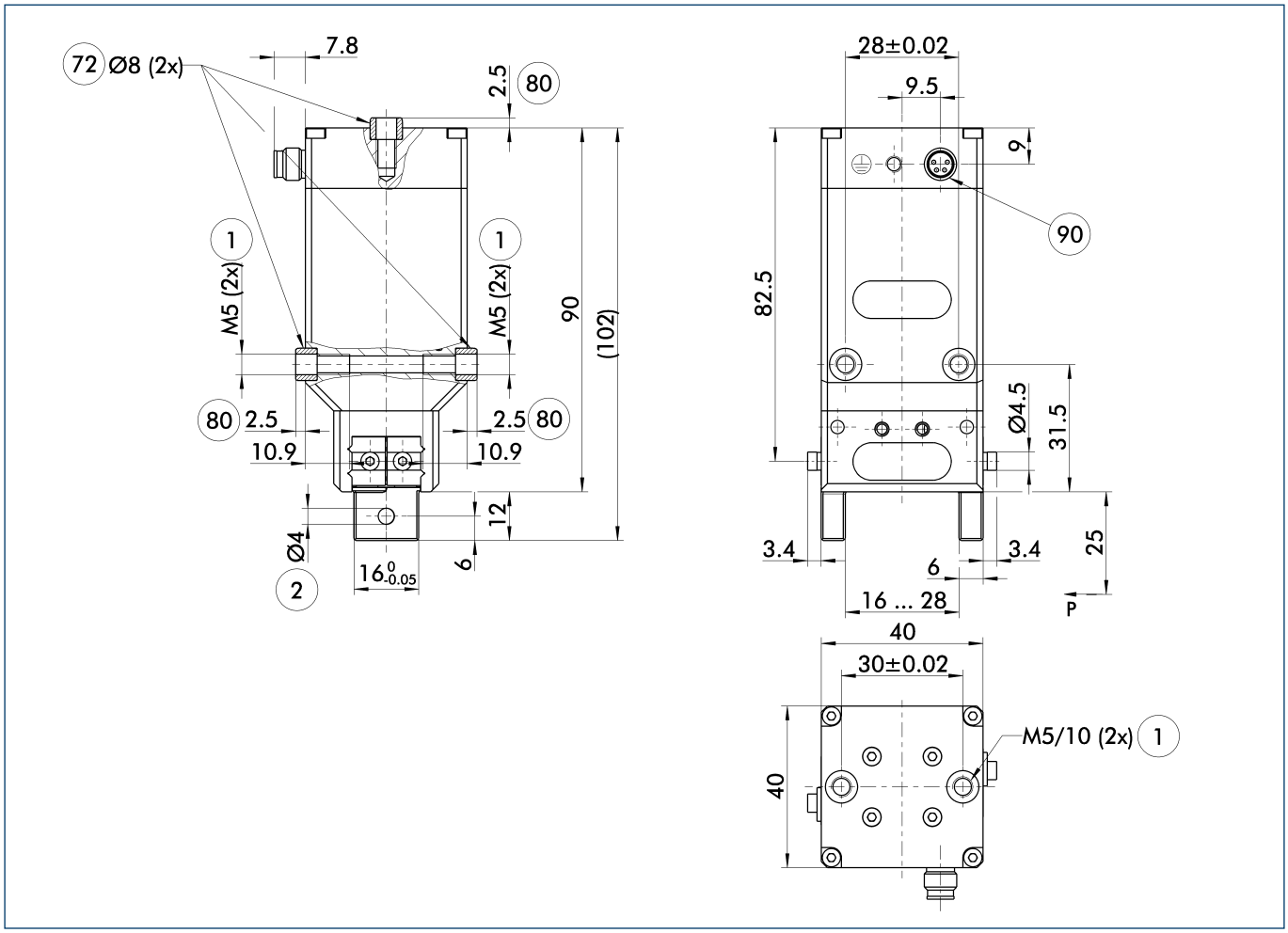


ⓘ The specified torques and forces are static values, apply for each base jaw, and may occur simultaneously. M_y may occur in addition to the torque generated by the gripping force.

Technical data

Description		MEG 40 EC
ID		0306008
General operating data		
Stroke per jaw	[mm]	6
min. / max. gripping force	[N]	35/40
Recommended workpiece weight	[kg]	0.2
max. permitted finger length	[mm]	40
max. permitted weight per finger	[kg]	0.08
Repeat accuracy	[mm]	0.02
Closing- / opening time	[s]	0.62/0.62
max. speed	[mm/s]	9.5
Weight	[kg]	0.47
min. / max. ambient temperature	[°C]	5/55
IP class		30
Electrical operating data		
Controller electronics		external
Controller type		MEG-C 040
Nominal voltage	[V DC]	24
Nominal current	[A]	0.6
max. power supply	[A]	1.5
Communication interface		Digital and analogue inputs and outputs
Number of digital inputs/outputs		2/2
Number of analouge inputs / outputs		3/3

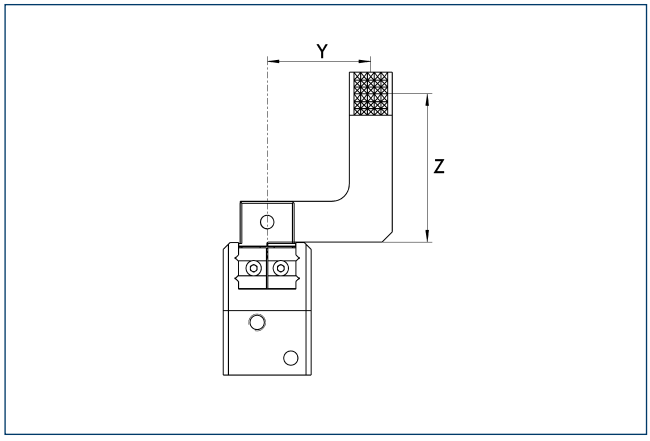
Main view

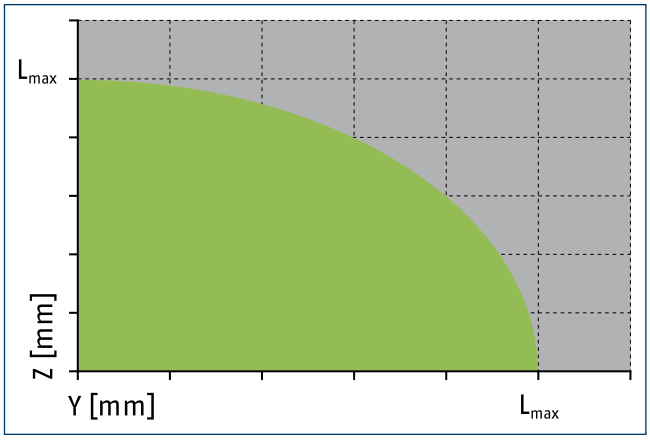


The drawing shows the basic version of the gripper with open jaws, without dimensional consideration of the options described below.

1 Gripper connection
2 Finger connection
72 Fit for centering sleeves
80 Depth of the centering sleeve hole in the mating part
90 Electrical connection

Maximum permitted finger projection

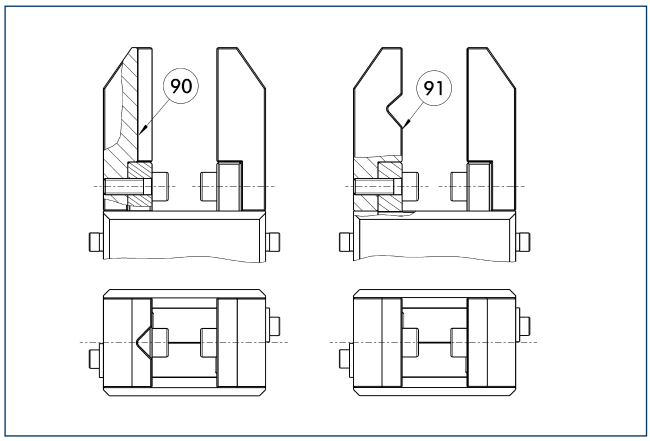




Permitted range
Inadmissible range

L_{max} is equivalent to the maximum permitted finger length, see the chart of technical specifications.

Jaw design

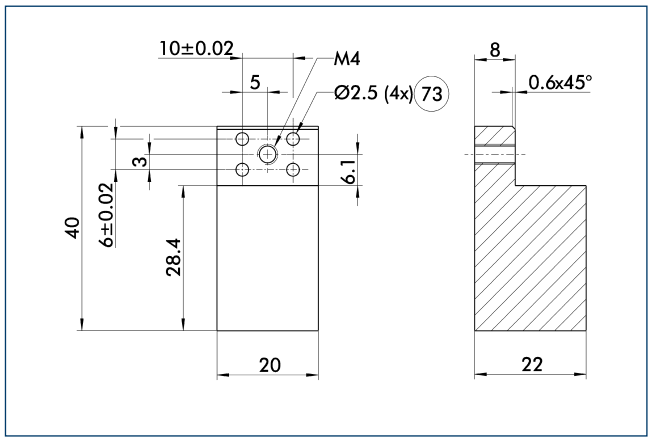


(90) Vertical prism

(91) Horizontal prism

A three-point support of the gripped workpiece is beneficial for gripping the workpiece with repeat accuracy and process reliability. More than three support points lead to a redundancy of the system. The drawing shows two alternative recommendations for the jaw design for coaxial and radial gripping of a cylindrical part.

ABR-MPG-plus 40 finger blanks

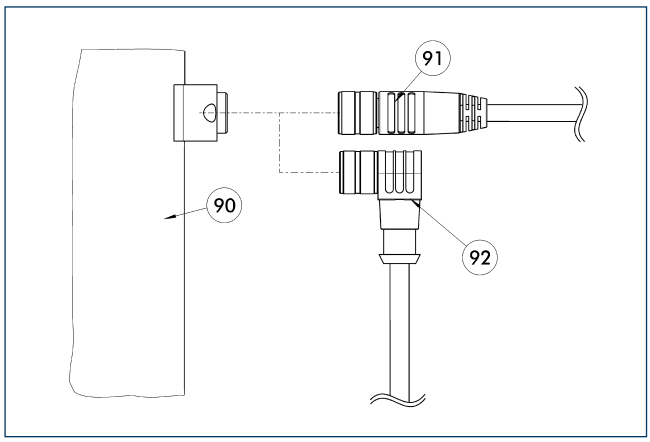


(73) Fit for centering pins

Finger blanks for customized subsequent machining.

Description	ID	Material	Scope of delivery
Finger blanks			
ABR-MPG-plus 40	0340213	Aluminum	2

Cable connector / cable extension



(90) Connecting point for component

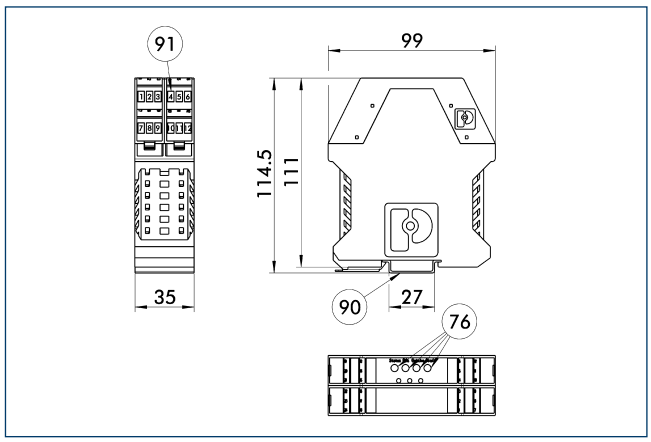
(91) Cable with straight connection

(92) Cable with angular connection

Description	ID	Length [m]	Connection electric cabinet sided	Often combined
Connection cables				
KA BG08-L 4P-0500	0307767	5	open wires	●
KA BG08-L 4P-1000	0307768	10	open wires	
KA BW08-L 4P-0500	0307765	5	open wires	
KA BW08-L 4P-1000	0307766	10	open wires	

ⓘ BG stands for a connection cable with a straight female connector and BW for an angled female connector.

Motor controller



(76) LED

(91) Terminal strips

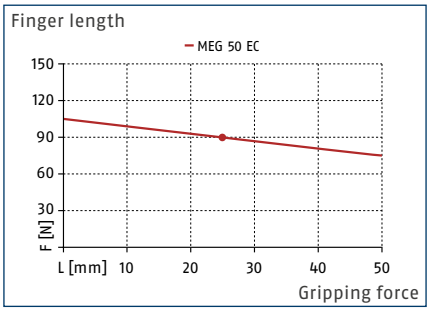
(90) Mounting on DIN rail

Description	ID	
Controller		
MEG-C-40	0307004	

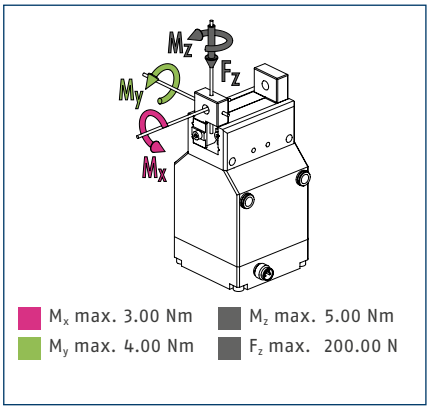
MEG 50

SCHUNK Grippers electric | 2-Finger Parallel Grippers | Small Components Gripper

Gripping force



Finger load

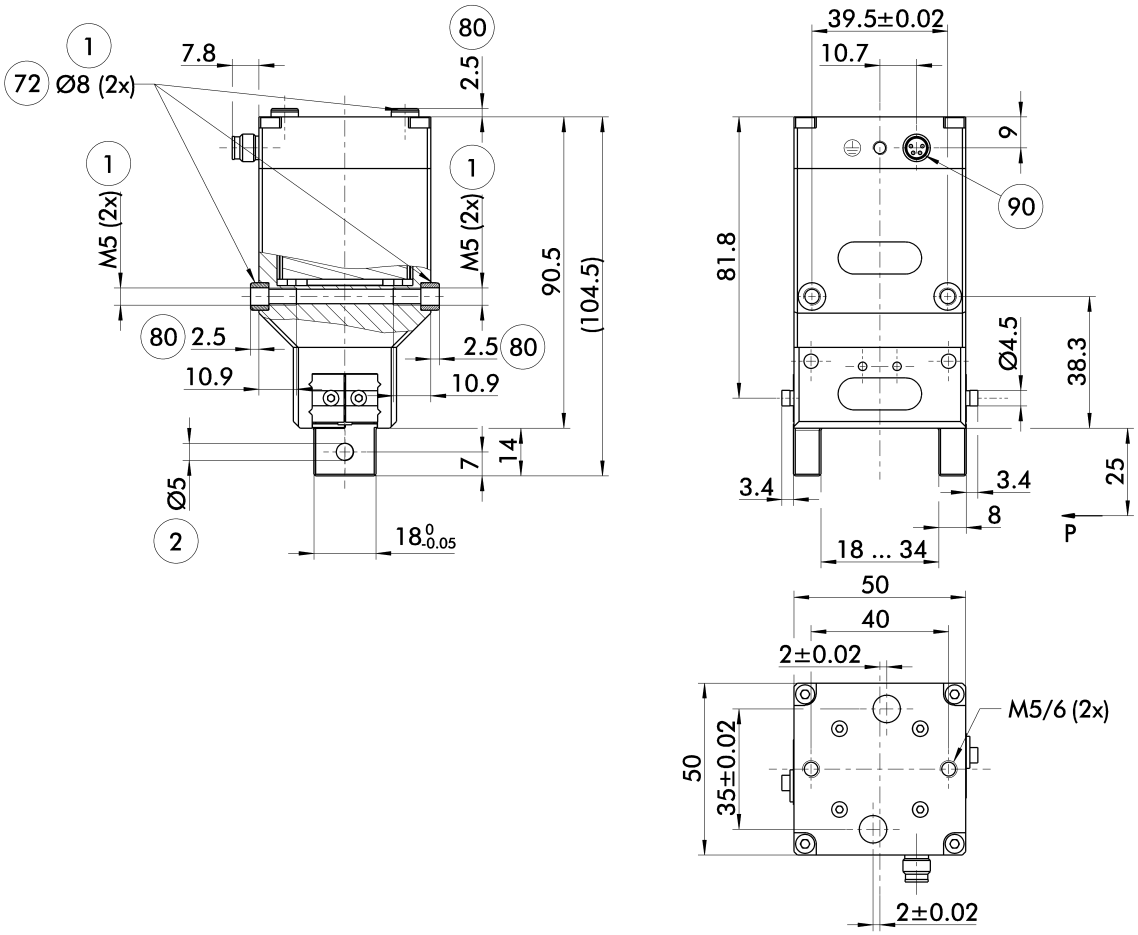


ⓘ The specified torques and forces are static values, apply for each base jaw, and may occur simultaneously. M_y may occur in addition to the torque generated by the gripping force.

Technical data

Description		MEG 50 EC
ID		0306010
General operating data		
Stroke per jaw	[mm]	8
min. / max. gripping force	[N]	60/90
Recommended workpiece weight	[kg]	0.45
max. permitted finger length	[mm]	50
max. permitted weight per finger	[kg]	0.14
Repeat accuracy	[mm]	0.02
Closing- / opening time	[s]	0.3/0.3
max. speed	[mm/s]	35
Weight	[kg]	0.71
min. / max. ambient temperature	[°C]	5/55
IP class		30
Electrical operating data		
Controller electronics		external
Controller type		MEG-C 050
Nominal voltage	[V DC]	24
Nominal current	[A]	0.9
max. power supply	[A]	1.5
Communication interface		Digital and analogue inputs and outputs
Number of digital inputs/outputs		2/2
Number of analouge inputs / outputs		3/3

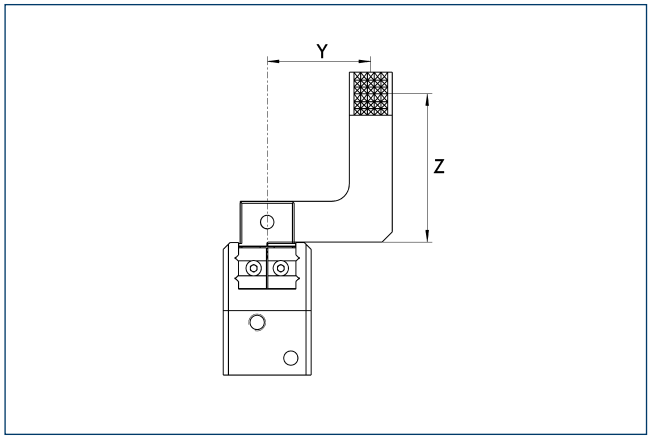
Main view

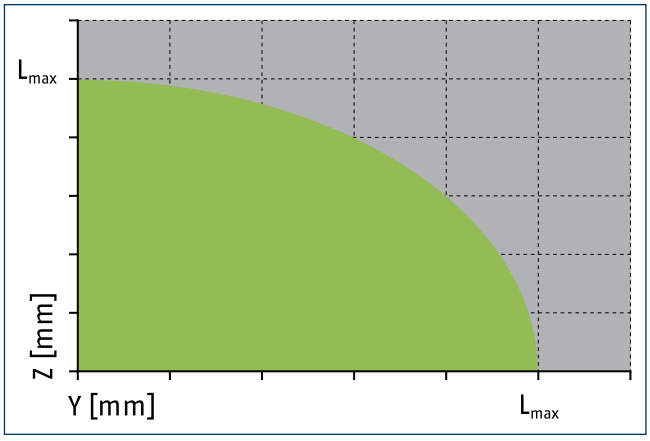


The drawing shows the basic version of the gripper with open jaws, without dimensional consideration of the options described below.

(1) Gripper connection
(2) Finger connection
(72) Fit for centering sleeves
(80) Depth of the centering sleeve hole in the mating part
(90) Electrical connection

Maximum permitted finger projection





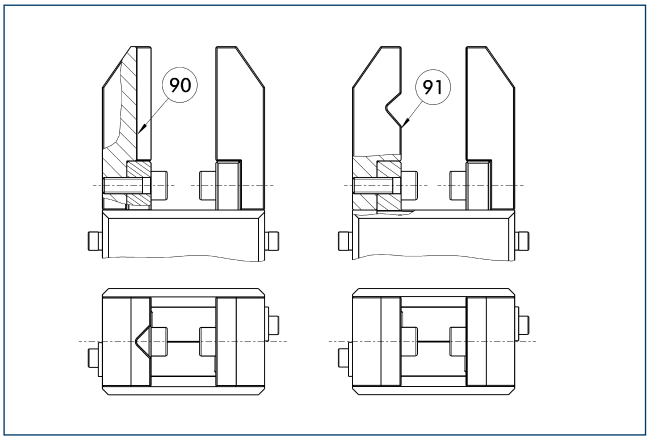
Permitted range
Inadmissible range

L_{max} is equivalent to the maximum permitted finger length, see the chart of technical specifications.

MEG 50

SCHUNK Grippers electric | 2-Finger Parallel Grippers | Small Components Gripper

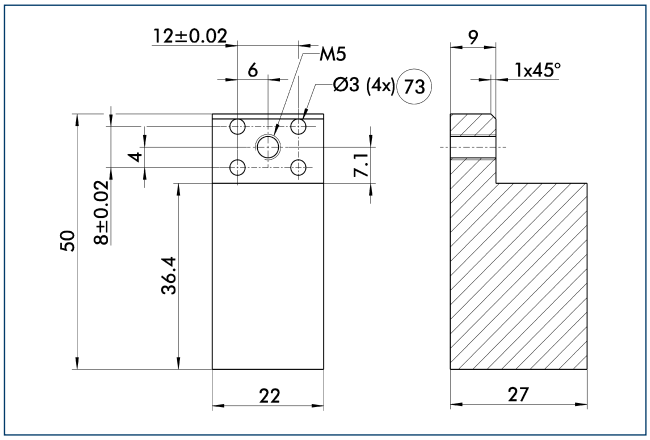
Jaw design



(90) Vertical prism
(91) Horizontal prism

A three-point support of the gripped workpiece is beneficial for gripping the workpiece with repeat accuracy and process reliability. More than three support points lead to a redundancy of the system. The drawing shows two alternative recommendations for the jaw design for coaxial and radial gripping of a cylindrical part.

ABR-MPG-plus 50 finger blanks

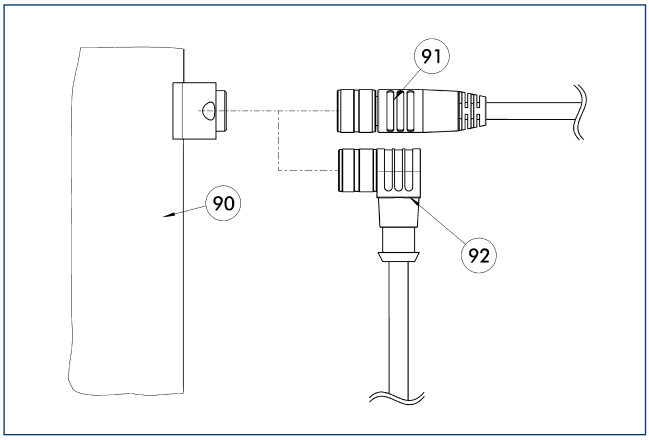


(73) Fit for centering pins

Finger blanks for customized subsequent machining.

Description	ID	Material	Scope of delivery
Finger blanks			
ABR-MPG-plus 50	0340214	Aluminum	2

Cable connector / cable extension

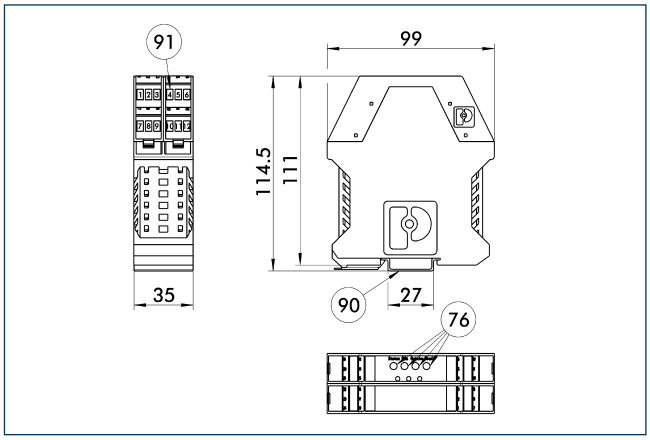


(90) Connecting point for component
(91) Cable with straight connection
(92) Cable with angular connection

Description	ID	Length [m]	Connection electric cabinet sided	Often combined
Connection cables				
KA BG08-L 4P-0500	0307767	5	open wires	●
KA BG08-L 4P-1000	0307768	10	open wires	
KA BW08-L 4P-0500	0307765	5	open wires	
KA BW08-L 4P-1000	0307766	10	open wires	

ⓘ BG stands for a connection cable with a straight female connector and BW for an angled female connector.

Motor controller



(76) LED
(91) Terminal strips
(90) Mounting on DIN rail

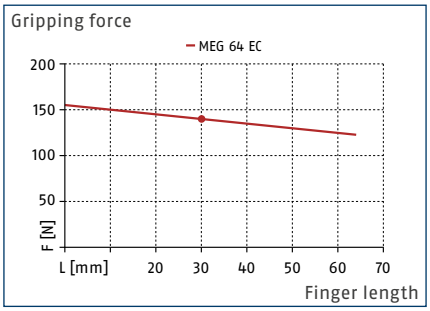
Description	ID	
Controller		
MEG-C-50	0307005	

Notes

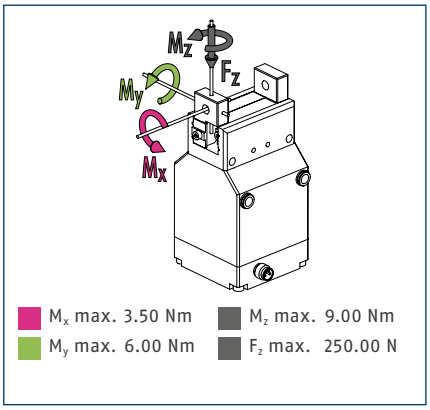
MEG 64

SCHUNK Grippers electric | 2-Finger Parallel Grippers | Small Components Gripper

Gripping force



Finger load

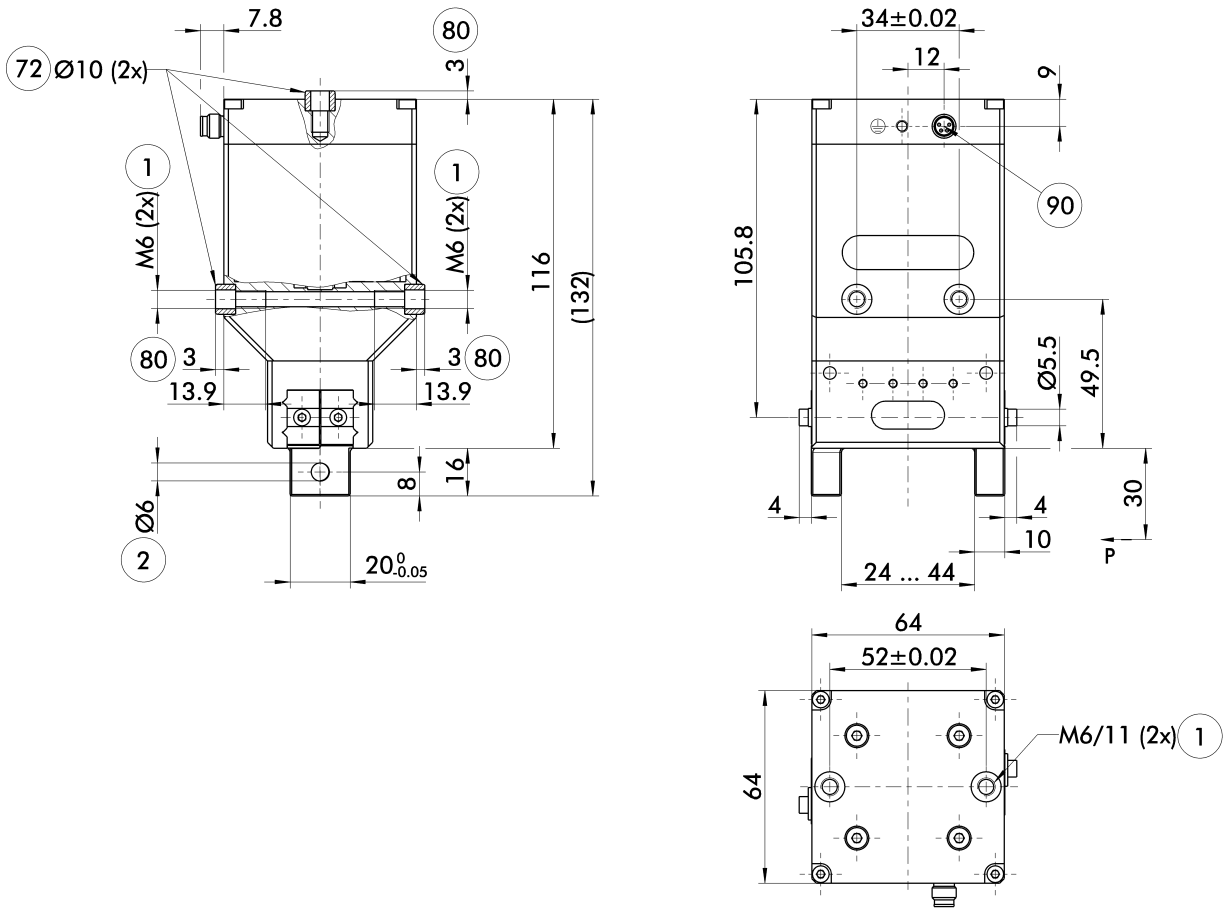


ⓘ The specified torques and forces are static values, apply for each base jaw, and may occur simultaneously. M_y may occur in addition to the torque generated by the gripping force.

Technical data

Description		MEG 64 EC
ID		0306012
General operating data		
Stroke per jaw	[mm]	10
min. / max. gripping force	[N]	40/140
Recommended workpiece weight	[kg]	0.7
max. permitted finger length	[mm]	64
max. permitted weight per finger	[kg]	0.24
Repeat accuracy	[mm]	0.02
Closing- / opening time	[s]	0.6/0.6
max. speed	[mm/s]	17
Weight	[kg]	1.42
min. / max. ambient temperature	[°C]	5/55
IP class		30
Electrical operating data		
Controller electronics		external
Controller type		MEG-C 064
Nominal voltage	[V DC]	24
Nominal current	[A]	1.3
max. power supply	[A]	1.5
Communication interface		Digital and analogue inputs and outputs
Number of digital inputs/outputs		2/2
Number of analouge inputs / outputs		3/3

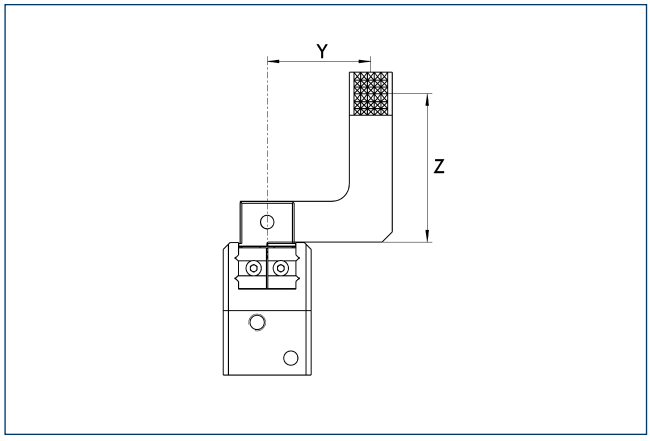
Main view

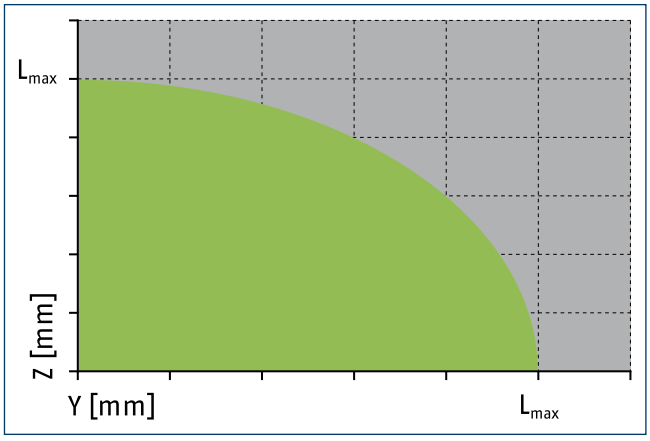


The drawing shows the basic version of the gripper with open jaws, without dimensional consideration of the options described below.

1 Gripper connection
2 Finger connection
72 Fit for centering sleeves
80 Depth of the centering sleeve hole in the mating part
90 Electrical connection

Maximum permitted finger projection

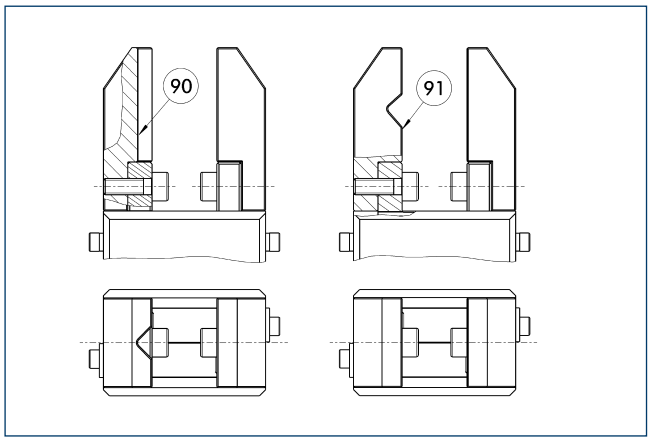




Permitted range
Inadmissible range

L_{max} is equivalent to the maximum permitted finger length, see the chart of technical specifications.

Jaw design



(90) Vertical prism

(91) Horizontal prism

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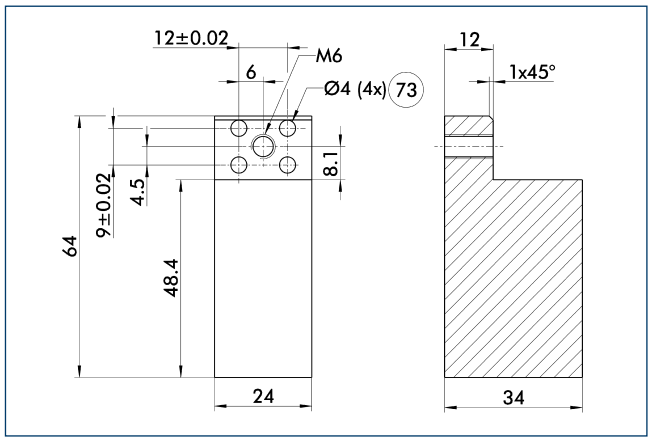
ABR-MPG-plus 64 finger blanks

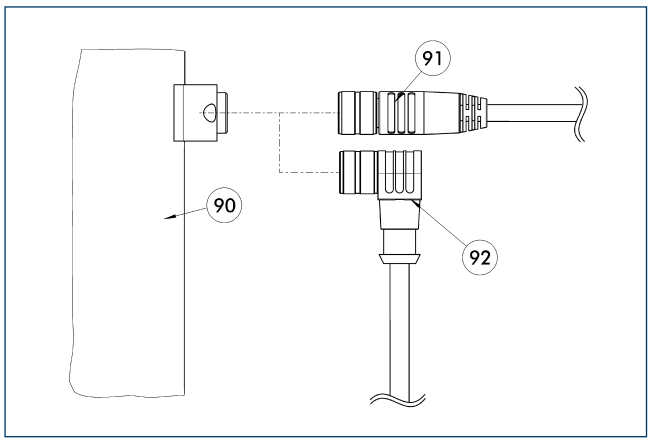


(73) Fit for centering pins

Finger blanks for customized subsequent machining.

Description	ID	Material	Scope of delivery
Finger blanks			
ABR-MPG-plus 64	0340215	Aluminum	2

Cable connector / cable extension



(90) Connecting point for component

(91) Cable with straight connection

(92) Cable with angular connection

Description	ID	Length [m]	Connection electric cabinet sided	Often combined
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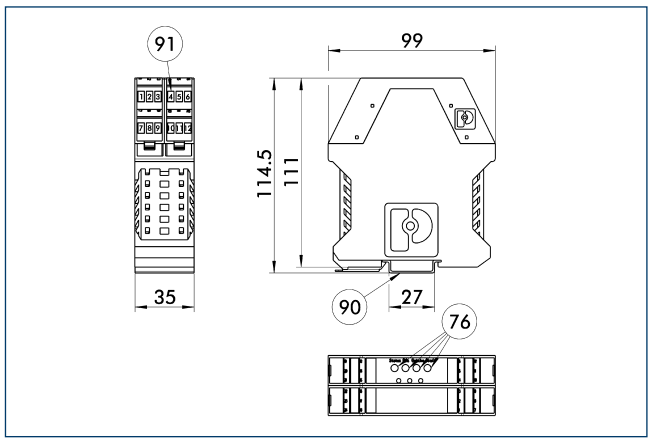
KA BG08-L 4P-1000	0307768	10	open wires	
KA BW08-L 4P-0500	0307765	5	open wires	
KA BW08-L 4P-1000	0307766	10	open wires	

ⓘ BG stands for a connection cable with a straight female connector and BW for an angled female connector.

Motor controller



(76) LED

(91) Terminal strips

(90) Mounting on DIN rail

Description	ID	
Controller		
MEG-C-64	0307006	

Notes