



Superior Clamping and Gripping



## Product Information

Magnetic gripper EGM

# EGM

Magnetic gripper

## Strong. Simple Control. Compact.

### Magnet gripper EGM

Electro-permanent magnetic gripper for energy-efficient handling of ferromagnetic workpieces

#### Field of application

Universal compact gripper for large diversity of parts in clean to slightly contaminated work environment



#### Advantages – Your benefits

**High holding forces at lowest space** for reliable part handling in compact machines

**Low weight** for high dynamics in challenging applications

**Reliable holding force maintenance** to ensure process reliable operation even in scenarios with emergency stop

**Energy efficiency:** electricity is only required for magnetization and demagnetization for an economic and careful management of resources

**Variable number of magnetic poles and adaptation possibilities to any common robot** to ensure the optimum adaption to each application

**Workpiece accessibility from five sides free from interfering contours** by unnecessary gripper fingers



Sizes  
Quantity: 4



Weight  
1 .. 25 kg



Max. workpiece  
weight  
118 kg



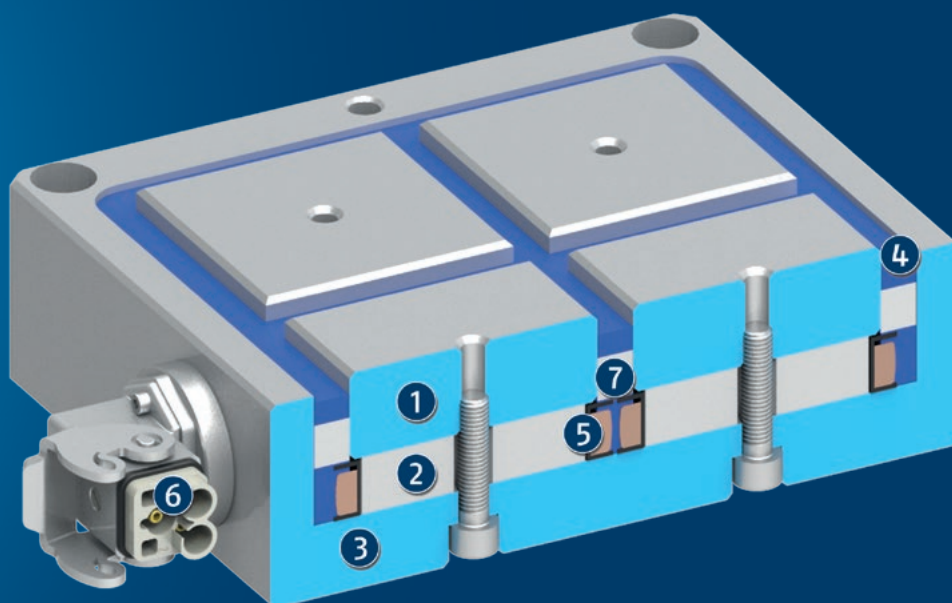
Max. magnetic surface  
196 cm<sup>2</sup>

## Functional description

The function of the magnetic gripper bases on the combination of AlNiCo and neodymium magnets. The magnetic flux of the AlNiCo magnets passes the neodymium magnet in the deactivated state, and closes the magnetic circuit over the gripper base body made of steel. To activate the system, an electric current pulse is conducted through the

coil, which reverses the polarity of the AlNiCo magnets accordingly.

The magnetic flux can not pass the Neodym magnets anymore and has to pass via the workpiece into the opposite pole, creating a holding force.

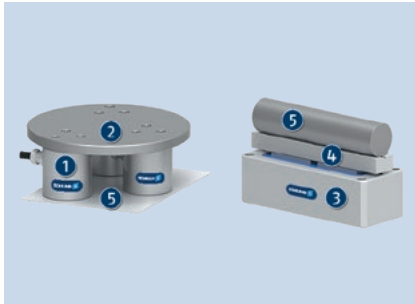


- ① **Steel poles with bore**  
for comfortable adaption of individualized pole extensions
- ② **Polarity reversible AlNiCo-magnet**  
surrounded by an electromagnetic coil
- ③ **One-piece base body made of steel**  
for optimal guidance of the magnetic flux

- ④ **Potting compound of synthetic resin**  
Prevents the penetration of coolant and chips
- ⑤ **Copper coil**  
for pole reversal of the AlNiCo-magnets
- ⑥ **Cable connector of Harting**  
ensures safe connection
- ⑦ **Non-pole reversing neodymium permanent magnets**  
lead the magnetic flux via the workpiece

### Detailed functional description

#### Gripping metal sheets or round components



The magnetic gripper EGM can be arranged or equipped as appropriate for the workpiece. The monopole grippers EGM-M are ideal for metal sheets, and are also suitable for handling larger sheets in multiple arrangements. Using pole extensions, the bi-poles EGM-B can also handle round workpieces. The pole extensions are supplied with mounting materials.

- ① Magnetic gripper EGM-M
- ② Adapter plate (customized) for EGM
- ③ Magnetic gripper EGM-B
- ④ Pole extensions PVL
- ⑤ Workpiece

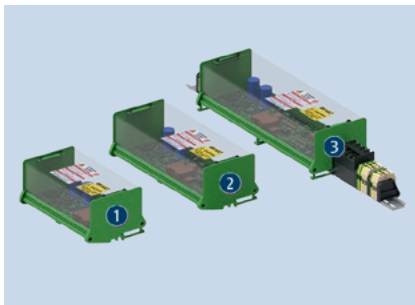
#### Plug-in connector for EGM



Magnetic grippers EGM are directly equipped with plug-in connectors. For the magnetic monopole grippers (EGM-M), these are attached to the gripper via a connection cable. This allows for flexible routing. For the bi-pole grippers EGM-B, the plug connectors are connected to the housing. The cable outlet can be turned in 90° increments.

- ① Magnetic gripper EGM-M
- ② Magnetic gripper EGM-B
- ③ Plug connector

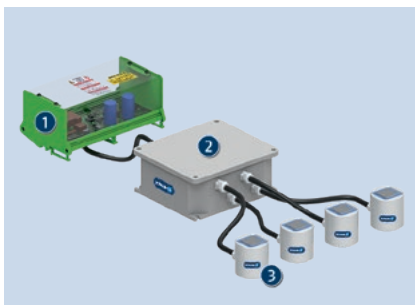
#### Selecting the magnet controller



To control the magnetic gripper, three controllers are available each in two performance categories. The standard controller ECG-C is used to magnetize/demagnetize and can be actuated via digital I/O. For the controller ECG-R, the output of the magnetic gripper can be controlled with up to eight levels via digital signals. The controller ECG-W is particularly designed for applications in the direct welding area.

- ① Magnetic controller ECG-C
- ② Magnetic controller ECG-R
- ③ Magnetic controller ECG-W

#### Simultaneous actuation of several EGMs



The magnetic gripper EGM is controlled by an control unit ECG. A control unit can be used to control up to 32 magnetic grippers, depending on the size. A simple connection of up to eight magnets is possible using a junction box. This can be positioned freely in the field.

- ① Control unit ECG
- ② Distributor box JBOX
- ③ Magnet gripper EGM

## Ordering example

EGM - M - Q - 8 - 1 - FX

### Description

EGM

### Magnet type

M= monopole

B= Bipole (with threads for pole extension)

### Pole form

Q = square

L= oblong

### Pole width

8 mm

15 mm

30 mm

32 mm

50 mm

70 mm

### Number of poles, pole arrangement

1= one pole

1 x 2= one row, two poles

1 x 4= one row, four poles

2 x 2= two rows, two poles

### Electrical interface

FX= fixed cable outlet (30 cm cable)

--= Connection plug on EGM

## General notes about the series

**Operating principle:** Magnetization of permanent magnets

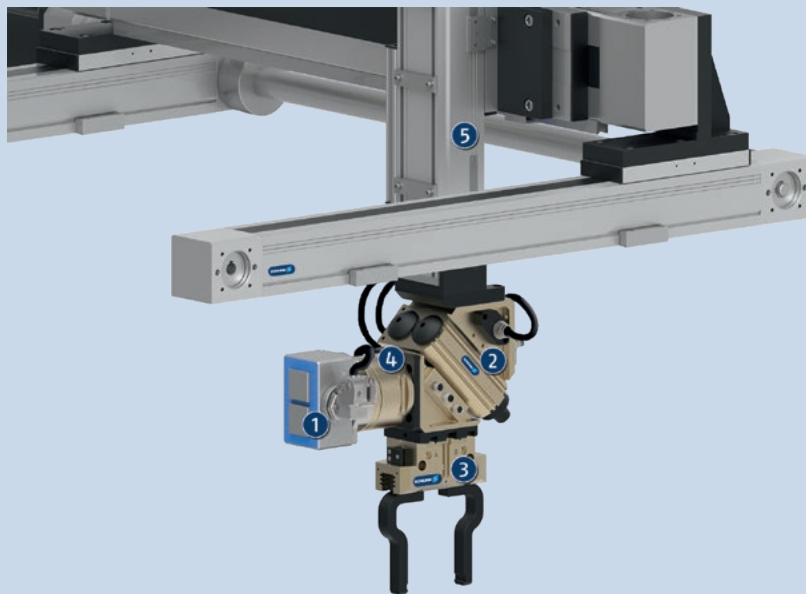
**Housing material:** Steel

**Base jaw material:** Steel

**Actuation:** Electrical current pulse for activation and deactivation of the system

**Warranty:** 24 months

**Scope of delivery:** Accessory kit with centering sleeves



## Application example

Electrically drive three-axis gantry with double gripper unit comprising electric magnetic gripper and pneumatic gripper, for the handling of a wide variety of workpieces.

- ① Magnet gripper EGM
- ② Swivel head SRH-plus
- ③ 2-finger parallel gripper PGN-plus

- ④ Compensation unit AGE-XY
- ⑤ Room gantry, electric RPE

## SCHUNK offers more ...

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



magnetic controller



Distributor box



Handpanel



Gaussmeter



Power cable



Pole extension

① For more information on these products can be found on the following product pages or at [schunk.com](http://schunk.com).

## Options and special information

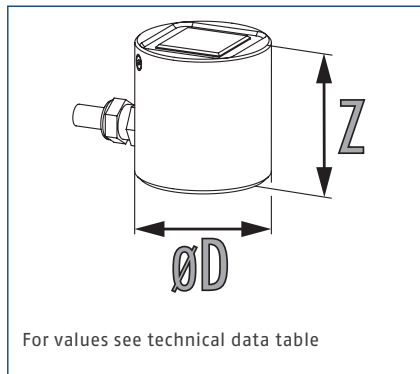
**Control via external controller:** Electrical control of the gripper takes place via the controller, which is separately available on request. The interface to the control unit is provided by digital I/O.

# EGM M-Q

Magnetic gripper



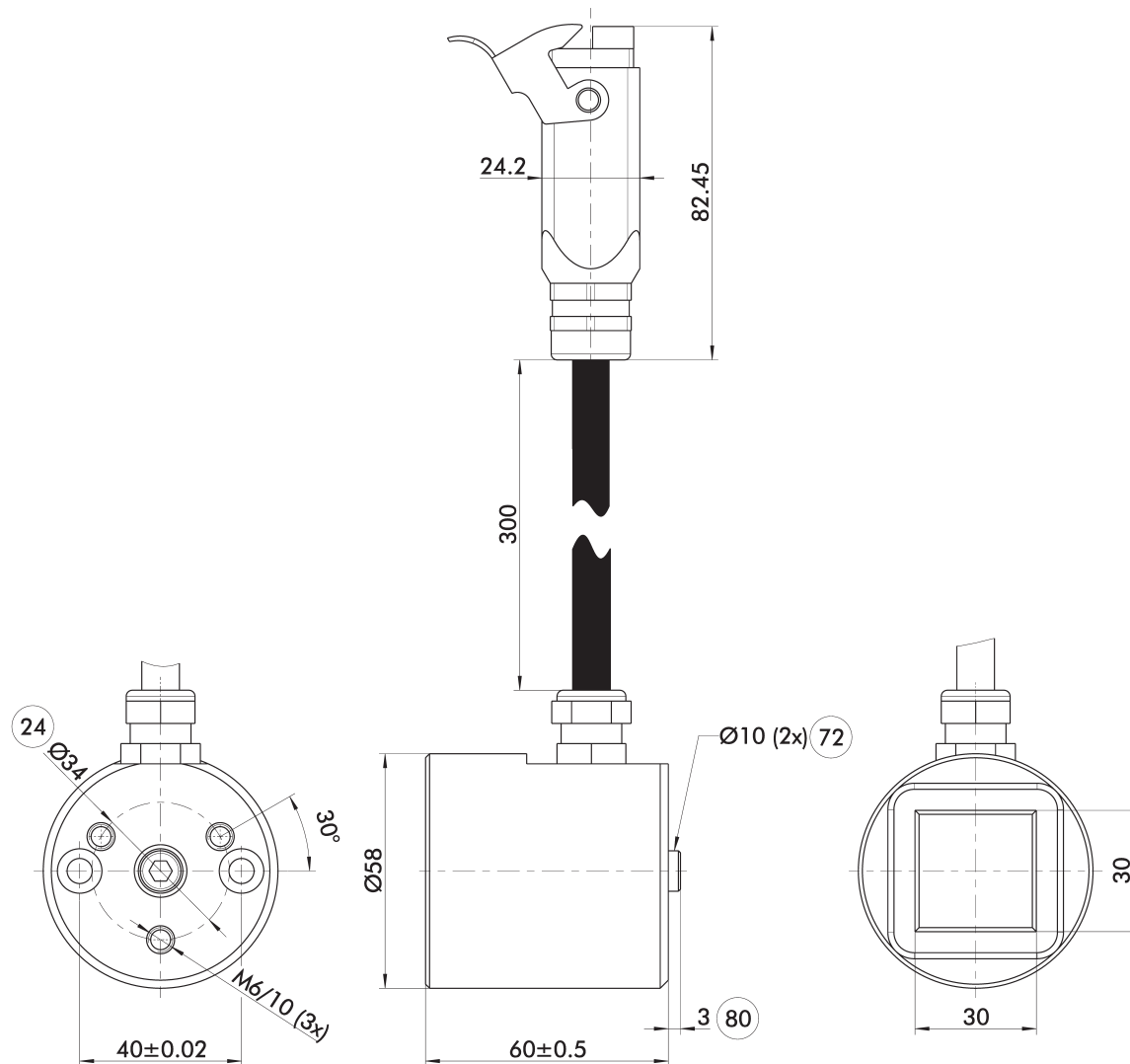
## Dimensions



## Technical data

| Description                                                        |                    | EGM-M-Q-30-1-FX | EGM-M-Q-50-1-FX | EGM-M-Q-70-1-FX |
|--------------------------------------------------------------------|--------------------|-----------------|-----------------|-----------------|
| ID                                                                 |                    | 0306350         | 0306351         | 0306352         |
| Weight                                                             | [kg]               | 1.3             | 3.45            | 7.1             |
| Number of poles                                                    |                    | 2               | 2               | 2               |
| Magnet area                                                        | [cm <sup>2</sup> ] | 18.4            | 50.4            | 98.1            |
| Minimum workpiece thickness                                        | [mm]               | 6               | 12              | 16              |
| Payload for horizontal magnet surface                              | [kg]               | 18              | 80              | 165             |
| Payload for vertical magnet surface                                | [kg]               | 7               | 32              | 65              |
| Max. activations/minute                                            | [1/min]            | 20              | 6               | 10              |
| Module temperature increasement in case of 5/15 activations/minute | [°C]               | 13/33           | 37/80           | 24/53           |
| IP protection class                                                |                    | 54              | 54              | 54              |
| Current consumption upon activation/deactivation                   | [A]                | 3               | 2.3             | 3.1             |
| Cable length                                                       | [cm]               | 30              | 30              | 30              |
| Dimensions Ø D x Z                                                 | [mm]               | 58 x 60         | 98 x 65         | 129.5 x 75      |
| <b>Magnet controller data</b>                                      |                    |                 |                 |                 |
| Magnet controller type                                             |                    | ECG 01          | ECG 02          | ECG 02          |
| Nominal voltage                                                    | [V AC]             | 400             | 400             | 400             |
| Max. current                                                       | [A]                | 32              | 32              | 32              |
| Max. number of modules per controller                              |                    | 28              | 26              | 19              |

## EGM-M 30Q-1FX main view



The drawing shows the magnet gripper in basis configuration, without any additional accessories.

24 Bolt circle

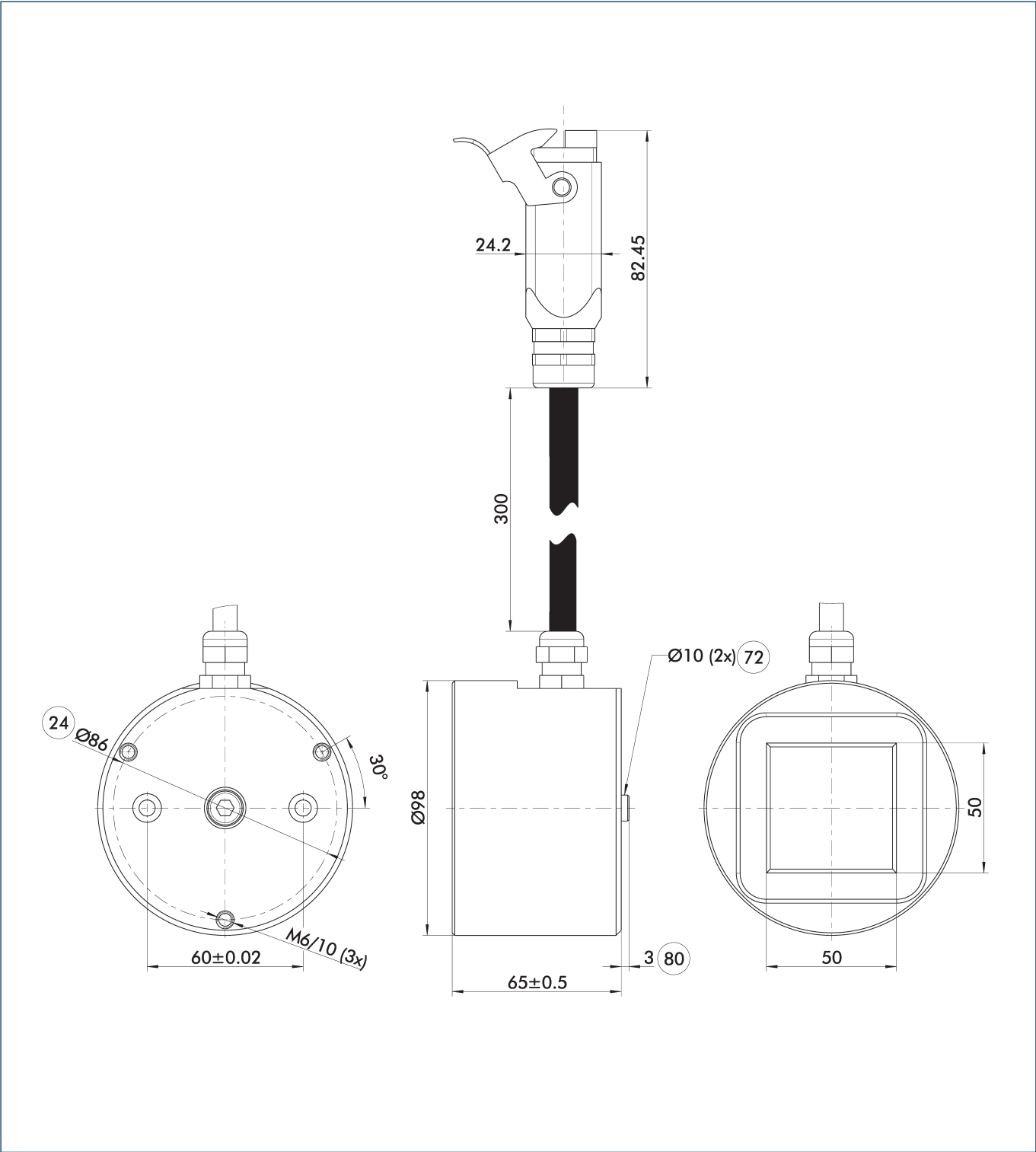
72 Fit for centering sleeves

80 Depth of the centering sleeve hole in the counter part

# EGM M-Q

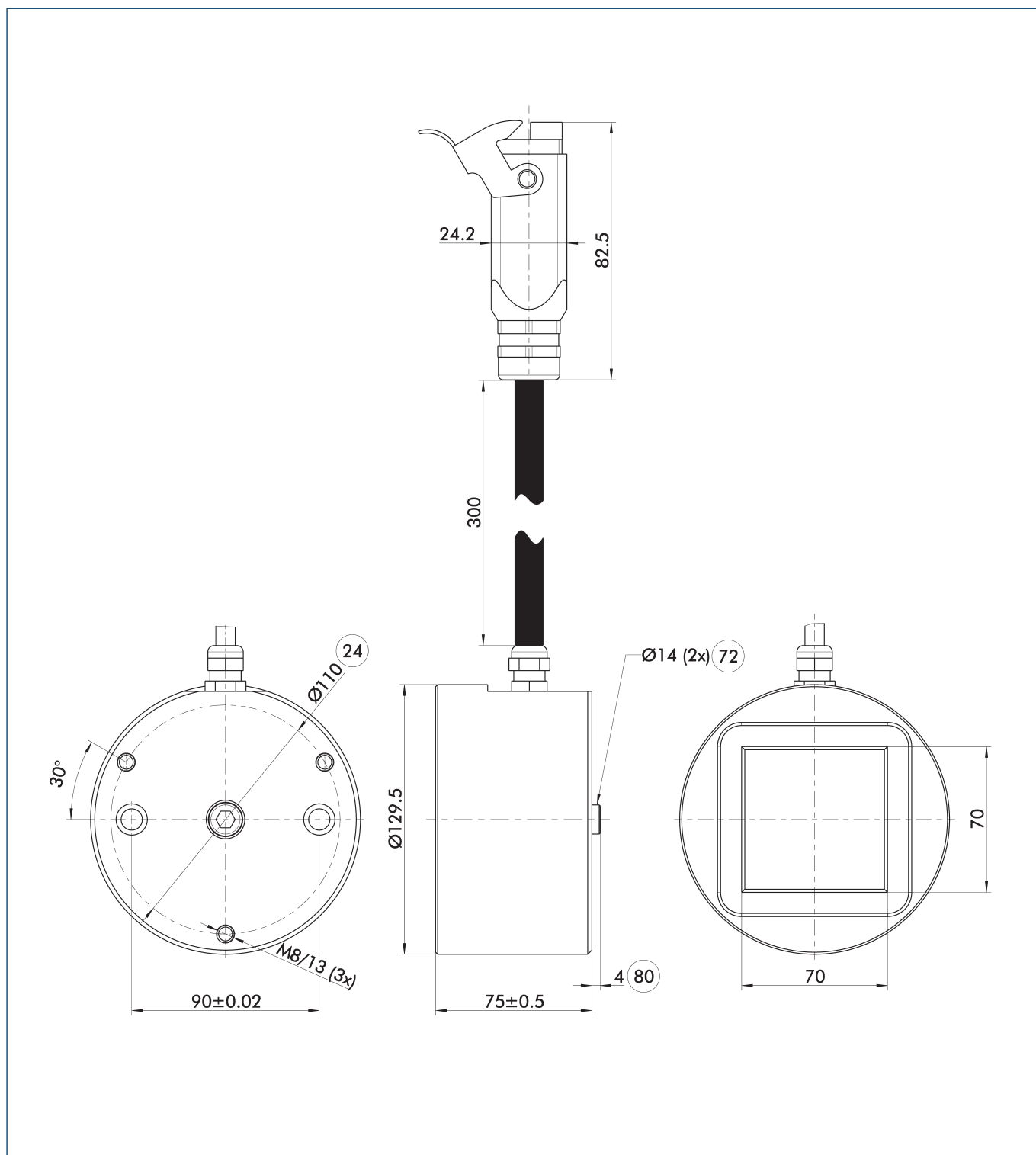
Magnetic gripper

EGM-M 50Q-1FX main view



The drawing shows the magnet gripper in basis configuration, without any additional accessories.

## EGM-M 70Q-1FX main view



The drawing shows the magnet gripper in basis configuration, without any additional accessories.

24 Bolt circle

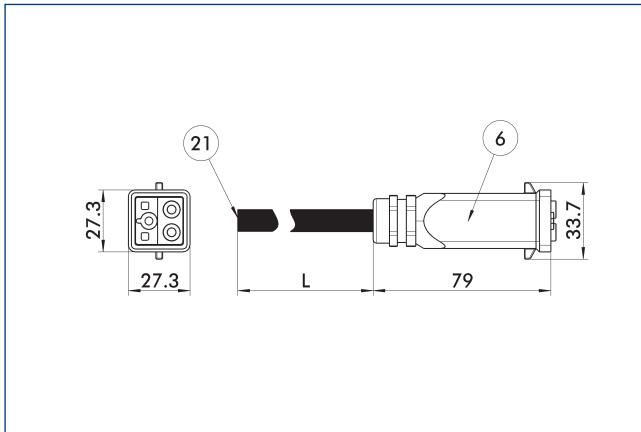
72 Fit for centering sleeves

80 Depth of the centering sleeve hole in the counter part

# EGM M-Q

## Magnetic gripper

### Connection cables

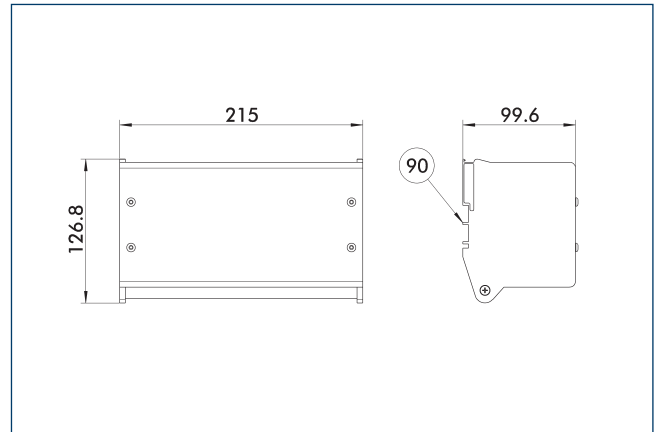


- ⑥ Connection module side      ②① Connection controller side

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  $\pm 180^\circ/\text{m}$ .

| Description           | ID      | L1  |
|-----------------------|---------|-----|
|                       |         | [m] |
| Connection cable EGM  |         |     |
| KA GLNQS03-LK-00500-J | 0306302 | 5   |
| KA GLNQS03-LK-01000-J | 0306303 | 10  |
| KA GLNQS03-LK-01500-J | 0306304 | 15  |
| KA GLNQS03-LK-02000-J | 0306305 | 20  |

### Magnetic controller ECG-C



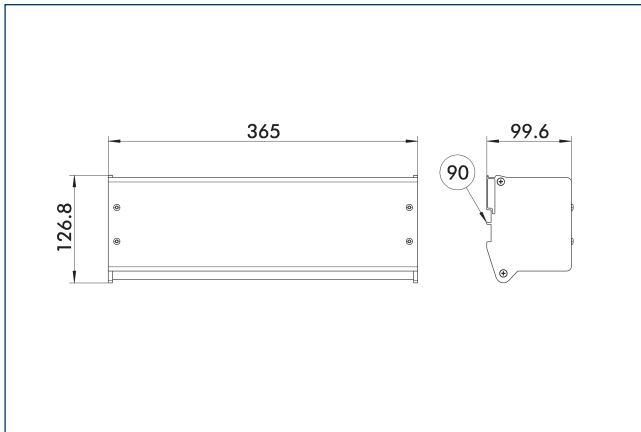
- ⑨⑩ Mounting on top-hat rail

An ECG control unit is required for actuating the EGM. The "C" version allows digital switching of the EGM.

| Description                                     | ID      | Power supply (load) |
|-------------------------------------------------|---------|---------------------|
|                                                 |         | [V AC]              |
| Magnetic controller for EGM with digital switch |         |                     |
| ECG-C 01                                        | 0306300 | 400                 |
| ECG-C 02                                        | 0306301 | 400                 |

- ① One ECG can control several magnets at the same time. For independent actuation of several magnets, several control units are needed.

### Magnetic controller ECG-W



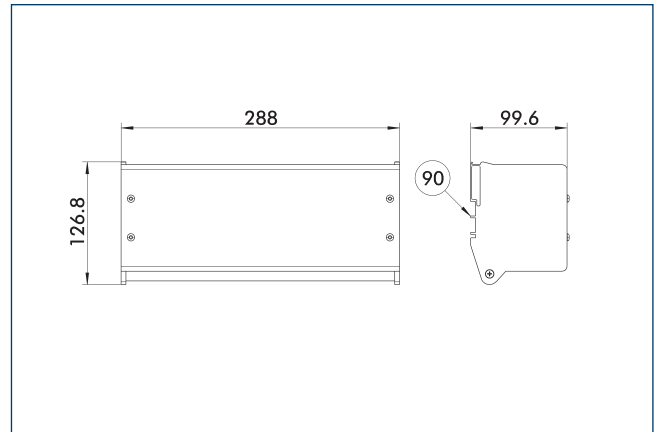
- ⑨⑩ Mounting on top-hat rail

An ECG control unit is required for actuating the EGM. Version "W" enables digital switching of the EGM while holding a workpiece during the welding process.

| Description                                                                | ID      | Power supply (load) |
|----------------------------------------------------------------------------|---------|---------------------|
|                                                                            |         | [V AC]              |
| Magnetic controller for EGM with digital switch during the welding process |         |                     |
| ECG-W 01                                                                   | 0306395 | 400                 |
| ECG-W 02                                                                   | 0306396 | 400                 |

- ① One ECG can control several magnets at the same time. For independent actuation of several magnets, several control units are needed.

### Magnetic controller ECG-R



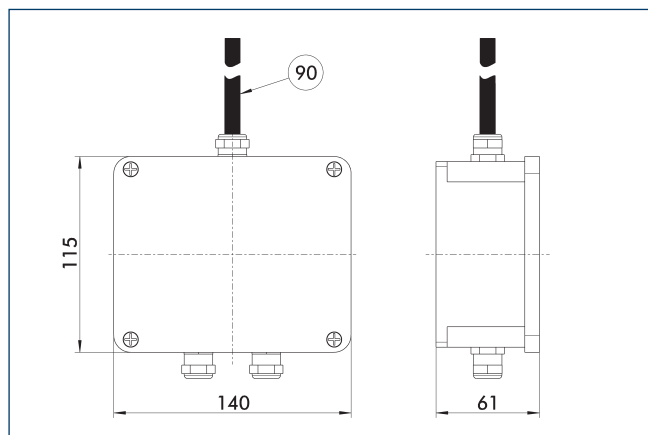
- ⑨⑩ Mounting on top-hat rail

An ECG control unit is required for actuating the EGM. Version "R" enables force control in eight force levels.

| Description                                    | ID      | Power supply (load) |
|------------------------------------------------|---------|---------------------|
|                                                |         | [V AC]              |
| Magnetic controller for EGM with force control |         |                     |
| ECG-R 02                                       | 0306391 | 400                 |

- ① One ECG can control several magnets at the same time. For independent actuation of several magnets, several control units are needed.

## 2-way distributor box

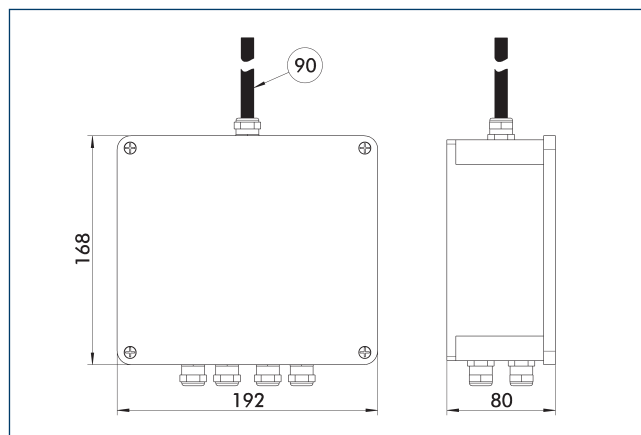


90 Cable length 10 m, open wires

Several EGMs can be connected to the distributor box. This simplifies the wiring of the EGMS with the ECG controller.

| Description           | ID      |  |
|-----------------------|---------|--|
| 2-way distributor box |         |  |
| EGM-JB 2              | 0306432 |  |

## 4-way distributor box

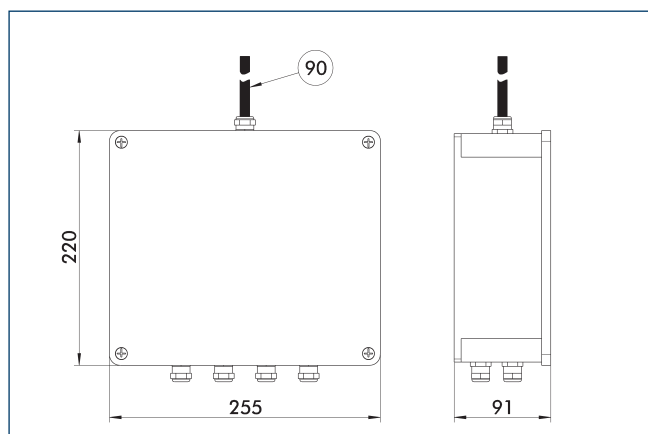


90 Cable length 10 m, open wires

Several EGMs can be connected to the distributor box. This simplifies the wiring of the EGMS with the ECG controller.

| Description           | ID      |  |
|-----------------------|---------|--|
| 4-way distributor box |         |  |
| EGM-JB 4              | 0306434 |  |

## 8-way distributor box



90 Cable length 10 m, open wires

Several EGMs can be connected to the distributor box. This simplifies the wiring of the EGMS with the ECG controller.

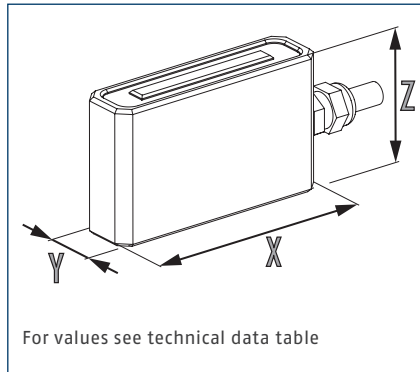
| Description           | ID      |  |
|-----------------------|---------|--|
| 8-way distributor box |         |  |
| EGM-JB 8              | 0306438 |  |

# EGM M-L

Magnetic gripper



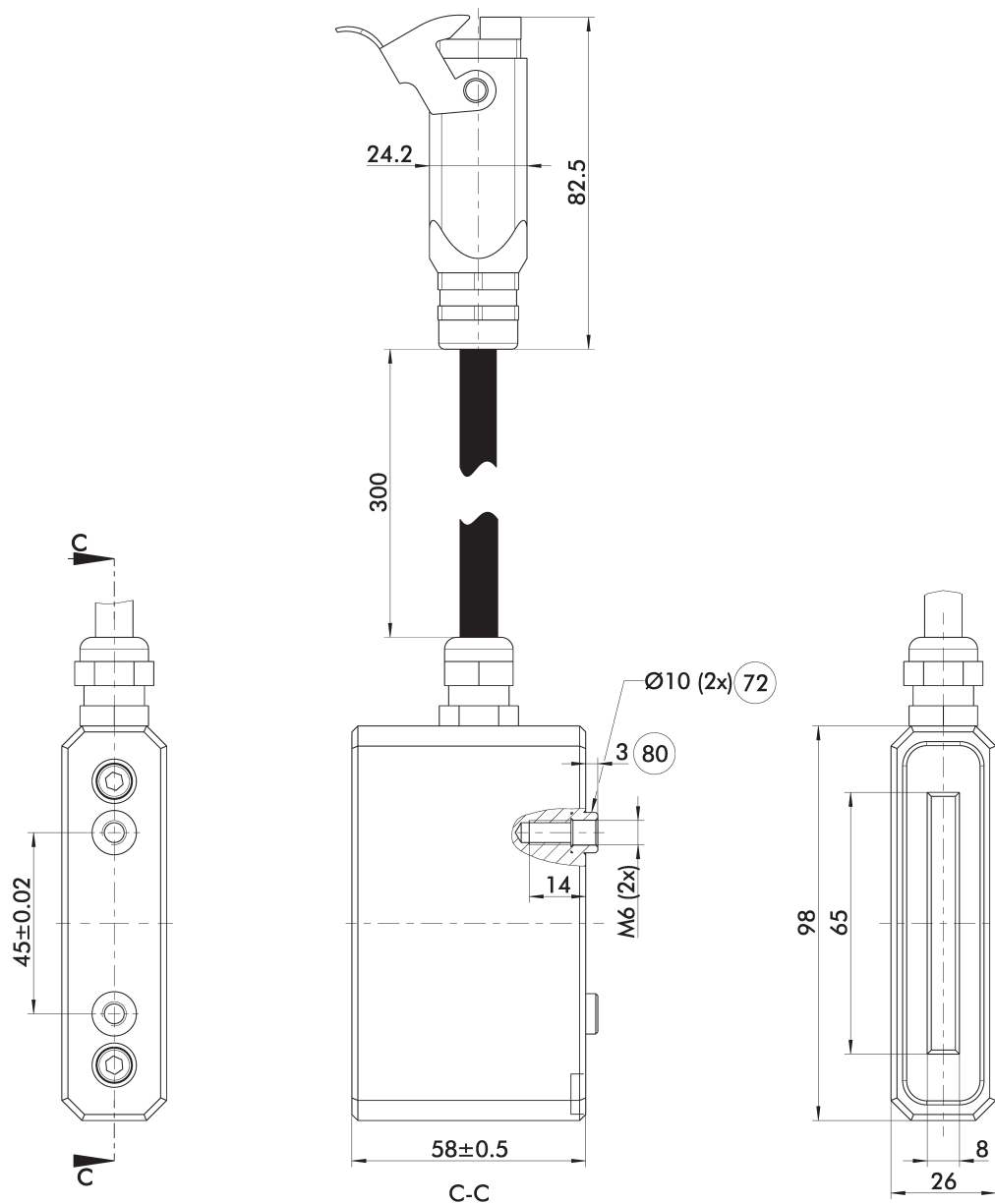
## Dimensions



## Technical data

| Description                                                        |                    | EGM-M-L-08-1-FX | EGM-M-L-15-1-FX | EGM-M-L-30-1-FX |
|--------------------------------------------------------------------|--------------------|-----------------|-----------------|-----------------|
| ID                                                                 |                    | 0306360         | 0306361         | 0306362         |
| Weight                                                             | [kg]               | 1               | 2.1             | 3.1             |
| Number of poles                                                    |                    | 2               | 2               | 2               |
| Magnet area                                                        | [cm <sup>2</sup> ] | 12              | 22.5            | 36.9            |
| Minimum workpiece thickness                                        | [mm]               | 3               | 5               | 10              |
| Payload for horizontal magnet surface                              | [kg]               | 10              | 22              | 60              |
| Payload for vertical magnet surface                                | [kg]               | 4               | 9               | 24              |
| Max. activations/minute                                            | [1/min]            | 16              | 16              | 12              |
| Module temperature increasement in case of 5/15 activations/minute | [°C]               | 18/39           | 15/40           | 22/49           |
| IP protection class                                                |                    | 54              | 54              | 54              |
| Current consumption upon activation/deactivation                   | [A]                | 3.7             | 2.6             | 2.2             |
| Cable length                                                       | [cm]               | 30              | 30              | 30              |
| Dimensions X x Y x Z                                               | [mm]               | 98 x 26 x 58    | 105 x 47 x 79   | 96 x 66 x 71    |
| <b>Magnet controller data</b>                                      |                    |                 |                 |                 |
| Magnet controller type                                             |                    | ECG 01          | ECG 02          | ECG 02          |
| Nominal voltage                                                    | [V AC]             | 400             | 400             | 400             |
| Max. current                                                       | [A]                | 32              | 32              | 32              |
| Max. number of modules per controller                              |                    | 23              | 17              | 32              |

## EGM-M 08L-1FX main view



The drawing shows the magnet gripper in basis configuration, without any additional accessories.

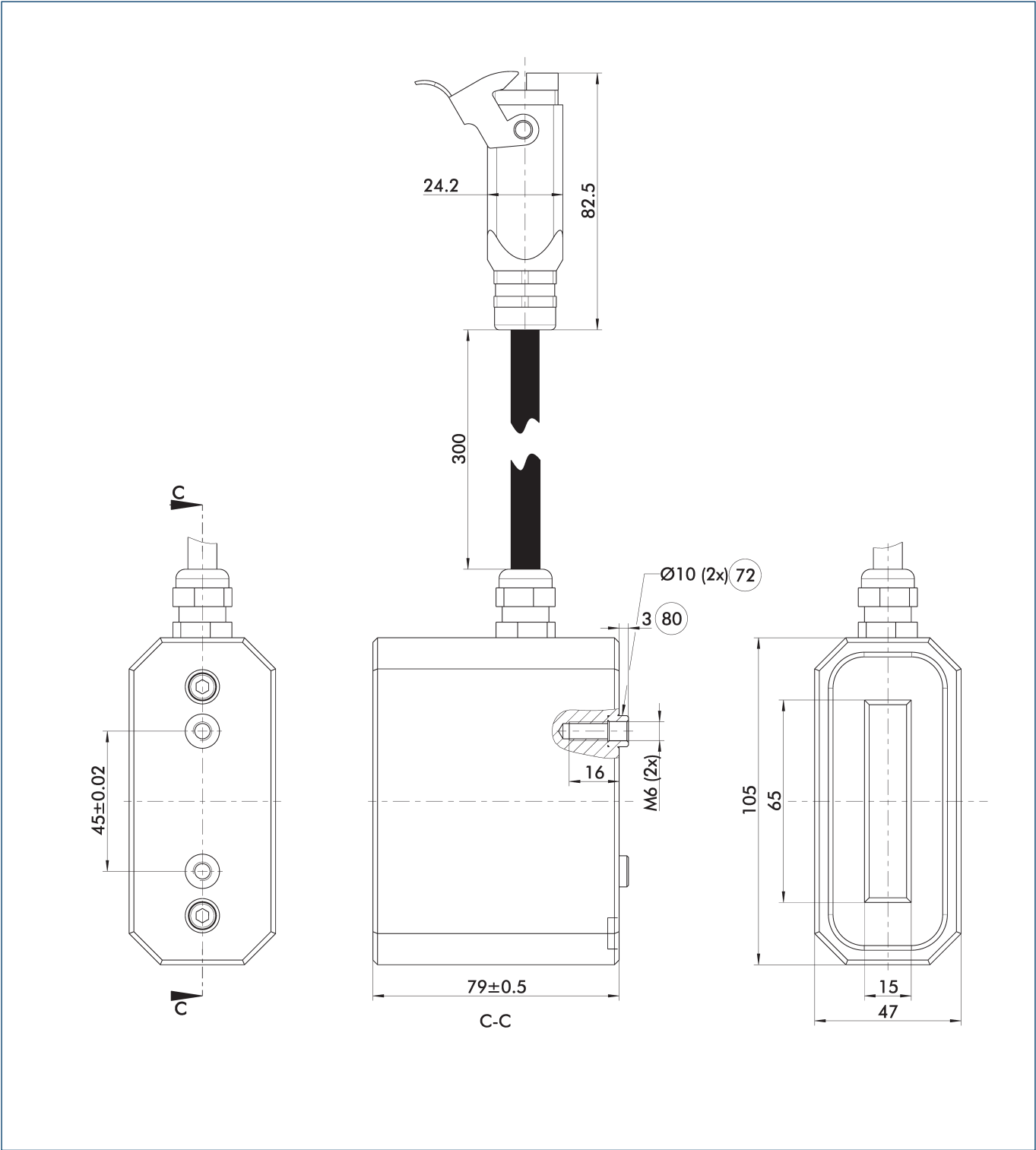
⑦② Fit for centering sleeves

⑧① Depth of the centering sleeve hole in the counter part

# EGM M-L

Magnetic gripper

EGM-M 15L-1FX main view

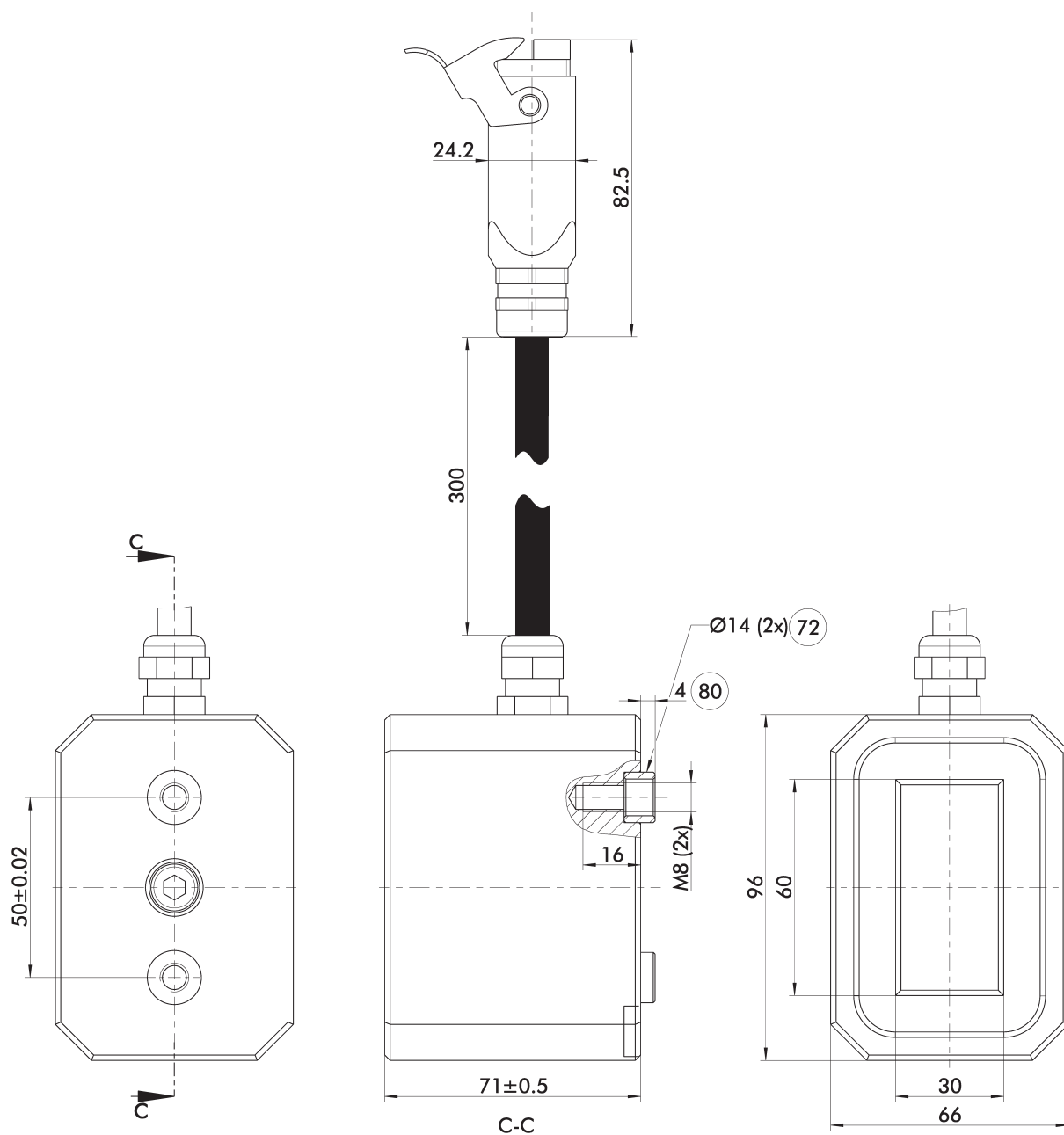


The drawing shows the magnet gripper in basis configuration, without any additional accessories.

72 Fit for centering sleeves

80 Depth of the centering sleeve hole in the counter part

## EGM-M 30L-1FX main view



The drawing shows the magnet gripper in basis configuration, without any additional accessories.

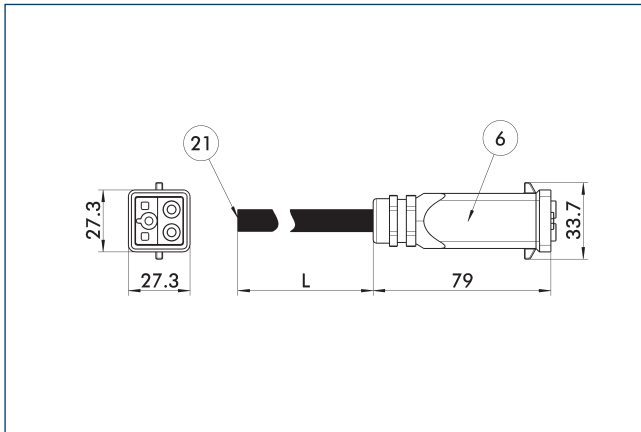
⑦② Fit for centering sleeves

⑧① Depth of the centering sleeve hole in the counter part

# EGM M-L

## Magnetic gripper

### Connection cables

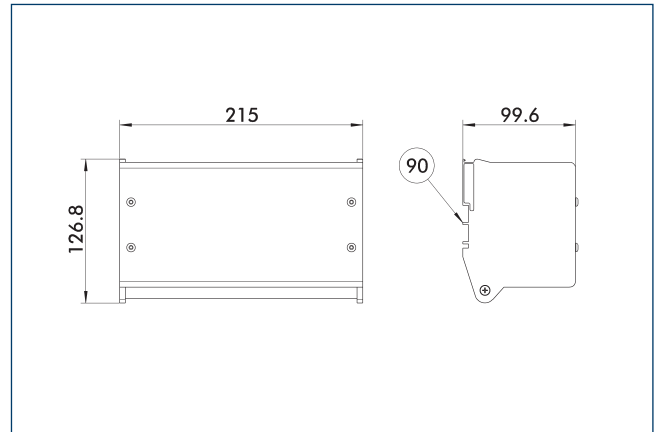


- ⑥ Connection module side      ②① Connection controller side

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  $\pm 180^\circ/\text{m}$ .

| Description           | ID      | L1  |
|-----------------------|---------|-----|
|                       |         | [m] |
| Connection cable EGM  |         |     |
| KA GLNQS03-LK-00500-J | 0306302 | 5   |
| KA GLNQS03-LK-01000-J | 0306303 | 10  |
| KA GLNQS03-LK-01500-J | 0306304 | 15  |
| KA GLNQS03-LK-02000-J | 0306305 | 20  |

### Magnetic controller ECG-C



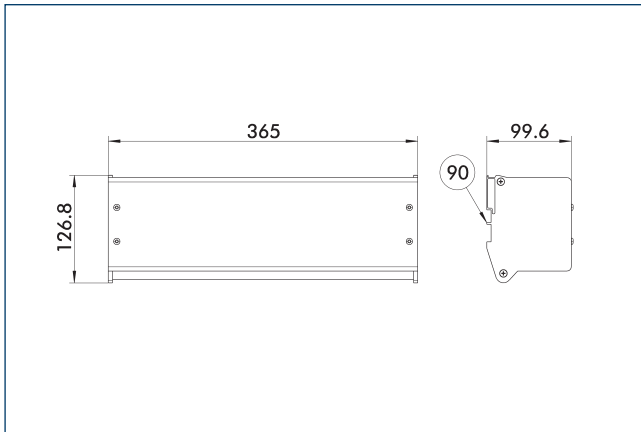
- ⑨⑩ Mounting on top-hat rail

An ECG control unit is required for actuating the EGM. The "C" version allows digital switching of the EGM.

| Description                                     | ID      | Power supply (load) |
|-------------------------------------------------|---------|---------------------|
|                                                 |         | [V AC]              |
| Magnetic controller for EGM with digital switch |         |                     |
| ECG-C 01                                        | 0306300 | 400                 |
| ECG-C 02                                        | 0306301 | 400                 |

- ① One ECG can control several magnets at the same time. For independent actuation of several magnets, several control units are needed.

### Magnetic controller ECG-W



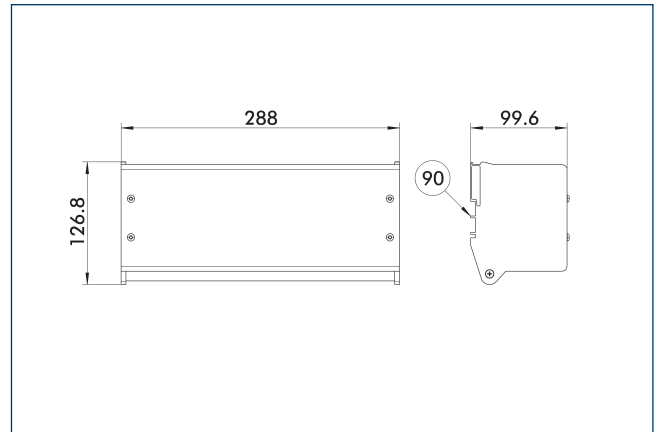
- ⑨⑩ Mounting on top-hat rail

An ECG control unit is required for actuating the EGM. Version "W" enables digital switching of the EGM while holding a workpiece during the welding process.

| Description                                                                | ID      | Power supply (load) |
|----------------------------------------------------------------------------|---------|---------------------|
|                                                                            |         | [V AC]              |
| Magnetic controller for EGM with digital switch during the welding process |         |                     |
| ECG-W 01                                                                   | 0306395 | 400                 |
| ECG-W 02                                                                   | 0306396 | 400                 |

- ① One ECG can control several magnets at the same time. For independent actuation of several magnets, several control units are needed.

### Magnetic controller ECG-R



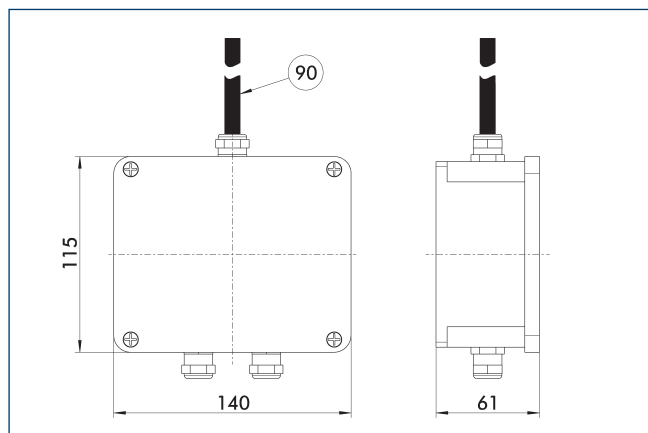
- ⑨⑩ Mounting on top-hat rail

An ECG control unit is required for actuating the EGM. Version "R" enables force control in eight force levels.

| Description                                    | ID      | Power supply (load) |
|------------------------------------------------|---------|---------------------|
|                                                |         | [V AC]              |
| Magnetic controller for EGM with force control |         |                     |
| ECG-R 02                                       | 0306391 | 400                 |

- ① One ECG can control several magnets at the same time. For independent actuation of several magnets, several control units are needed.

## 2-way distributor box

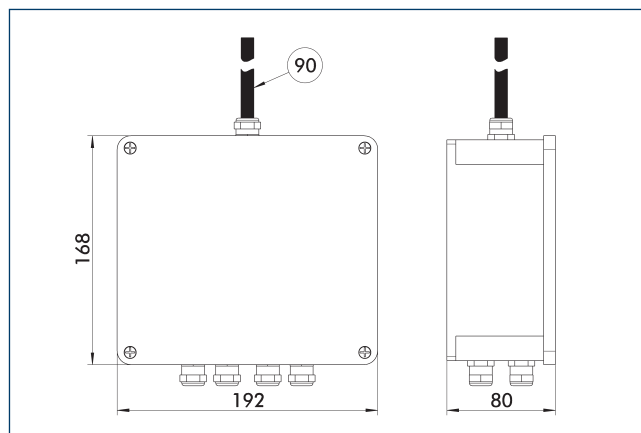


90 Cable length 10 m, open wires

Several EGMS can be connected to the distributor box. This simplifies the wiring of the EGMS with the ECG controller.

| Description           | ID      |  |
|-----------------------|---------|--|
| 2-way distributor box |         |  |
| EGM-JB 2              | 0306432 |  |

## 4-way distributor box

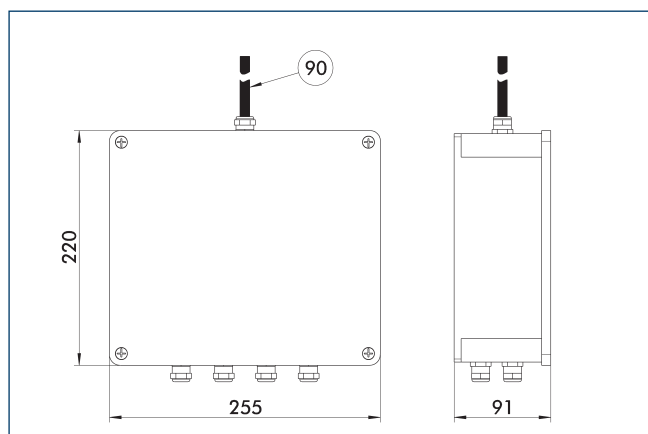


90 Cable length 10 m, open wires

Several EGMS can be connected to the distributor box. This simplifies the wiring of the EGMS with the ECG controller.

| Description           | ID      |  |
|-----------------------|---------|--|
| 4-way distributor box |         |  |
| EGM-JB 4              | 0306434 |  |

## 8-way distributor box



90 Cable length 10 m, open wires

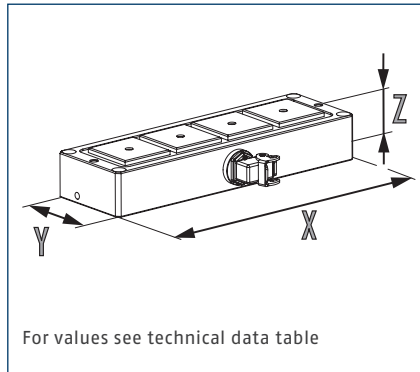
Several EGMS can be connected to the distributor box. This simplifies the wiring of the EGMS with the ECG controller.

| Description           | ID      |  |
|-----------------------|---------|--|
| 8-way distributor box |         |  |
| EGM-JB 8              | 0306438 |  |

# EGM B-Q

Magnetic gripper

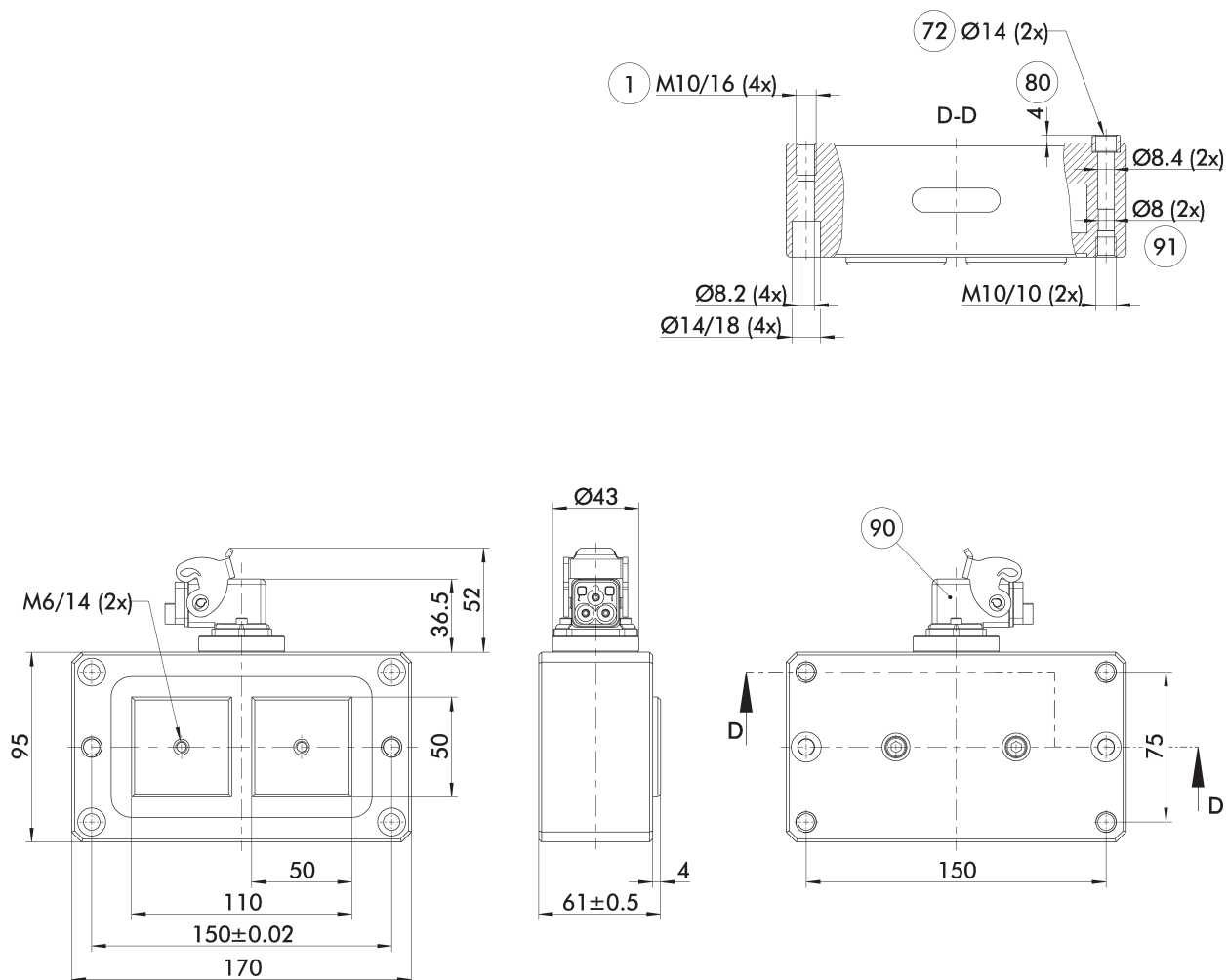
## Dimensions



## Technical data

| Description                                                        |                    | EGM-B-Q-50-1x2 | EGM-B-Q-50-1x4 | EGM-B-Q-50-2x2 | EGM-B-Q-70-1x2 | EGM-B-Q-70-1x4 | EGM-B-Q-70-2x2 |
|--------------------------------------------------------------------|--------------------|----------------|----------------|----------------|----------------|----------------|----------------|
| ID                                                                 |                    | 0306370        | 0306372        | 0306371        | 0306380        | 0306382        | 0306381        |
| Weight                                                             | [kg]               | 5.5            | 13             | 8.5            | 9              | 25             | 18             |
| Number of poles                                                    |                    | 2              | 4              | 4              | 2              | 4              | 4              |
| Magnet area                                                        | [cm <sup>2</sup> ] | 50             | 100            | 100            | 98             | 196            | 196            |
| Minimum workpiece thickness                                        | [mm]               | 12             | 14             | 14             | 14             | 18             | 18             |
| Payload for horizontal magnet surface                              | [kg]               | 75             | 175            | 175            | 120            | 296            | 290            |
| Payload for vertical magnet surface                                | [kg]               | 30             | 70             | 70             | 48             | 118            | 115            |
| Max. activations/minute                                            | [1/min]            | 20             | 8              | 8              | 15             | 10             | 10             |
| Module temperature increasement in case of 5/15 activations/minute | [°C]               | 12/30          | 30/68          | 30/68          | 15/40          | 24/60          | 24/60          |
| IP protection class                                                |                    | 54             | 54             | 54             | 54             | 54             | 54             |
| Current consumption upon activation/deactivation                   | [A]                | 2.9            | 9.5            | 9.5            | 6.4            | 12.3           | 12.3           |
| Dimensions X x Y x Z                                               | [mm]               | 170 x 95 x 61  | 290 x 95 x 61  | 170 x 150 x 61 | 210 x 115 x 61 | 370 x 115 x 61 | 210 x 195 x 61 |
| <b>Magnet controller data</b>                                      |                    |                |                |                |                |                |                |
| Magnet controller type                                             |                    | ECG 02         | ECG 02         | ECG 02         | ECG 02         | ECG 02         | ECG 02         |
| Nominal voltage                                                    | [V AC]             | 400            | 400            | 400            | 400            | 400            | 400            |
| Max. current                                                       | [A]                | 32             | 32             | 32             | 32             | 32             | 32             |
| Max. number of modules per controller                              |                    | 25             | 7              | 7              | 9              | 4              | 5              |

EGM-B 50Q-1x2 main view



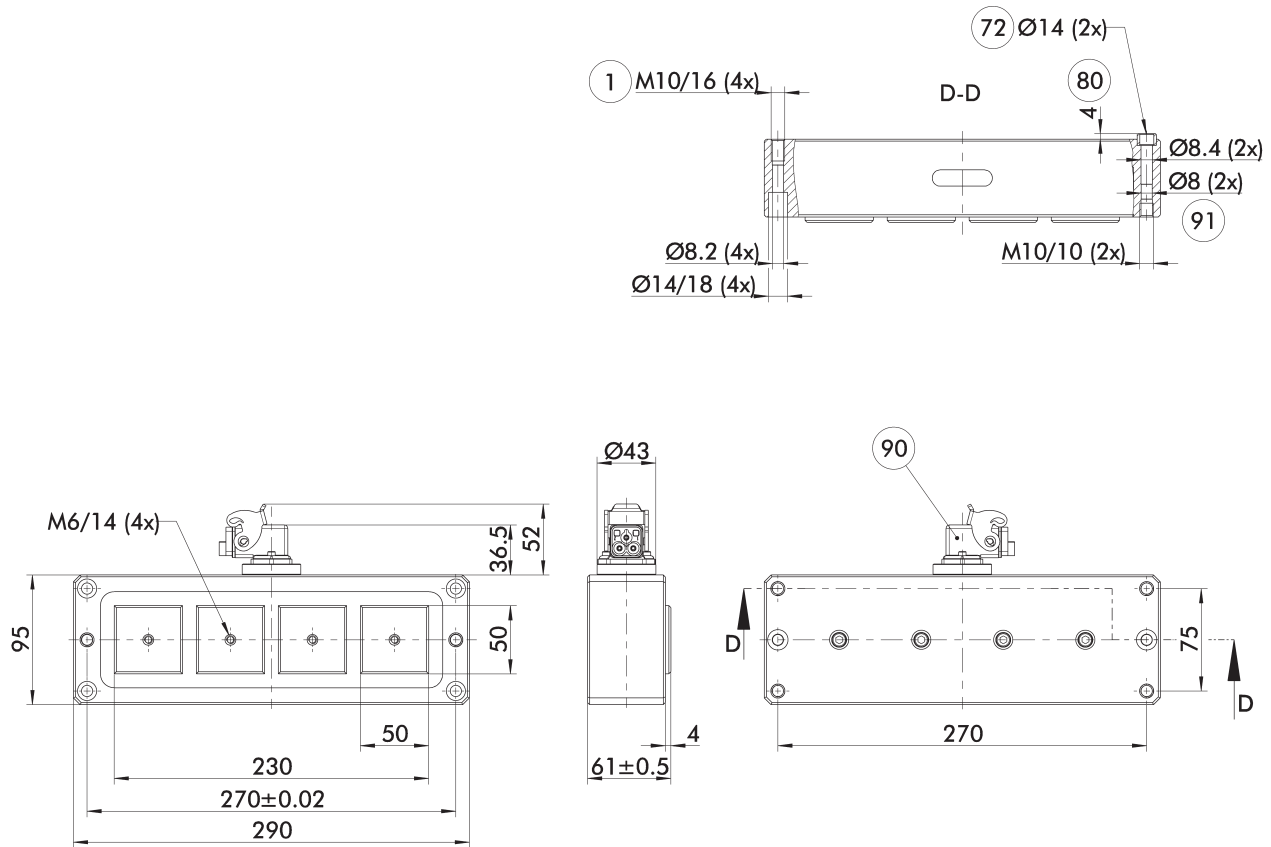
The drawing shows the magnet gripper in basis configuration, without any additional accessories.

- |                                                           |                               |
|-----------------------------------------------------------|-------------------------------|
| ① Gripper connection                                      | ⑨⑩ Plug connector             |
| ⑦② Fit for centering sleeves                              | ⑨① fitting for pole extension |
| ⑧⑩ Depth of the centering sleeve hole in the counter part |                               |

# EGM B-Q

Magnetic gripper

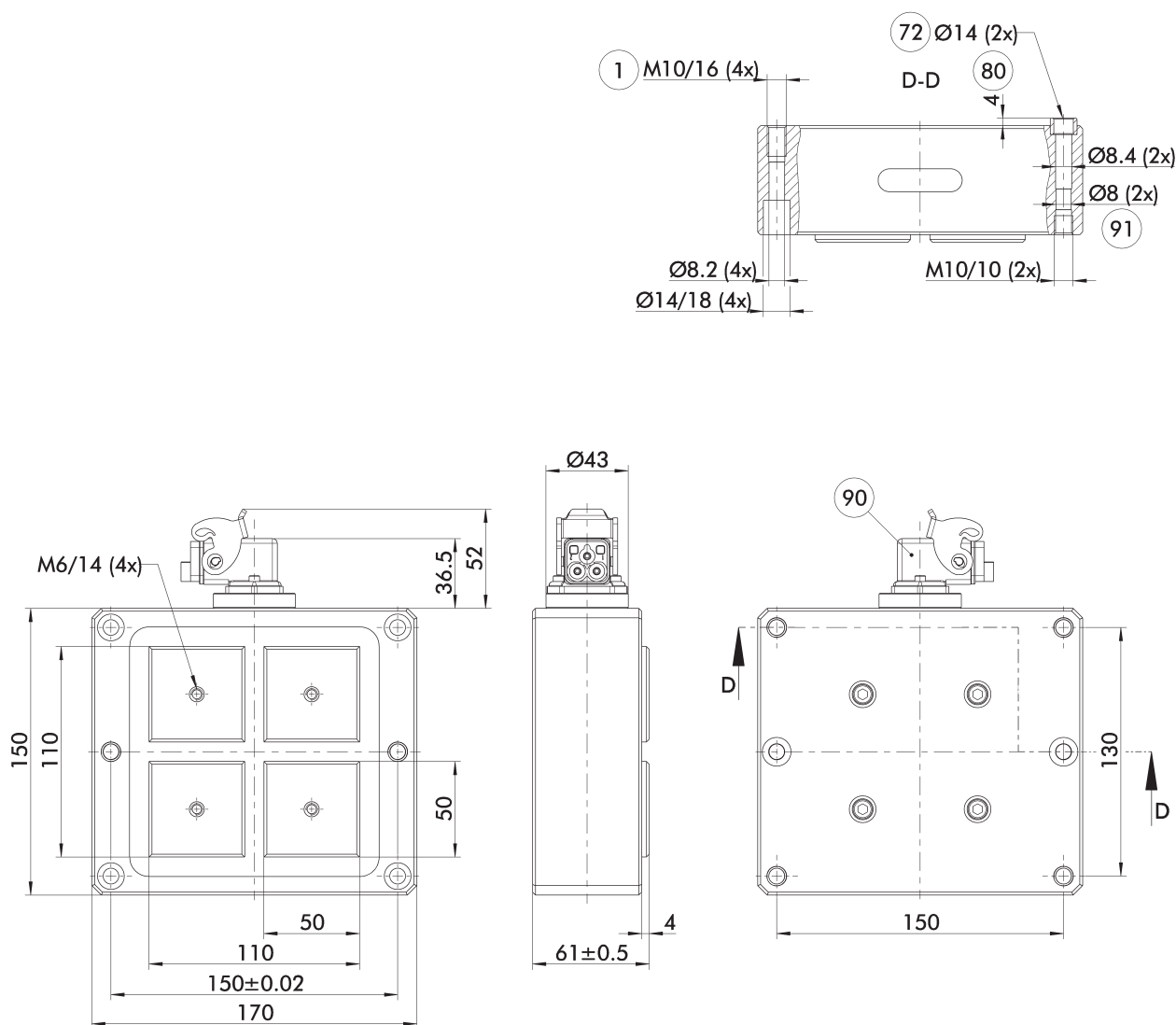
## EGM-B 50Q-1x4 main view



The drawing shows the magnet gripper in basis configuration, without any additional accessories.

- |                                                           |                               |
|-----------------------------------------------------------|-------------------------------|
| ① Gripper connection                                      | ⑨⑩ Plug connector             |
| ⑦② Fit for centering sleeves                              | ⑨① fitting for pole extension |
| ⑧① Depth of the centering sleeve hole in the counter part |                               |

EGM-B 50Q-2x2 main view



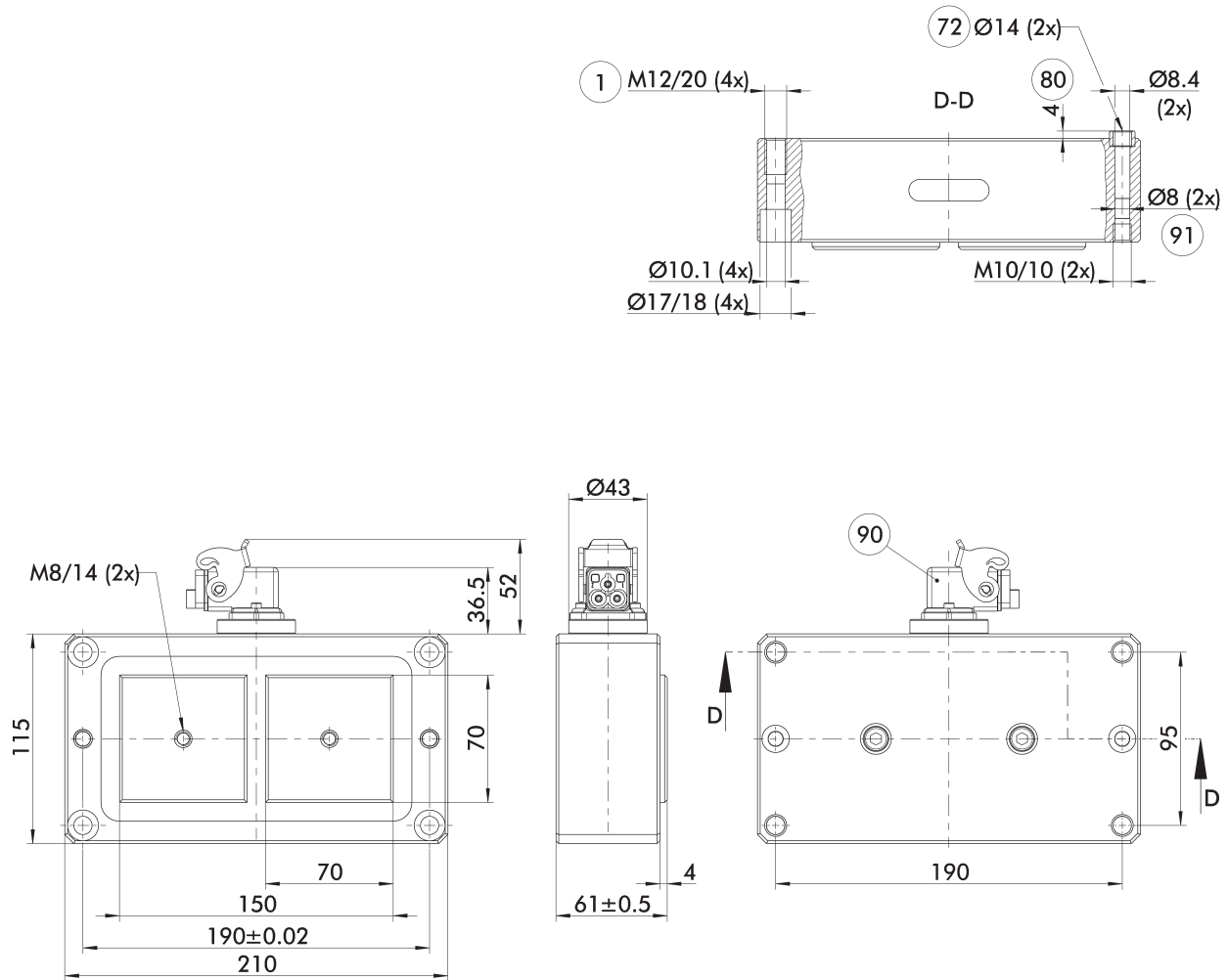
The drawing shows the magnet gripper in basis configuration, without any additional accessories.

- |                                                           |                               |
|-----------------------------------------------------------|-------------------------------|
| ① Gripper connection                                      | ⑨⑩ Plug connector             |
| ⑦② Fit for centering sleeves                              | ⑨① fitting for pole extension |
| ⑧⑩ Depth of the centering sleeve hole in the counter part |                               |

# EGM B-Q

Magnetic gripper

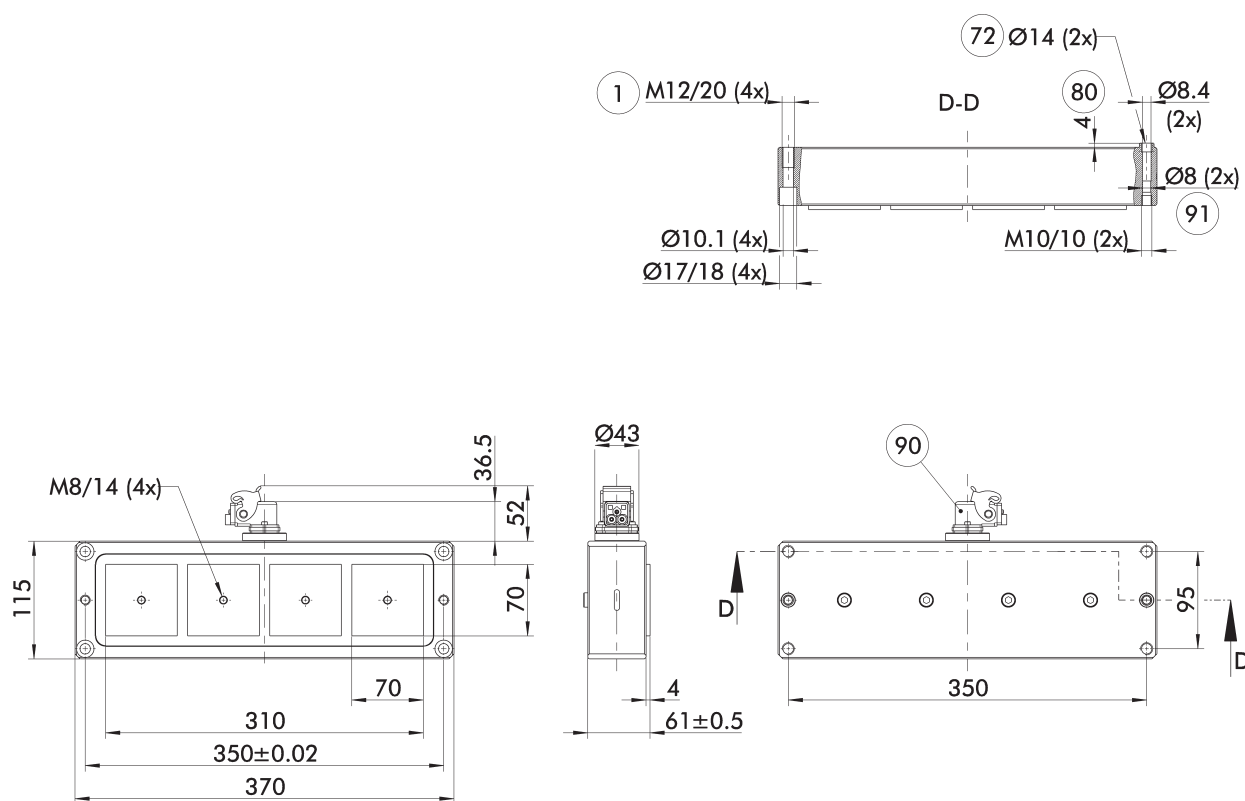
## EGM-B 70Q-1x2 main view



The drawing shows the magnet gripper in basis configuration, without any additional accessories.

- |                                                           |                               |
|-----------------------------------------------------------|-------------------------------|
| ① Gripper connection                                      | ⑨⑩ Plug connector             |
| ⑦② Fit for centering sleeves                              | ⑨① fitting for pole extension |
| ⑧⑩ Depth of the centering sleeve hole in the counter part |                               |

EGM-B 70Q-1x4 main view



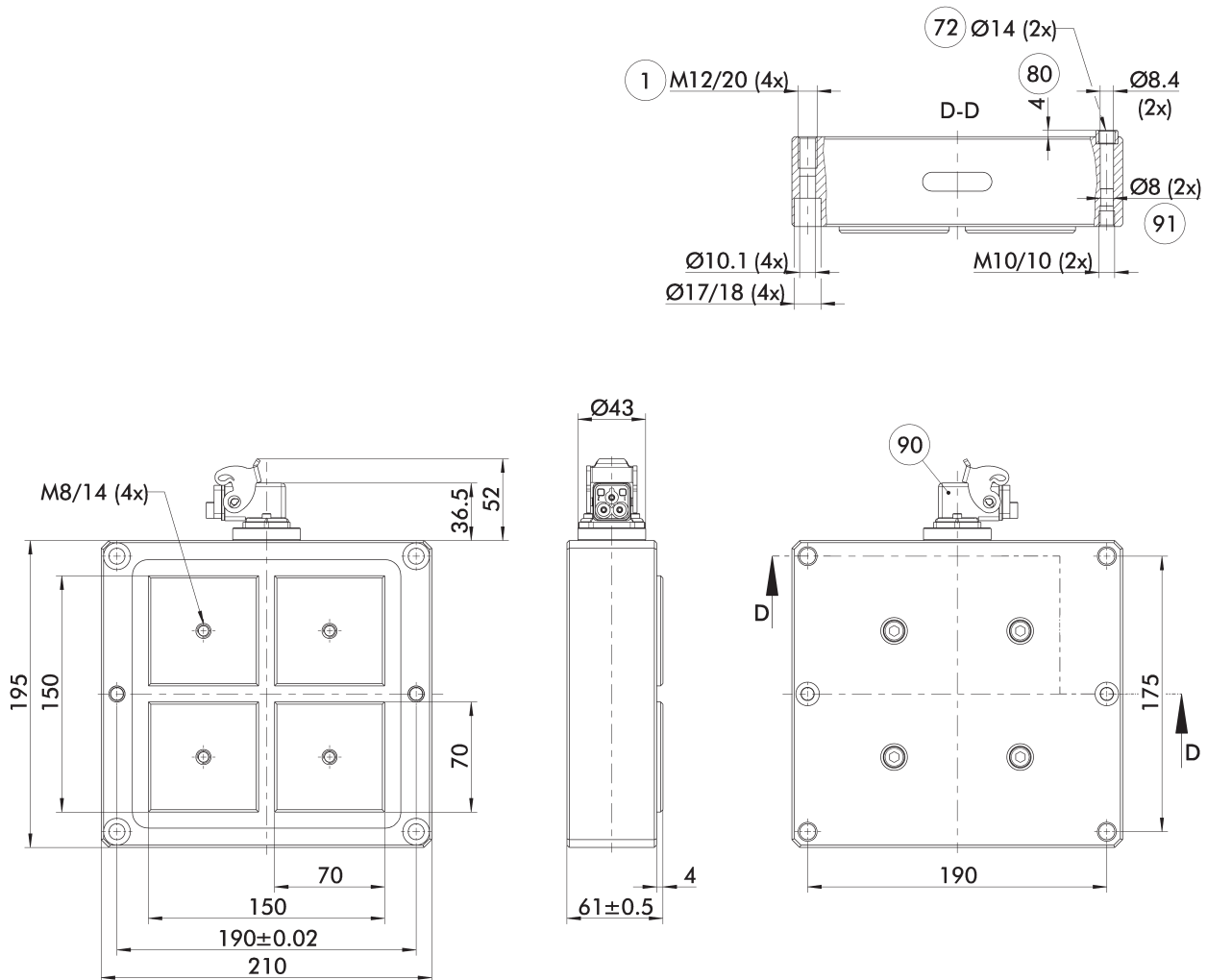
The drawing shows the magnet gripper in basis configuration, without any additional accessories.

- |                                                           |                               |
|-----------------------------------------------------------|-------------------------------|
| ① Gripper connection                                      | ⑨⑩ Plug connector             |
| ⑦② Fit for centering sleeves                              | ⑨① fitting for pole extension |
| ⑧① Depth of the centering sleeve hole in the counter part |                               |

# EGM B-Q

Magnetic gripper

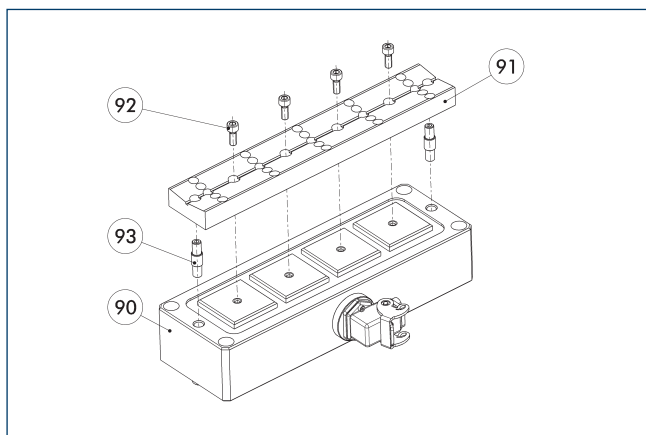
## EGM-B 70Q-2x2 main view



The drawing shows the magnet gripper in basis configuration, without any additional accessories.

- |                                                           |                               |
|-----------------------------------------------------------|-------------------------------|
| ① Gripper connection                                      | ⑨⑩ Plug connector             |
| ⑦② Fit for centering sleeves                              | ⑨① fitting for pole extension |
| ⑧⑩ Depth of the centering sleeve hole in the counter part |                               |

### Pole extension



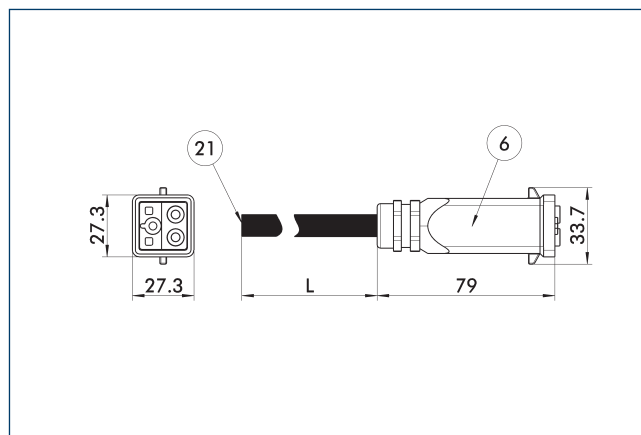
- 90 Magnet gripper EGM  
 91 Pole extension  
 92 Screws  
 93 Centring screw

Prismatic pole extensions enable the gripping of round workpieces. The mounting material and centering elements are included in the scope of delivery.

| Description    | ID      |  |
|----------------|---------|--|
| Pole extension |         |  |
| PVL B-Q-50-1x2 | 0306383 |  |
| PVL B-Q-50-1x4 | 0306384 |  |
| PVL B-Q-70-1x2 | 0306387 |  |
| PVL B-Q-70-1x4 | 0306388 |  |

- ① When using pole extensions, the max. payload is reduced by 50%.

### Connection cables

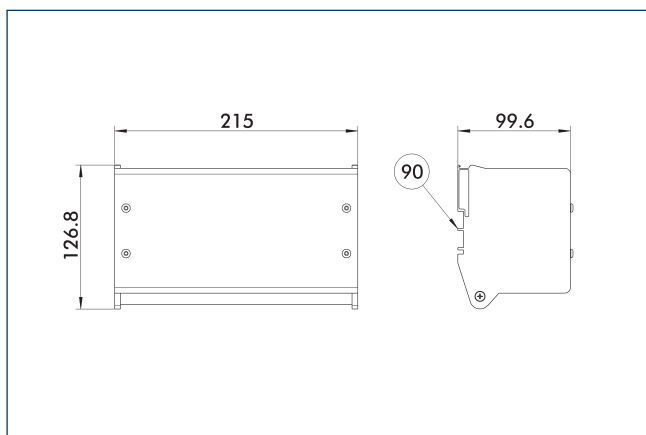


- 6 Connection module side  
 21 Connection controller side

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  $\pm 180^\circ/\text{m}$ .

| Description           | ID      | L1  |
|-----------------------|---------|-----|
|                       |         | [m] |
| Connection cable EGM  |         |     |
| KA GLNQS03-LK-00500-J | 0306302 | 5   |
| KA GLNQS03-LK-01000-J | 0306303 | 10  |
| KA GLNQS03-LK-01500-J | 0306304 | 15  |
| KA GLNQS03-LK-02000-J | 0306305 | 20  |

### Magnetic controller ECG-C



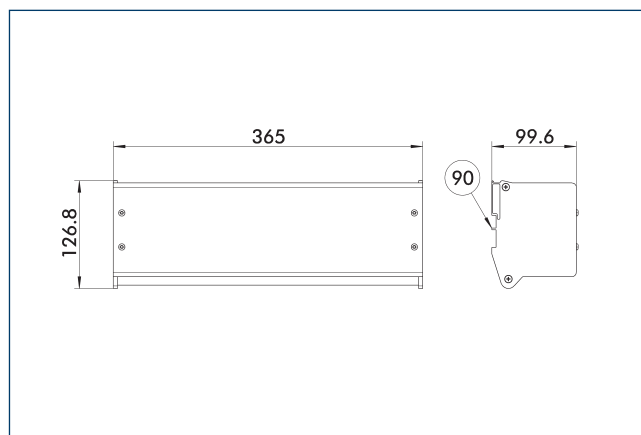
- 90 Mounting on top-hat rail

An ECG control unit is required for actuating the EGM. The "C" version allows digital switching of the EGM.

| Description                                     | ID      | Power supply (load) |
|-------------------------------------------------|---------|---------------------|
|                                                 |         | [V AC]              |
| Magnetic controller for EGM with digital switch |         |                     |
| ECG-C 02                                        | 0306301 | 400                 |

- ① One ECG can control several magnets at the same time. For independent actuation of several magnets, several control units are needed.

### Magnetic controller ECG-W



- 90 Mounting on top-hat rail

An ECG control unit is required for actuating the EGM. Version "W" enables digital switching of the EGM while holding a workpiece during the welding process.

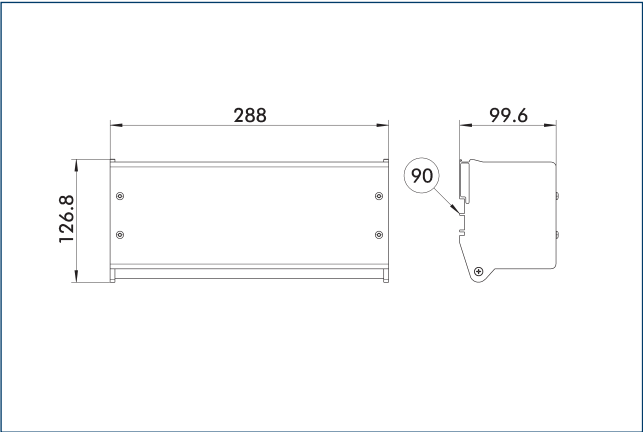
| Description                                                                | ID      | Power supply (load) |
|----------------------------------------------------------------------------|---------|---------------------|
|                                                                            |         | [V AC]              |
| Magnetic controller for EGM with digital switch during the welding process |         |                     |
| ECG-W 02                                                                   | 0306396 | 400                 |

- ① One ECG can control several magnets at the same time. For independent actuation of several magnets, several control units are needed.

# EGM B-Q

Magnetic gripper

## Magnetic controller ECG-R



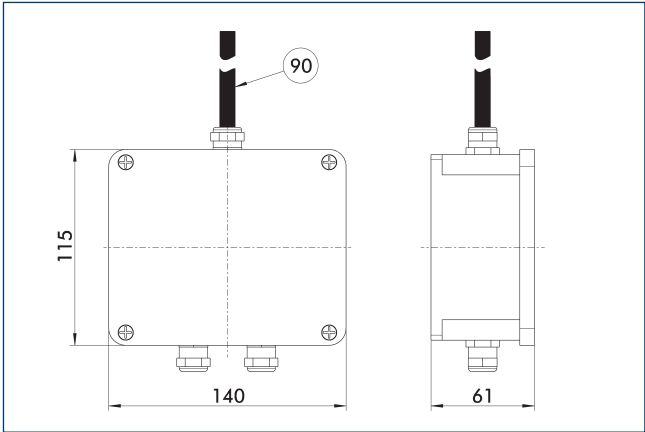
90 Mounting on top-hat rail

An ECG control unit is required for actuating the EGM. Version "R" enables force control in eight force levels.

| Description                                    | ID      | Power supply (load) |
|------------------------------------------------|---------|---------------------|
|                                                |         | [V AC]              |
| Magnetic controller for EGM with force control |         |                     |
| ECG-R 02                                       | 0306391 | 400                 |

1 One ECG can control several magnets at the same time. For independent actuation of several magnets, several control units are needed.

## 2-way distributor box

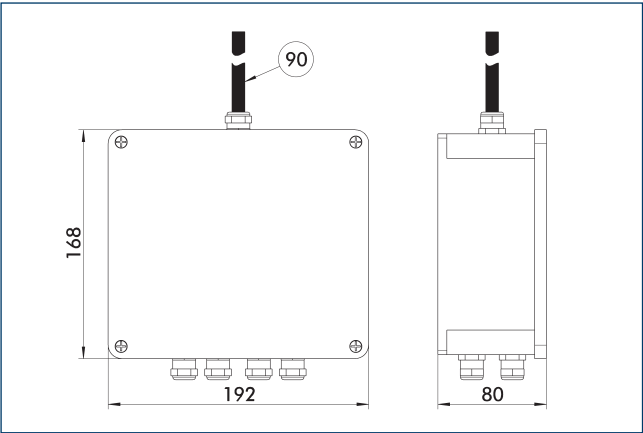


90 Cable length 10 m, open wires

Several EGMs can be connected to the distributor box. This simplifies the wiring of the EGMs with the ECG controller.

| Description           | ID      |  |
|-----------------------|---------|--|
| 2-way distributor box |         |  |
| EGM-JB 2              | 0306432 |  |

## 4-way distributor box

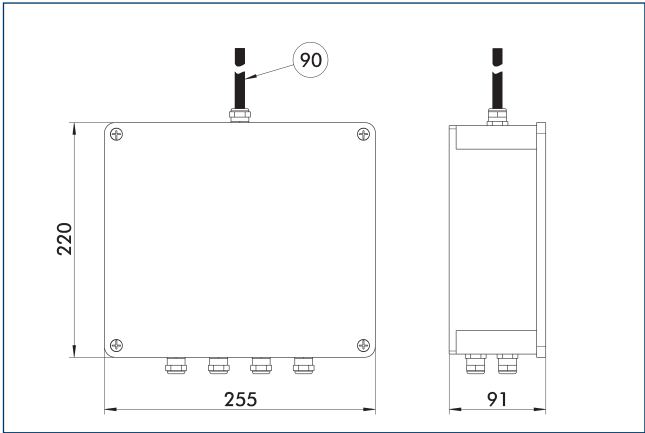


90 Cable length 10 m, open wires

Several EGMs can be connected to the distributor box. This simplifies the wiring of the EGMs with the ECG controller.

| Description           | ID      |  |
|-----------------------|---------|--|
| 4-way distributor box |         |  |
| EGM-JB 4              | 0306434 |  |

## 8-way distributor box



90 Cable length 10 m, open wires

Several EGMs can be connected to the distributor box. This simplifies the wiring of the EGMs with the ECG controller.

| Description           | ID      |  |
|-----------------------|---------|--|
| 8-way distributor box |         |  |
| EGM-JB 8              | 0306438 |  |

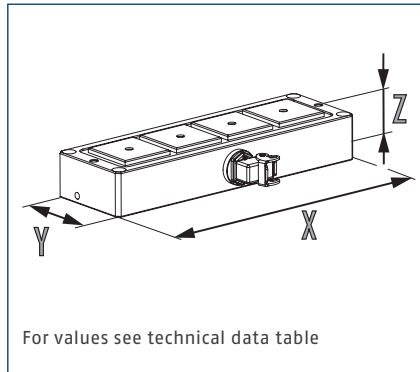


# EGM B-L

Magnetic gripper



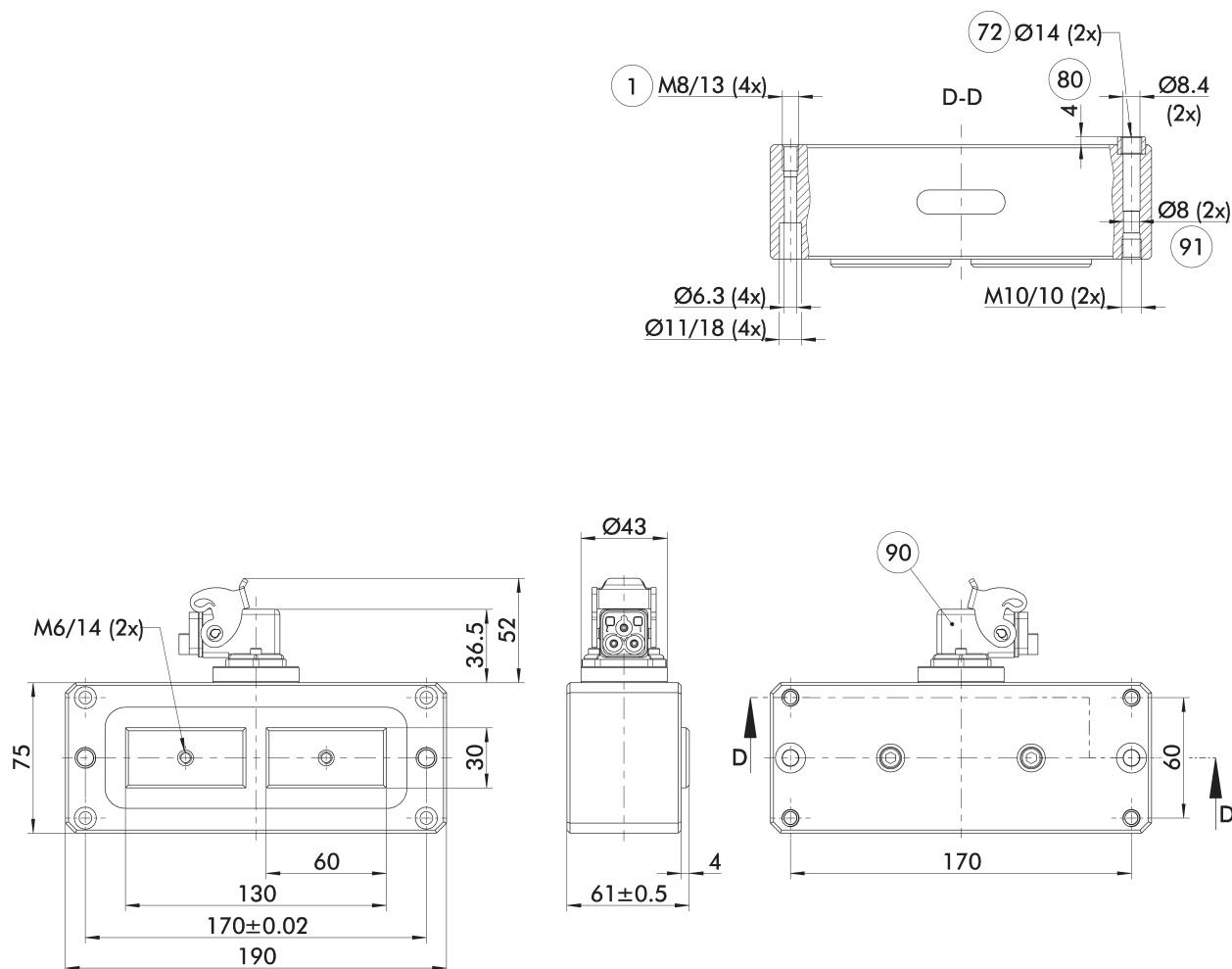
## Dimensions



## Technical data

| Description                                                        |                    | EGM-B-L-30-1x2 | EGM-B-L-30-1x4 |
|--------------------------------------------------------------------|--------------------|----------------|----------------|
| ID                                                                 |                    | 0306373        | 0306374        |
| Weight                                                             | [kg]               | 6.5            | 11.5           |
| Number of poles                                                    |                    | 2              | 4              |
| Magnet area                                                        | [cm <sup>2</sup> ] | 36             | 72             |
| Minimum workpiece thickness                                        | [mm]               | 8              | 8              |
| Payload for horizontal magnet surface                              | [kg]               | 60             | 110            |
| Payload for vertical magnet surface                                | [kg]               | 20             | 40             |
| Max. activations/minute                                            | [1/min]            | 15             | 20             |
| Module temperature increasement in case of 5/15 activations/minute | [°C]               | 15/35          | 12/32          |
| IP protection class                                                |                    | 54             | 54             |
| Current consumption upon activation/deactivation                   | [A]                | 3.1            | 6.5            |
| Dimensions X x Y x Z                                               | [mm]               | 190 x 75 x 61  | 330 x 75 x 61  |
| <b>Magnet controller data</b>                                      |                    |                |                |
| Magnet controller type                                             |                    | ECG 02         | ECG 02         |
| Nominal voltage                                                    | [V AC]             | 400            | 400            |
| Max. current                                                       | [A]                | 32             | 32             |
| Max. number of modules per controller                              |                    | 24             | 13             |

EGM-B 30L-1x2 main view



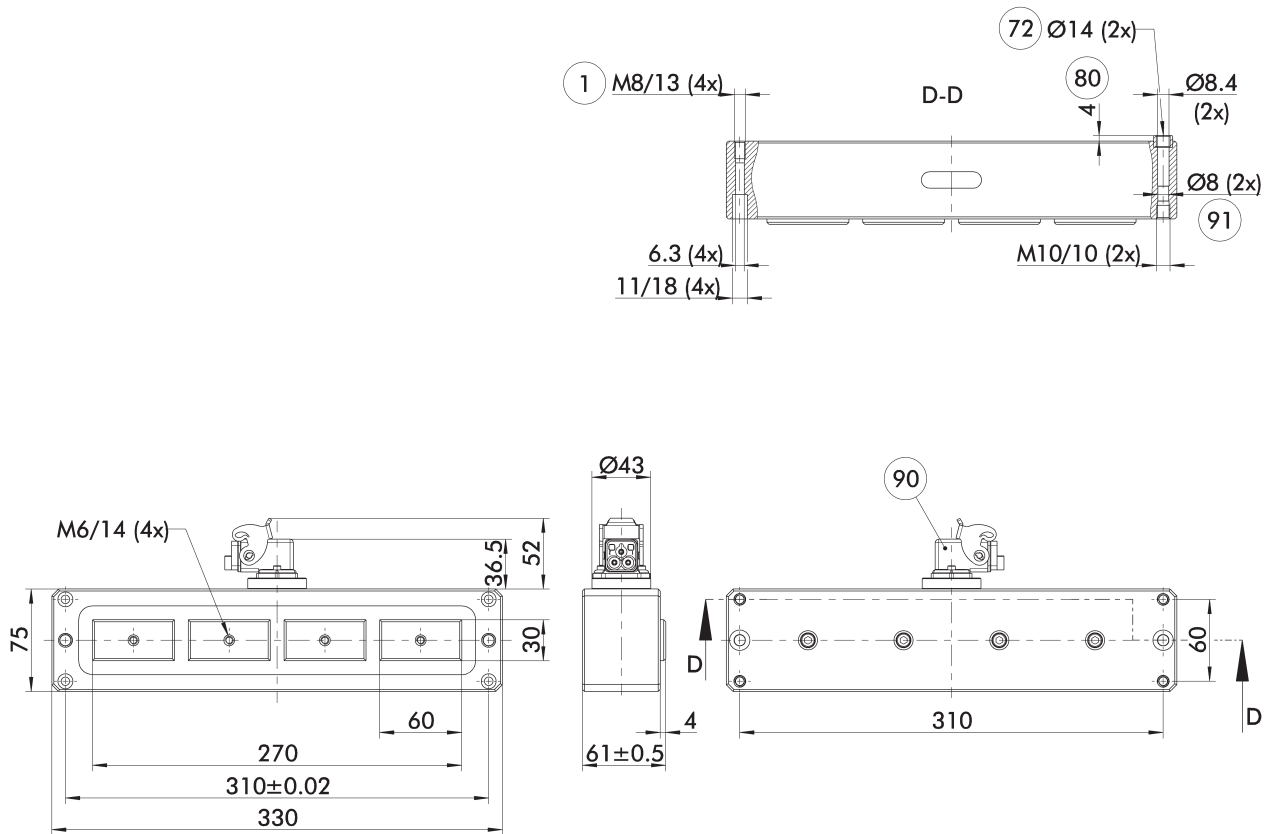
The drawing shows the magnet gripper in basis configuration, without any additional accessories.

- |                                                           |                               |
|-----------------------------------------------------------|-------------------------------|
| ① Gripper connection                                      | ⑨① Plug connector             |
| ⑦② Fit for centering sleeves                              | ⑨② fitting for pole extension |
| ⑧① Depth of the centering sleeve hole in the counter part |                               |

# EGM B-L

Magnetic gripper

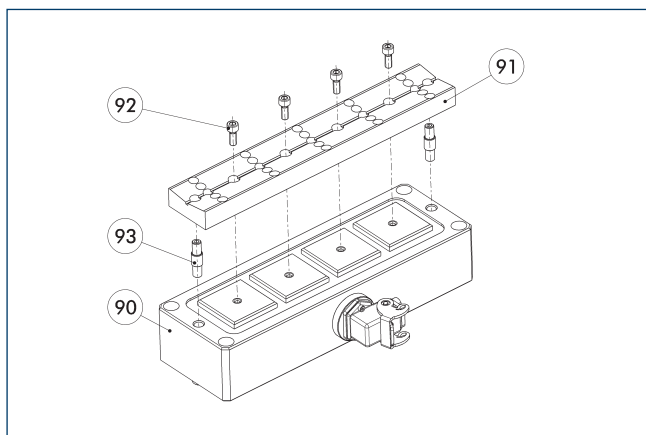
## EGM-B 30L-1x4 main view



The drawing shows the magnet gripper in basis configuration, without any additional accessories.

- |                                                           |                               |
|-----------------------------------------------------------|-------------------------------|
| ① Gripper connection                                      | ⑨⑩ Plug connector             |
| ⑦② Fit for centering sleeves                              | ⑨① fitting for pole extension |
| ⑧⑩ Depth of the centering sleeve hole in the counter part |                               |

### Pole extension



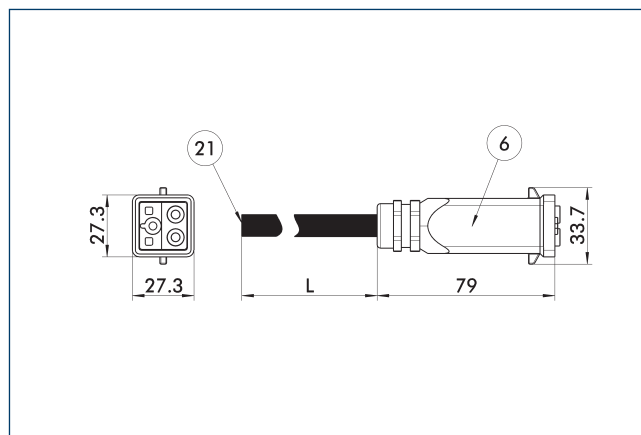
- 90 Magnet gripper EGM
- 91 Pole extension
- 92 Screws
- 93 Centring screw

Prismatic pole extensions enable the gripping of round workpieces. The mounting material and centering elements are included in the scope of delivery.

| Description    | ID      |  |
|----------------|---------|--|
| Pole extension |         |  |
| PVL B-L-30-1x2 | 0306385 |  |
| PVL B-L-30-1x4 | 0306386 |  |

- ① When using pole extensions, the max. payload is reduced by 50%.

### Connection cables

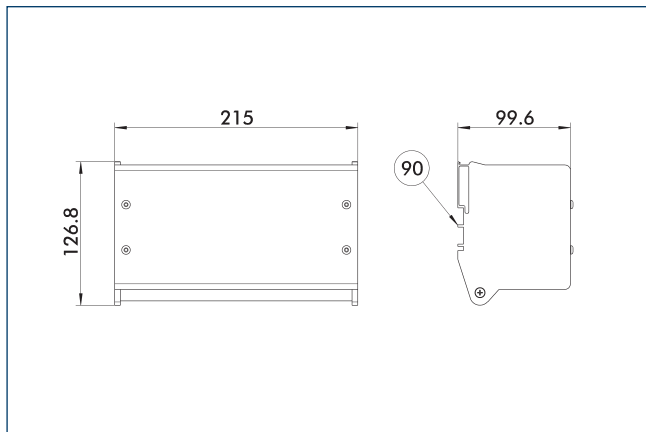


- 6 Connection module side
- 21 Connection controller side

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  $\pm 180^\circ/\text{m}$ .

| Description           | ID      | L1  |
|-----------------------|---------|-----|
|                       |         | [m] |
| Connection cable EGM  |         |     |
| KA GLNQS03-LK-00500-J | 0306302 | 5   |
| KA GLNQS03-LK-01000-J | 0306303 | 10  |
| KA GLNQS03-LK-01500-J | 0306304 | 15  |
| KA GLNQS03-LK-02000-J | 0306305 | 20  |

### Magnetic controller ECG-C



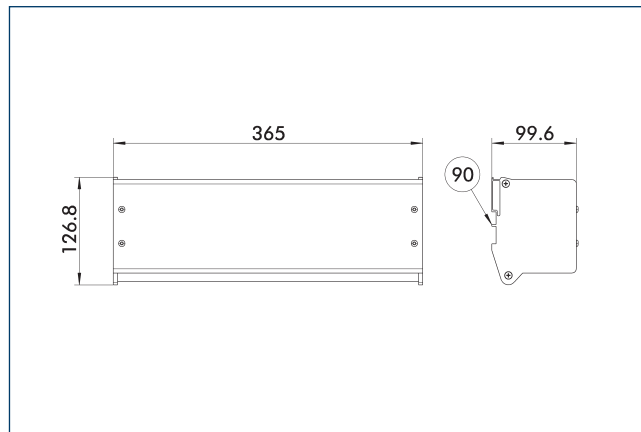
- 90 Mounting on top-hat rail

An ECG control unit is required for actuating the EGM. The "C" version allows digital switching of the EGM.

| Description                                     | ID      | Power supply (load) |
|-------------------------------------------------|---------|---------------------|
|                                                 |         | [V AC]              |
| Magnetic controller for EGM with digital switch |         |                     |
| ECG-C 02                                        | 0306301 | 400                 |

- ① One ECG can control several magnets at the same time. For independent actuation of several magnets, several control units are needed.

### Magnetic controller ECG-W



- 90 Mounting on top-hat rail

An ECG control unit is required for actuating the EGM. Version "W" enables digital switching of the EGM while holding a workpiece during the welding process.

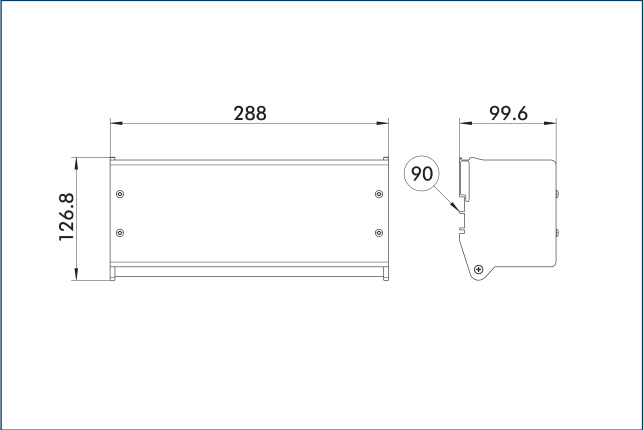
| Description                                                                | ID      | Power supply (load) |
|----------------------------------------------------------------------------|---------|---------------------|
|                                                                            |         | [V AC]              |
| Magnetic controller for EGM with digital switch during the welding process |         |                     |
| ECG-W 02                                                                   | 0306396 | 400                 |

- ① One ECG can control several magnets at the same time. For independent actuation of several magnets, several control units are needed.

# EGM B-L

Magnetic gripper

## Magnetic controller ECG-R



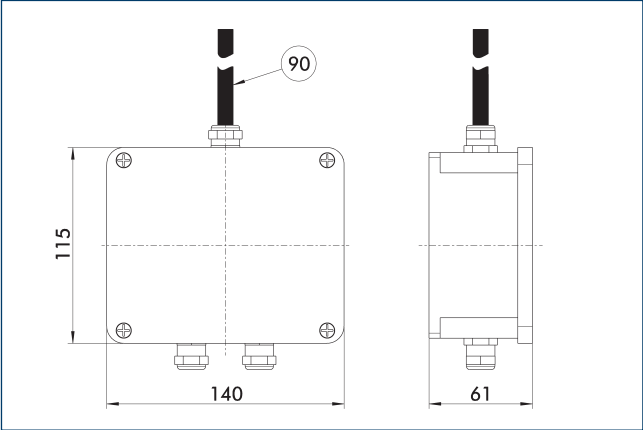
90 Mounting on top-hat rail

An ECG control unit is required for actuating the EGM. Version "R" enables force control in eight force levels.

| Description                                    | ID      | Power supply (load) |
|------------------------------------------------|---------|---------------------|
|                                                |         | [V AC]              |
| Magnetic controller for EGM with force control |         |                     |
| ECG-R 02                                       | 0306391 | 400                 |

1 One ECG can control several magnets at the same time. For independent actuation of several magnets, several control units are needed.

## 2-way distributor box

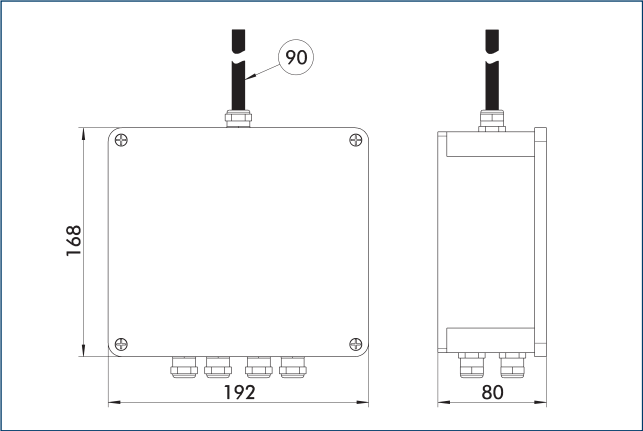


90 Cable length 10 m, open wires

Several EGMs can be connected to the distributor box. This simplifies the wiring of the EGMs with the ECG controller.

| Description           | ID      |  |
|-----------------------|---------|--|
| 2-way distributor box |         |  |
| EGM-JB 2              | 0306432 |  |

## 4-way distributor box

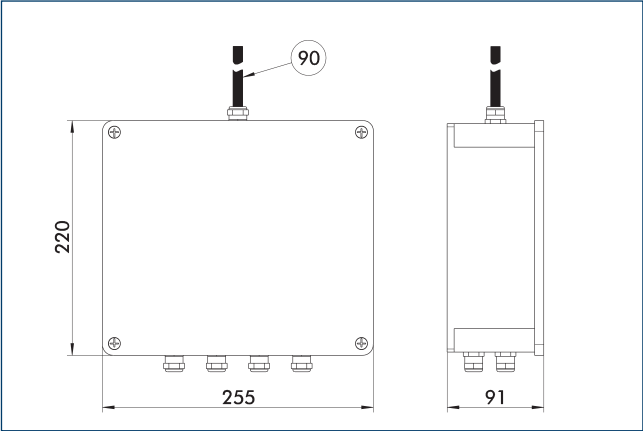


90 Cable length 10 m, open wires

Several EGMs can be connected to the distributor box. This simplifies the wiring of the EGMs with the ECG controller.

| Description           | ID      |  |
|-----------------------|---------|--|
| 4-way distributor box |         |  |
| EGM-JB 4              | 0306434 |  |

## 8-way distributor box



90 Cable length 10 m, open wires

Several EGMs can be connected to the distributor box. This simplifies the wiring of the EGMs with the ECG controller.

| Description           | ID      |  |
|-----------------------|---------|--|
| 8-way distributor box |         |  |
| EGM-JB 8              | 0306438 |  |





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