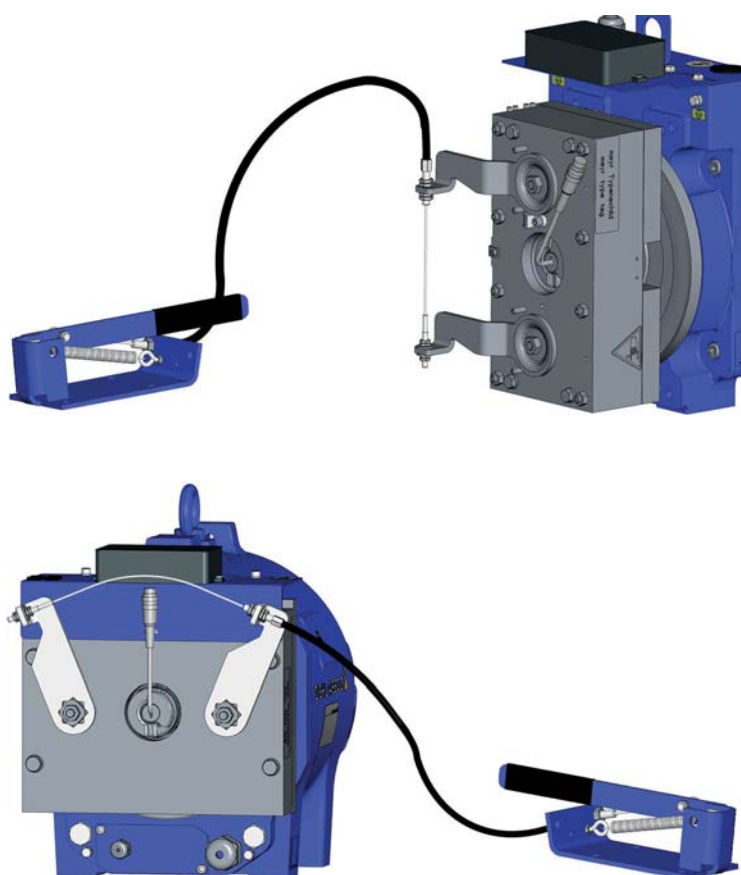


ZIEHL-ABEGG



Die Königsklasse The Royal League

Die Königsklasse in Lufttechnik, Regeltechnik und Antriebstechnik | The Royal League in ventilation, control and drive technology



Hand release system with bowden cable

ZA^{top} SM180.24/B

ZA^{top} SM180.35/B

ZA^{top} SM180.45/B

ZA^{top} SM180.46/B

ZA^{top} SM200.15D

ZA^{top} SM200.23D

ZA^{top} SM200.30D

ZA^{top} SM200.40E

ZA^{top} SM200.45E

Assembly instructions

Store for future use!

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1 General information

- These assembly instructions contain additional information on the operating instructions of the elevator machine. Observe the operating instructions of the elevator machine.
- The operating instructions of the elevator machine must always be available.

2 Safety instructions

2.1 General

The bowden cable ZAtop SM180/SM200.15D-SM200.45E is not a ready-to-use product and may only be operated when it has been installed on an elevator machine and its safety has been assured using guard grilles, barriers, structural attachments or other appropriate measures, depending on the application (see also DIN EN ISO 13857).

2.2 Pictographs

Safety instructions are highlighted with warning triangles and are depicted according to the degree of hazard as follows.

2.3 Requirements placed on the personnel / due diligence



Danger!

General hazardous area. Death or severe injury or significant property damage can occur if the corresponding precautions are not taken!

- Only qualified specialist personnel may have access to the lever for hand release.
- Installation, start-up, operation and maintenance may only be carried out by qualified specialist personnel in compliance with the applicable regulations.
- Planners, manufacturers and operators of system parts or entire systems are responsible for the correct and safe mounting and a reliable operation.

2.4 General safety instructions

The elevator manufacturer's safety instructions have priority!



Danger

Depending on the system type and weight proportions, it is possible for the elevator car to accelerate in one direction when the brakes are opened.

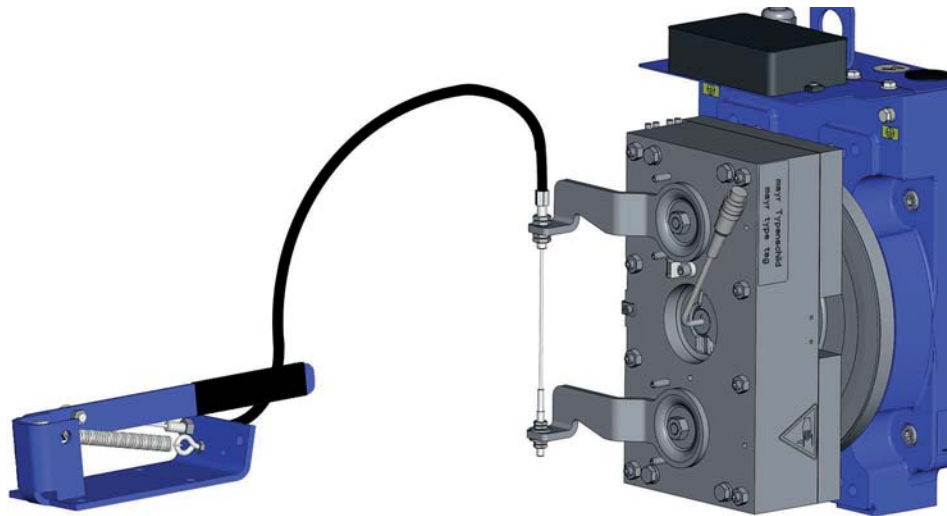
3 Product overview

3.1 Intended use

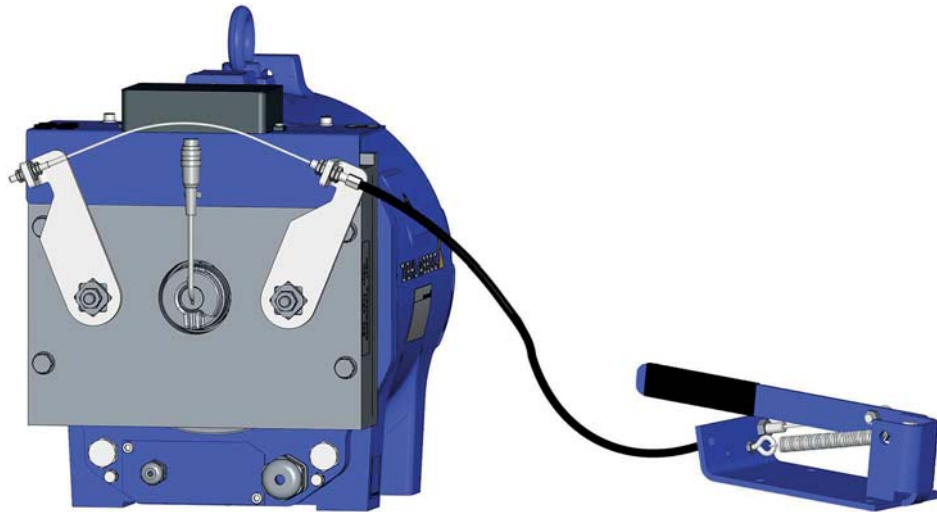
- The bowden cable ZAtop SM180/SM200.15D-SM200.45E serves to open the elevator machine brakes manually without electric current.
- It is used for a manual emergency evacuation.
- The bowden cable ZAtop SM180/SM200.15D-SM200.45E is not suitable for separately releasing individual brake circuits.
- The bowden cable ZAtop SM180/SM200.15D-SM200.45E may be used only in conjunction with the following elevator machines and brakes:

Elevator machine	Brake type
ZAtop SM180.24/B	ROBA®-twinstop® (RTW), Size 250
ZAtop SM180.35/B	ROBA®-twinstop® (RTW), Size 250
ZAtop SM180.45/B	ROBA®-twinstop® (RTW), Size 350
ZAtop SM180.46/B	ROBA®-twinstop® (RTW), Size 450
ZAtop SM200.15D	ROBA®-twinstop® (RTW), Size 250
ZAtop SM200.23D	ROBA®-twinstop® (RTW), Size 350
ZAtop SM200.30D	ROBA®-twinstop® (RTW), Size 450
ZAtop SM200.40E	ROBA®-twinstop® (RTW), Size 800
ZAtop SM200.45E	ROBA®-twinstop® (RTW), Size 800

3.2 General overview

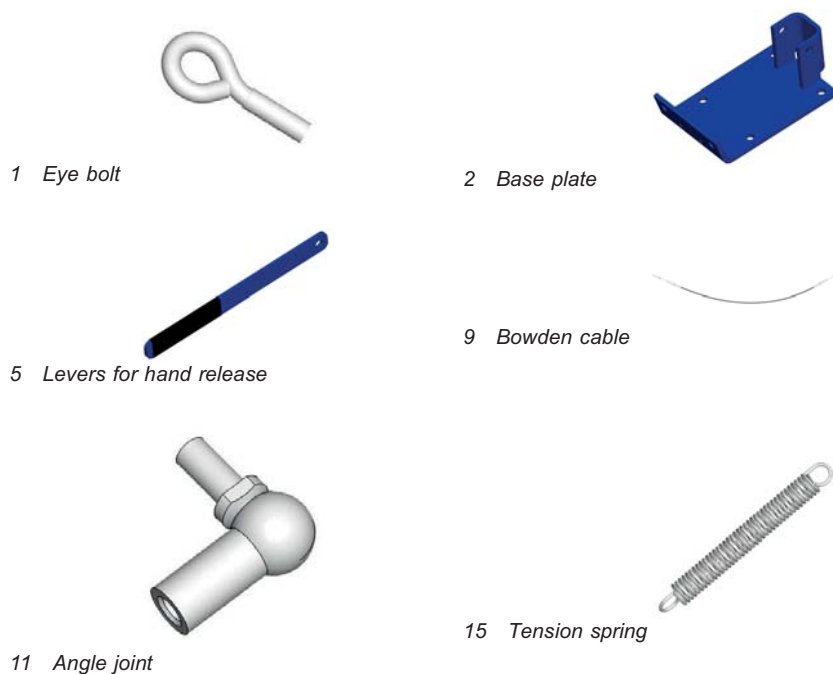


Bowden cable mounted on the ZAtop SM180 elevator machine



Bowden cable mounted on the ZAtop SM200.15D elevator machine

3.3 Scope of delivery



Pos.	Count	Designation
1	1	Eye bolt M6 x 20 - 4.8
2	1	Base plate
3	4	Hexagon nut M6 - 8
4	1	Hexagon head screw M6 x 20 - 8.8
5	1	Levers for hand release
6	1	Cylinder screw M12 x 35 - 8.8
7	2	Hexagon nut M12-8
8	2	Hexagon nut M8-8
9	1	Bowden cable
10	2	Hexagon nut M10-8
11	1	Angle joint
12	4	Hexagon nut M8 - 04, low form
13	4	Hexagon nut M6 - 04, low form
14	2	Washer 6 - 200 HV
15	1	Tension spring

4 Commissioning

4.1 General

The hand release system with bowden cable must be installed by the customer.



Danger!

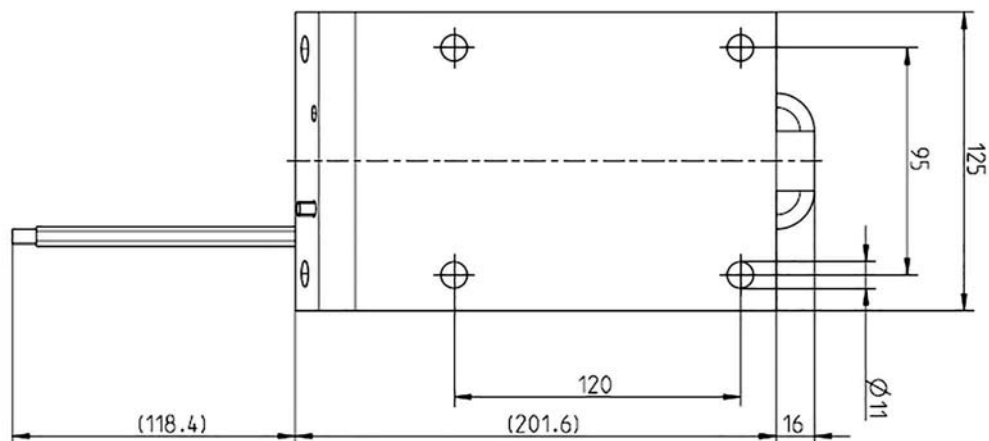
Impairment of the functioning of the bowden cable

If the functioning of the bowden cable is impaired, it may be that the brakes can not be opened or closed any more. This can result in death, severe injury or significant property damage.

- The installation radius of the bowden cable must be at least 300 mm.
- The bowden cable may be twisted when installing at most 3 times a maximum of 90° (the installation radius must be complied with).
- The bowden cable must move freely.
- The bowden cable must slide back to its starting position after activation.
- During construction work at the shaft, the ends of the bowden cable must be protected against dust by appropriate means, e.g. with tape. The tape must be removed at the end of construction work.

4.2 Assembly of the lever for hand release

- The lever for hand release must be installed in the elevator shaft without separation from the shaft and must be accessible by a flap or access door (observing the relevant patent situation).
- The lever for hand release must be mounted on a firm base, e.g. the elevator shaft wall.
- Pay attention to the drilling pattern when mounting the base plate.

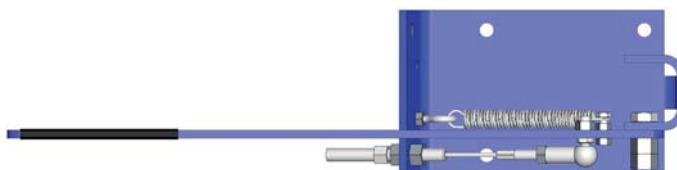


Base plate drilling pattern

- The lever for hand release is mountable on both sides.

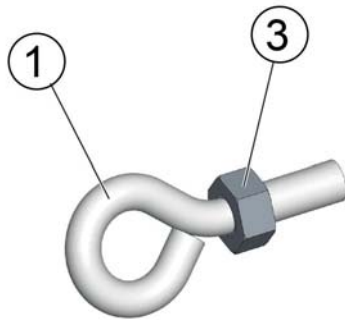


Lever attachment variant 1

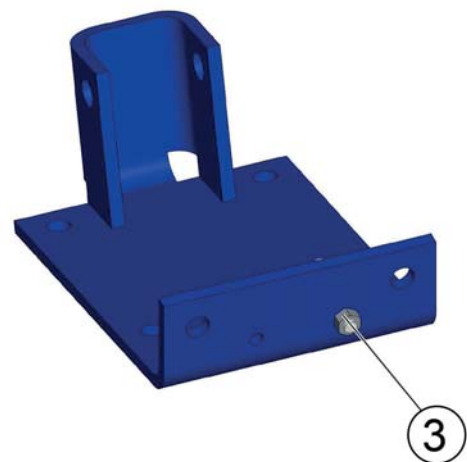
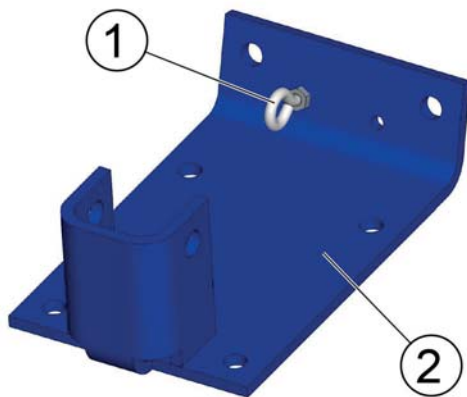


Lever attachment variant 2

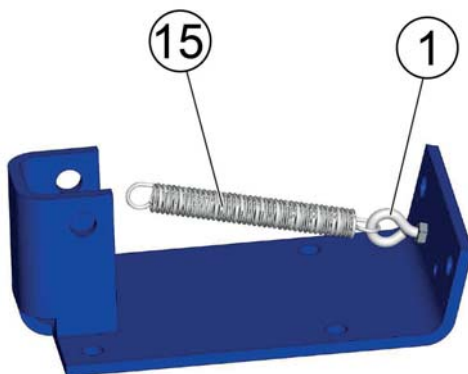
- ▷ Screw nut M6 (3) onto the eye bolt (1).



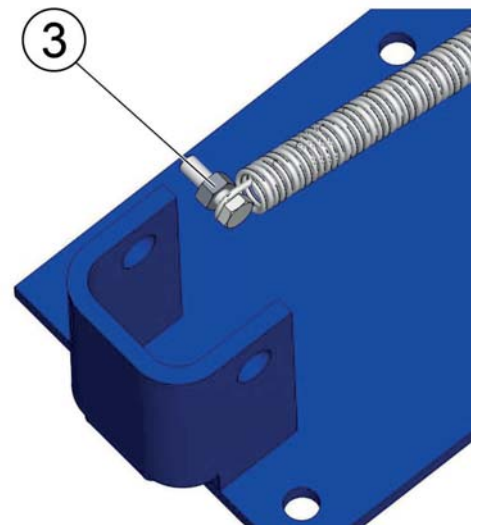
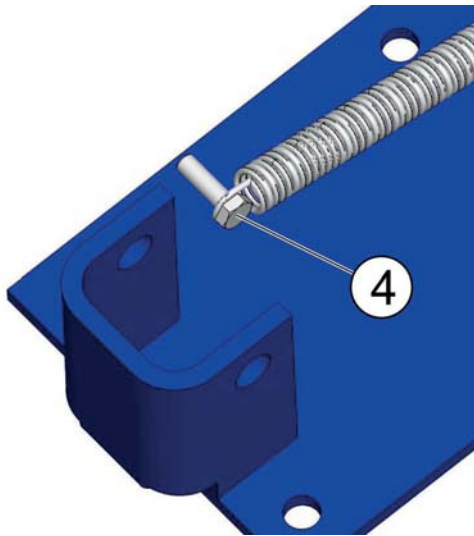
- ▷ Insert the eye bolt (1) into the opening on the base plate (2).
▷ Screw nut M6 (3) onto the eye bolt.



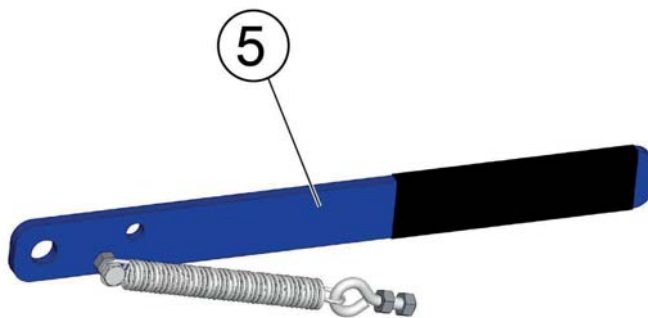
- ▷ Thread the tension spring eye (15) in the eye bolt (1).



- ▷ Insert hexagon head screw M6 x 20 - 8.8 (4) into tension spring eye.
- ▷ Screw nut M6 (3) onto screw M6 (4).



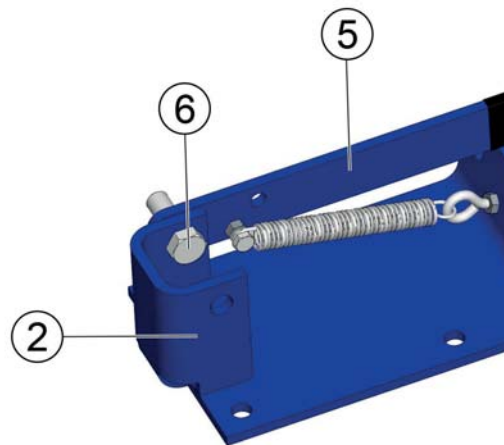
- ▷ Screw hand lever (5) onto the hexagon head screw M6 x 20 - 8.8 (4).



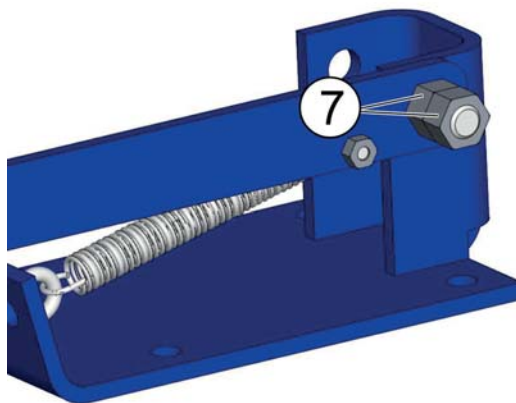
- ▷ Screw nut M6 (3) onto the hexagon head screw M6 x 20 - 8.8 (4).



- ▷ Insert cylinder screw M12 x 35 - 8.8 (6) into the openings of the base plate (2) and lever for hand release (5).



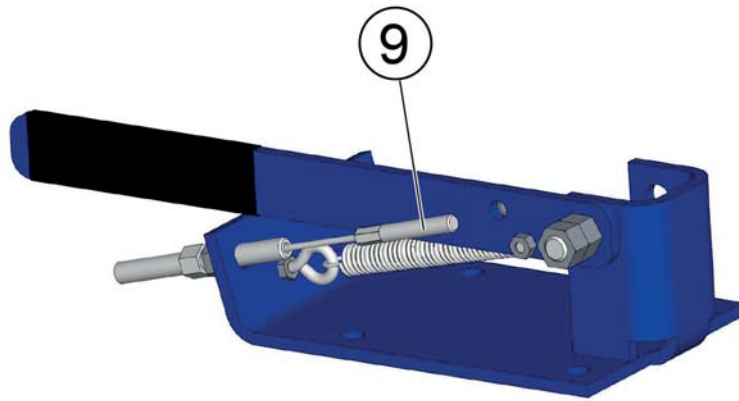
- ▷ Screw two nuts M12 (7) onto the cylinder screw M12 x 35 - 8.8 (6). Lock both nuts.



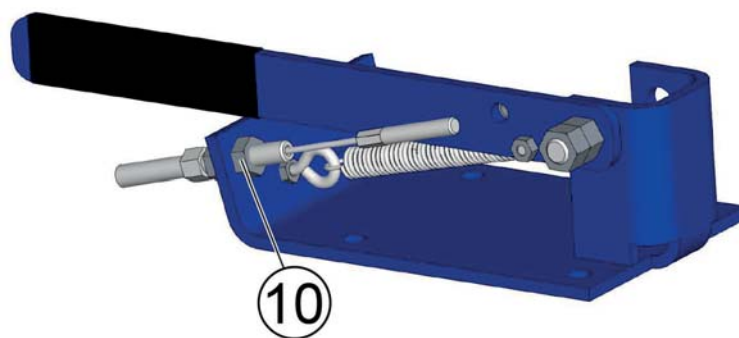
- ▷ Screw nut M10 (10) approx. 4 cm onto the bowden cable (9).



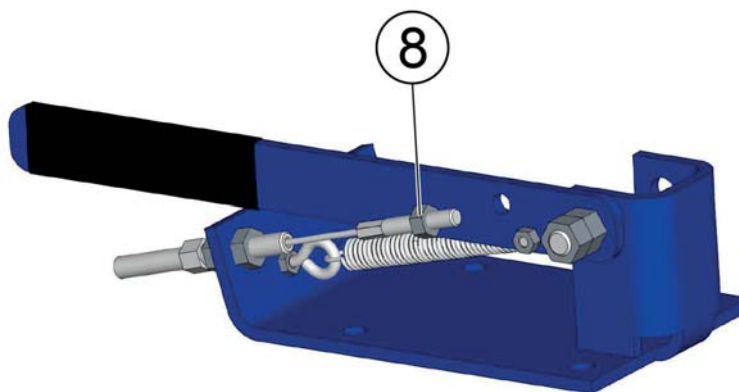
- ▷ Insert bowden cable (9) into the base plate opening.



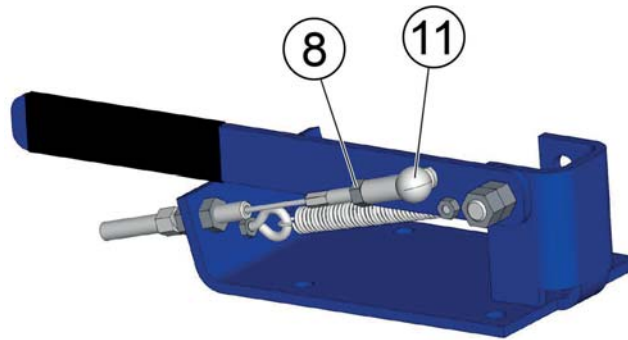
- ▷ Screw nut M10 (10) onto the bowden cable.



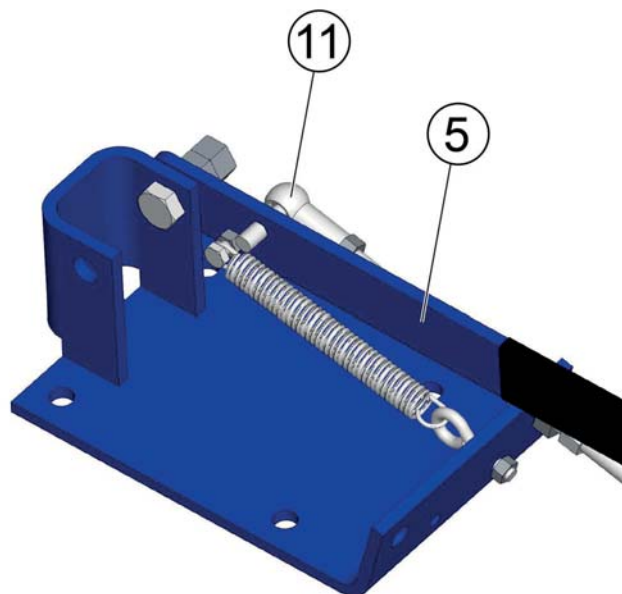
- ▷ Screw nut M8 (8) onto the bowden cable.



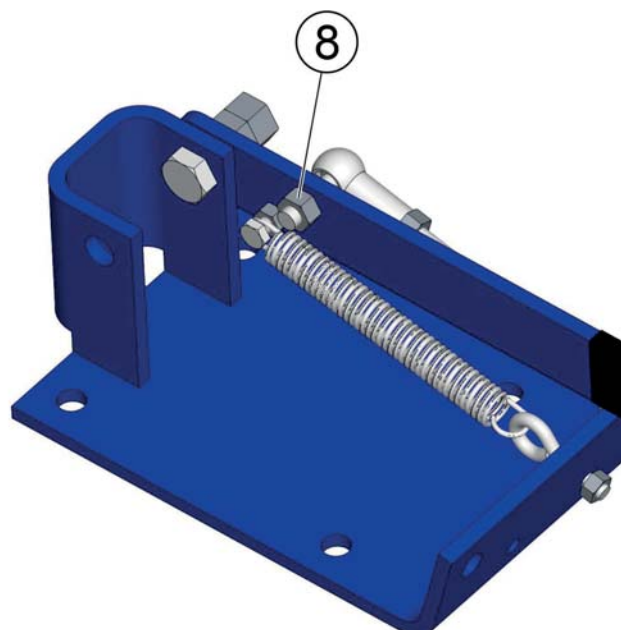
- ▷ Screw angle joint (11) onto bowden cable. Lock nut M8 (8).



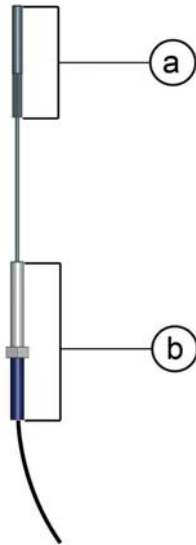
- ▷ Insert angle joint (11) into the opening of the lever for hand release (5).



- ▷ Screw nut M8 (8) onto angle joint (11).



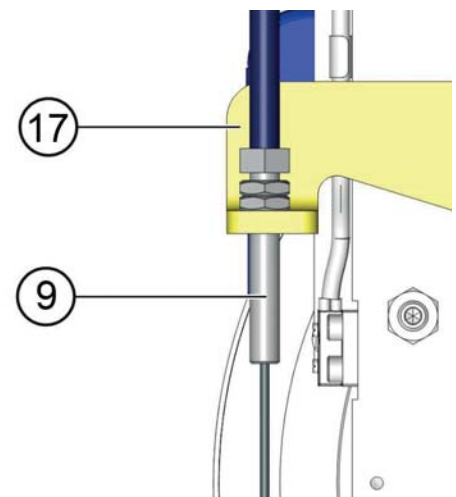
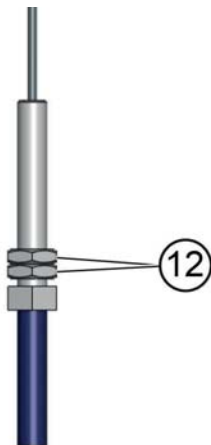
4.3 Assembly of the bowden cable on the brake



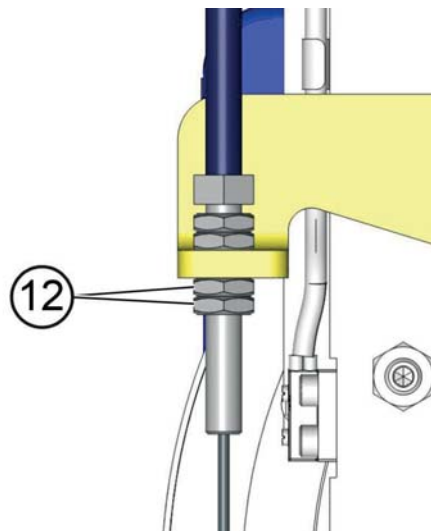
Bowden cable end overview

a Threaded end
b Adjusting screw

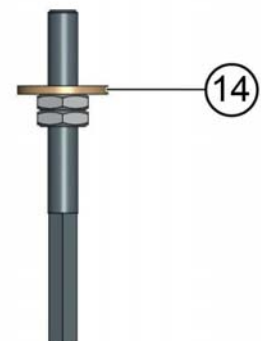
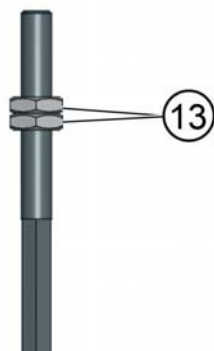
- ▷ Screw two nuts M8, low form (12) onto the adjusting screw.
- ▷ Insert bowden cable (9) into the opening of the lower or upper lever (17).



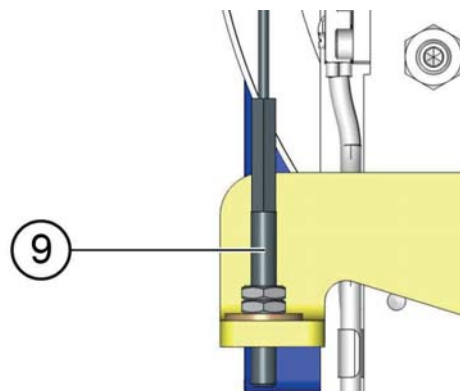
- ▷ Screw two nuts M8, low form (12) onto the adjusting screw. Lock the nuts.



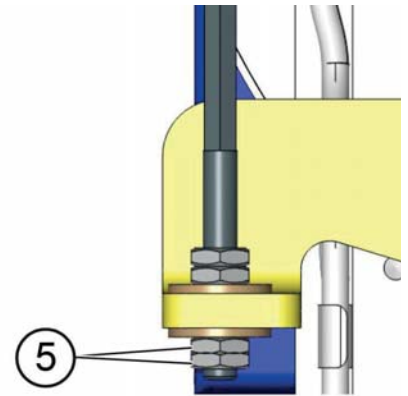
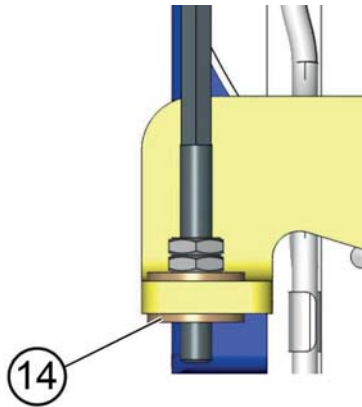
- ▷ Screw two nuts M6, low form (13) approx. 3 cm onto the threaded end.
- ▷ Screw a washer D6 (14) onto the threaded end.



- ▷ Insert bowden cable (9) into the opening of the 2nd lever.

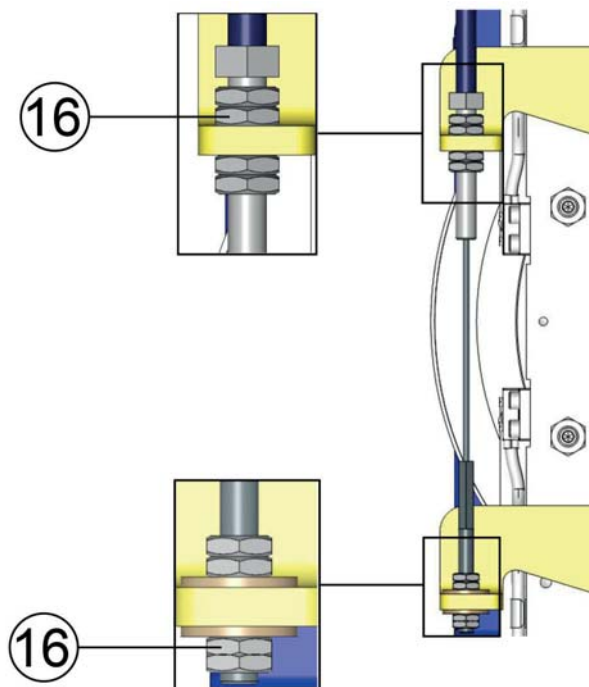


- ▷ Screw a washer D6 (14) onto the threaded end.
- ▷ Screw two nuts M6, low form (13) onto the threaded end. Lock the nuts.



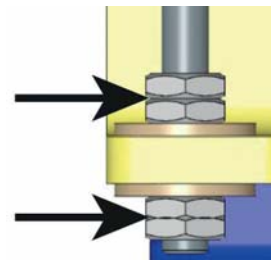
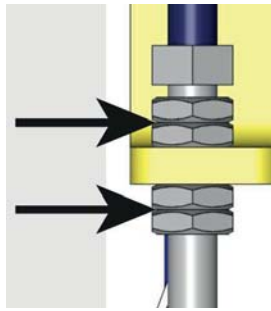
4.4 Adjusting the bowden cable

- The pretension of the bowden cable is adjusted using the adjusting nuts.



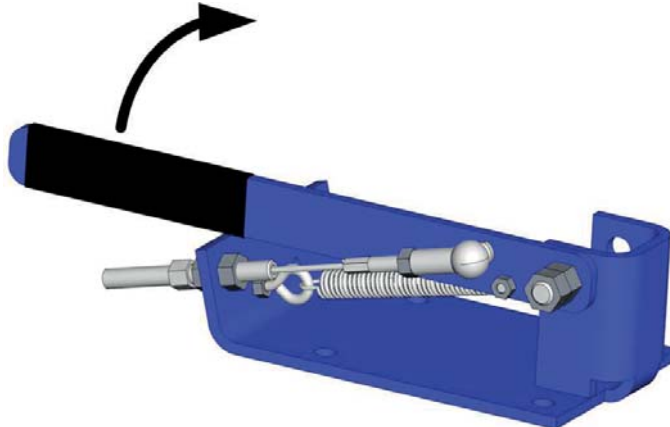
16 Adjusting nuts

- The pre-tension must be set so that the brakes are closed when the lever for hand release is not pulled.
- After assembly, secure the nuts and locking nuts on the bowden cable with threadlocker.



5 Controls

- To open the brakes, pull the lever for hand release.



Pulling the lever for hand release

- To close the brakes, the lever for hand release is moved back to its starting position.

6 Service work



Danger!

Risk of accident and damage to property caused by maintenance work not carried out properly!

Maintenance work not carried out properly endangers the safety of the elevator system.
 Injury to persons and damage to property can occur.

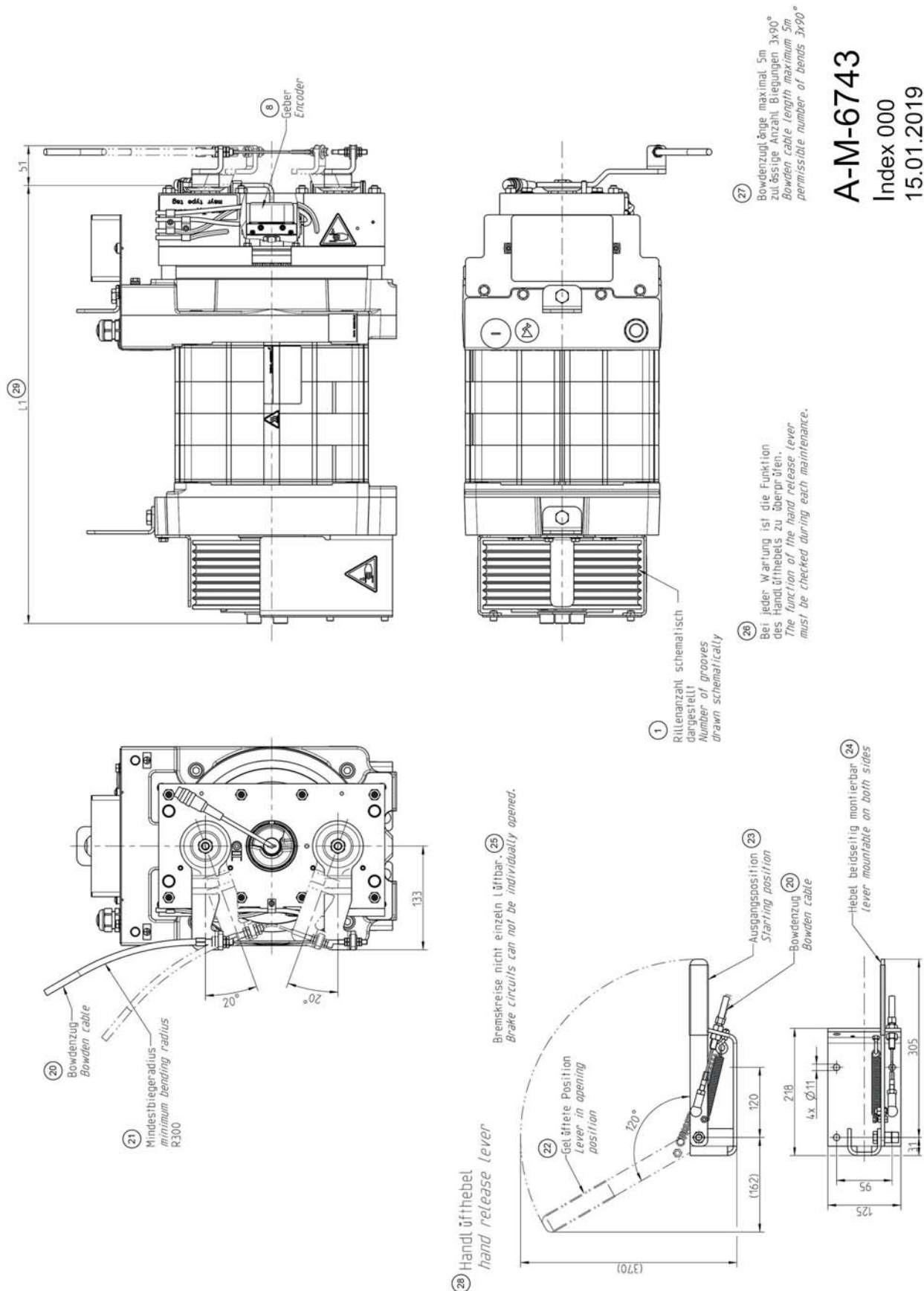
▷ Carry out the maintenance work properly.

component	Activity	Interval
Levers for hand release	Checking for functioning.	Whenever performing maintenance on the elevator, at least 1 x a year.
Bowden cable	Visual inspection for rust and soiling.	
	Checking for free movement and necessity to replace the bowden cable if any doubt.	
Bowden cable	Checking for elongation. Elongation of the bowden cable can be recognised by the fact that the pre-tension with the adjusting nuts has to be re-adjusted (see chapter "Start-up/Adjusting the bowden cable"). If it has stretched by more than 1 cm, it must be replaced.	

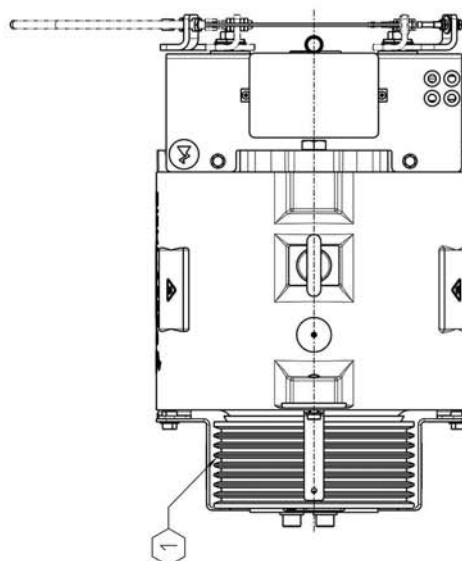
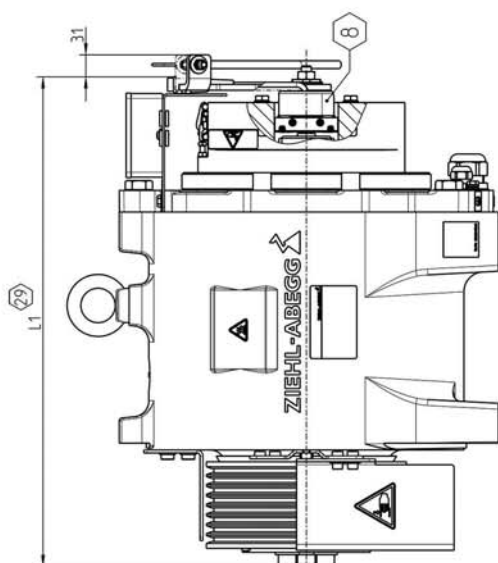
7 Enclosure

7.1 Dimension sheet

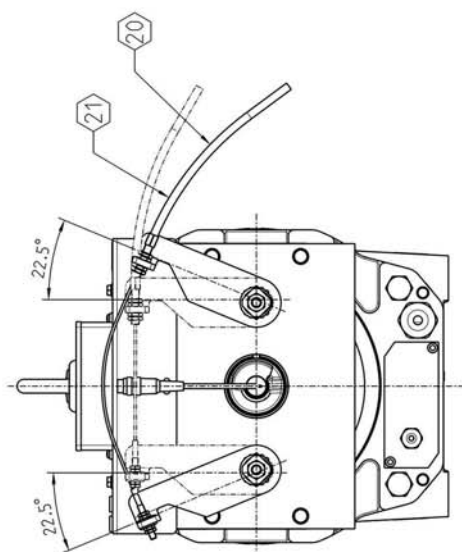
7.1.1 Dimension sheet ZAtop SM180/B with bowden cable hand release system



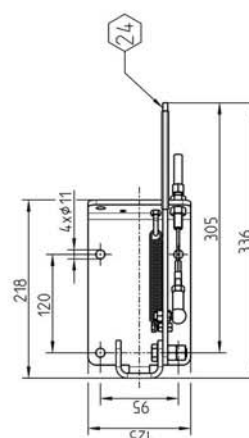
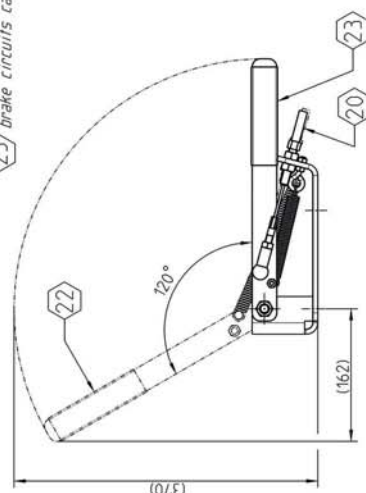
① = Rillen schematisch dargestellt
grooves drawn schematically
 ⑧ = Geber
encoder
 ②① = Bowdenzug
bowden cable
 ②① = Mindestbiegeradius
minimum bending radius
 R300
 ②② = Gelöferte Position
lever in opening position
 ②③ = Ausgangsposition
lever in starting position
 ②④ = Hebel beidseitig montierbar
lever mountable on both sides
 ②⑤ = siehe Motor Maßblatt
see motor dimension sheet



Bei jeder Wartung ist die Funktion des Handlöffhebels zu überprüfen
the function of the hand release lever must be checked during each maintenance



25 Bremskreise nicht einzeln lüftbar.
brake circuits can not be individually opened.



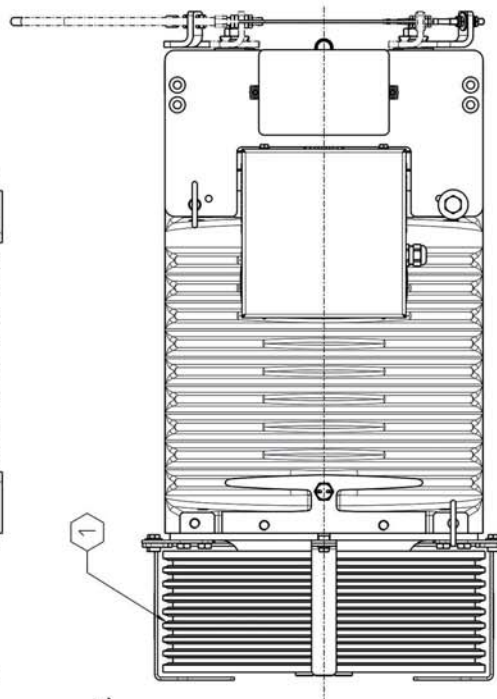
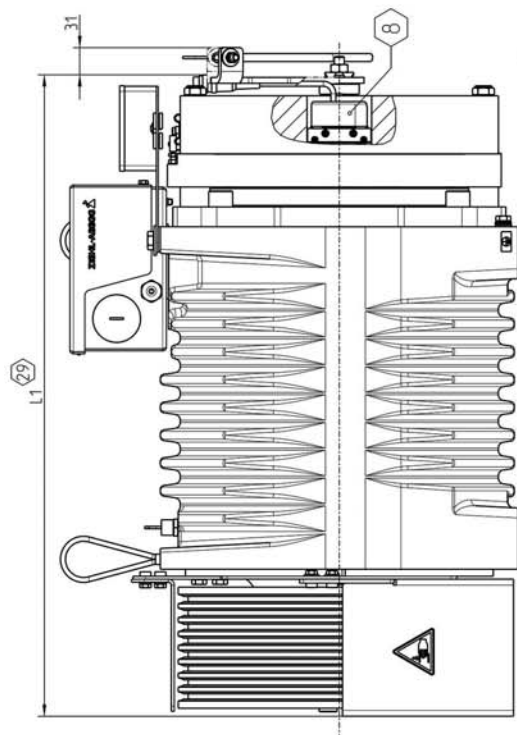
27
bowdenzuglänge maximal 5m
zulässige Anzahl Biegungen 3x90°
bowden cable length maximum 5m
permissible number of bends 3x90°

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01.12.2021

① = Rillen schematisch dargestellt
grooves drawn schematically
 ⑧ = Geber
encoder
 20 = Bowdenzug
bowden cable
 21 = Mindestbiegeradius
minimum bending radius
 R300
 22 = Gefärrte Position
lever in opening position
 23 = Ausgangsposition
lever in starting position
 24 = Hebel beidseitig montierbar
lever mountable on both sides
 29 = siehe Motor Maßblatt
see motor dimension sheet

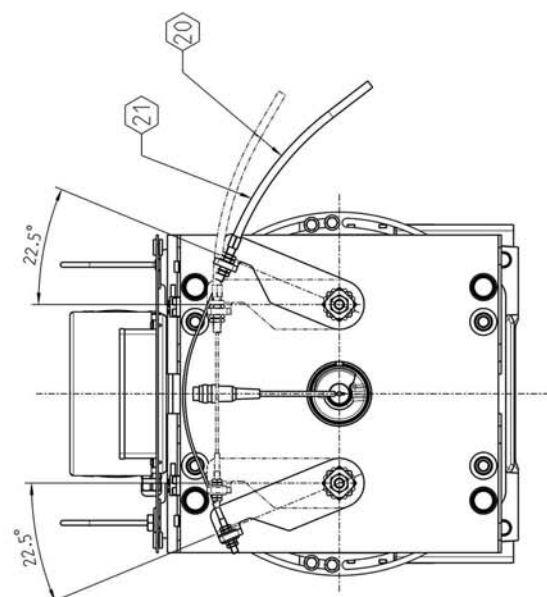


27 Bowdenzuglängen maximal 5m
zulässige Anzahl Biegungen 3x90°
bowden cable length maximum 5m
permissible number of bends 3x90°

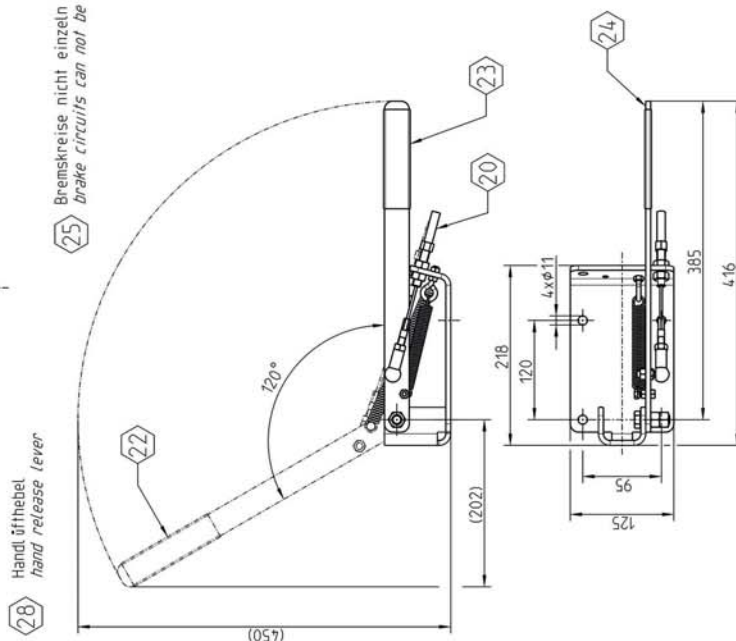
A-M-6778

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01.12.2021



25 Bremskreise nicht einzeln lüftbar.
brake circuits can not be individually opened.



7.1.4 Legend for dimension sheets

- 1 Number of grooves represented schematically
- 8 Encoder
- 20 Bowden cable
- 21 Minimum bending radius $R = 300 \text{ mm}$
- 22 Lever in opening position
- 23 Starting position
- 24 Levers mountable on both sides
- 25 Brake circuits cannot be individually released
- 26 Whenever performing maintenance, the functioning of the lever for hand release must be checked.
- 27 Bowden cable length max. 5 m
- Allowed number of bends $3 \times 90^\circ$
- 28 Levers for hand release
- 29 See motor dimension sheet

7.2 Part no.

Hand release system with bowden cable 5 m	Part no.
Version ZAtop SM180 designed for one lever	70026228
Version ZAtop SM200.15D designed for one lever	70029161
Version ZAtop SM200.23D designed for one lever	70031103
Version ZAtop SM200.30D designed for one lever	70031104
Version ZAtop SM200.40E/SM200.45E designed for one lever	70031091

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