



MAGNUM 210  
MAGNUM 300

MANUAL FOR ROLL UP SCREENS

# INDEX

GENERAL INFORMATION .....	3
SAFETY INSTRUCTIONS .....	5
MAGNUM 210 .....	8
Cross Section MAGNUM 210 Casing	
Dimensions of the projection screen	
MAGNUM 300 .....	11
Cross Section MAGNUM 300 Casing	
Dimensions of the projection screen	
ELECTRICAL INSTALLATION.....	14
EMERGENCY LIMIT SWITCH .....	15
Motor Left/ screen material Back .....	15-17
Motor right/ screen material front.....	18-20
ADJUSTMENT OF STOP POSITIONS.....	21
STOP POSITION ADJUSTMENT .....	22
ACCESSORIES.....	24
TENSIONING UNIT .....	26

# GENERAL INFORMATION

## ROLL-UP PROJECTION SCREEN MAGNUM

Roll-up screens MAGNUM 210 and MAGNUM 300 are permanently installed projection screens consisting of a roll-up tube that is attached to a drive system (asynchronous tube motor) on one side and pivoted on the opposite.

The safety devices according to DIN 56950-1 consists of a mechanical safety brake unit and a rotary limit switch with two adjustable emergency stop positions. Both safety devices are connected to the winding shaft. The lateral bearing positions are connected to a two-part screen casing made of aluminum sheet (protective casing). The projection material is rolled up on the winding tube and has a weighting profile (bottom bar) at its lower end.

The winding tube maintains the height and the projection material is unrolled downwards. The drive (tubular motor) can be exchanged without dismantling the projection screen if necessary.

Projection screen MAGNUM is used for displaying images, videos, films, etc. supplied by a projector. MAGNUM projection screens can be mounted to the ceiling or to the wall via a separate bearer construction on site.

Detail information on the roll-up screen and the serial number VAT can be found on the type plate on the back of the screen material in the bottom left corner and at the top of the protective casing. The screen material corresponds to a building material class in accordance with DIN 4102-1 and is in line with the limit values for waviness according to ÖNORM A 2115.

For the technical details and projection-specific material parameters please refer to the corresponding product data sheet. [www.AVstumpfl.com/projectionmaterials](http://www.AVstumpfl.com/projectionmaterials)

## QUALITY AND SAFETY

The roll-up projection screen is in line with the applicable European guidelines and standards (incomplete excerpt):

Directive 2006/42/EC on Machinery

Low Voltage Directive 2014/35/EU

Electromagnetic Compatibility Directive 2014/30/EU

DIN 19045-2 Projection of still pictures and motion pictures - Part 2: Screens

DIN 56950-1 Entertainment Technology - Machinery Installations - Part 1: Safety requirements and inspection

DIN 56950-4 Entertainment Technology - Machinery Installations - Part 4: Safety requirements for serially manufactured projection screens

## DECLARATION OF CONFORMITY

According to the EU-Machinery Directive (2006/42/EG) the roll up screen MAGNUM is a machine.

## WARRANTY

The roll up screen MAGNUM may only be used as a projection screen.

No persons are allowed to stay in the operation area. For all damages to persons and property which occur from inappropriate use the warranty will be invalid and the manufacturer cannot be held responsible. The intended use also includes the observance of all instructions and information contained in this operating manual.

The warranty period for production deficiencies is 24 months. Please mind the guarantee regulations with media control panel operation on page 14.

The general terms and conditions are available at [www.AVstumpfl.com/generalterms](http://www.AVstumpfl.com/generalterms)

## UNAUTHORIZED MODIFICATIONS

Unauthorized modifications to a MAGNUM roll up screen or controllers, will invalidate all liability and warranty claims.

## CHANGING THE IMAGE HEIGHT - WARRANTY OF FLATNESS

Each roll-up screen is set to the ordered picture height and the flatness is optimized for this image height. A guarantee claim for the flatness exists exclusively for the ordered image height.

Please note that a subsequent adjustment of the image height can lead to a change in the flatness!

### NOTE

Always keep the manual close to the installation site! The manual must be accessible to the operator and for maintenance work.

# SAFETY INSTRUCTIONS

## TRANSPORT – MOUNTING

### ⚠ WARNING



**Suspended Load**  
Do not linger under a suspended load!

The roll-up screen must be secured during transport and assembly in accordance with the total weight. During lifting work, no person must remain in the danger zone below the suspended load (roll-up screen)! The load must be distributed evenly and secured against falling!

The total weight is displayed on the roll-up screen type plate or on the packaging. For mounting use hoisting equipment which is approved for the weight of the roll up screen. Make sure the roll-up screen is transported and mounted horizontally and torsion-free to prevent the safety brake from engaging. Do not put additional mechanical load on the lightweight aluminium casing.

## MECHANICAL MOUNTING

### NOTICE

Before assembly check the roll-up screen for transport damage! Information on how to proceed in cases of transport damage is provided on the info sheet IMPORTANT INFORMATION.

### ⚠ WARNING

Before assembly make sure that the wall or the ceiling is able to carry the load. Choose the screws/ attachment material in accordance with the weight of the projection screen and the condition of wall or ceiling. The permissible loads on walls, fastenings, connecting and transmission elements must not exceed the maximum holding force and catch torque.

### NOTICE

In order to ensure optimal flatness of the projection surface avoid assembly within the vicinity of radiators, ventilation and air condition systems. To ensure safe and trouble-free operation make sure that the roll-up screen is installed in an absolutely horizontal and torsion-free position!

## ELECTRICAL INSTALLATION

### ⚠ WARNING



**Hazardous Voltage**  
Can cause severe injury or death.  
Turn OFF power and lock-out before installation

The electrical installation is to be performed by a trained electrician from a licensed expert company only. Please hand over this manual and the connection directions that are supplied separately with every motor or switch or control unit to the executing expert.

The electrical installation must only be carried out in a voltage-free and secured against unintentional activation. The electrical installation may only be carried out in a voltage-free state! Secure the system against unintentional reconnection!

Prior to the installation check the isolation of the connecting cable and the cable feedthrough at the casing for damage. Check that there is no ohmic continuity between the connecting cable and the roll-up screen casing so that any danger by indirect contact is excluded. Control units must not be installed in the operating area of the roll-up screen.

## FIRST-TIME OPERATION

### **NOTICE**

When starting the roll-up screen for the first time secure the immediate area of the screen and its movement range. During first-time operation the screen should be moved in steps only. When there are signs of danger or danger situations roll-up screen operation must be stopped immediately. During the test run the operator must always have full and direct sight of the roll-up screen.

Remove the transport protection (protective film) and make sure that the bottom bar did not get stuck in the roll-up screen casing during transport or assembly and that the screen material can unwind without any problems!

## OPERATION

### **CAUTION**

The operator must undergo a training regarding the technical construction and operating principle to ensure safe operation. The operator must have basic knowledge of the industry safety standards. Take appropriate measures to ensure that the roll up screen cannot be operated by untrained persons or activated unintentionally.

The projection screen must only be operated in a well lit environment so as to recognize any danger situations that might occur. During operation the operator must always have full and direct sight of the roll-up screen so as to be able to stop it immediately when a danger situation occurs.

Supervision by adults is required when putting the roll-up screen into operation.

During operation the movement range and the immediate area of the roll-up screen must be secured. No persons are allowed below the roll-up screen!

Before winding up the screen check the bottom bar and the screen material for damage and remove any possible obstacles within the movement range. No additional loads must be attached to / or lifted by the bottom bar.

In the case of recognizable damage to the roll-up screen it must immediately be taken out of service. It can only be put back into service after being repaired and checked/cleared for use by an expert.

## MAINTENANCE TIPS - CLEANING

### **CAUTION**

During work at the roll-up screen make sure that it cannot be started accidentally.

Protect the screen material from soiling. If necessary clean it with a slightly damp and soft cloth. Do not use any aggressive cleaning agents, such as acetone, terpentine, cellulose thinners or ethyl alcohol or similar substances.

## MAINTENANCE

Drives, bearings and other rotating parts of the roll-up screen are permanently lubricated and are maintenance-free. The roll-up screen must be protected from soiling. Maintenance and repair work must only be carried out by authorized experts.

## SAFETY INSPECTION

### NOTICE

MAGNUM roll-up screens must undergo annual safety inspection.

In case of visible damage or unusual noises during the operation the roll-up screen must immediately be taken out of service. It must only be returned to service upon successful repair and inspection/clearance for use by an expert.

The annual safety inspection must only be performed by qualified personnel licensed in line with the national legal regulations (installing person/company, TÜV, consulting engineer).

The inspection must be performed in accordance with DGUV 17 (BGV C1) and the regulations according to DIN 56950-1 Appendix A and the applicable national regulations.

We recommend performing the following measures:

- Check form-fit, positive-fit and torsion-free mounting to ceiling or mounting bracket.
- Perform a test run
- Visual inspection of winding behavior
- Check for operating noises at the bearing locations
- Check operating limit switches (stop point of upper and lower limit switches)
- Check function of the emergency limit switch (by mechanical triggering or triggering by previous adjustment of the operating limit switches)
- Visual inspection of the connection between bottom bar and screen material
- Check electrical control unit and safety installations
- Check "dead man's control" for screens with more than 5 m width or height

## DISASSEMBLY

### WARNING

For disassembly the same safety instructions apply as listed for TRANSPORT - MOUNTING on page 5.

## DISPOSAL

At the end of its lifetime this product must not be disposed of with normal household waste but needs to be taken to a collection site for recycling.

Disassembly of a MAGNUM roll-up screen takes a few steps only and by separate disposal of the waste you can make an important contribution towards environmental protection.

In separated form the materials can be recycled.

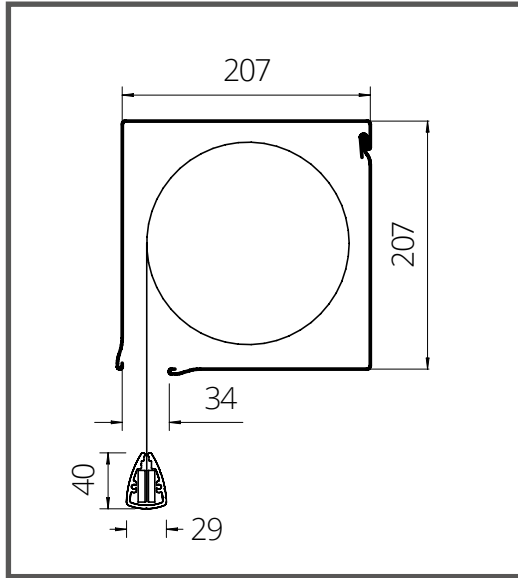
Casing components and bottom bar are made of aluminum and the lateral brackets are made of steel.

For the projection screen material refer to the type plate.

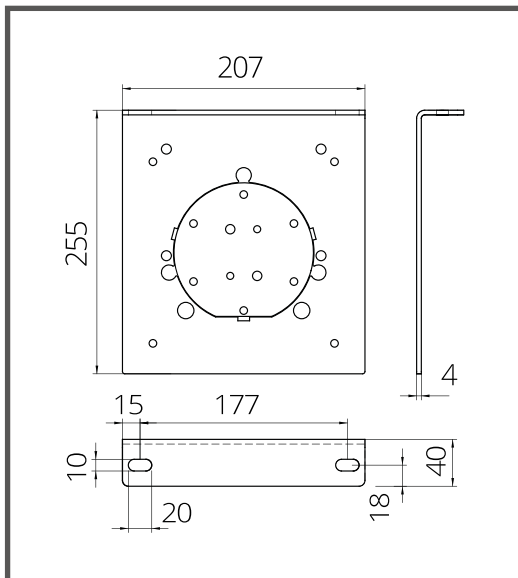
The motor drive is to be disposed of at a collection center for electric devices.

Contact your local disposal company for the address of a collection center.

## CROSS SECTION MAGNUM 210 CASING



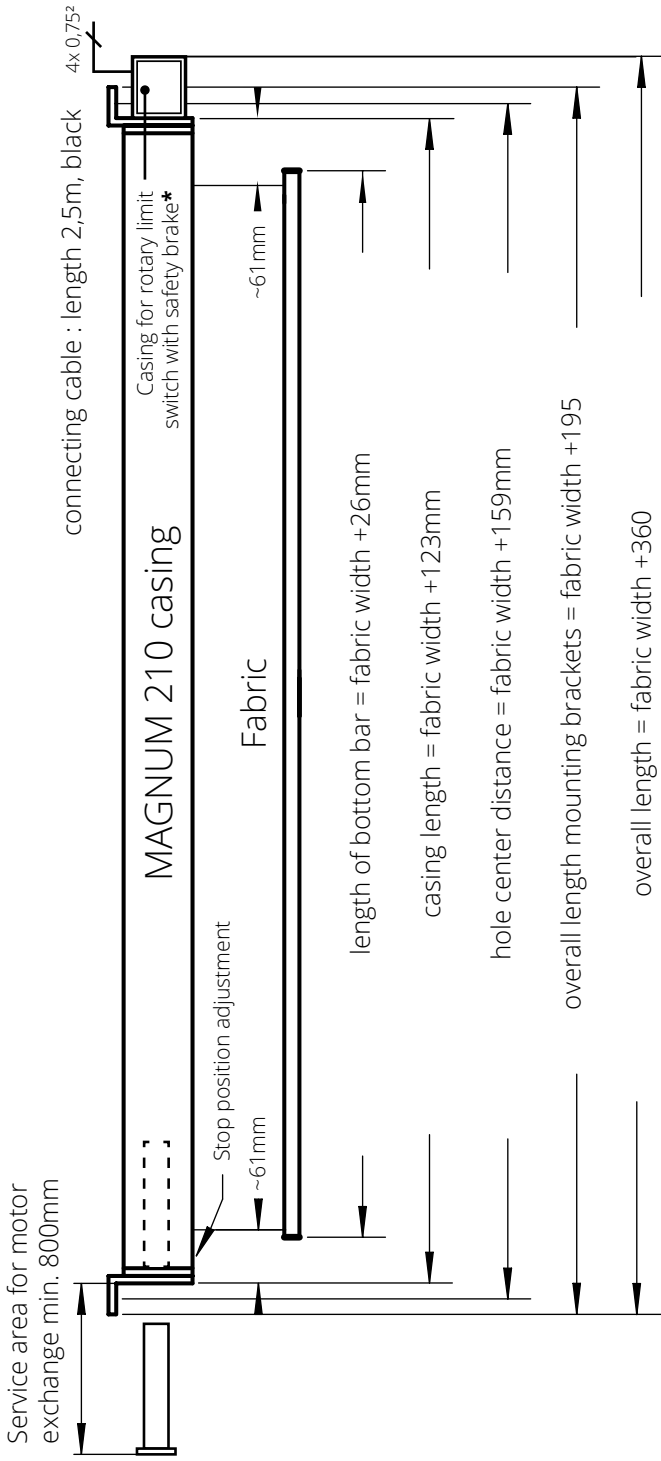
## UNIVERSAL MOUNTING BRACKET FOR CEILING MOUNTING





# MAGNUM 210

Dimensions of the projection screen

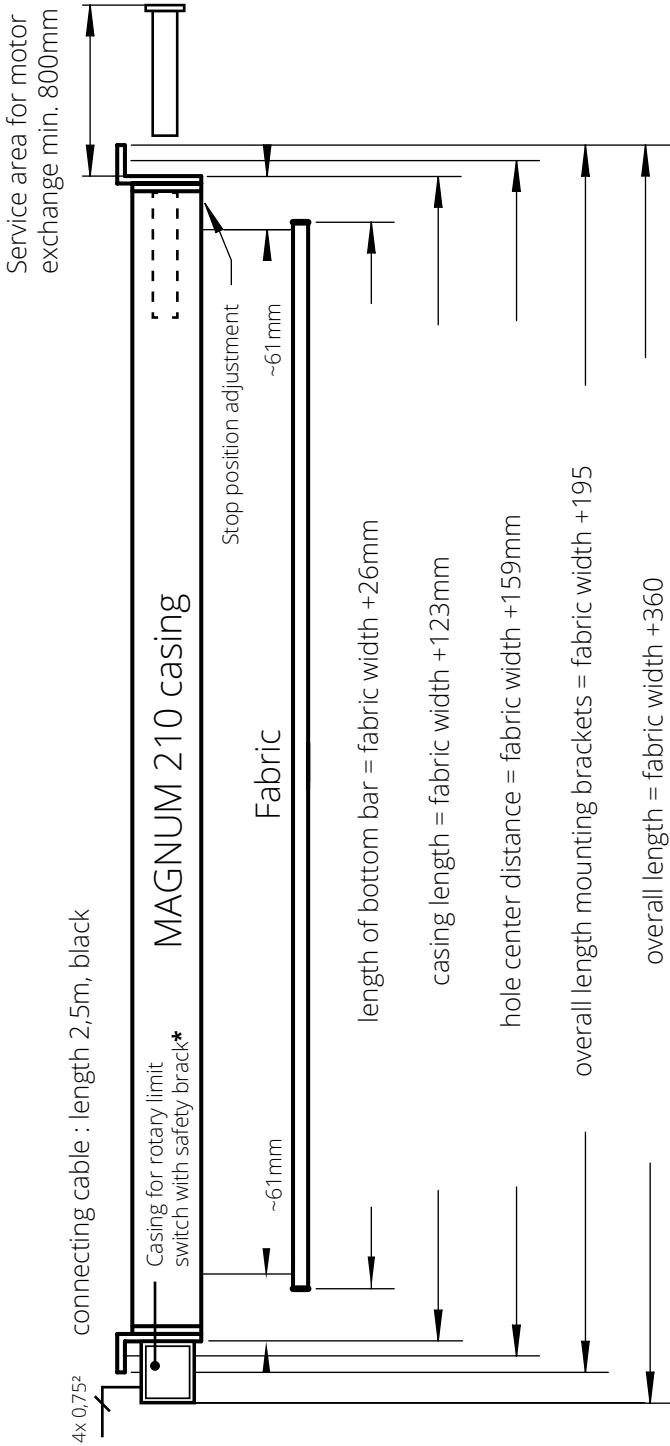


\* For servicing and adjustment of the rotary limit switch and safety brake the casing must be accessible at least from the front and the bottom.

# MAGNUM 210

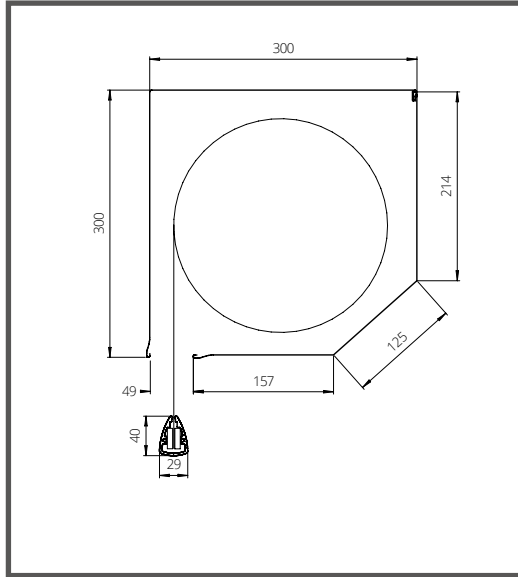
## fabric front

### Dimensions of the projection screen

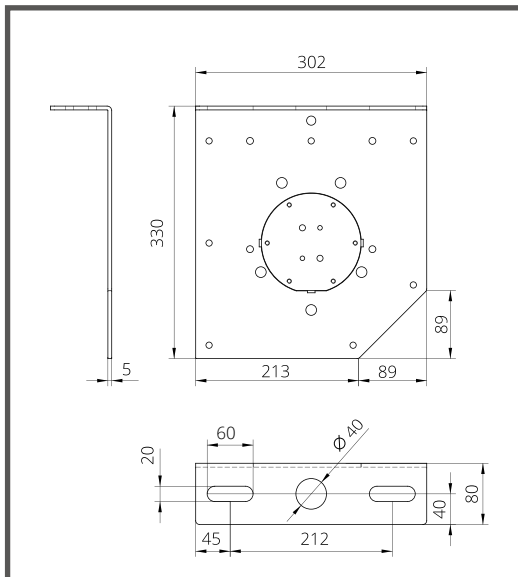


\* For servicing and adjustment of the rotary limit switch and safety brack the casing must be accessible at least from the front and the bottom.

## CROSS SECTION MAGNUM 300 CASING

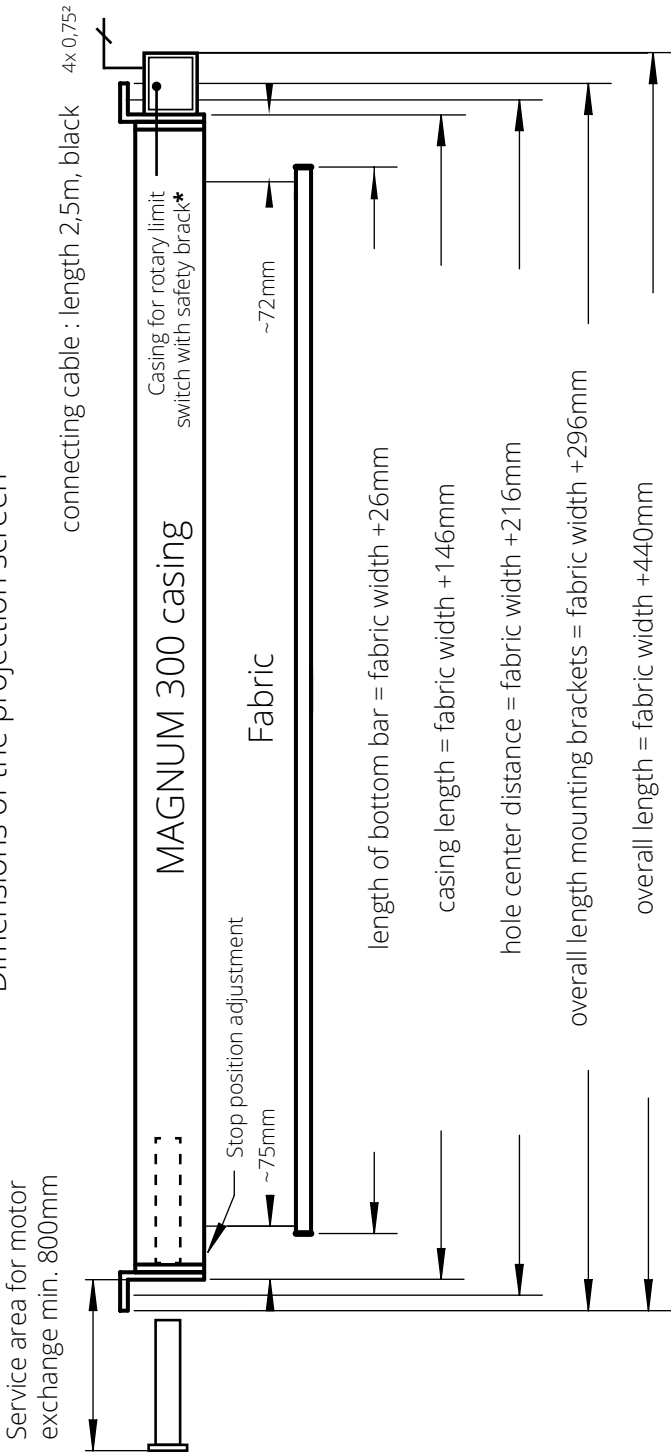


## MOUNTING BRACKET MAGNUM 300 FOR CEILING MOUNTING



# MAGNUM 300

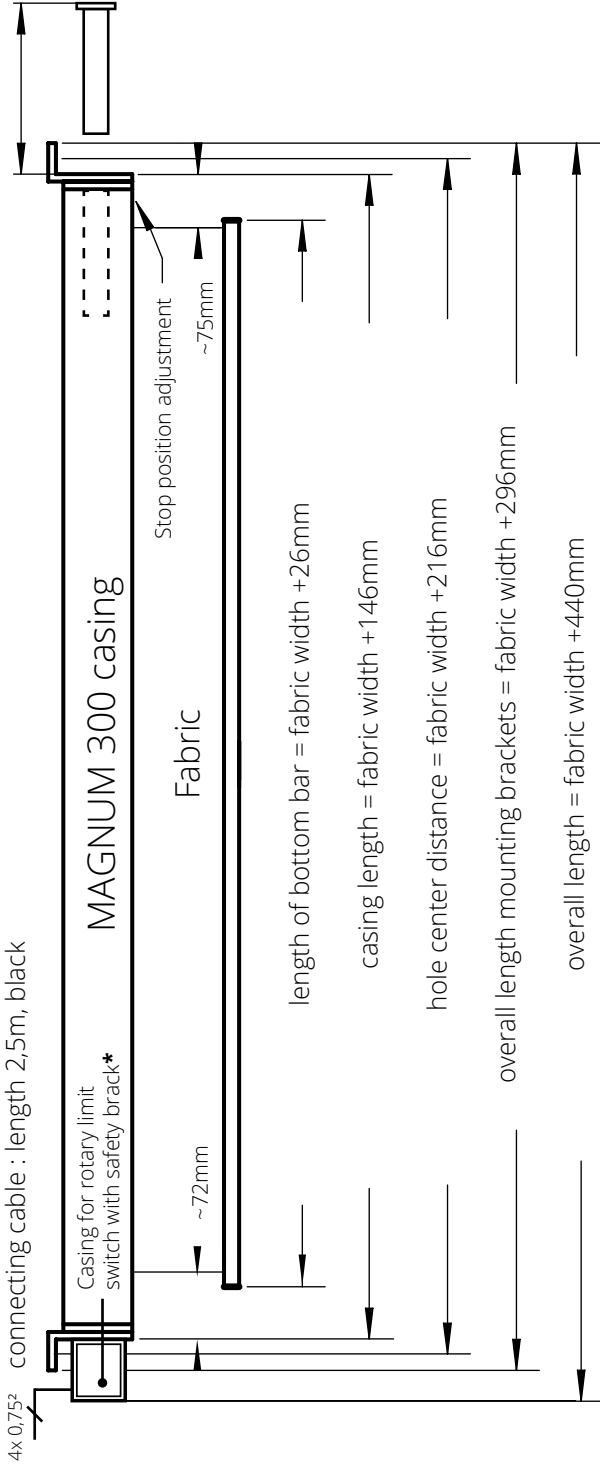
Dimensions of the projection screen



\* For servicing and adjustment of the rotary limit switch and safety brack the casing must be accessible at least from the front and the bottom.

# MAGNUM 300 fabric front

Dimensions of the projection screen



overall length: +/- 5mm

\* For servicing and adjustment of the rotary limit switch and safety brack the casing must be accessible at least from the front and the bottom.

# ELECTRICAL INSTALLATION

## ELECTRIC SUPPLY

230VAC 50Hz. Line circuit breaker 10 A. Motor cable 4x0,75mm<sup>2</sup>



Work at mains voltage (230 V) must only be performed by a licensed electrical company. Please hand over this manual and the connection directions that are supplied separately with every motor or switch or control unit to the executing expert. To get further important instructions refer to chapter SAFETY INSTRUCTIONS on page 4: Incorrect connection of the projection screen may damage the motor!

## INDIVIDUAL CONTROL - 230 V

(See circuit diagram)

### NOTICE

Incorrect control of the tube motor results in electrical overload on the limit switches and may change the set stop positions. In extreme cases the limit switches may get welded together permanently. This causes the motor to be permanently activated and the projection screen to be damaged.

IN ORDER TO AVOID AN ELECTRICAL OVERLOAD OF THE LIMIT SWITCHES IN THE TUBE MOTOR, THE WIRING AND THE CONTROL COMMANDS, MUST COMPLY WITH THE FOLLOWING REGULATIONS:

**1. Do not run two or more motors in parallel from one output.**

A separate contact must be available for every drive and running direction.

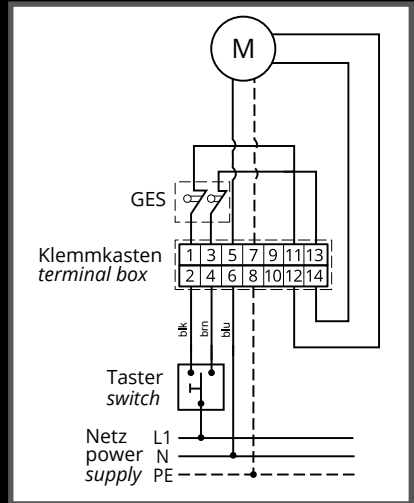
**2. switches and controls must not allow simultaneous UP-and DOWN commands.**

Simultaneous up and down commands cause a short-circuit of the operating capacitor.

For that reason only electrically or mechanically locked single switches (no light switches) must be used.

**3. The CHANGEOVER-DELAY BETWEEN UP AND DOWN COMMAND MUST BE 500ms at least.**

Switching periods under 0,5s results in extremely high currents, which may result in the limit switches being welded together and therefore the projection screen being damaged.



### NOTICE

## OPERATION VIA A MEDIA CONTROL SYSTEM (DRY CONTACT)

In order to control a roll-up screen via a media control system a motor control unit must be installed! Any damage to the motor and consequential damage caused by non-integration of a motor control unit are excluded from the warranty.

Motor control unit-> See chapter "Accessories"

Incorrect connection of the projection screen may damage the motor!

# EMERGENCY LIMIT SWITCH

## MOTOR LEFT/ SCREEN MATERIAL BACK

The movement range of a MAGNUM 210 and 300 roll-up screen is additionally limited by a gear-type limit switch with emergency limit switches for both stop positions.

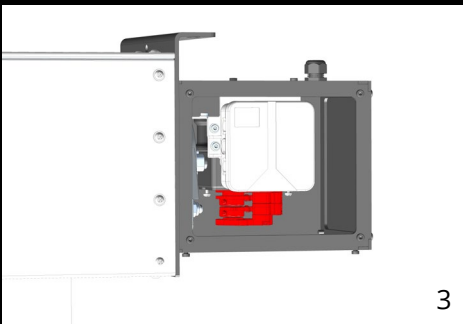
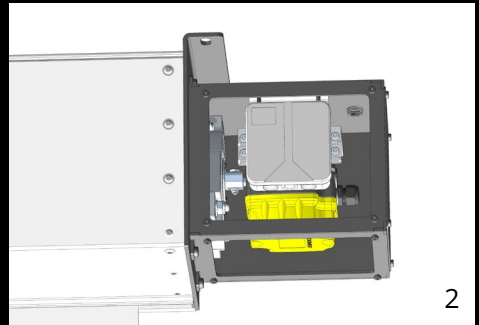
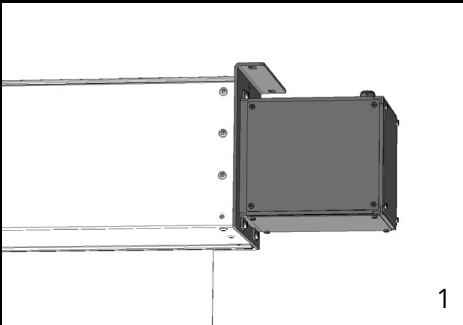
The emergency limit switch is factory-set to the ordered screen Dimensions.  
For safety reasons the movement range must not be extended!

If the installation environment requires an adjustment of the limit positions, the switch point of the emergency limit switch must be adjusted before setting the operational limit switch.

Do a test run.

Instructions for the adjustment of the operational limit switches of the tube motor see chapter Adjustment of stop positions (page 21-23)

**1-2** Start by removing the front and lower casing cover (2,5mm hexagonal Allen key).



**3** In order to get access to the cam unit, remove the cover (red) of the rotary limit switch. (Phillips or slot screwdriver).

# EMERGENCY LIMIT SWITCH

## MOTOR LEFT/ SCREEN MATERIAL BACK

### ADJUSTING THE UPPER EMERGENCY LIMIT SWITCH

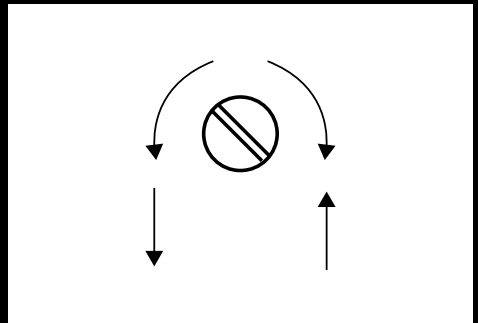
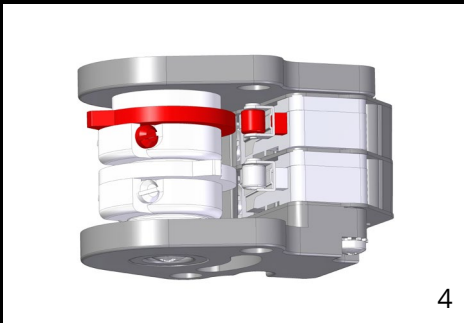
#### NOTICE

In order to ensure safe operation of the roll-up screen the stop point of the upper emergency limit switch must not be moved up any higher!

There is a danger that the bottom bar of the projection screen is pulled into the screen casing and consequently falls down.

#### ⚠ WARNING

The bottom bar falling down may cause serious injuries to persons within the danger area below the projection screen.



**4** The stop point for the upper emergency limit switch is set by means of the set screw at the top switching cam (red).



Turning the screw clockwise moves the stop point UP.

CAUTION: There is a danger that the bottom bar of the projection screen is pulled into the screen casing and consequently falls down.



Turning the screw counter-clockwise moves the stop point DOWN.

Proceed by doing a test run.

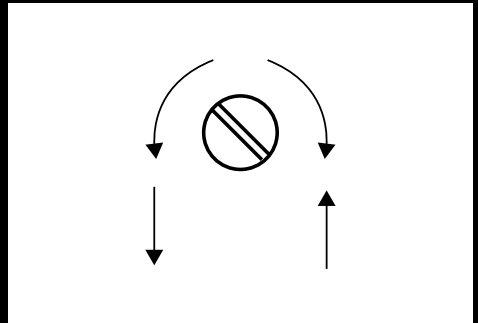
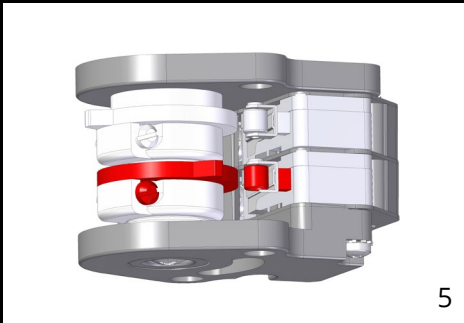
Following this set the upper stop point of the tube motor (operating limit switch).  
(See chapter Adjustment of stop positions on page 21-23)



# EMERGENCY LIMIT SWITCH

## MOTOR LEFT/ SCREEN MATERIAL BACK

### ADJUSTING THE LOWER EMERGENCY LIMIT SWITCH



**5** The stop point for the lower emergency limit switch is set by means of the set screw at the lower switching cam (red).



Turning the screw clockwise moves the stop point UP.



Turning the screw counter-clockwise moves the stop point DOWN.

### NOTICE

The STOP mark must not be visible! The emergency limit switch must not be triggered! There is a risk of the screen material rips off the winding tube and irreparable damage being caused.

### ⚠ WARNING

The screen material falling down may cause severe injuries to persons within the danger area below the projection screen.

Proceed by doing a test run. Following this, adjust the lower tube motor stop point (operation limit switch). (See chapter Adjustment of stop positions on page 21-23).

# EMERGENCY LIMIT SWITCH

## MOTOR RIGHT/ SCREEN MATERIAL FRONT

The movement range of a MAGNUM 210 and 300 roll-up screen is additionally limited by a gear-type limit switch with emergency limit switches for both stop positions.

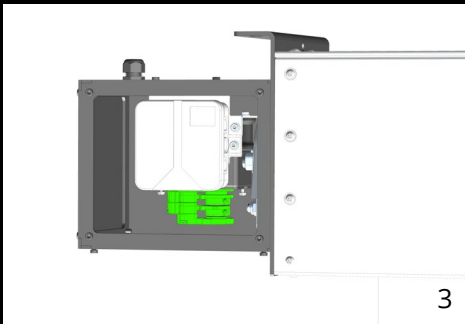
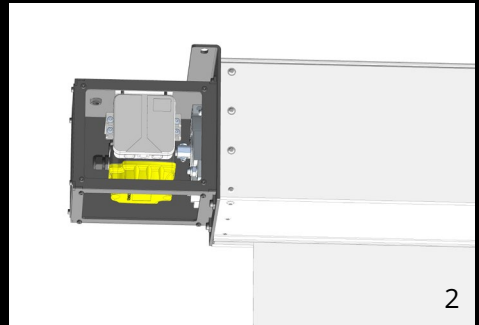
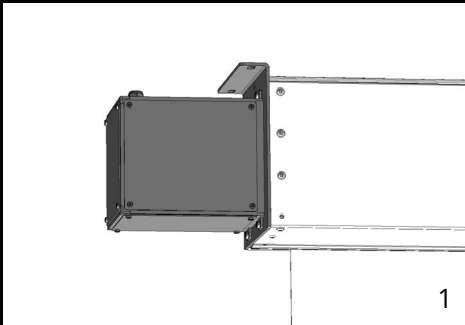
The emergency limit switch is factory-set to the ordered screen Dimensions.  
For safety reasons the movement range must not be extended!

If the installation environment requires an adjustment of the limit positions, the switch point of the emergency limit switch must be adjusted before setting the operational limit switch.

Do a test run.

Instructions for the adjustment of the operational limit switches of the tube motor see chapter Adjustment of stop positions (page 21-23)

**1-2** Start by removing the front and lower casing cover (2,5mm hexagonal Allen key).



**3** In order to get access to the cam unit, remove the cover (green) of the rotary limit switch. (Phillips or slot screwdriver).

# EMERGENCY LIMIT SWITCH

## MOTOR RIGHT/ SCREEN MATERIAL FRONT

### ADJUSTING THE UPPER EMERGENCY LIMIT SWITCH

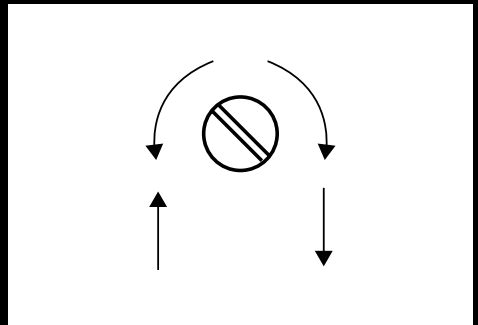
#### NOTICE

In order to ensure safe operation of the roll-up screen the stop point of the upper emergency limit switch must not be moved up any higher!

There is a danger that the bottom bar of the projection screen is pulled into the screen casing and consequently falls down.

#### ⚠ WARNING

The bottom bar falling down may cause serious injuries to persons within the danger area below the projection screen.



**4** The stop point for the upper emergency limit switch is set by means of the set screw at the top switching cam (red).



Turning the screw counter-clockwise moves the stop point UP.  
(CAUTION: There is a danger that the bottom bar of the projection screen is pulled into the screen casing and consequently falls down.)



Turning the screw clockwise moves the stop point DOWN.

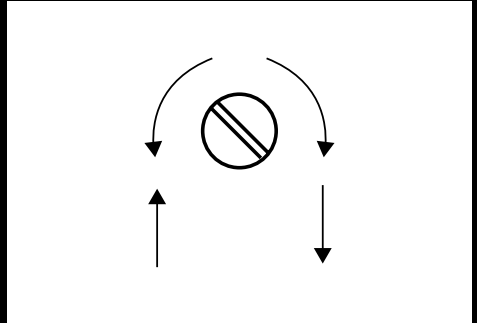
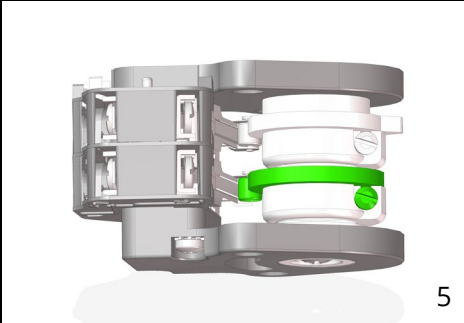
Proceed by doing a test run.

Following this set the upper stop point of the tube motor (operating limit switch).  
(See chapter Adjustment of stop positions on page 21-23)

# EMERGENCY LIMIT SWITCH

## MOTOR RIGHT/ SCREEN MATERIAL FRONT

### ADJUSTING THE LOWER EMERGENCY LIMIT SWITCH



**5** The stop point for the lower emergency limit switch is set by means of the set screw at the lower switching cam (green).



Turning the screw counter-clockwise moves the stop point UP.



Turning the screw clockwise moves the stop point DOWN.

### NOTICE

The STOP mark must not be visible! The emergency limit switch must not be triggered! There is a risk of the screen material rips off the winding tube and irreparable damage being caused.

### ⚠ WARNING

The screen material falling down may cause severe injuries to persons within the danger area below the projection screen.

Proceed by doing a test run. Following this, adjust the lower tube motor stop point (operation limit switch). (See chapter Adjustment of stop positions on page 21-23).

# ADJUSTMENT OF STOP POSITIONS

## MOTOR LEFT/ SCREEN BACK AND MOTOR RIGHT/SCREEN FRONT

Roll-up screens MAGNUM 210 or MAGNUM 300 have two set screws at the tube motor for setting the upper (MIN) and lower (MAX) stop points. Additionally, the movement range is secured by two emergency limit switches of a rotary limit switch. Details on the emergency limit switches can be found in chapter EMERGENCY LIMIT SWITCHES.

### **NOTICE**

#### LOSS OF WARRANTY

The stop positions are factory-set to the ordered screen Dimensions and the set screws sealed. Usually there is no need to change the upper or lower stop position.

IMPORTANT NOTE: Any damage caused by adjusting the stop positions are not covered by warranty.

Note: Any adjustment of the stop positions for application reasons must be carried out by qualified personnel only . Adjust in small steps and check the result by completely unwind and rewind of the projection screen.

### **NOTE**

Tube motors are not suitable for permanent operation; maximum power-on time is 3 - 4 minutes. When the roll-up screen is running any longer than that, a thermal circuit breaker switches off the motor. In such a case you need to wait for about 15 minutes before the motor is ready for operation again!

# STOP POSITION ADJUSTMENT

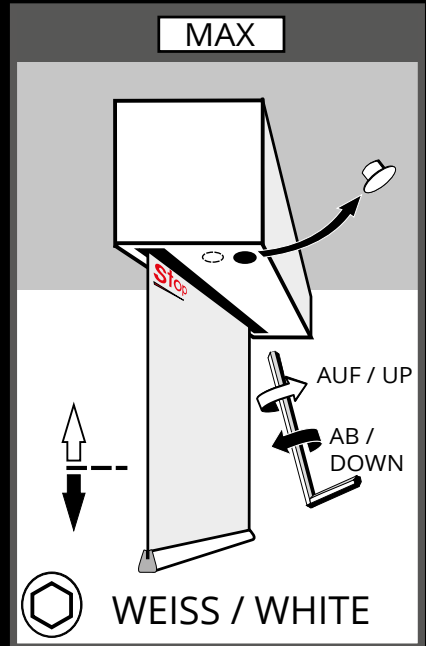
ADJUSTING THE LOWER STOP POINT MAX OF THE TUBE MOTOR  
(OPERATING LIMIT SWITCH):



IN ORDER TO MOVE THE STOP POINT **MAX** UP YOU NEED TO TURN THE WHITE SET SCREW TO THE RIGHT (CLOCKWISE) (SEE FIG. MAX)



IN ORDER TO MOVE THE STOP POINT **MAX** DOWN YOU NEED TO TURN THE WHITE SET SCREW SLIGHTLY TO THE LEFT (COUNTER-CLOCKWISE) (SEE FIG. MAX)



## NOTICE

The STOP mark must not be visible! The emergency limit switch must not be triggered! There is a risk of the screen material rips off the winding tube and irreparable damage being caused. For safety reasons the movement range must not be extended! There is a risk of the projection screen material is ripped off the winding tube and irreparable damage being caused.

## ⚠ WARNING

The screen material and bottom bar falling down may cause severe injuries to persons within the danger area below the projection screen.

# STOP POSITION ADJUSTMENT

ADJUSTING THE UPPER STOP POINT MIN OF THE TUBE MOTOR  
(OPERATING LIMIT SWITCH):

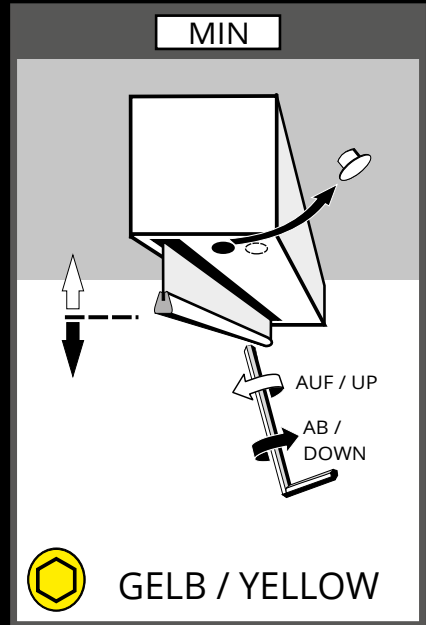
Remove the round cover cap(s) at the bottom of the screen casing (see Fig. MIN).



IN ORDER TO MOVE THE STOP POINT **MIN** SLIGHTLY UP YOU NEED TO TURN THE YELLOW SET SCREW SLIGHTLY TO THE LEFT (COUNTER-CLOCKWISE) (SEE FIG. MIN).



IN ORDER TO MOVE THE STOP POINT **MIN** DOWN YOU NEED TO TURN THE YELLOW SET SCREW TO THE RIGHT (CLOCKWISE) (SEE FIG. MIN).



## NOTICE

The bottom bar of the screen material must not be pulled into the opening of the screen casing!  
The emergency limit switch must not be triggered

## ⚠ WARNING

There is a danger that the bottom bar of the projection screen is pulled into the screen casing and ripped off from the projection screen and falls down.

The bottom bar falling down may cause severe injuries to persons within the danger area below the projection screen.

# ACCESSORIES

## CONTROL OF ONE MOTOR



### BRZ-S-SW-SMO-UNO

Wall switch, for single motor control (UP-STOP-DOWN), flush mounted (surface mount adapter optional available)



### BRZ-S-SW-KEY-UPAP

Key switch, for single motor control (UP-STOP-DOWN), surface and flush mount optional

## MEDIA CONTROL (DRY CONTACT)



### BRZ-S-MC-SMO-UNO-IB

Motor control unit for flush mounting with integrated switch, 2 intermediate positions programmable, surface mount adapter optional available



### BRZ-S-MC-CD1X1N

Motor control unit, with dry contacts and with safety insert to protect the motor from impermissible control commands (version for mounting on a 35mm DIN rail in distribution cabinets), additional switch control possible

## MEDIA CONTROL AND RADIO CONTROL (DRY CONTACT)



### BRZ-S-RC-INT-IB-RTS

1-channel wireless wall transmitter for installation in a standard flush-mounted box. Dry contact inputs for operating a roll-up screen with a media control panel.



## RADIO CONTROL



### SOMFY RADIO CONTROL-SET (BRZ-S-RC-SET-IWR-SIT)

Consisting of In-Wall Receiver RTS for flush mounting and remote control Situ 1 (optional: Situ 5 ... five channels), flush mounting (surface adapter optionally available)



### SOMFY RADIO CONTROL-SET (BRZ-S-RC-SET-IWR-SMO)

Consisting of In-Wall Receiver RTS for flush mounting and remote control Smooove 1 Origin RTS for wall mounting

## TRIGGER



### TRIGGER 12V (BRZ-S-TRIGGER-12V)

For controlling the projection screen via a projector with trigger output, direct control of the projection screen via optional switch possible



### TRIGGER 230V (BRZ-S-TRIGGER-230V)

For controlling the projection screen via a projector without trigger output, direct control of actuators via optional switches possible

You will find detailed information for our further control options on our website:

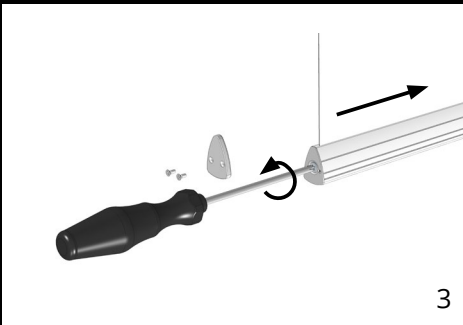
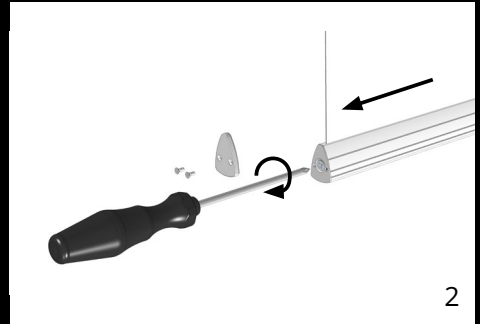
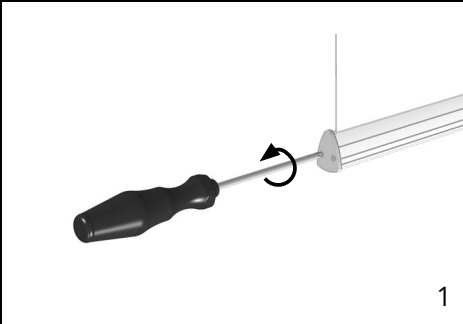
[www.AVstumpfl.com/rollupcontrol](http://www.AVstumpfl.com/rollupcontrol)

# TENSIONING UNIT

Any changes in the room climate (temperature, humidity, winter/summer) may cause the screen material to slight expand or shrink and result in some sort of waviness near the bottom bar.

Rollup projection screens **INLINE** and **MAGNUM** offer the possibility to compensate for these changes by adjusting the tension on the bottom bar.

- 1** Unscrew the two Phillips screws and remove the end caps. Behind these end caps you will find the central set-screw.
- 2** Turning this screw clockwise increases the tensile stress.
- 3** Turning the screw counter-clockwise reduces the tensile stress.



AV Stumpfl GmbH | Mitterweg 46 | 4702 Wallern  
AVstumpfl@AVstumpfl.com | www.AVstumpfl.com | +43 7249 42811