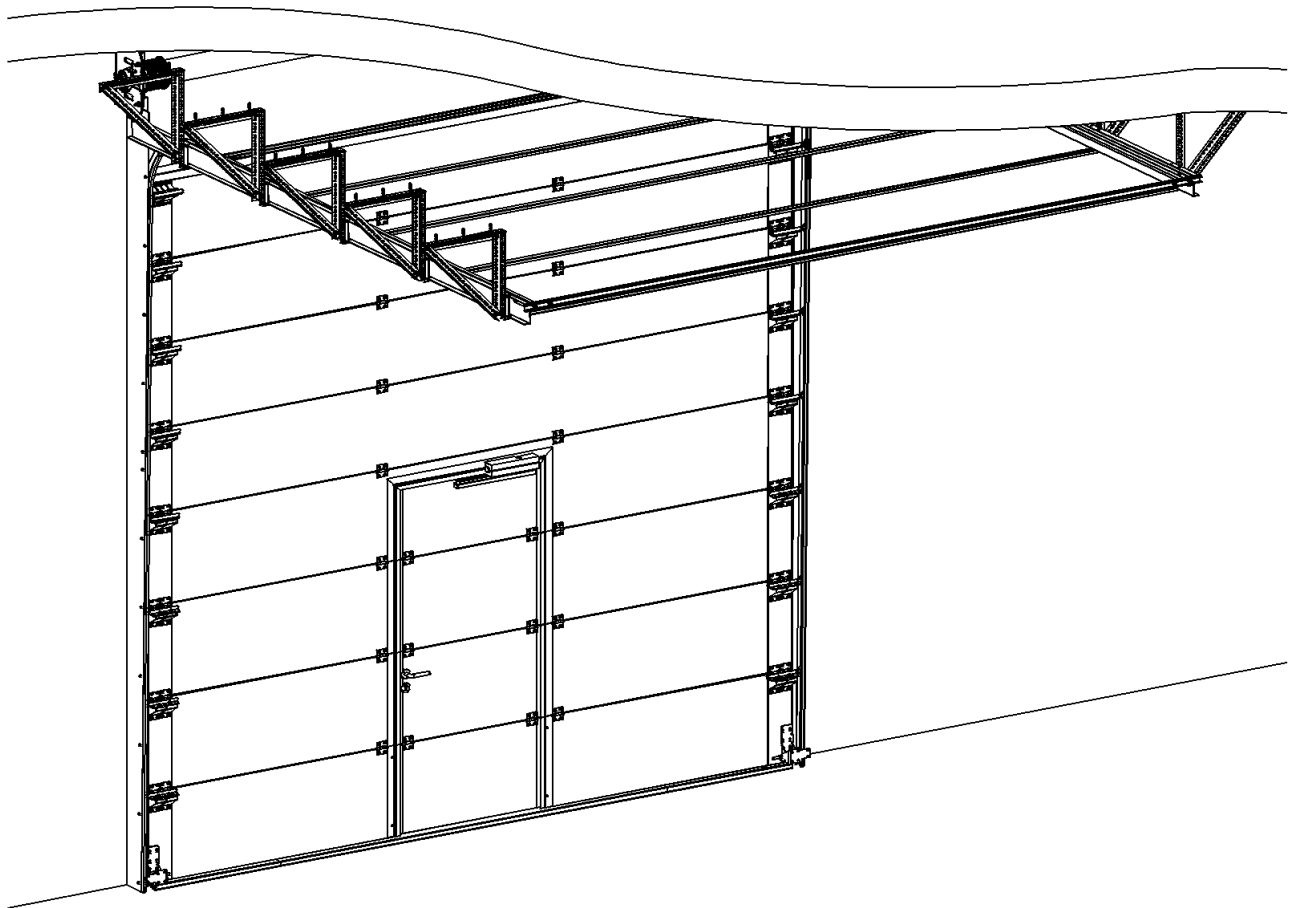




Installation manual OGS





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1. NOTICE BEFORE INSTALLATION

Dear customers,

we are pleased, you have decided for sectional fire gates from the company Somati system s.r.o.

Please, read the instructions carefully and follow them step by step. You will obtain important information on the safe installation and operation of your gates and proper maintenance and repairs.

Professional use and proper maintenance significantly influence the performance and serviceability of the gate system. Errors in operating and improper maintenance lead to operating malfunctions, which can be normally avoided. Your satisfaction and long-term operational safety is ensured only in case of professional use and proper maintenance.

Important guidelines:

- Follow instructions mentioned in this manual.
- Improper installation or maintenance of the gate can lead to life-threatening injuries. For your own safety, have the installation done by a qualified company.
- Transport gate leaves only on a special pallet. During transportation without pallet you can damage the gate surface.
- These gates open and close vertically. For this reason, make sure that during the operation of the gate there are no persons in the area of the gate movement – especially children – and no objects blocking movement of the gate.
- Use gate system only if it is in perfect technical condition. Malfunction of the gate system can lead to life-threatening injuries.
- Make sure that during all inspections, repairs and cleaning, the gate system is not controlled by a third party.
- Do not change or remove any functional parts! This way you can put important safety components out of order.
- Do not install any additional structural parts. All structural parts are tailor-made and fit exactly to each other. Additionally mounted parts can overload the gate structure and lead to life-threatening injuries.

Work equipment:

- Use only tools suitable for installation of gate system and appropriate equipment

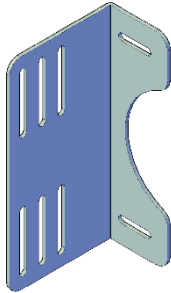

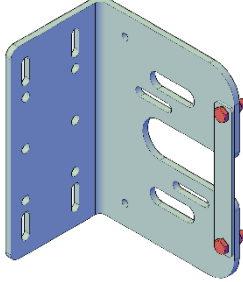
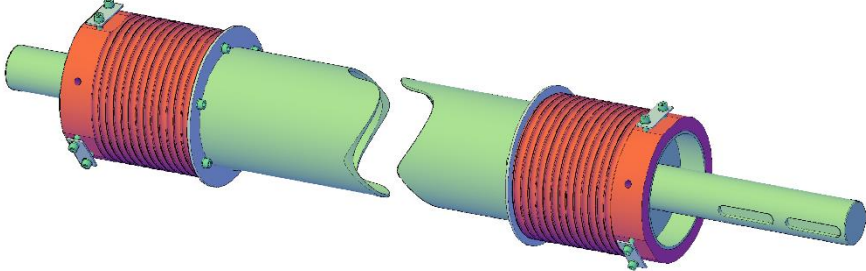

Gather all the following work equipment:

- **Appropriate lifting equipment (forklift truck, crane) for lifting roller and placing it on the brackets (watch out for the total weight of the roller mentioned at the installation drawings)**
- **Appropriate lifting platform or scaffolding**
- **Drill**
- **Grinder**
- **Set of spanners**
- **Optical levelling devices**
- **ACCU screwdriver**
- **Screw taps (in case of installation on steel structure)**



2. CHECK OF DELIVERY

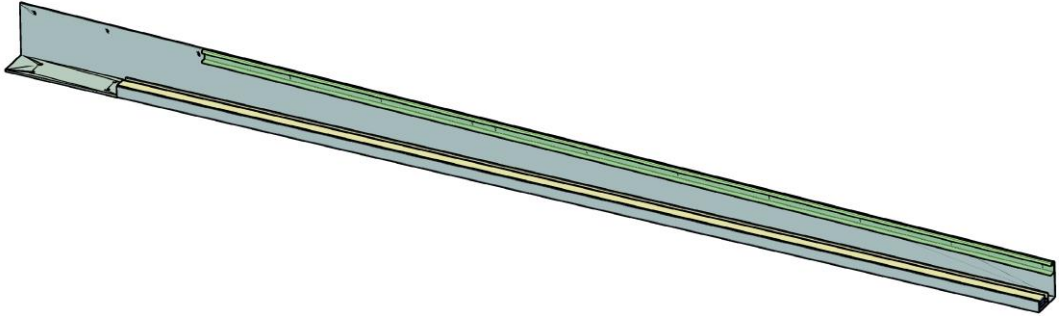
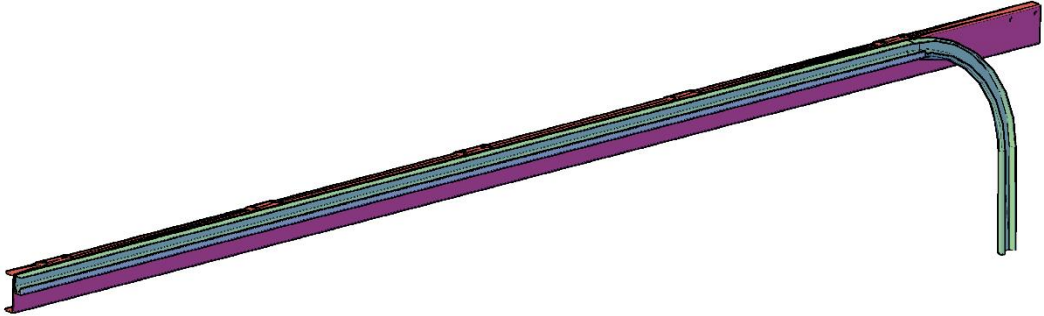
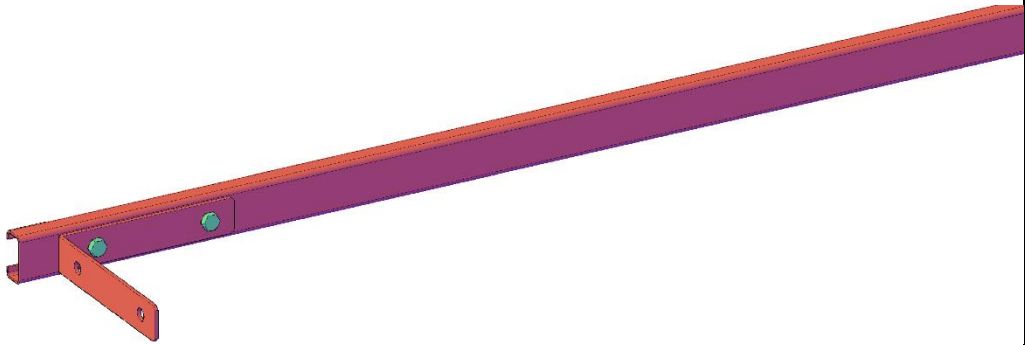
Before starting the installation, remove the technical drawing and packing list from the packaging and make sure that the delivery corresponds to the packing list.

SET OF MOTOR	
1.1	motor bracket 
1.2	motor (SI, FS, MDF) 
1.3	winding roller bracket (2 pcs) (not applicable for low lintel) 
1.4	winding roller including drums 
1.5	flanged bearing UCFL 

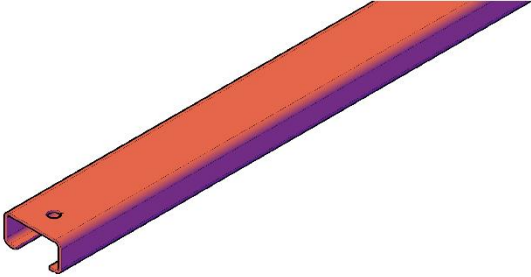
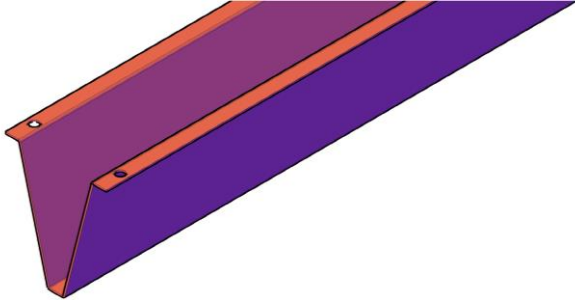


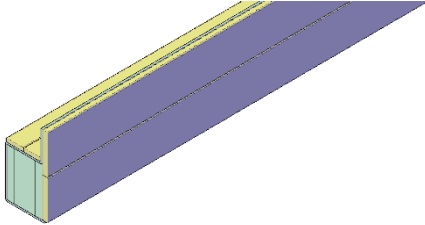
1.6	steel wire rope with pressed eyelet
	
1.7	fasteners

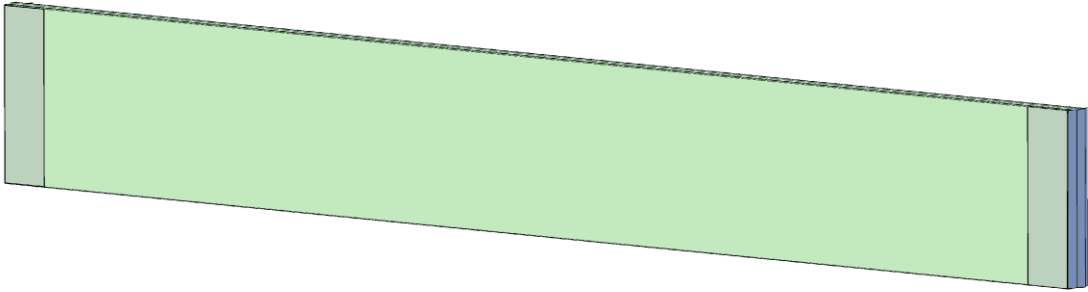
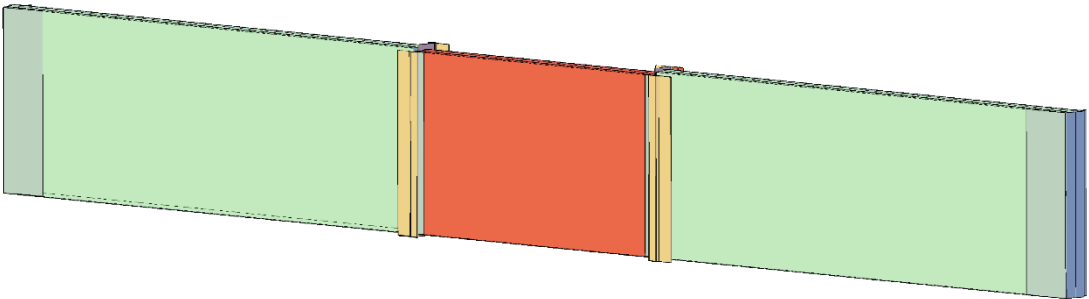
GUIDES

2.1	side guide with vertical rail (1 pair)
	
2.2	curved rail (1 pair) – not used for vertical OGS
	
2.3	strut - not used for vertical OGS
	

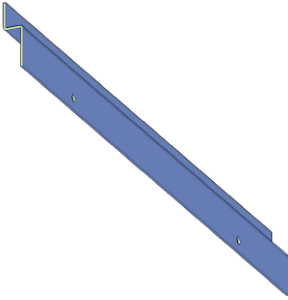
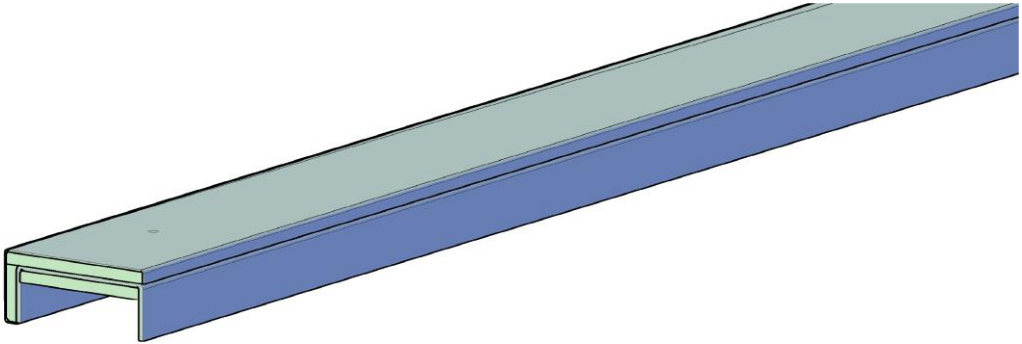
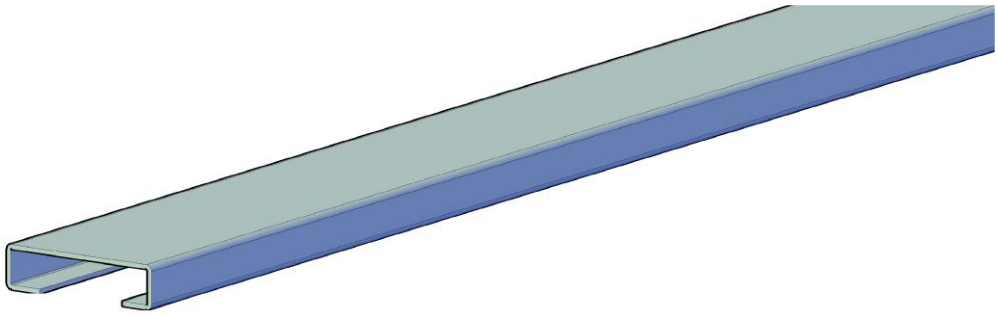
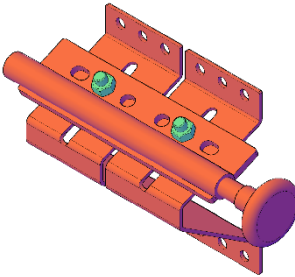
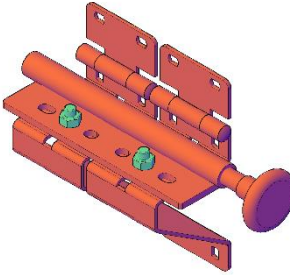


	reinforcement (number according to the length of horizontal guidance (not applicable for vertical OGS))	
	a – for gate of width < 4 m	b - for gate of width \geq 4 m
2.4		
2.5	wind bracing - not applicable for vertical OGS	
2.6	fasteners	

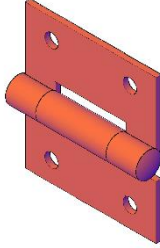

HORIZONTAL LATHING	
	horizontal lathing
3.1	
3.2	fasteners

GATE SECTION	
	section without passage door
4.1	
	section with passage door
4.2	

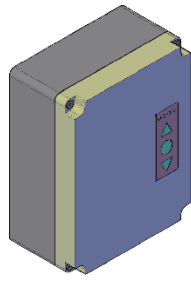
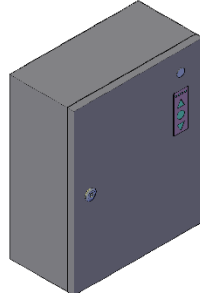
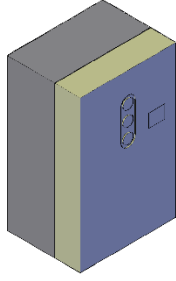


4.3	side edges (number of edges = 2x number of sections) 
4.4	upper edge profile 
4.5	bottom profile (only for gates with passage door) 
4.6	upper hinge with pulley 
4.7	side hinge with pulley 

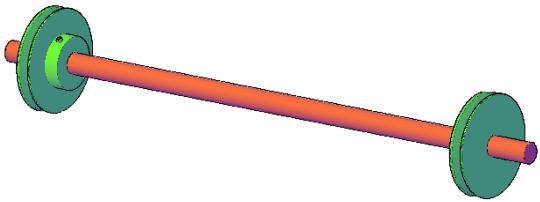
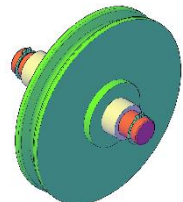


4.8	centre hinge		
			
4.9	safety brake with pulley		
			
4.10	fasteners		

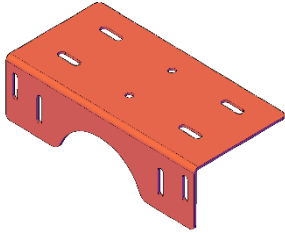
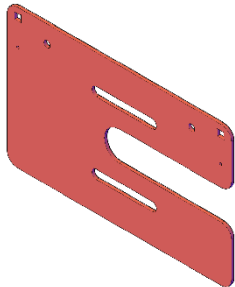
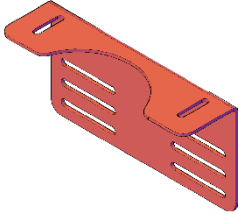

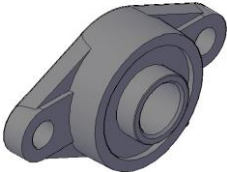
CONTROL

6.1	control box + installation manual		
	FSTRONIC 24	FSTRONIC DES-FI	TS 970
			
6.2	cable of motor		

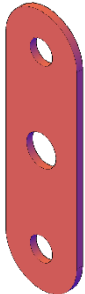

ACCESSORIES FOR GATES WITH LOW LINTEL

7.1	shaft with pulleys	
	a – for gates of width ≤ 3 m	b - for gates of width > 3 m (2 pcs)
		



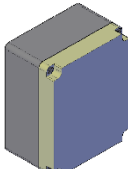
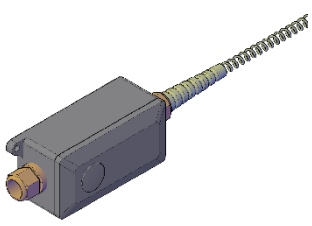
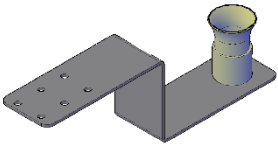
7.2	winding roller bracket – ceiling part (2 pcs) 
7.3	winding roller bracket – side part (2 pcs) 
7.4	motor bracket - fixing 
7.5	inserting bracket - J-profile 
7.6	flanged bearing UCFL (only for gates of width ≤ 3 m) (2 pcs) 



7.7	reduction for the shaft mounting (only for gates of width > 3 m) (2 pcs)
	
7.8	additional part of J-profile (only for gates of width > 3 m) (2 pcs)
	
7.9	fasteners



OTHER

8.1	additional accessories – according to the order specification			
8.2	installation material – standard delivery does not include bolts for installation into supporting structure – possible to order according to the type of supporting structure (wall, steel structure)			
	recommended anchor material			
	wall material	brackets	guides	lathing
	concrete	anchor to concrete M12x110 (e.g. Hilti HSA)	wall plug (e.g. Fisher SX) 8x65 mm + buttonhead screw 6x80 mm	wall plug (e.g. Fisher SX) 8x65 mm + countersunk screw 6x80 mm
	steel structure	screw M12x min. 30	TEX 6,3x45 mm with hexagon head	TEX 5,5x45 mm with countersunk head
	ceramic wall (Porotherm) gas-silicate (Ytong) wall from solid bricks	anchoring with threaded rod M12 through wall + spreading plates threaded rod M12 + chemical anchor	wall plug (e.g. Fisher SX) 8x65 mm + countersunk screw 6x80 mm	wall plug (e.g. Fisher SX) 8x65 mm + countersunk screw 6x80 mm
example of optional electrical accessories				
8.3	optional battery module for FSTRONIC DES-FS			
				
8.4	connection box with spiral cable for optical safety edge OSE, including grommet			
				



3. TYPES OF OGS

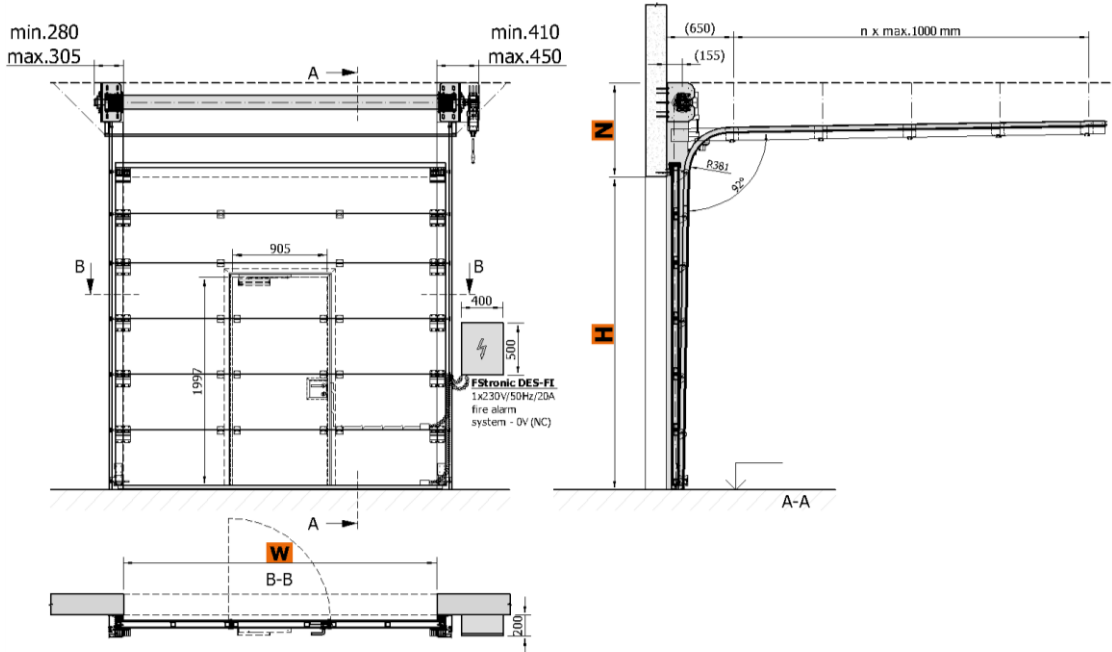
W – opening width

H – opening height

N - lintel

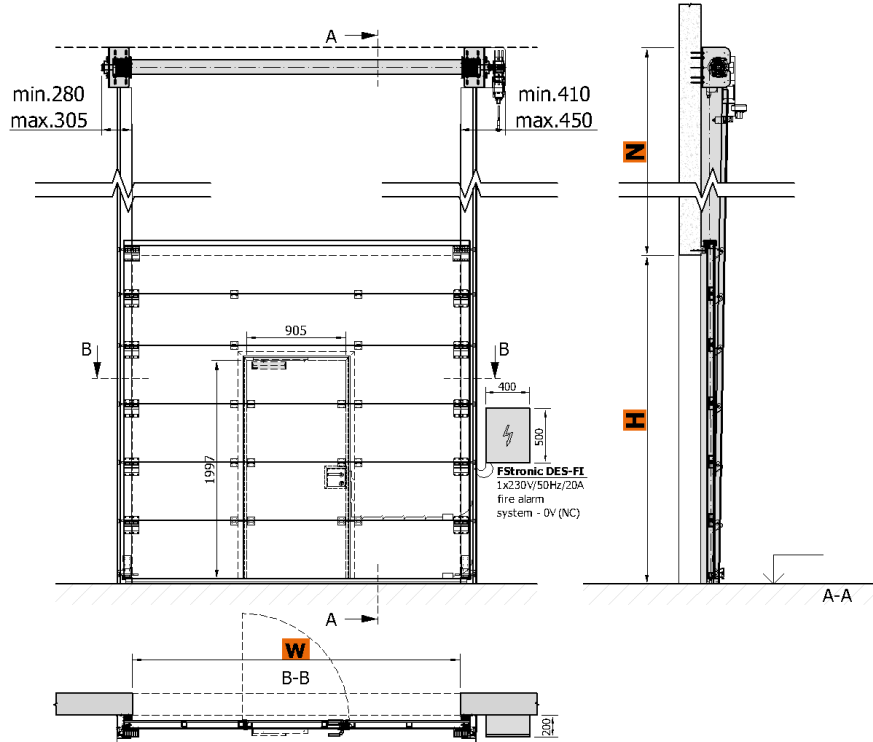
standard

$N = 900 \text{ mm}$



vertical

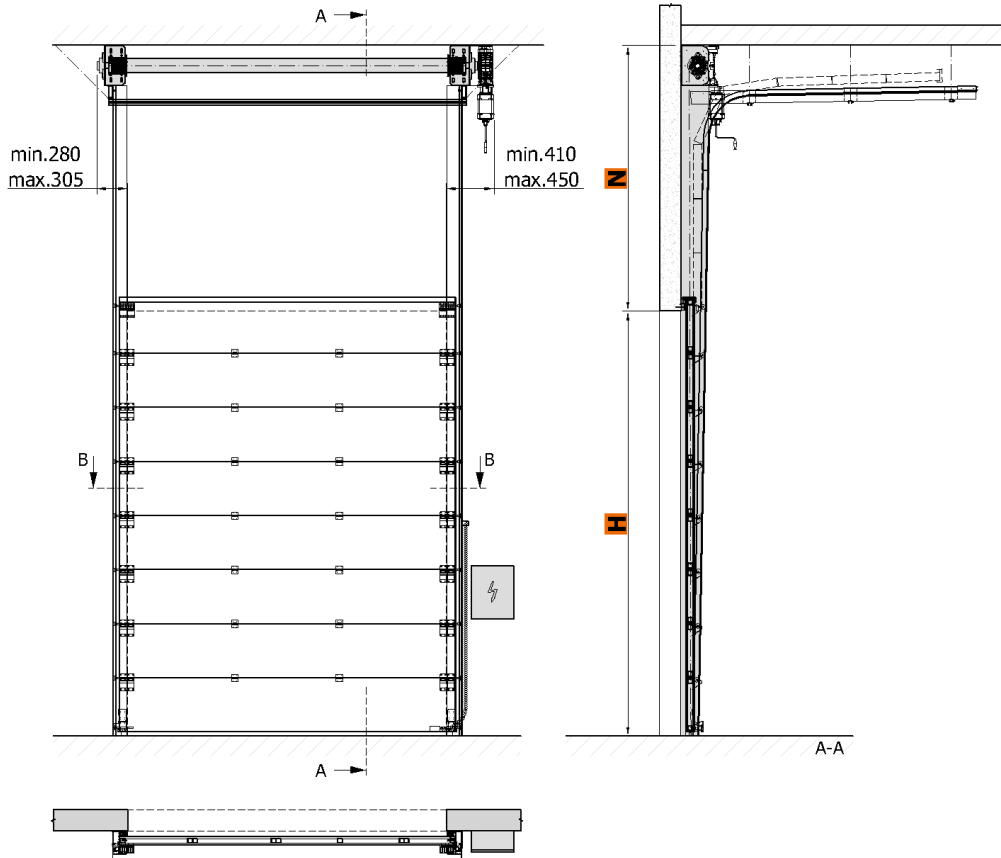
$N = H + 500 \text{ mm}$





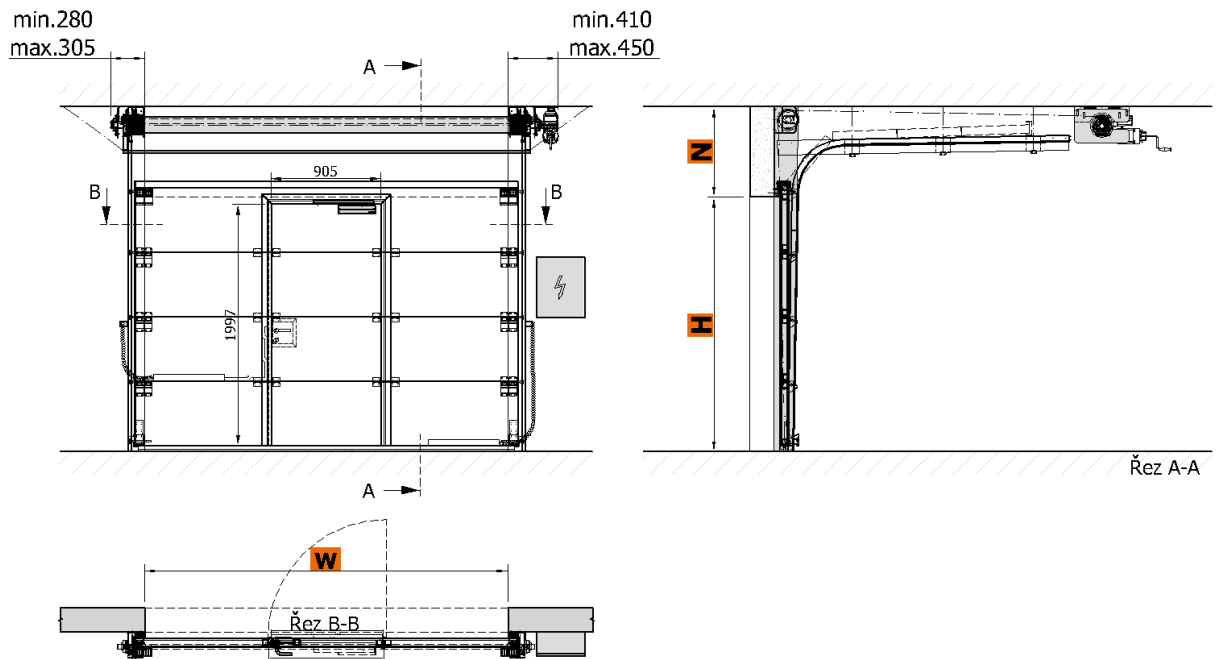
high-lift lintel

$$900\text{mm} > N < (H + 500\text{ mm})$$



low-lift lintel

$$N = 750\text{ mm}$$



All variants can be designed with passage door or without passage door. Passage door must always open to the wall.



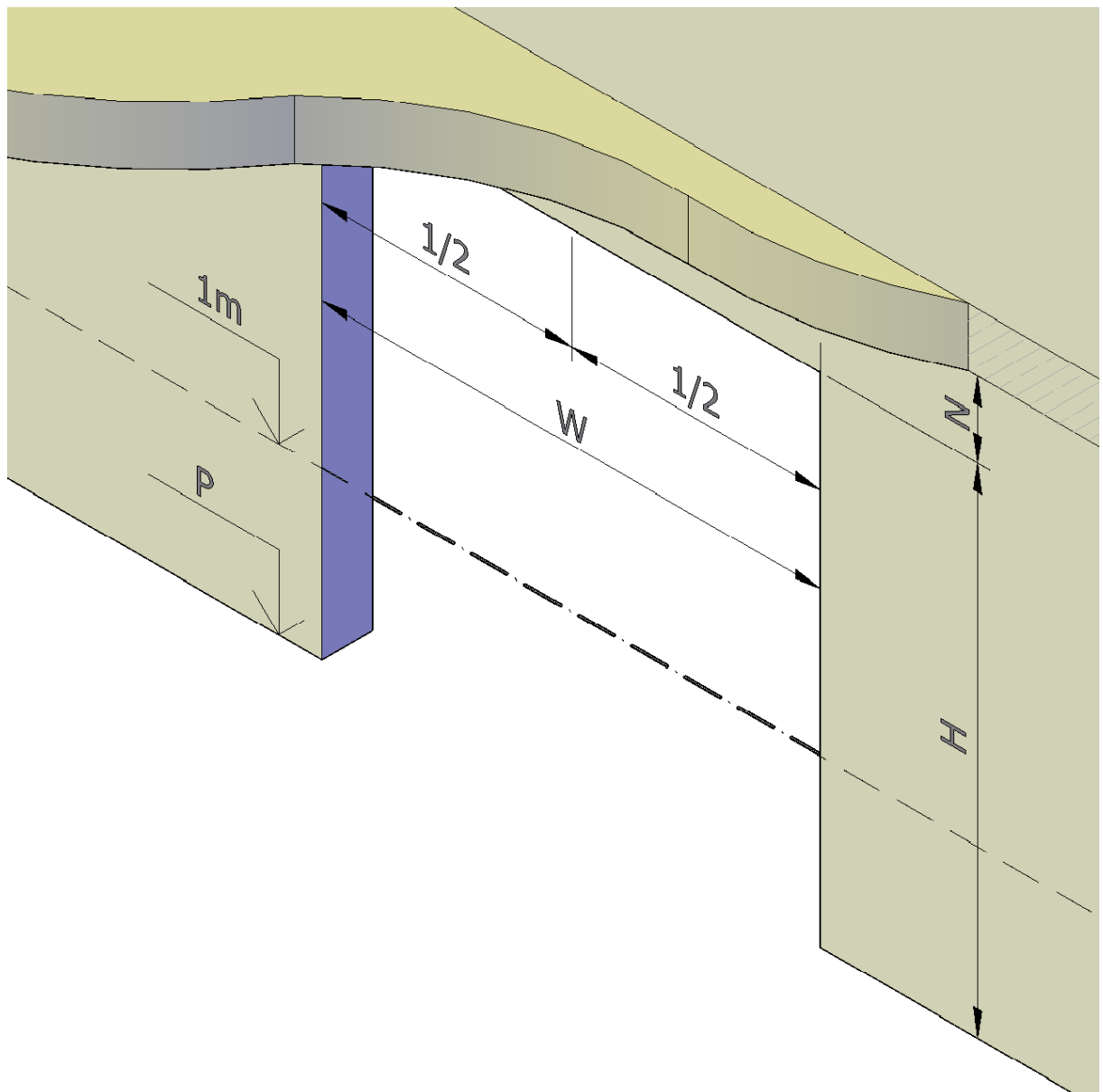
4. CHECK OF CONSTRUCTION READINESS ACCORDING TO THE DRAWING

W – opening width

H – opening height

N - lintel

P – floor level



Picture 1

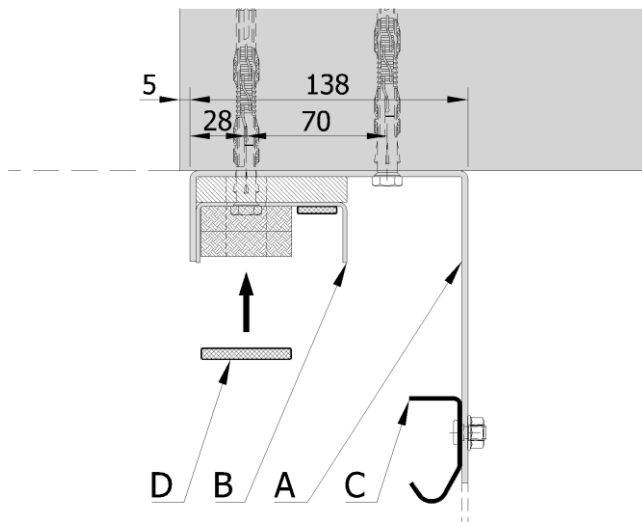
- See dimensions in the enclosed drawings.
- Mark centre of the opening.
- Make a level line on the wall (horizontal line at height 1m above clear floor level).
- If any of the dimensions are bigger than in the documentation, it is not possible to install the gate.



5. INSTALLATION OF GUIDES

Side guides are delivered in a set with vertical lathing. Right and left guide install according to the provided drawings. Standardly the load-bearing structure is anchored through each second pre-prepared hole and always through the highest and lowest holes. After the installation put Palusol on the vertical lathing.

Standard distance of guide anchoring from the edge of opening



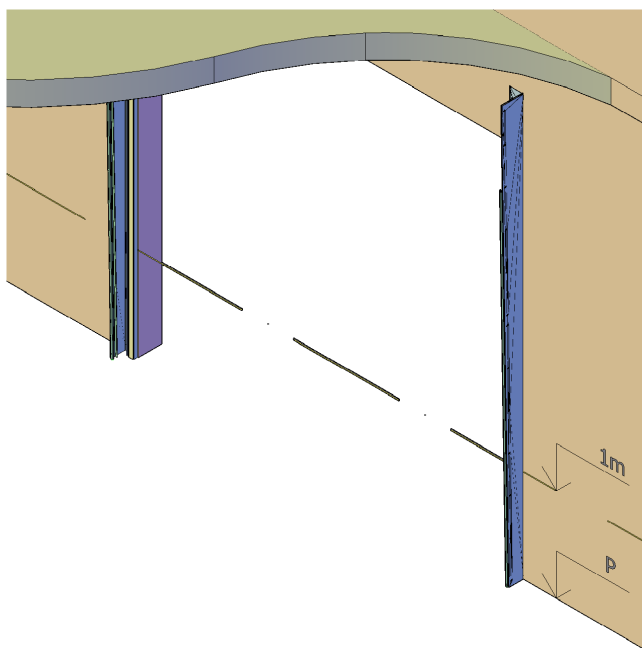
A – guide

B – vertical lathing

C – rail, mounted on the guide

D – Palusol, glued on the guide after the installation (e.g. with glue Colgel, Mamut Glue)

Picture 2



Picture 3

1. Mark on the guides distance 1m from the bottom edge.
2. Mount left and right guide on the wall at a distance from the edge of the opening, indicated in the installation drawing. Vertical pitch of the anchor points must be max. 1 m.
3. Check the correct distance of the guides by inserting horizontal lathing between the guides. The lathing should be tightly attached to the guides on both sides.
4. Align the guides into the vertical plane and tighten the anchor material.



6. INSTALLATION OF BRACKETS

6.1 OGS STANDARD AND HIGH-LIFT

	standard: $N = 900 \text{ mm}$ high-lift: $900\text{mm} > N < (H + 500 \text{ mm})$
<p style="text-align: center;">Picture 4</p>	<p>The bracket pitch is shown in the enclosed installation drawing.</p> <p>Standard bracket distance [1.3] from the inner edge of the track is 25 mm. The bracket is mounted just above the guide [2.1] - standardly: $V = 530 \text{ mm}$ - high-lift lintel: $V = N - 370 \text{ mm}$</p>

6.2 OGS VERTICAL

	$N = H + 500 \text{ mm}$
<p style="text-align: center;">Picture 5</p>	<p>The bracket pitch is shown in the enclosed installation drawing.</p> <p>Standard bracket distance [1.3] from the edge of the track is 25 mm. The bracket is mounted just above the guide [2.1].</p>



6.3 OGS LOW-LIFT

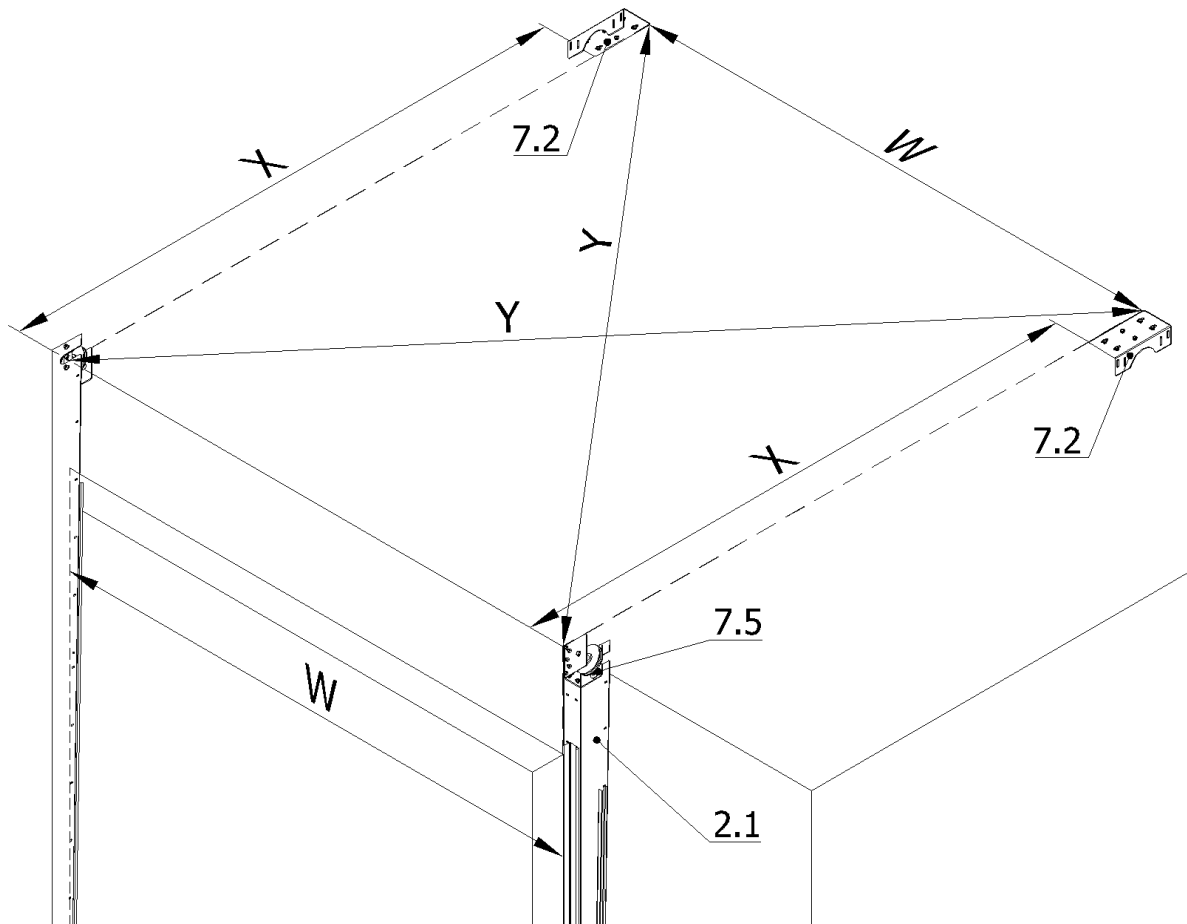
width $W \leq 3$ m	$N = 750$ mm
<p style="text-align: center;">Picture 6</p>	<p>For low-lift gates are used guides [2.1] with cut-out. The inserting bracket [7.5] for transfer pulley is placed at the top of the guides. The inserting bracket is anchored to the wall through the holes in the guide. Insert shaft with pair of pulleys [7.1a] into the cut-out of the bracket. The setting screws on the pulley can be loosened and the pulley moved so that the bearing [7.6] can be mounted using two screws with nut and spring washer. Fix the pulleys in the correct position in the later stage of the installation.</p>
<p style="text-align: center;">Picture 7</p>	<p style="text-align: center;">Picture 8</p>



width $W > 3\text{ m}$	$N = 750\text{ mm}$
	<p>On inserting bracket [7.5] is mounted additional part [7.8] and reduction for shaft fixing [7.7] by using screws M12x30. Place the shaft through the reduction hole, put on it a short spacer tube, pulley (with bearing) [7.1b], long spacer tube and on the outside of the additional ring part [7.8] secure the shaft with a safety ring.</p>
Picture 9	

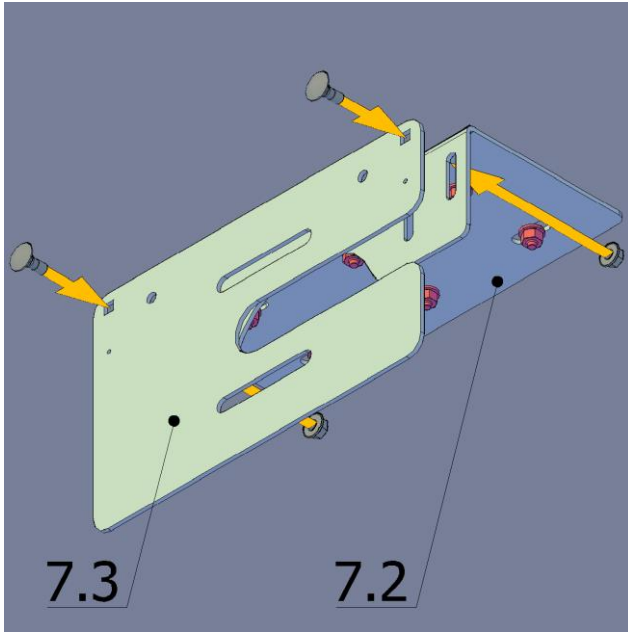
Picture 10

Picture 11

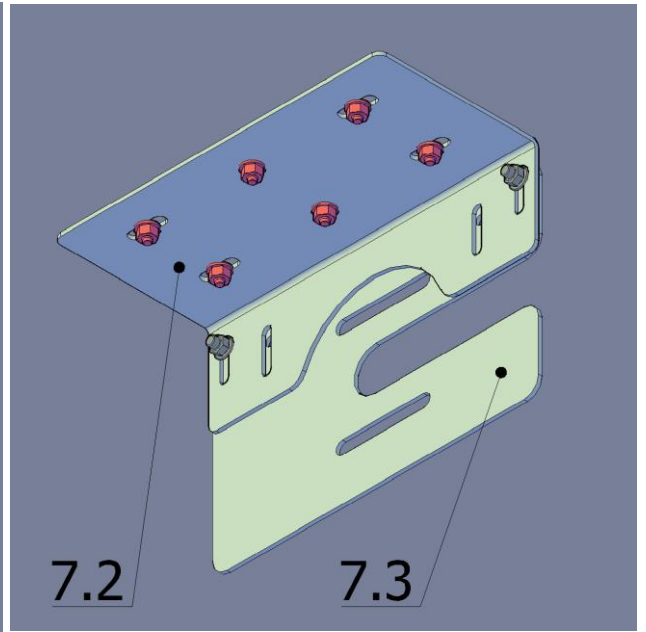


Picture 12

On the ceiling, mark the position of the ceiling parts of the winding roller brackets [7.2]. Distance X from the wall is shown in the installation drawing for the particular gate. The inner edge of the bracket is standardly in plane with the edge of the opening; the pitch of the brackets is standardly equal to the width of the opening W. Verify alignment of diagonals Y (see pic. 12). After anchoring of the brackets [7.2] mount side profiles [7.3] (see pic. 13 - 14) on them using screws and nuts with indentation.



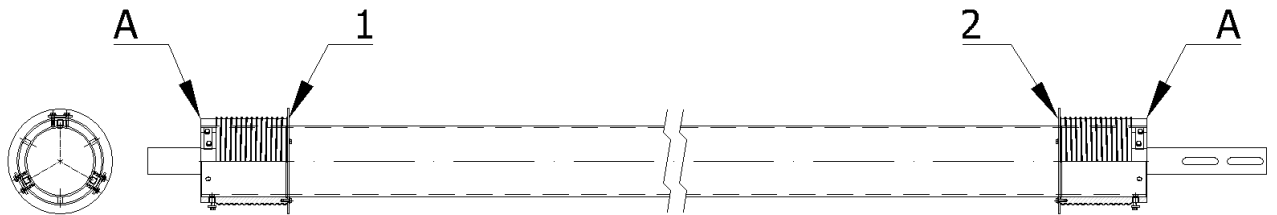
Picture 13



Picture 14



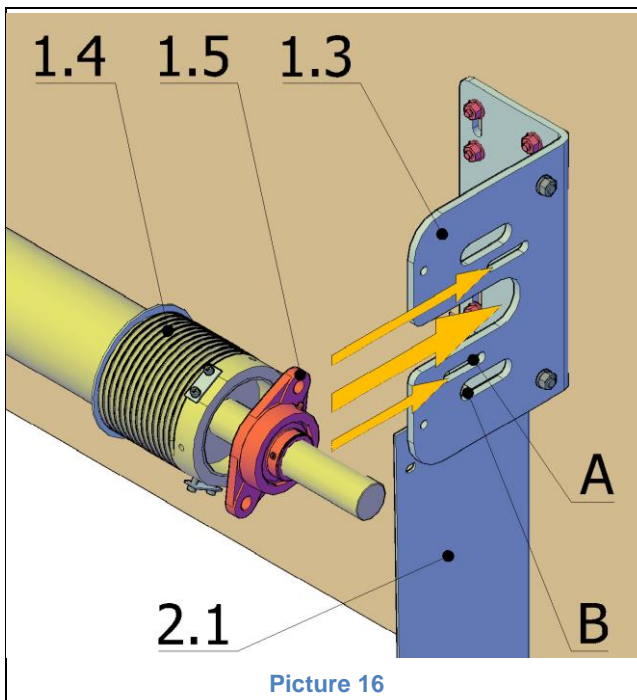
7. INSTALLATION OF ROLLER



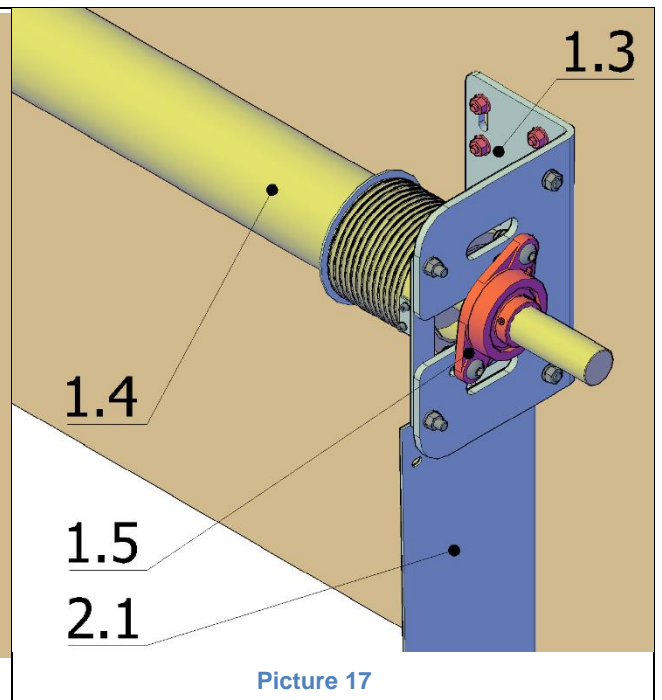
Picture 15

Roller with mounted drums
1 – winding drum left (L)
2 – winding drum right (R)
A – roller edge = drum edge

7.1 OGS STANDARD, VERTICAL AND HIGH-LIFT



Picture 16



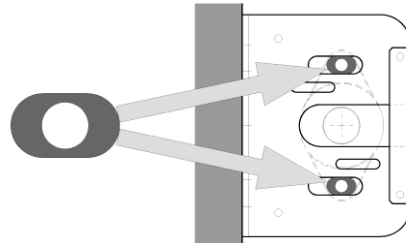
Picture 17



Mount roller set [1.4] on the brackets [1.3] so that the flanged bearing [1.5] lie on the outside of the brackets. Mount bearings to the brackets using button head and hexagon screws with nut and washer. Fix safety plate on the brackets using two screws M12x40 with nut and washer.

A – grooves for mounting the bearing UCFL 208 and UCFL 210

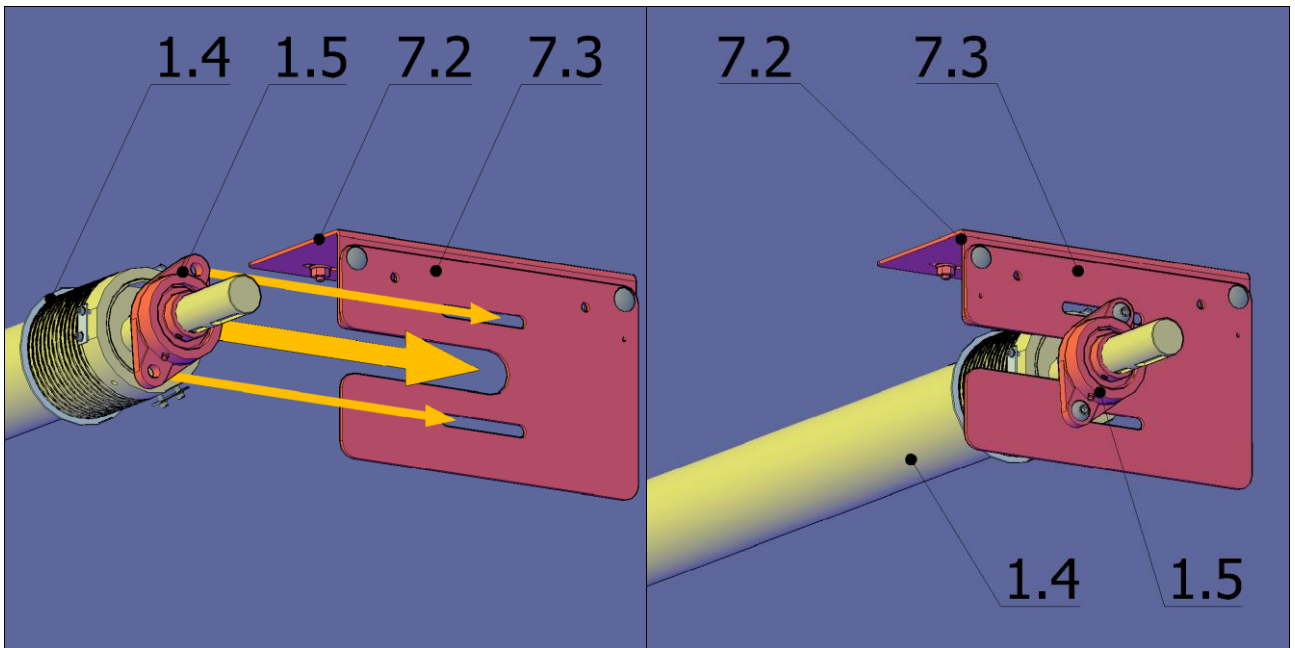
B – grooves for mounting the bearing UCFL 212. Screws are placed in the groove through the inserts.



Picture 18



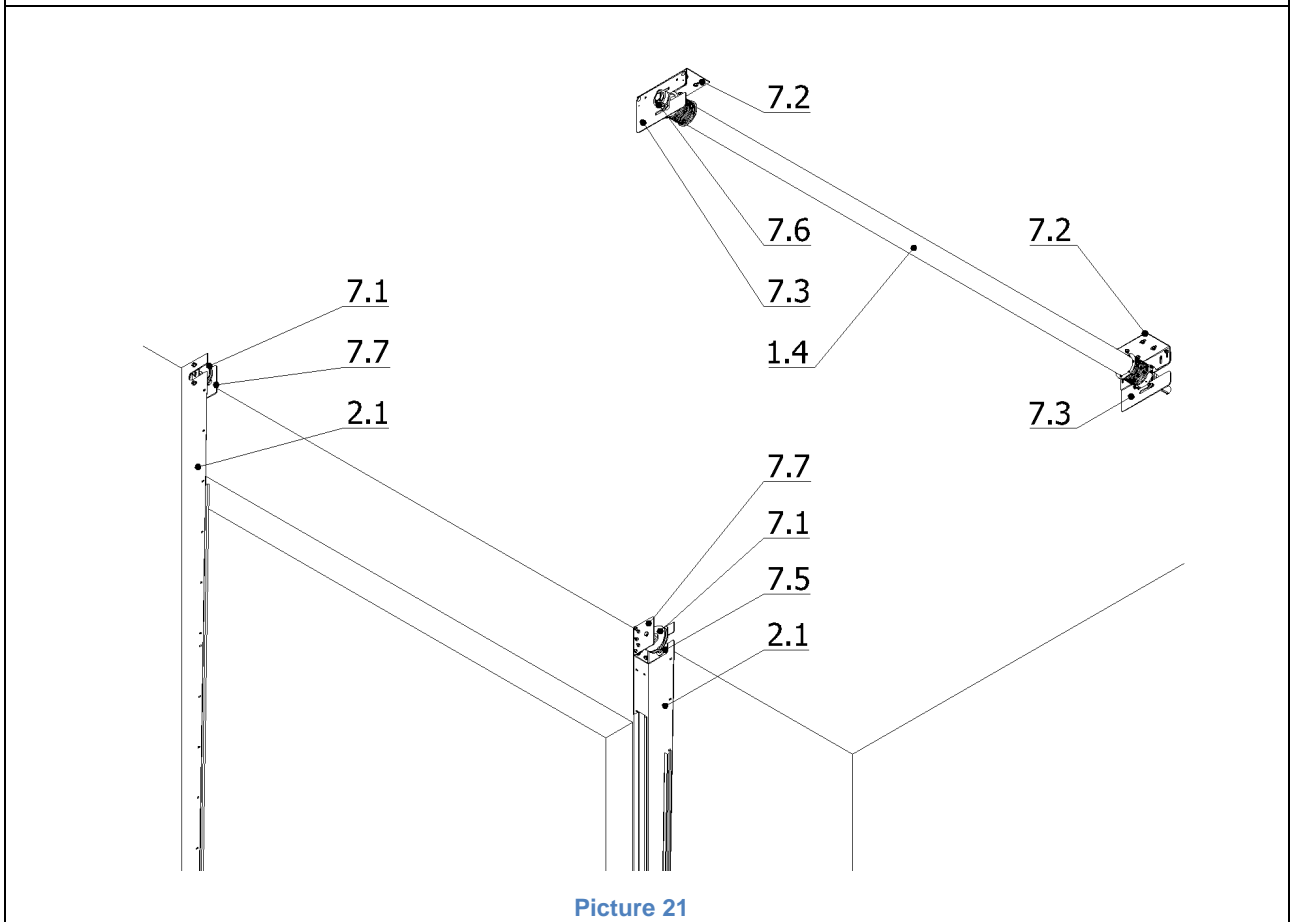
7.2 OGS LOW-LIFT



Picture 19

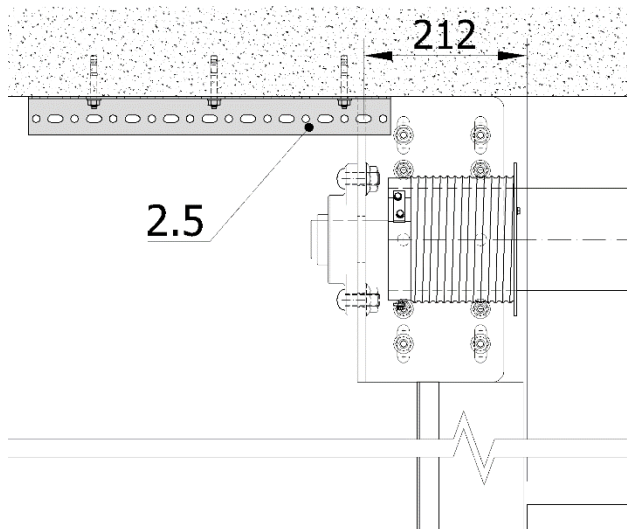
Picture 20

Place roller set [1.4] into the brackets [7.3] so that the flanged bearings [1.5] lie on the outside of the brackets. Mount bearings to the brackets using button head and hexagon screws with nut and washer. Fix safety plate on the brackets using two screws M12x40 with nut and washer.

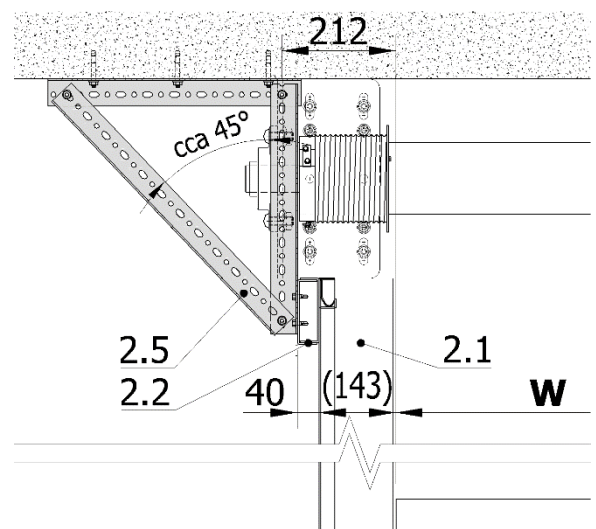


Picture 21

8. INSTALLATION OF CURVED TRACK



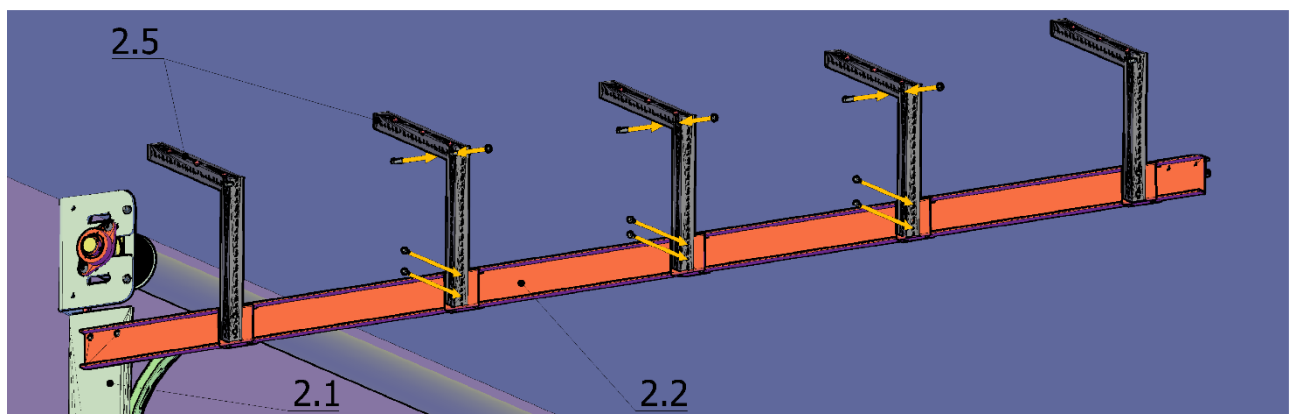
Picture 22a



Picture 22b

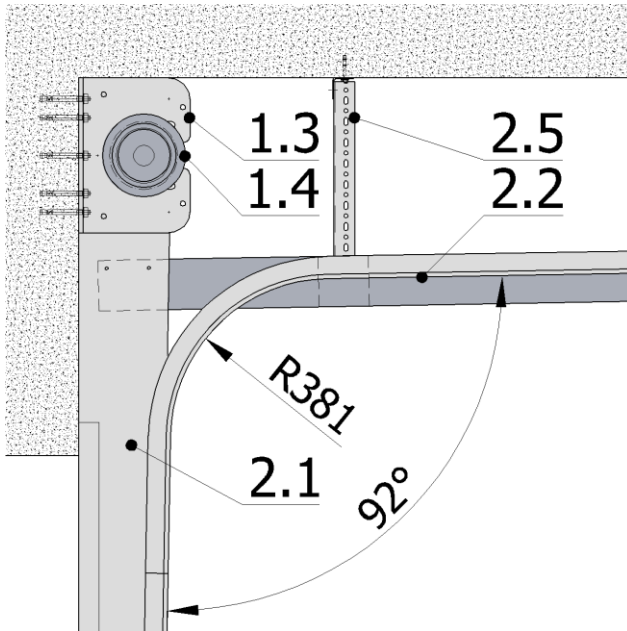
This part of the installation does not apply to the vertical OGS.

Curved rail is standardly delivered in a set with track [2.2]. Before its installation it is first necessary to fix props from the perforated profiles [2.5] on the ceiling structure. The profiles are delivered in length 2,5 m – must be shorten to the required size. First, anchor squares into the ceiling in direction perpendicular to the track (pic. 22a). The pitch is shown in the installation drawing. Position the squares so that the centre of the groove is approximately 212 mm (in standard cases). Into the groove insert screw M8x30, on which fit vertical square.



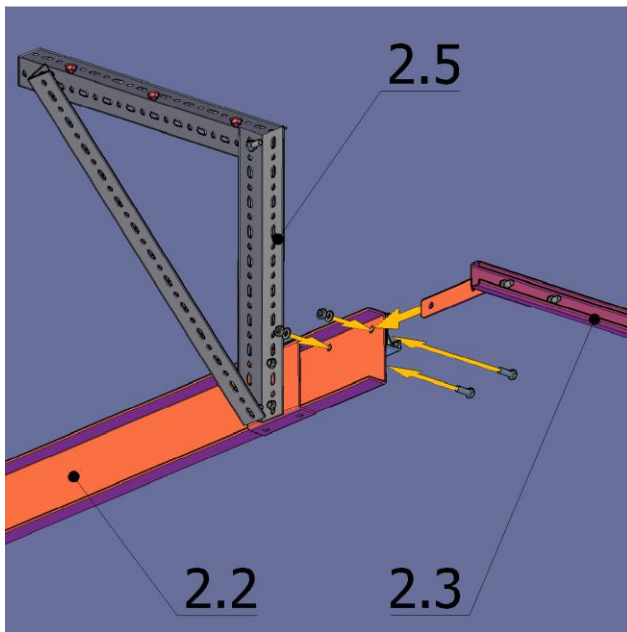
Picture 23

Track with rail [2.2] anchor with two self-drilling screws TEX 6,3x22 mm to the track [2.1]. Vertical L-profile fix to the track [2.2] with two self-drilling screws TEX 6,3x22. For anchoring there are reinforcing U-profiles riveted on the track at the required pitch.



Picture 24

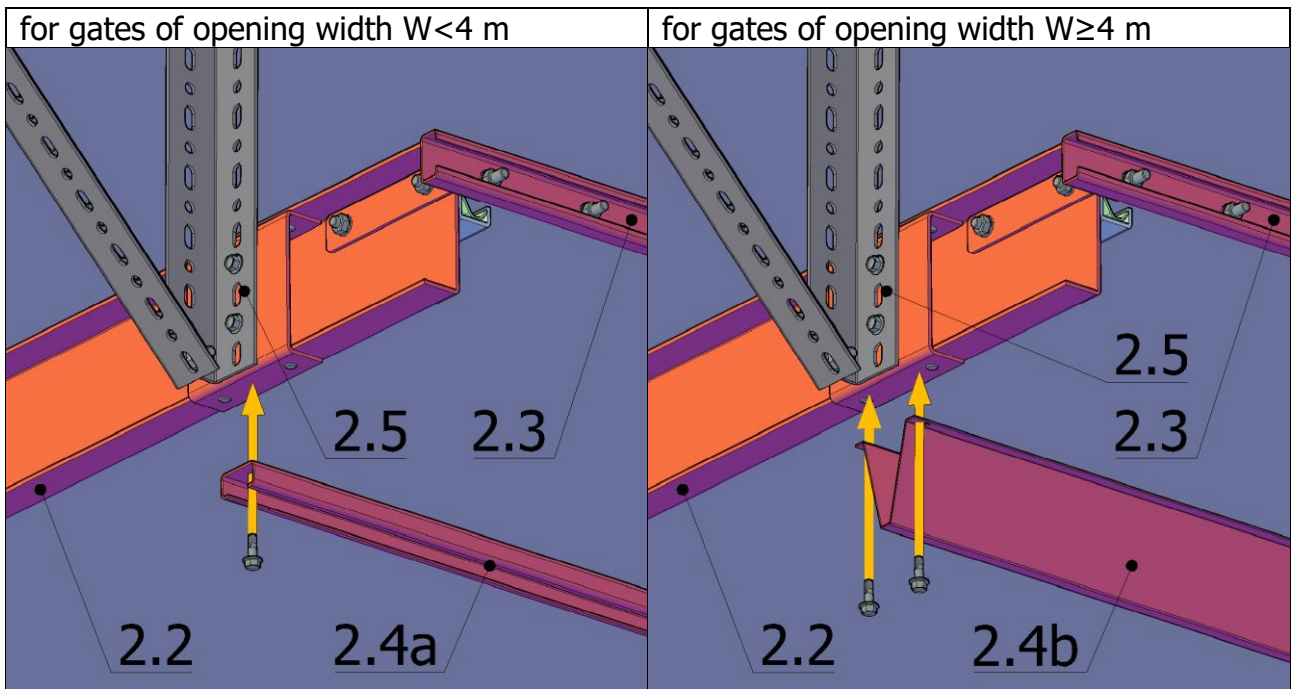
Align the track with the curve so that it is at angle 92° with the vertical track.
By sliding in horizontal grooves, align the track so that it is plan view perpendicular to the wall.



Fix each vertical track with a side stiffener made of perforated square [2.5], anchored to the ceiling in the same way as the vertical props.
Once more, check the correct inclination and the perpendicularity to the wall and tighten the installation material.
At the ends of the tracks [2.2] install the spacer [2.3] (pic. 24). 2x 2 screws M8x25 with nut and washer are used for the assembly.



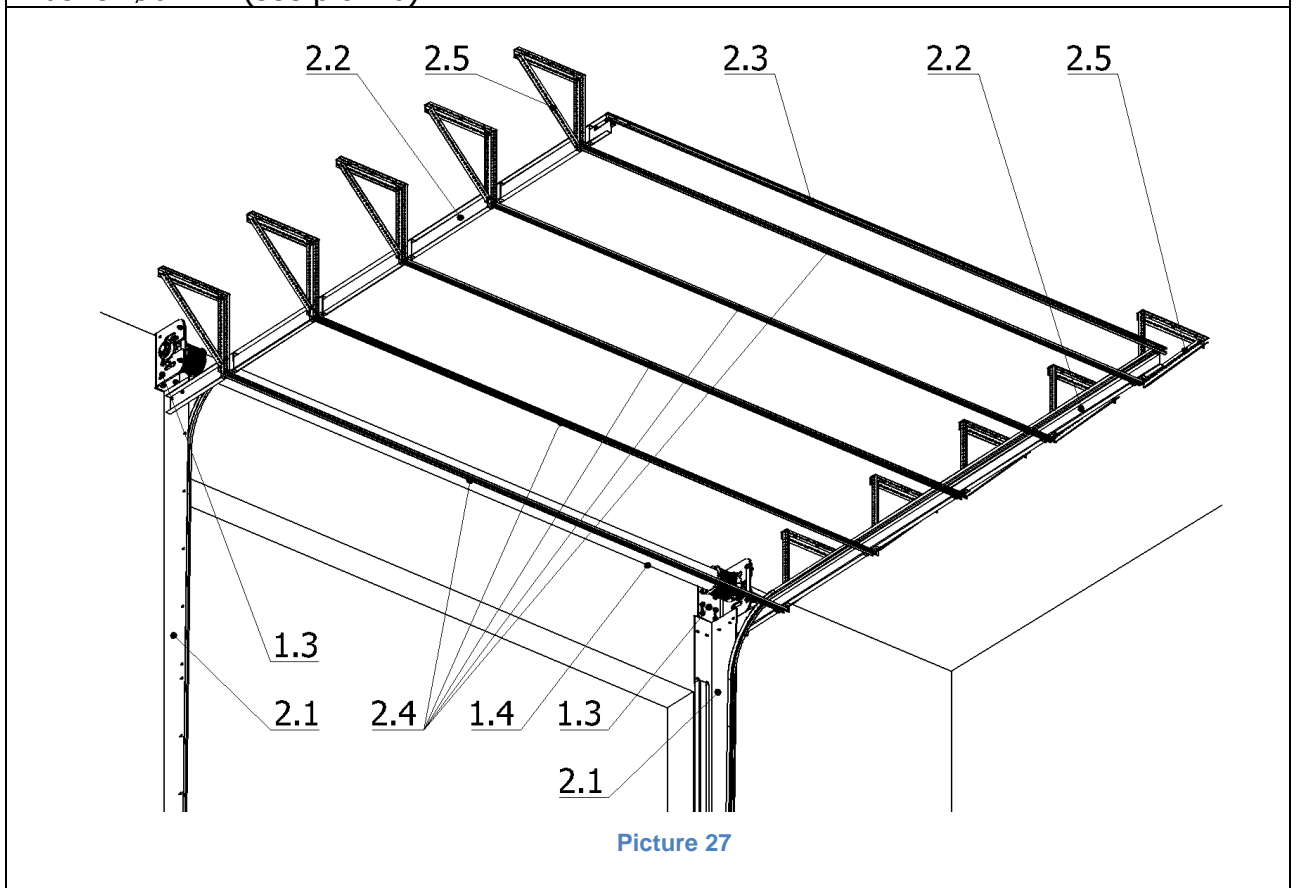
9. HORIZONTAL STIFFENERS



Picture 25

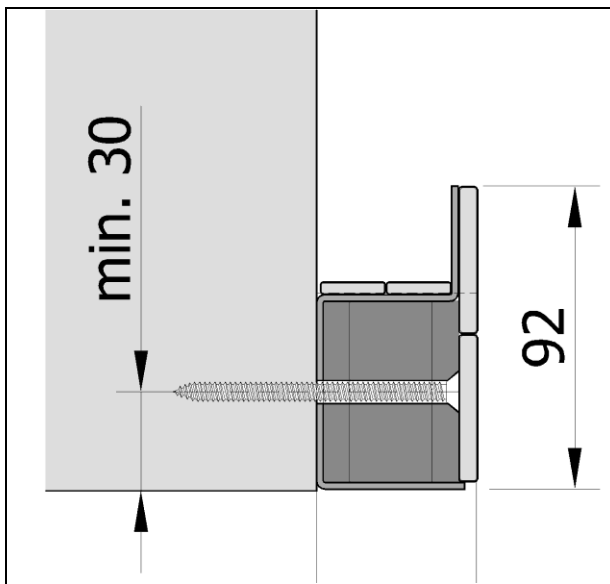
Picture 26

On tracks [2.2] install stiffeners [2.4] in place of reinforcing U-profiles. For gates of opening width up to 4 m are used reinforcing C-profiles, anchored on each side with a self-drilling screw TEX 6,3x22 mm with washer $\varnothing 6$ mm (see pic. 25). For wider gates are used V-profiles, anchored on each side with 2 pcs of self-drilling screws TEX 6,3 x 22 mm with washer $\varnothing 6$ mm (see pic. 26).



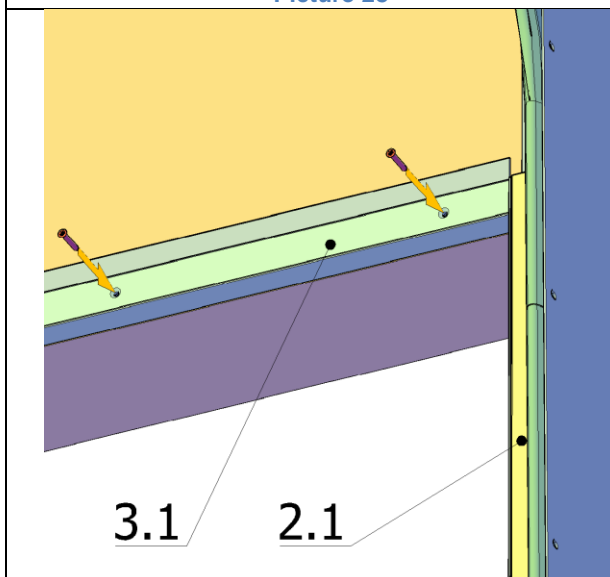
Picture 27

10. HORIZONTAL LATHING



Picture 28

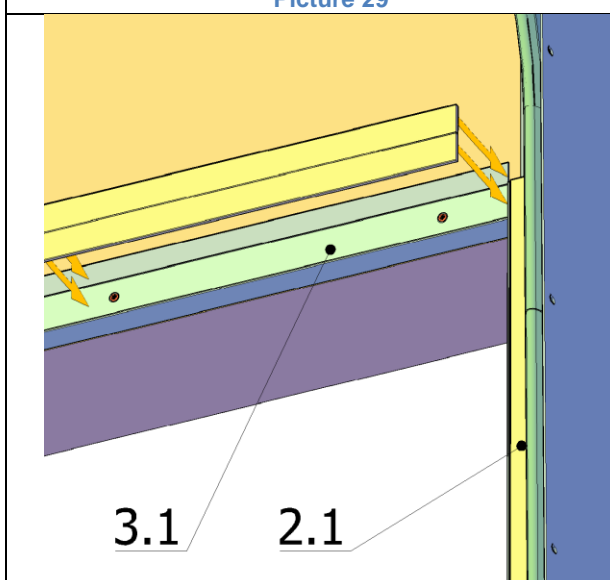
The horizontal labyrinth is placed over the edge of the opening, between the side guides. It is delivered without glued intumescent tapes, which are glued after anchoring of the labyrinth to the wall. The lathing must be positioned so that the bend of the top edge profile fits into it when the gate is closed and at the same time is not higher than the vertical lathing.



Picture 29

1. Place the horizontal lathing [3.1] between the side guides [2.1] to the height according to the installation drawing. The height can be adjusted if necessary.

2. Anchor the lathing to the wall through the prepared holes.

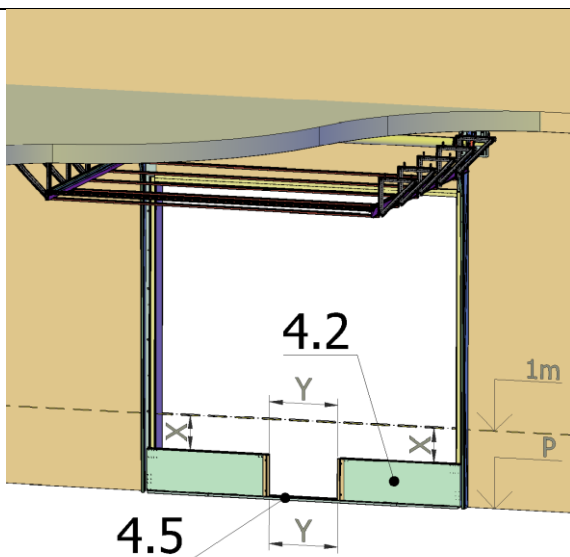


Picture 30

1. Apply glue (e.g. Colgel, Mamut Glue).

2. Attach a pair of intumescent tapes to the silicate board in the labyrinth and to the plate.

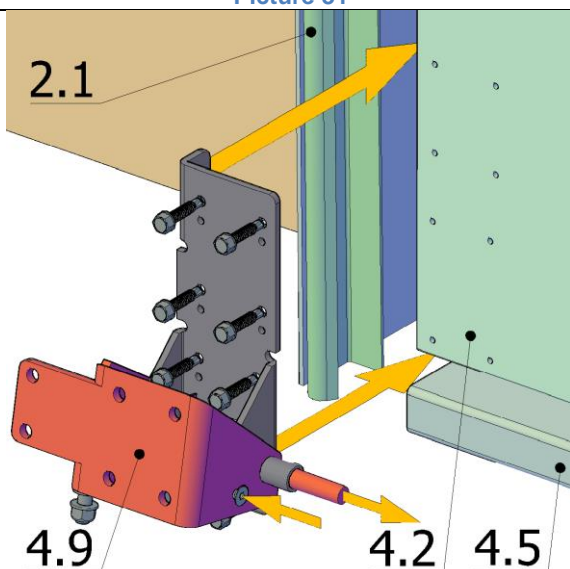
11. INSTALLATION OF SECTIONS



Picture 31

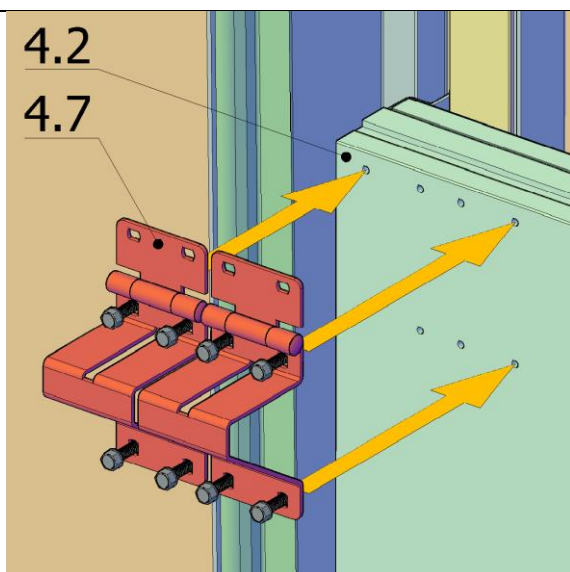
The basis for the correct assembly of the sections is the perfect alignment of the first section so that its upper edge is horizontal. To check the horizontality, use a laser levelling device to project the horizontal line to the top edge of the last mounted section. Gate with passage door has the first three sections divided into two separate parts. The lowest section is connected at the bottom by a threshold profile, which can be supplemented with OSE.

If the floor is not perfectly horizontal, underlay the first section, for example, with the blanks of construction boards.



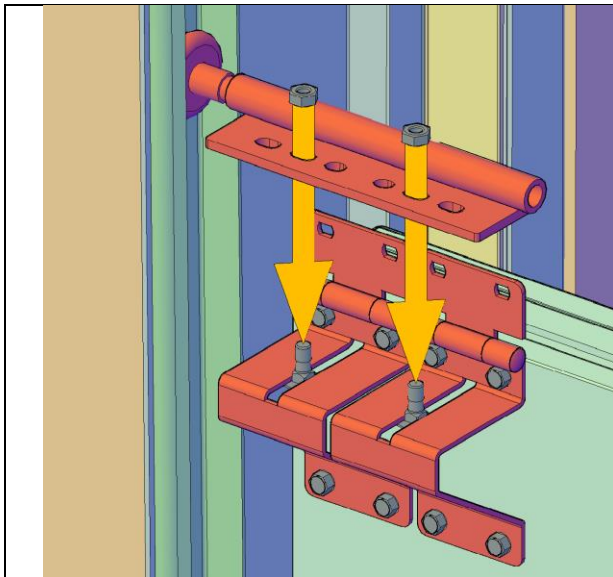
Picture 32

Install the left and right safety brake [4.9] into the pre-drilled holes $\varnothing 4$ mm at the lower corners of the first section. Before installation, temporarily secure the two safety brakes in open position by inserting the screw into the hole on the side (see instructions supplied with the safety brake). Remove the plastic cap from the hollow shaft into which the guide pulley is inserted. The bends on the anchor board of the brake serve to define the correct position on the gate leaf. Fasten each safety brake with eight self-drilling screws TEX 6HR 6,3x38 mm, 6Nm tightening torque.



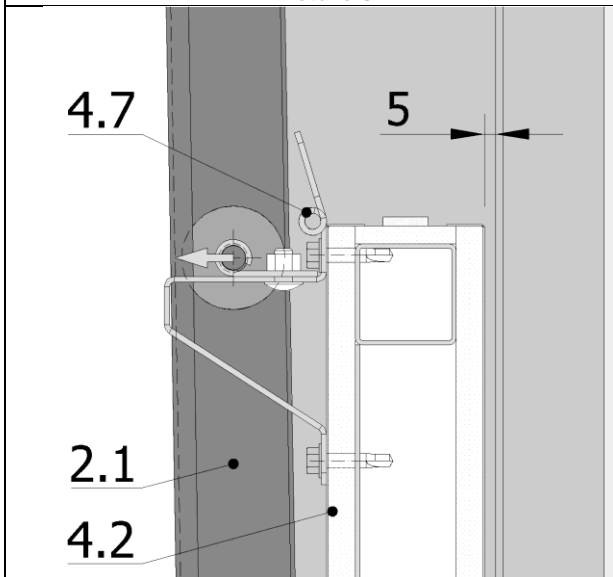
Picture 33

Mount the pair of side hinges [4.7] on the top corners of the first section. There are pre-drilled holes $\varnothing 4$ mm for hinges.



Picture 34

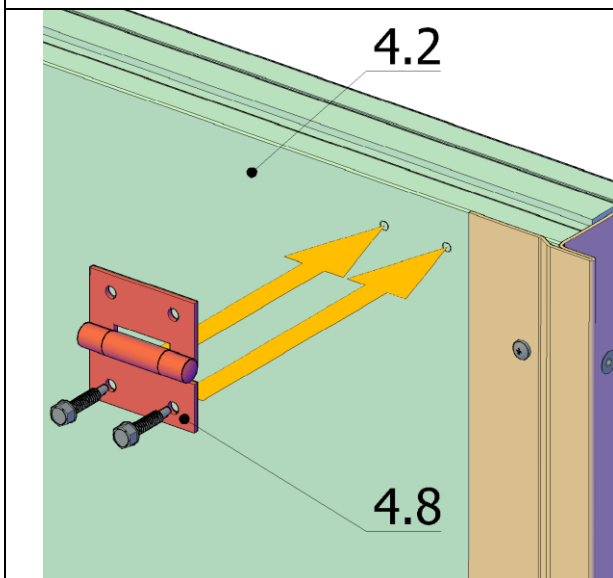
Mount the holder with the guide pulley on, using the pair of gate screws fitted from below to the groove in the hinge.



Picture 35

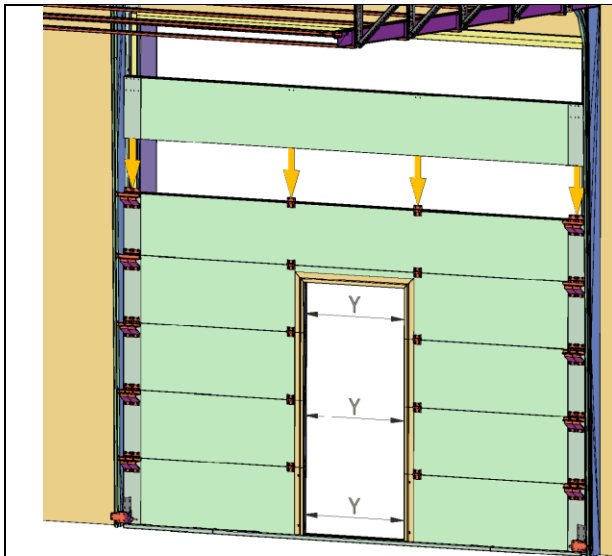
The gap between the upright section and the vertical lathing will be 5 mm. During installation, secure the fixed distance of the section from the lathing, for example, with underlays from construction boards or with wedges. Adjust the position of the guide pulleys so that they are in contact with the rail. Supplied $\varnothing 12$ mm washers are used to secure the pulley in the correct horizontal position and can be placed between the holder and pulley if necessary.

The pulley holder is mounted, as needed, with the screw in front (in case of first sections), or with screw back (in case of higher-placed sections, when pulley needs to be moved further away from section).



Picture 36

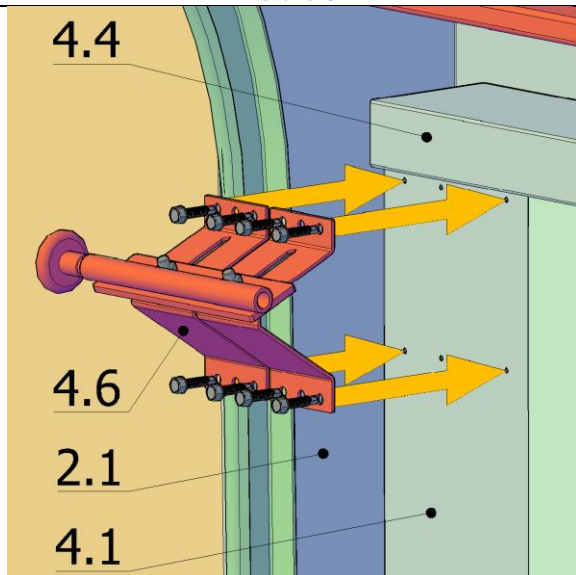
Mount the centre hinges on the pre-drilled holes $\varnothing 4$ mm at the top of the section by using the TEX 6HR 6,3x38 mm screws. Their number varies according to the gate width. In case of gate with passage door there is always one hinge on each side of the passage door opening.



Picture 37

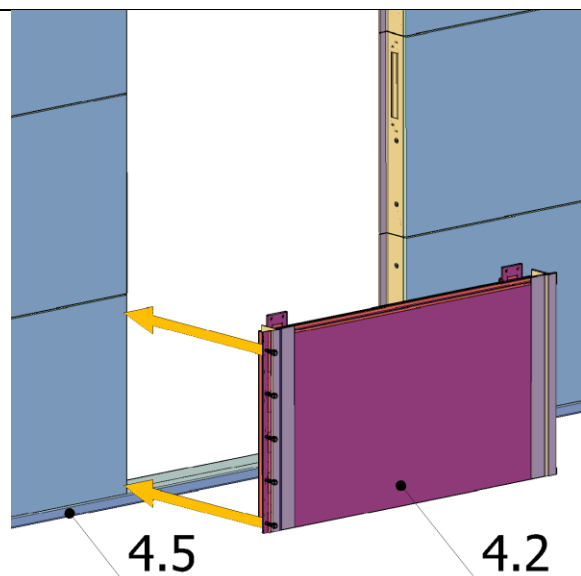
Install the remaining sections the same way. Before installing the next section, always check the horizontality and verticality of the already-mounted sections and the possible passage door width in case of gate with passage door.

After the next section is correctly mounted, fix it with self-drilling screws TEX 6HR 6,3x38 mm through the holes in hinges.



Picture 38

Fit the upper hinges with pulleys [4.6] to the pre-drilled holes $\varnothing 4$ mm at the upper corners of the last section with the top edge [4.4]. Adjust the pulley as you did on the previous sections.

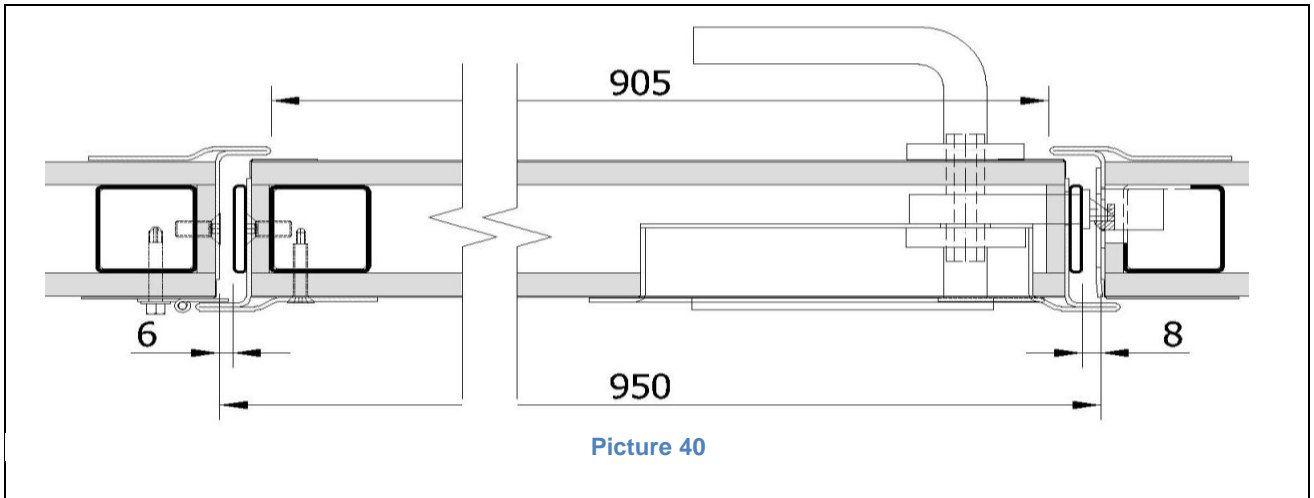


Picture 39

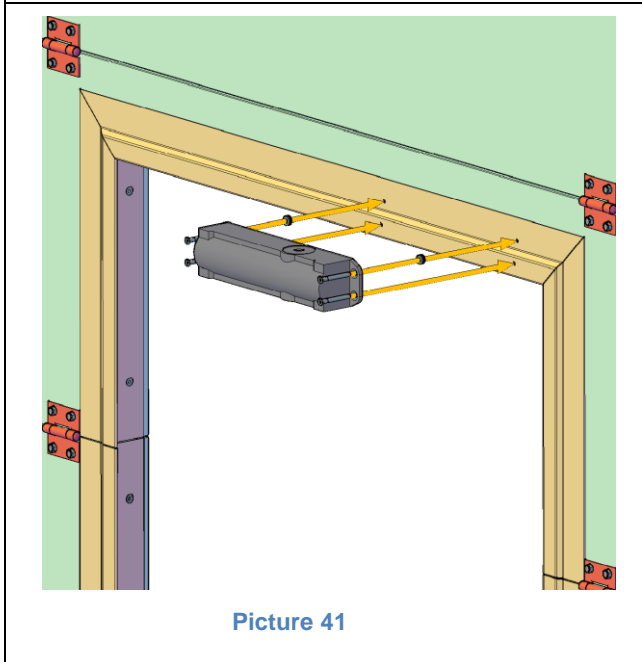
In case of gate with passage door, continue with installation of the door leaf. It always opens towards the building opening.

On the gap between the first and second section, project the horizontal line and align the first section of the passage door according to that. The gap between the bottom profile [4.5] and the gate leaf is secured by mounting underlays (prepared from production), which should be removed after mounting of all sections. Anchor the leaf hinge to the fixed section. For the top hole of each hinge use screw M8x30, and TEX 6,3x38 self-drilling screws for remaining holes.

Horizontal placement of the leaf towards the fixed sections – see pic. 40.

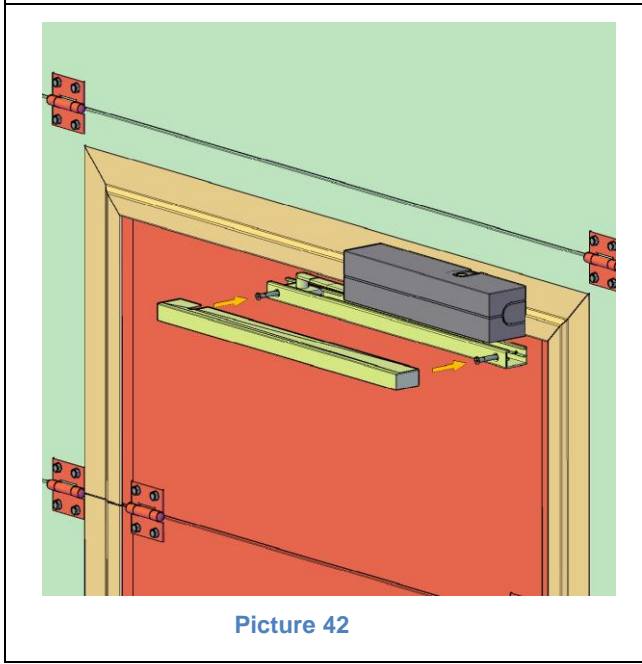


Picture 40



Picture 41

Mount the door closer according to the included instructions. Install the door closer body on the door frame. Use 2x 3 pads of $\varnothing 6$ mm due to profiling of the door frame. After the installation, cut the lower screws going through the protective cover strip.

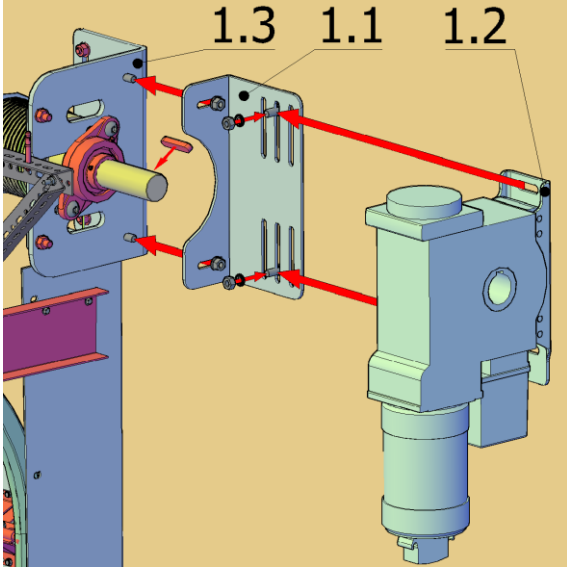
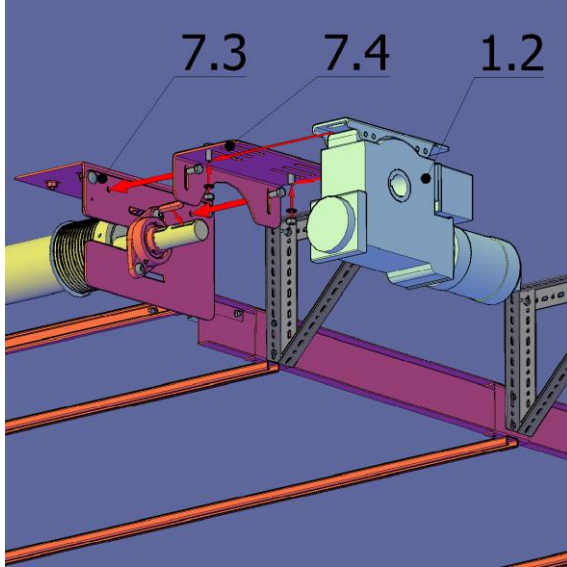


Picture 42

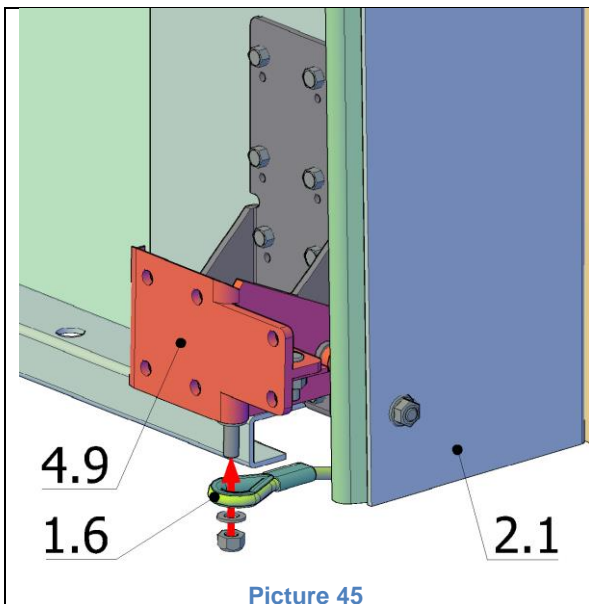
Mount the sliding bar with hanger on the gate leaf by using two screws M5x70 and cover it.



12. INSTALLATION OF MOTOR

OGS STANDARD AND HIGH-LIFT	OGS LOW-LIFT
 <p style="text-align: center;">Picture 43</p>	 <p style="text-align: center;">Picture 44</p>
<p>Install the motor bracket [1.1] to the winding roller bracket [1.3] using two screws 6HR M12x30 with large washer and nut. Insert spring into the shaft groove. Place motor on the shaft and fix to the bracket [1.1] (by two screws M12x20 with fan washer and nut).</p>	<p>Install the motor bracket [7.4] to the winding roller bracket [7.3] using two screws 6HR M12x30 with large washer and nut. Insert spring into the shaft groove. Place motor on the shaft and fix to the bracket [7.4] (by two screws M12x20 with fan washer and nut).</p>

13. ASSEMBLY OF CARRYING ROPES AND THEIR ADJUSTMENT



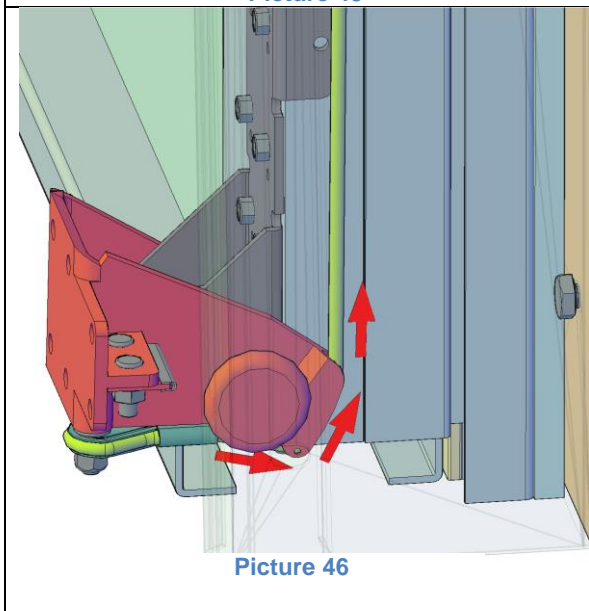
Picture 45

Before installing the ropes, read the instructions, supplied with safety brake.

During installation the safety brake must be secured by inserting the screw into the hole on the side (see the safety brake instructions).

Fasten the carrying rope to the drum on the roller and guide it in the space between the guide pulleys [4.6, 4.7] and the wall.

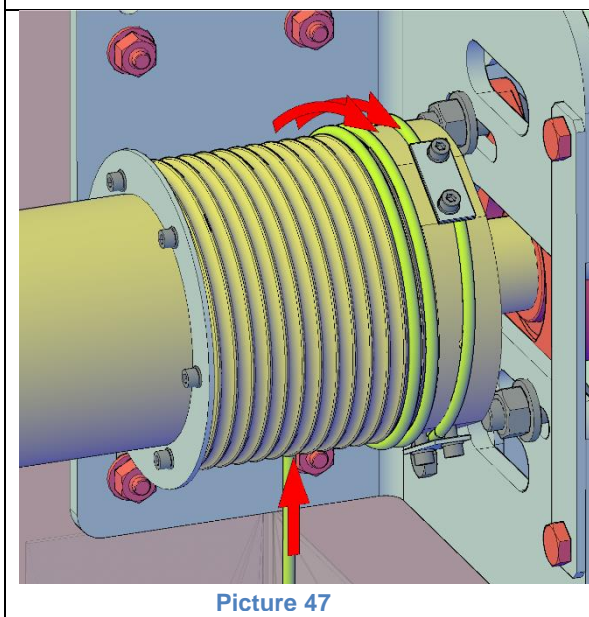
Screw with nut and two washers is located on the underside of the safety brakes [4.9]. Place rope eyelet, pressed on the steel wire [1.6], between the washers and secure with the nut (pic. 45).



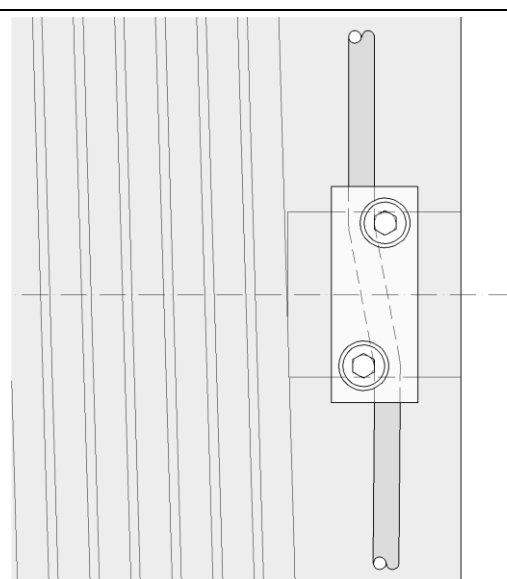
Picture 46

Wind the rope onto the drum, so that there are at least two full turns (see pic. 47) when the gate is in closed position. Pass the rope end as shown in picture 48 below all three clamping plates on the outer edge of the drum. Align the two ropes so that they are equally tightened on both sides. If the rope length is different, there is a risk of jamming of the sections and consequent damage of the wheels. Tighten the clamping plate screws by torque max. 5 Nm.

After installing the ropes, remove the plastic blade covers from the safety brakes and remove the screws that held the safety brakes in the open position.



Picture 47



Picture 48



14. COMPLETION OF THE INSTALLATION

14.1 Final adjustment

Perform at least 10 full open and close cycles to check smooth running of the gate. Make record about the installation into the handover documentation.

14.2 Warranty information

According to the regulation No. 305/2011 of the European parliament and of the council, Article 13 for warranty information, please, contact local importer in your country. Local warranty conditions can be updated according to the local law regulations.