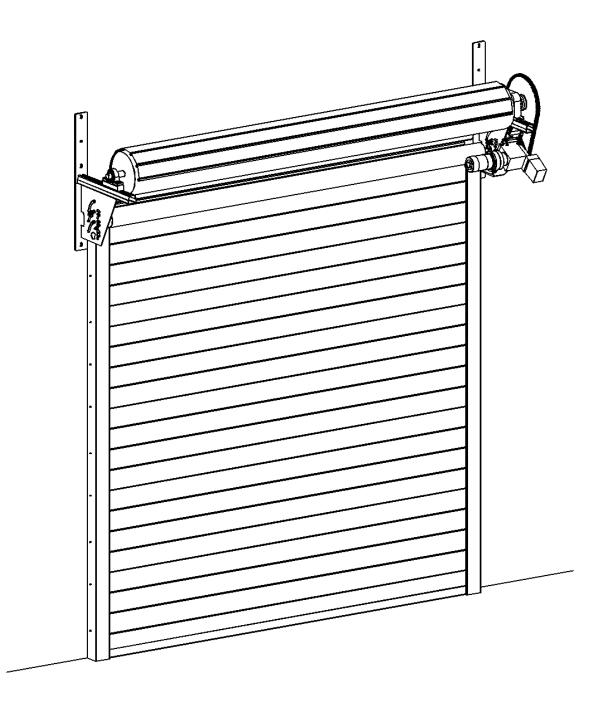


Installation manual RGS 60 EI 60 DP1 and RGS 120 EI 120 DP1









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1. NOTICE BEFORE INSTALLATION

Dear customers,

we are pleased, you have decided for rolling fire shutters 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. Additional 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 gate 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 pacing list from the packaging and make sure that the delivery corresponds to the packing list.

BRA	BRACKET SET ON SIDE OF BEARING							
	bracket on side of bearing							
	for gates with motors FS 15.20, 25.20, KE 20.24 – 40.24 and with safety brake max. FG 120-50			for gates with motors FS 50.20, 110.18, KE 40.24, 60.24, 80.24, 120.24 and with safety brake FG 220-60 a FG 360-80				
1.1	type 1			type 2				
	bearing holder UNI f		noring bearing	to the bracket	,,			
			for brackets type 1	bearing		pitch X		
				UCP 208		137 mm		
1.2				UCP 210		159 mm		
			for brackets type 2	UCP 210		159 mm		
				UCP 212		184 mm		
				UCP 216		232 mm		
	underlay of the main roller bearing			1	l			
	for bearing UCP 208 for bearing UCP 210			for bearing UCP	212	for bearing UCP 216		
1.3								
	bearing of main rolle	er		•		•		
	UCP 208	UCP 2	10	UCP 212		UCP 216		
1.4	(for shaft of main roller Ø40 mm) (for shaft of main roller Ø50 mm)		(for shaft of roller Ø60 mm)		(for shaft of main roller Ø80 mm)			
1.5	fasteners		15					



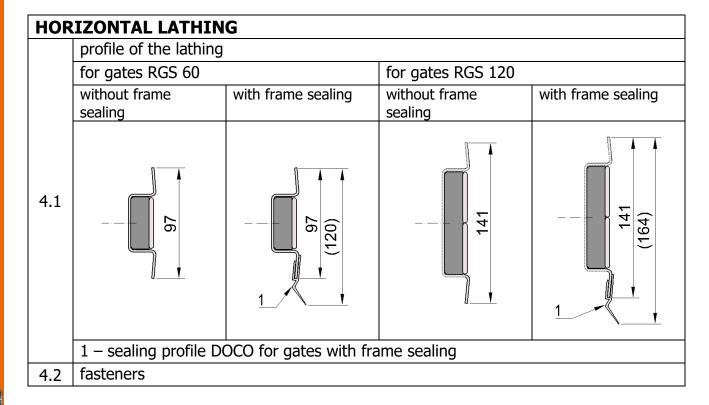
BRACKET SET ON SIDE OF SAFETY BRAKE AND MOTOR								
Ditt	bracket for safety brake and motor							
	for gates with motors FS 15.20, 25.20, KE 9.24, 20.24 – 40.24 and with safety brake max. FG 120-50							
2.1	type 1			type 2				
	bearing holder UNI	for anchoring	safety br	ake to th	ne bracket			
					safety brake	pitch X		
2.2	for brackets type 1 for brackets type 2		FG 40-30, 80-40, 120-50		240 mm			
			FG 12	0-50	240 mm			
			FG 22	0-60, 360-80	360 mm			
	safety brake; type according to the gate dimensions (number after the hyphen indicates shaft diameter of the main roller)							
	FG 40-30	FG 80-40	FG 12	20-50	FG 220-60	FG 360-80		
2.3								
	motor							
	FS 15.20, 25.20, 50.20, 110.18			KE 9.24, 20.24, 30.24, 40.24, KE 40.24, 60.24, 80.24, 120.24				
2.4			3					



	small chain wheel of the motor					
	inner diameter according to the shaft of the motor, standardly 14 teeth, type					
	according to the chain					
2.5	400		5/8	8" x 3/8"	(10 B-1)	
			3/4	4" x 7/16"	(12 B-1)	
	3,6	2	1"	x 17,02 mm	(16 B-1)	
	_		1 :	1/4" x 3/4"	(20 B-1)	
2.6	shaft key of the outp	ut shaft of the mo	tor ((part of delivery of t	he motor)	
	threaded block to the	e chain tensioning	(for	motors FS 1 pc, for	motors KE 2 pcs)	
					width X	
					WIGGE	
2.7			for	r brackets type 1	120 mm	
				- 5. delitete 1, pe 1	-	
			for	r brackets type 2	140 mm	
				- 5. a.c. (5, p.c. =		
	spacer of the motor (2 pcs)					
	KE 9.24	KE 20.24 - 40.24	-	KE 60.24 - 120.24	FS 25.20	
2.0		0		60		
2.8						
				0		
2.9	fasteners	<u> </u>	l l		1	

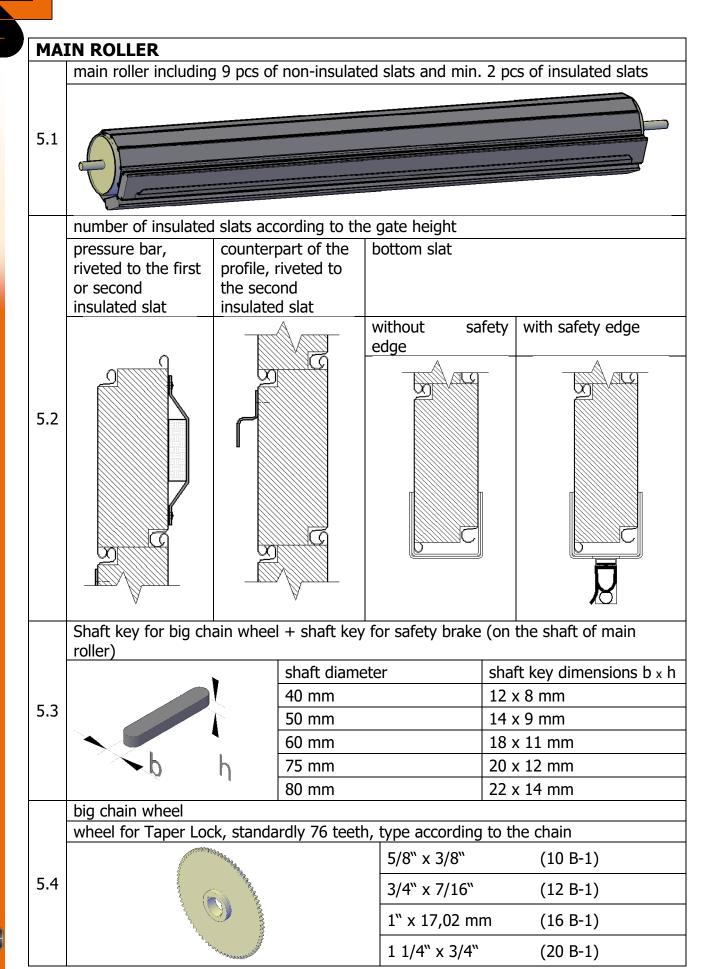


GUIDES complete left and right guide for gates RGS 60 for gates RGS 120 and for gates RGS 60 width ≥ 6m 35 35 119 3.1 115 160 part 1 - body of the guide 2 part 2 – body of the guide 3 part 3 – covering of the guide countersunk screw M6x20 + flanged nut M6 4 5 groove for anchoring to the wall garage profile * detail of the garage profile * * - only in case of frame sealing fasteners





3.2





	clamping sleeve Taper Lock for big chain wheel				
		type of chain	Taper Lock		
5.5		10 B-1	2012 / 40, 50		
		12 B-1	2517 / 40,50,60		
		16 B-1	3020 / 60, 75		

PRE	PRESSURE ROLLER							
	pressure roller; diameter of roller and shaft according to the gate width							
	< 4,5m	4,50	0m – 5,99m	6,0m – 8,99m		≥ 9,0m		
6.1	Ø30 Ø133	Ø40 Ø168		Ø50 Ø219		Ø50 Ø324		
	bearings for pressure roller (2pcs)							
	UCFL 206		UCFL 208		UCFL :	-		
	(for shaft of pressure roller		(for shaft of p		•	naft of pressure		
	Ø30mm)		roller Ø40mm	າ)	roller	Ø50mm)		
6.2								
6.3	fasteners							

СНА	CHAIN						
	chain; type according to the gate dimensions						
	10B-1 (g = 14,73 mm) 12B-1 (g = 16,13 mm) 16B-1 (g = 21,08 mm)						
7.1							
	chain link						
7.2							

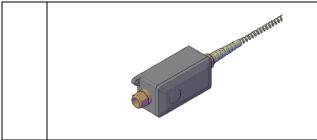


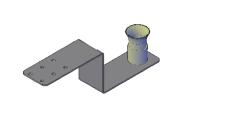
CON	CONTROL							
	control box + installation m	anual						
	FSTRONIC DES-FS	FSTRONIC DES-FI	TS 97x					
8.1								
8.2	cabel of motor							

OTH	OTHER						
9.1	additional accessories – according to the order specification						
	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)						
			anchor material	lath:			
	wall material	brackets	guides	lathing			
9.2	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			
9.2	steel structure	screw M12x min. 30	TEX 6,3x45 mm with hexagon head	TEX 5,5x45 mm with countersunk head			
	ceramic wall (Porotherm)	anchoring with threaded rod M12	wall plug (e.g. Fisher SX) 8x65 mm + buttonhead screw	wall plug (e.g.			
	gas-silicate (Ytong)	through wall + spreading plates		Fisher SX) 8x65 mm + countersunk			
	wall from solid bricks	threaded rod M12 + chemical anchor	6x80 mm	screw 6x80 mm			
exam	ple of optional electric	cal accessories					
	optional battery module for FSTRONIC DES-FS						
9.3							
9.4	connection box with	n spiral cable for optica	ll safety edge OSE, inc	cluding grommet			



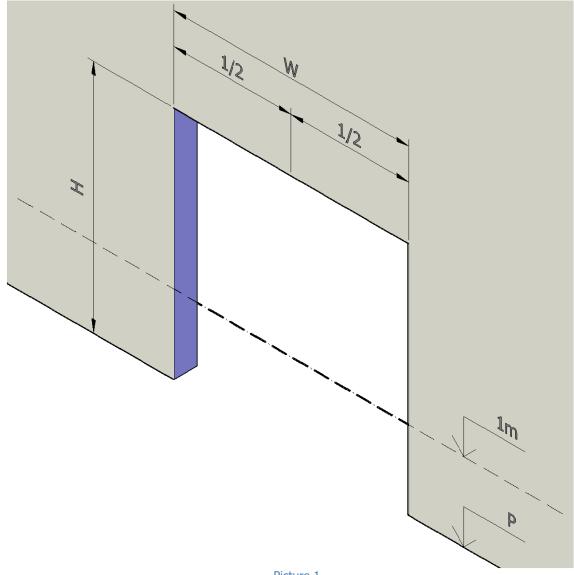








3. CHECK OF CONTRUCTION READINESS ACCORDING TO THE **DRAWING**



Picture 1

H – opening height, W – opening width

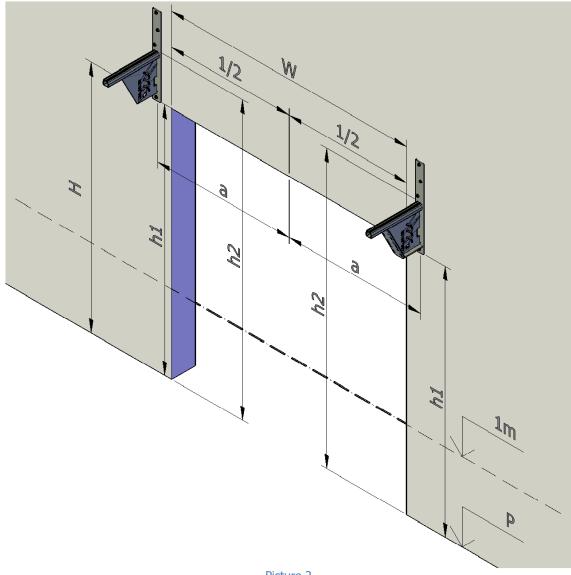
- See dimensions in the enclosed drawings.
- Mark centre of the opening.
- Make a level line on the wall (horizontal line at height 1m above clear floor level).
- If any of the dimensions are bigger than in the documentation, it is not possible to install the gate.





4. INSTALLATION

4.1 Installation of the brackets



Picture 2

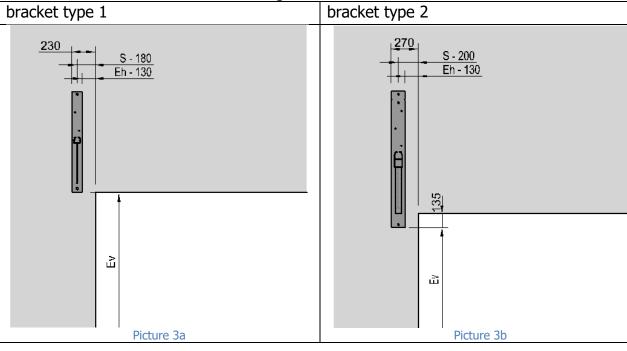
Mark position of the brackets according to the enclosed technical drawing:

- Measure position of brackets according to the marked level line (not from the floor).
- In standard cases the lower edge of h1 brackets **type 1** is equal to the upper edge of the opening. Lower edge of h1 brackets **type 2** is standardly 135mm below upper edge of opening. It is always necessary to check the actual height of the bracket position according to the installation drawing of the particular gate!
- Brackets have to be hanged vertically and on the both sides in same distance a from the edge of opening. Height of the rail for fitting the main roller h2 must be in one horizontal plane on both brackets (with a tolerance of max. 1 mm).

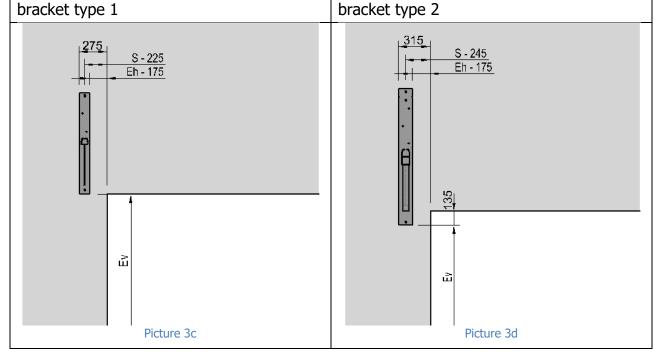


Standard distance of brackets from the edge of opening (check the real distance for the particular gate in the installation drawing)





gate RGS 120 and RGS 60 width > 6 m

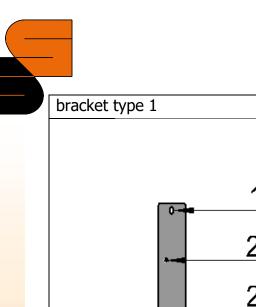


S – axis of bracket from the edge of opening

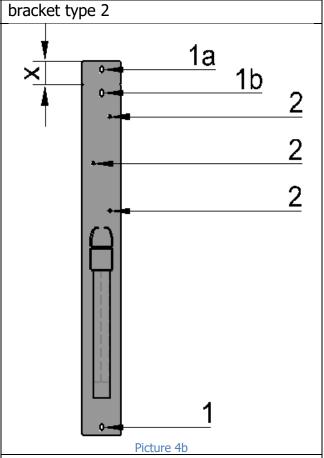
Eh – distance of bracket edge from the edge of opening

Ev – lower edge of bracket

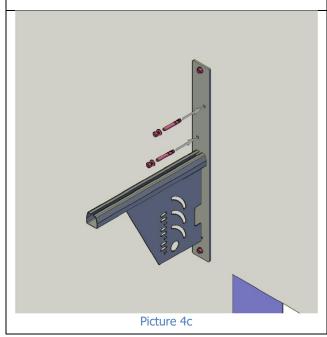


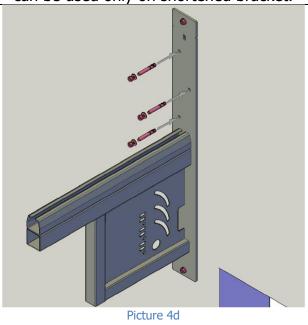


Picture 4a



x - upper 85 mm of bracket anchor board can be cut off if necessary. It is valid for gate up to height 2,10 m. Anchor hole 1b can be used only on shortened bracket.



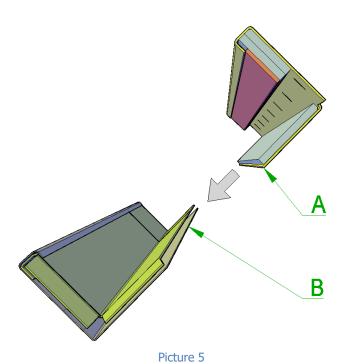


- Drill holes into the wall in the place of oval holes No. 1 (see pic. 4a, b).
- Anchor brackets into holes No. 1 with suitable installation material.
- Align brackets to the required height and tighten anchor material.
- Secure by drilling together with holes No. 2 and fix with anchor material (see Pic. 4c, d).



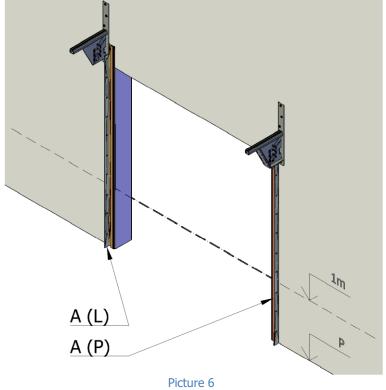


Side guides are delivered in the left and right variant. The design differs according to the fire resistance. (see scheme on page 5). The guide is consisting of two parts, connected with countersunk screws M6 and flanged nuts. On the inner upper edge of the part B is made a bevel for better guidance of the slats.



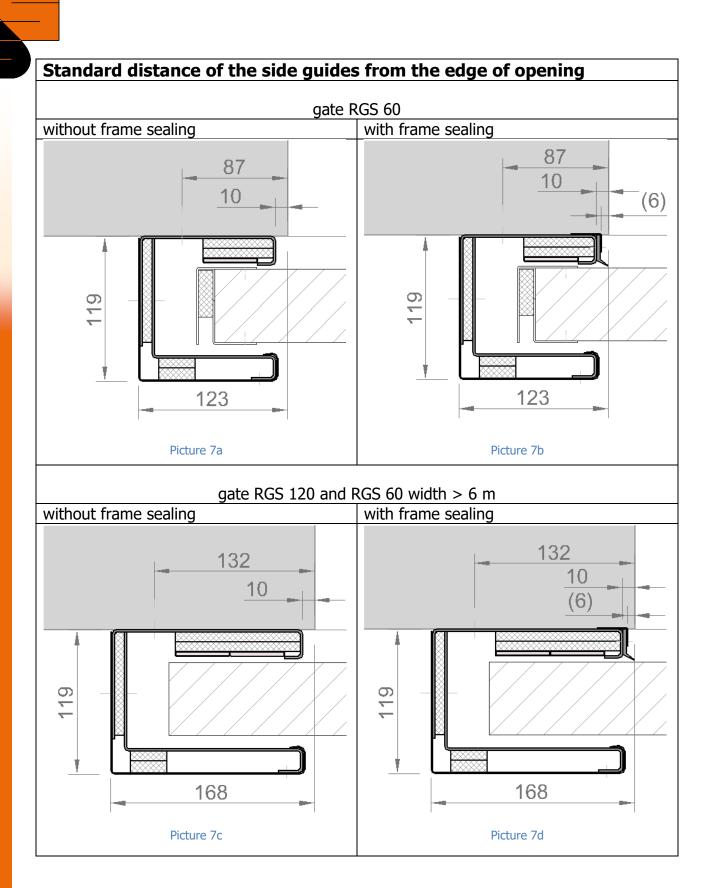
Part A – body of the guide (wall-mounted – standardly anchored through every second pre-prepared hole. Must be always anchored to the first hole from the top and the first hole from the bottom.)

Part B – covering of the guide



- 1. Mark on the guides distance 1m from the bottom edge.
- 2. Mount part A (P right, L- left) on the wall at a distance from the edge of the opening indicated in the installation drawing. The vertical pitch of the anchor points must be max. 1 m.
- Check the correct distance of the guides by inserting horizontal lathing between the guides. The lathing should fit tightly to the guides on both sides.
- 4. Align the guides to the vertical plane and tighten the anchor material.



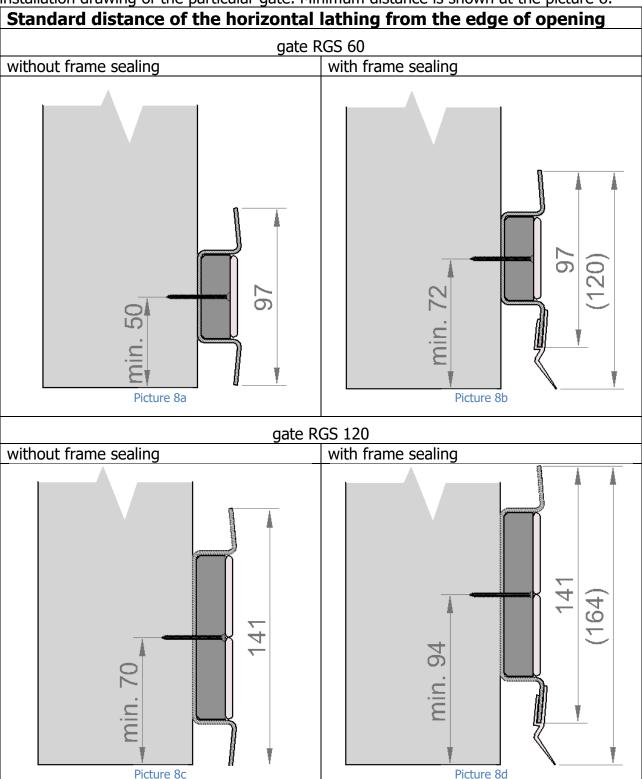




4.3

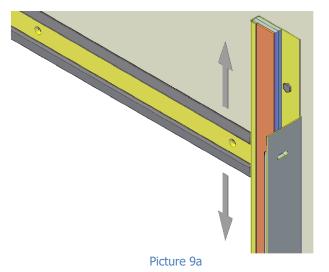
4.3 Installation of the horizontal lathing

The horizontal lathing is placed above the edge of the opening, between side guides. The design differs according to the fire resistance (to EI 60 and to EI 120) and according to the requirement for frame sealing. It is delivered without the glued intumescent tape, which is standardly glued after anchoring of the lathing to the wall. The lathing must be placed in a position when Z-profile, riveted on the second insulated slat from the top, fits in the lathing when gate is closed. Distance of the anchoring axis of the opening edge is indicated in the installation drawing of the particular gate. Minimum distance is shown at the picture 8.

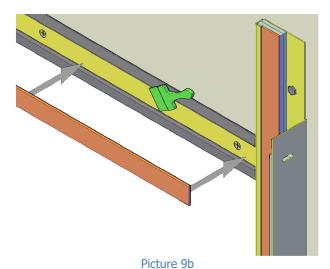








- 1. Place horizontal lathing between side guides in height according to the installation drawing. Height can be adjusted if necessary.
- 2. Anchor the lathing to the wall through the pre-prepared holes.

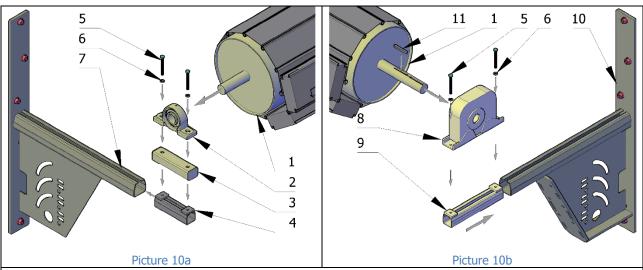


- 1. Apply glue (e.g. Colgel, Mamut Glue).
- 2. Glue intumescent tape to the silicate board in the lathing (gates with fire resistance RGS 120 have two intumescent tapes parallel to each other).



4.4 Installation of the brackets with bearing and safety brake

Main roller is delivered on a pallet together with 9 pcs of rolled-up non-insulated slats and min. 2 pcs of insulated slats. During installation the rolled-up slats have to be secured against unwinding. Shaft with grooves for shaft keys must be on the side on which the motor is going to be mounted.



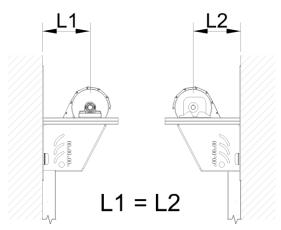
- 1 main roller including nine non-insulated slats and two insulated slats tied together
- 2 bearing UCP
- 3 underlay of the main roller bearing (type according to the particular bearing)
- 4 bearing holder UNI for anchoring of the bearing to the bracket (inserted into the rail)
- 5 bolt DIN 933 M12 M16 (2 pcs)
- 6 washer DIN 125A (2 pcs)
- 7 bracket on the side of bearing, anchored to the wall
- 8 safety brake FG (type according to the gate dimensions)
- 9 bearing holder UNI for anchoring of safety brake to the bracket (inserted into the rail)
- 10 bracket on the side of motor and safety brake, anchored to the wall
- 11 safety brake key (insert into the groove, closer to the roller)

Balancing of the roller

- The bearing axis must be at the same height as the safety brake axis.
- Axis of the bearing and the safety brake must be in the same distance from the wall (see pic. 11).
- To install the roller, it must be placed into horizontal position by moving the set of bearing and safety brake in the rail of the bracket, when the screws of the holders are loosened.



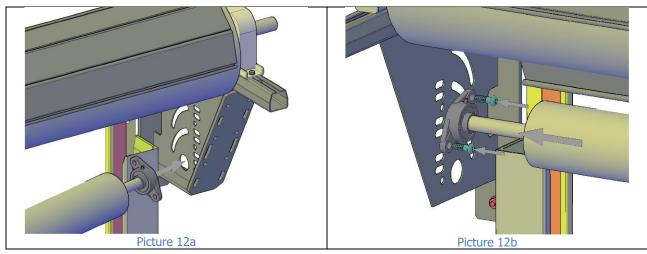




Picture 11

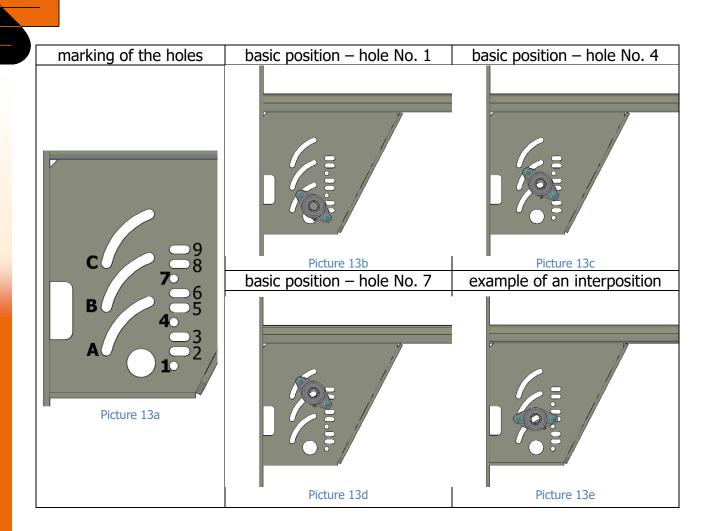
4.5 Installation of the pressure roller

Place the pressure roller with the UCFL bearings on the brackets. If both brackets have
a reinforced edge it is possible, during installation of the roller, to use the mounting hole
through which the shaft is inserted to ensure the roller to get round the stiffener on the
opposite bracket.



Secure the UCFL bearings on both sides with bolts, placed into the holes according to
the expected position of the roller (see the installation drawing). Bearings can be placed
in three basic positions (one bearing bolt in one of the holes 1, 4, or 7 and the second
bolt in one of the arched grooves). If none of the basic positions is suitable, it is possible
to place the bearing the way that one bolt will be in one of the horizontal grooves (No
2, 3, 5, 6, 8, 9) and in one of the three arched grooves.





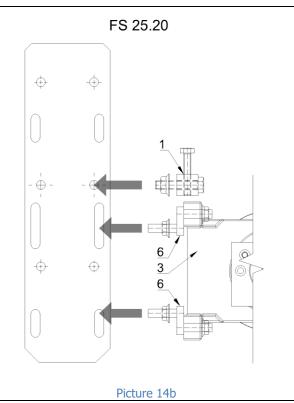


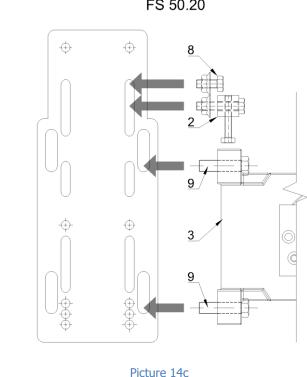


4.6 Installation of the motor

Motor is mounted on a plate with holes, which is part of the bracket of the rolled-up slats. Some types of the motors require to use a spacer for connecting motor with the bracket. Chain tensioning is solved using threaded blocks, placed in the given holes on the plate. For motors FS one threaded block is used, two blocks are used for motors KE.

FS 15.20 Picture 14a FS 50.20

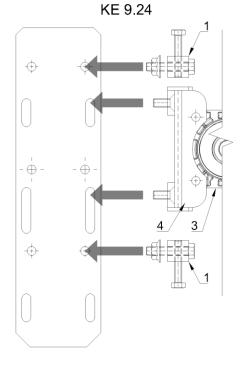


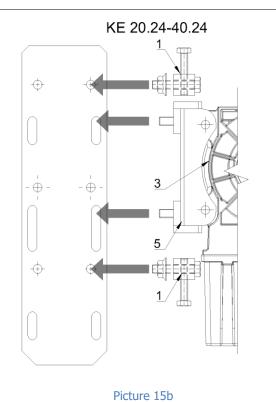


- 1 threaded block 120x30x30mm, for motor tensioning
- 2 threaded block 140x30x30mm, for motor tensioning
- 3 motor
- 6 spacer for motor FS 25.20 (2 pcs)
- 8 bolt M12x40 with flanged nut with teeth (2 pcs)
- 9 bolt M16x60 with nut and washer (4 pcs)

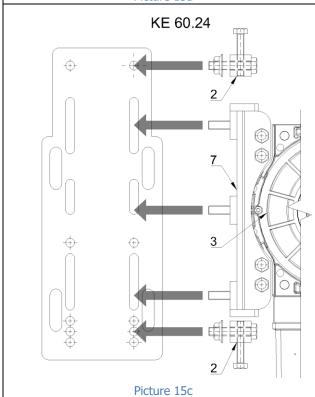








Picture 15a

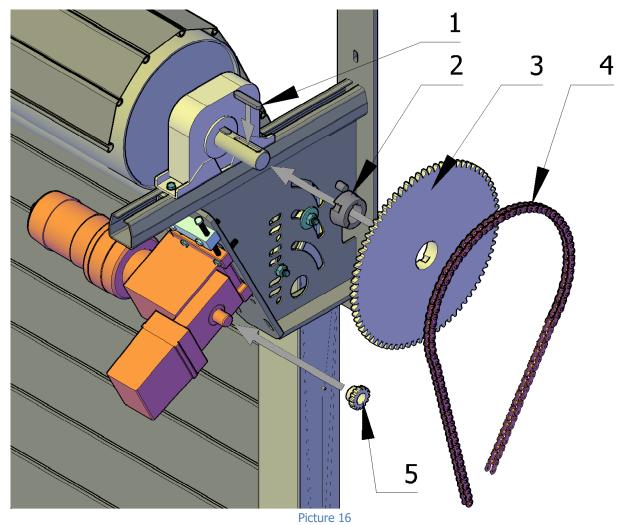


- 1 threaded block 120x30x30mm, for motor tensioning
- 2 threaded block 140x30x30mm, for motor tensioning $\,$
- 3 motor
- 4 spacer for motor KE 9.24
- (2 pcs)
- 5 spacer for motors KE 20.24 40.24 (2 pcs)
- 7 spacer for motors KE 60.24 120.24
- 9 bolt M16x60 with nut and washer

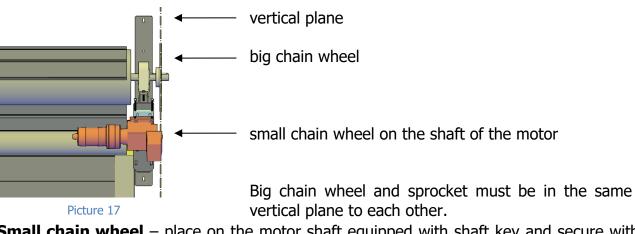




4.7 Installation of the chain and wheel on the shaft



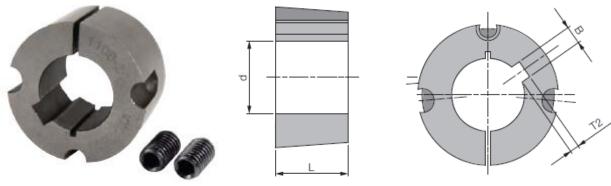
- 1 shaft key (to insert into the groove in the shaft of the main roller)
- 2 clamping sleeve Taper Lock for the big chain wheel (installation according to the manual inside the packaging)
- 3 big chain wheel
- 4 chain with a joint
- 5 small chain wheel on the shaft of the motor (sprocket)





Small chain wheel – place on the motor shaft equipped with shaft key and secure with Allen screw.

Taper lock – clamping sleeve for fixing of the main chain wheel to the shaft of the main roller. It is supplied with 2 pcs of setting screws (see pic. 18a). On the perimeter of the socket are three holes, one of them is threaded (see pic. 18b). In chain wheel are also three holes, two threaded.



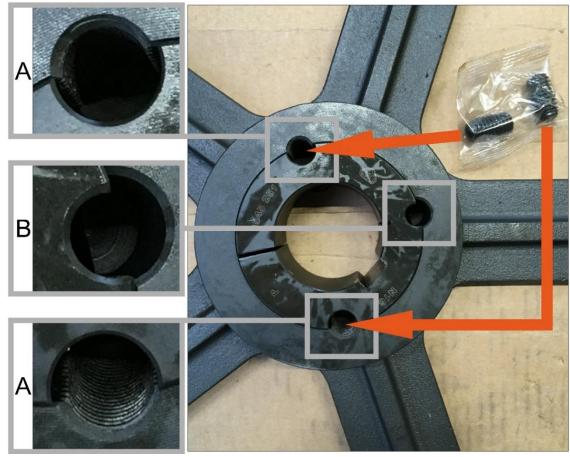
Picture 18a

Picture 18b

- before mounting, clean properly the socket
- place the socket into the wheel the way that the threaded hole is exactly in the opposite position to the hole without the thread
- manually tighten the screws put wheel on the shaft with shaft key, place it in the vertical plane with the small chain wheel on the motor and in turns tighten both setting screws. Tighten to specified torque according to the assembly instructions that are included in each package of Taper Lock with torque wrench. Alternatively can be used an ordinary hexagonal key, which is not possible to develop an abnormal tightening torque.

Do not use the ratchet to tighten!!!

Picture 18c

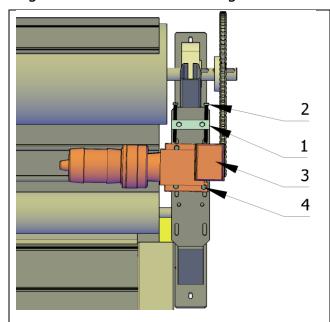




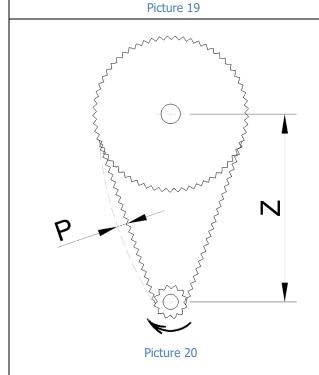
A – threaded hole in the chain wheel, opposite to the hole in Taper Lock without thread B – threaded hole in Taper Lock, opposite to the hole in chain wheel without thread (used only during disassembly of Taper Lock)

4.8 Chain

- place motor into the grooves in the highest position
- put chain on the small and the big wheel
- shorten the chain if needed by removing a certain number of links
- connect with joint
- slightly loosen nuts on the bolts fixing motor to the bracket
- tighten bolts on the threaded block, placed over the motor; chain tension occurs
- tighten nuts on the bolts fixing motor to the bracket



- 1 threaded block for chain tensioning
- 2 tensioning bolt on the threaded block
- 3 motor
- 4 bolts fixing motor to the bracket



Chain must freely run on the chain wheel.

Free branch of the chain must be slack not less than 1% and not more than 3% of the distance between chain wheel centres. (P = Z*0,01 to Z*0,03)

Operating load causes the chain to slowly extend, which must not exceed 2% of its length.

Record position of motor on the bracket into the installation report. It is necessary due to the check of chain running performance during service inspections.





For motors FS = control box DES - FS (optionally with battery module)

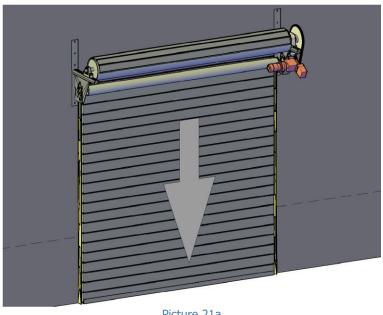
For motors KE = control box DES - FI

Connection procedure and putting into service see in manual for the type of control box.

4.10 Unrolling of the slats

Unroll the slats from the roller after connection of the control box to the power supply.

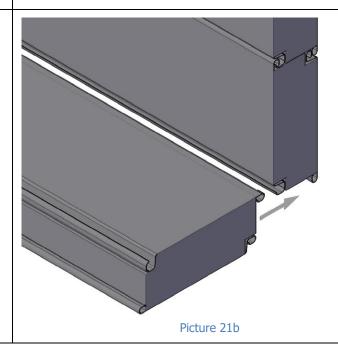
A. If the slats are rolled-up (all slats on the roller) unroll them and slowly let the slats down in the guides.



Picture 21a

B. Separate slats (roller and slats are separated) are snapped into each other one by one from the roller downwards.

Put the slats with the joints to each other at an angle of 90 degrees, after snapping, the slats are joined and straightened.

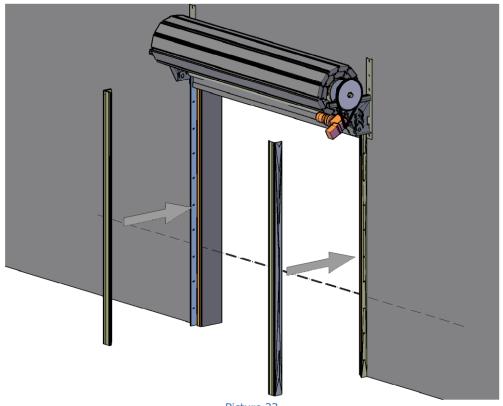






4.11 Installation of the coverings of the side guides

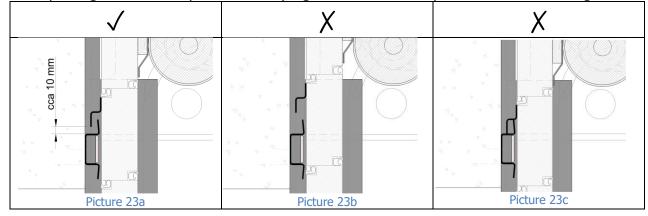
Coverings of the guides (part B, see pic. 5) can be installed earlier, if the slats were completely rolled-up on the roller. However, it is recommended to have the guides uncovered as we work with them during the installation and cover the guides in the final phase of the installation.



Picture 22

Grooves in part A allow to set the internal width of the guide within approx. 12 mm. It is recommended to choose a larger internal width, to enable the slats to move freely in the guides. Particular attention needs to be paid to the top of the guides – there must not occur jamming of the slats against the guide edge. If necessary, the position of the pressure roller has to be adjusted. The roller has to be in such a position, that before the complete closing of the gate, the slat with pressure bar moves on the roller. The slat with pressure bar then enables correct fitting of the counterpart of horizontal lathing into its lock. After closing the gate, check through the hole in the bracket, the correct position of the counterpart against the horizontal lathing (pic. 23a). During opening and closing of the gate the pressure roller should rotate.

After placing into correct position firmly tighten bolts of the pressure roller bearings.







5. COMPLETION OF THE INSTALLATION

5.1 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.

5.2 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.

