

Installation and operating instructions

Aluminium cantilever system

Rollco® LWA 115/1A



tousek®
G A T E A U T O M A T I O N





Important warning and safety notes for installation and operation

- These installation- and operating instructions form an integral part of the product "cantilever system". They have been specifically written for professional installers trained and skilled in the trade and should be carefully read in their full length before carrying out the installation. After the installation this manual has to be handed over to the user.
- Installation, connection, adjustments, putting into operation, and servicing may only be carried out by trained professionals in full accordance with these installation- and operating instructions. Faulty assembling can cause severe injury and material damage.
- The EU Machine Directive, laws and rules concerning the prevention of accidents, and laws and standards which are in force in the EU and in the individual countries have to be strictly followed.
- The TOUSEK Ges.m.b.H. cannot be held liable for any claims resulting from disregards of the laws and standards in force during the installation and operation.
- The product may only be used in accordance with its original purpose, for which it has been exclusively designed, and which is described in these installation and operating instructions. The TOUSEK Ges.m.b.H. rejects any liability if the product is used in any way not fully conforming to its original purpose as stated herein.
- The packaging materials (cardboard, plastic, EPS foam parts and filling material etc.) have to be properly disposed of in accordance with the applying recycling- and environmental protection laws. They may be hazardous to children and therefore have to be stored out of children's reach.
- Before beginning with the installation the installer has to make sure that all mechanical components of the gate facility, like carrier profile/rail, gate frame and panels, guiding elements etc. are sufficiently supportive and resistant for the purpose of gate automation. Check also whether the product has transport damages.
- After installation the proper function of the gate facility has to be checked!
- Place warning signs and notes of the valid regulations to indicate danger areas
- Children have to be instructed, that the gate facility as well as the belonging parts may not be used improperly, e.g. playing.
- Only original spare- and replacement parts may be used for repair of the product.
- The TOUSEK Ges.m.b.H. rejects any liability for claims resulting from usage of the product in combination with components or devices which do not fully conform to the applying safety laws and rules.
- The installer has to supply to the user all instructions relating to the safe operation of the gate facility.

The installation and operating instructions also have to be handed over to the user.

- For perfect function and avoiding damages at the cantilever system, the following planning- and processing rules have to be strictly followed!



ATTENTION: blocking of the gate (see page 9) !

- **Firmly bolted mechanical stops prevent the running of the sliding gate on the rolling gears, when in OPEN or CLOSED position!**
- **Examples of fixed limit stops as safety devices:**
(1) Guide-in bracket, (2) counter pillar



Maintenance

According to the frequency of actuation, but at least once a year, we recommend to carry out the following maintenance works:

- **Check if the rolling gears are standing in-line.**
- **Check if the gate is smooth running without jamming.**
- **Check the upper gate guiding.**
- **Check the assembly screws.**
- **Check if the door runs correctly into the guide-in bracket resp. guide-in fork bracket.**
- **Clean the inside of the profile.**

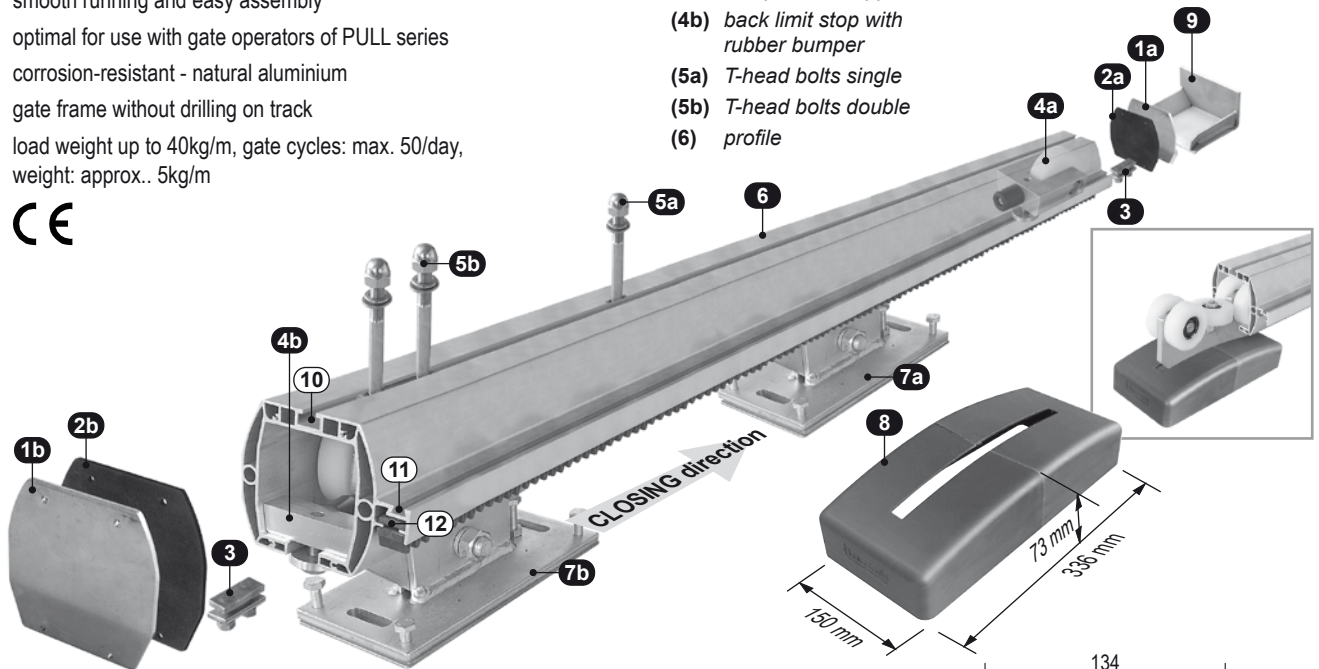
Characteristics

- aluminium profile in hollow-chamber design with integrated guiding for plastic gear rack and limit switch
- cantilever profile in two different stock lengths
- rolling gears of galvanized steel with ball-bearing polyamide-rollers
- smooth running and easy assembly
- optimal for use with gate operators of PULL series
- corrosion-resistant - natural aluminium
- gate frame without drilling on track
- load weight up to 40kg/m, gate cycles: max. 50/day, weight: approx. 5kg/m



- (1a) front end plate with lateral plastic guidings
- (1b) back end plate
- (2a) front seal (V)
- (2b) back seal (H)
- (3) clamping (for gear rack)
- (4a) front limit stop with rubber bumper and support roller
- (4b) back limit stop with rubber bumper
- (5a) T-head bolts single
- (5b) T-head bolts double
- (6) profile

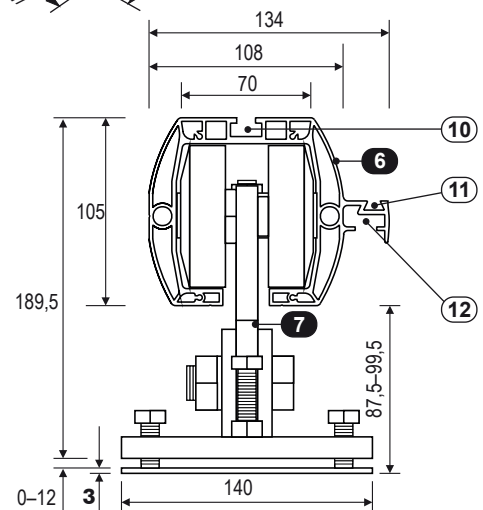
- (7a/b) front/back rolling gear and mounting plate in stainless steel
- (8) rolling gear cover
- (9) guide-in bracket



General features

The aluminum-track Rollco® LWS 115 with hollow chamber design is the perfect system for cantilever gates. The integrated for plastic gear rack, limit stop and hammer head bolts (for gate frame installation) guarantee an easy mouting. Modern, cantilever gate constructions have the big advantage that they can glide over any ground uneveness. The rolling gear with ball bearing polyamide rollers ensures an optimal drive guidance. The adjusting bolts on the rolling gears are for avoiding a tilt effect when there are changes of alternation of load during gate movement.

- (10) opening for T-head bolts for connection with the gate frame
- (11) guiding for limit switches
- (12) guiding for plastic gear rack



Technical data

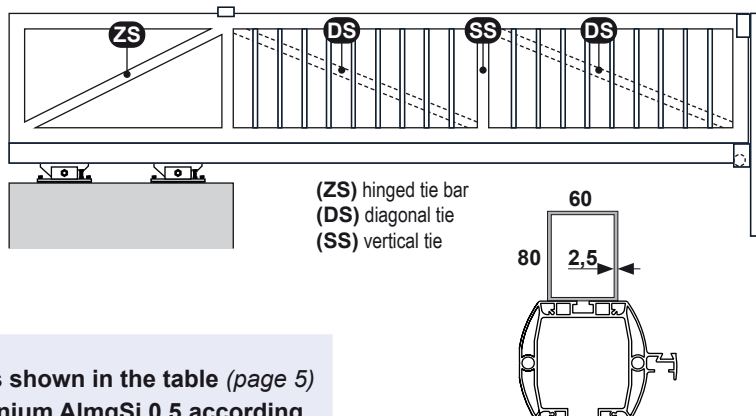
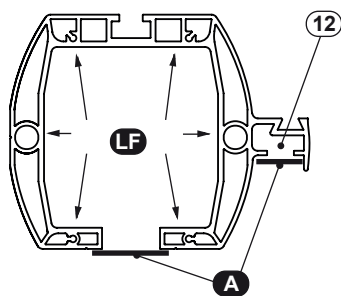
Aluminium cantilever system Rollco® LWA 115/1A		Art.Nr.
Aluminium profiles	load capacity: 40kg/m, weight: ca. 5kg/m, frequency of actuation: 50 cycles/day	
for max. DL 3.000mm ± 10mm	4.300mm profile length ± 10mm natural aluminium	14630200
for max. DL 4.300mm ± 10mm	6.000mm profile length ± 10mm natural aluminium	14630020
for max. DL 5.800mm ± 10mm	8.000mm profile length ± 10mm natural aluminium	14630030
Rolling gear LWA 115/1A	2 units necessary!, made of galvanised steel (adjustable in height and inclination) with polyamide rollers, incl. covers for rolling gear	14630080
optional accessories	INOX mounting plate, heavy-lift anchor, motor mounting plate for tousek sliding gate operators, end plates (aluminium), limit stops with and without support rollers, guide-in bracket (aluminium), guide bracket (stainless steel), turnbuckle (stainless steel), guide-in fork bracket (stainless steel), T-head bolts (stainless steel), gear rack (plastic)	



ATTENTION: The assembly of cantilever system and gate may only be carried out by trained and qualified professionals. For perfect function and avoiding damages at the cantilever system, the following planning- and processing rules have to be strictly followed!



Important



- The max. loading may not be higher as shown in the table (page 5)
 - The cantilever profile is made of aluminium AlmgSi 0,5 according to DIN 1725.
 - The surface of the profile is alu-nature. If it is powder coated or painted, please take care that the profile is covered (see **A** above drawing) in the area of the running surfaces **LF** as well as the guidance for the plastic gear rack **12**.
 - The gate frame may not be welded onto the cantilever profile. Screw joints have to be used.
 - When using different materials (e.g. steel gate frame), an anti-corrosion contact tape has to be inserted between gateframe and cantilever system.
 - The gate frame may not show any distortion.
 - Recommended dimensions for aluminium gate frame: steel profile 80/60/2,5 mm, on edge. Starting from a clearance width of 3 m, an additional vertical tie **SS** has to be set in the gate frame. Furthermore we recommend to insert diagonal ties **DS**.
- These values are only standard values, the gate frame has to be designed according to the static requirements.
- In the area of the support length, a diagonal tie **ZS** has to be set in. From 5000mm DL on, this tie has to be adjustable. Therefore a turnbuckle designed for gate ties 60/60/3 is available.
 - Load through wind: The calculation of the cantilever system is based on a gate with bars or lattice. No wind-impermeable materials may be used as gate-filling.
 - For relieving the gate, a support roller and a guide-in bracket have to be mounted in position gate **CLOSED**.
 - For the upper gate guiding, a guide bracket with rollers and a guide-in fork bracket have to be foreseen in gate position **CLOSED**.
 - The rolling gears have to be mounted in-line and perpendicular.
 - The measurements of the foundation are only standard values. The foundation always has to be adjusted to the structure of the ground. It should consist of concrete quality C20/25 at ground class 3. The foundation has to be horizontal and free of cracks. A reinforcement (armour iron) may only be carried out from 200 mm upper concrete edge (heavy-lift dowels).
 - These technical notes are only valid for horizontally running gates.



ATTENTION: blocking of the gate (see page 9) !

- Firmly bolted mechanical stops prevent the running of the sliding gate on the rolling gears, when in **OPEN** or **CLOSED** position (see page 9) !



Taking into operation

After installation and before taking into operation, the following points have to be carried out:

- Clean the inside of the cantilever profile (remove possibly existing dirt)
- Check if the gate is smooth running without jamming.



Maintenance

According to the frequency of actuation, but at least once a year, we recommend to carry out the following maintenance works:

- Check if the rolling gears are standing in-line.
- Check if the gate is smooth running without jamming.
- Check the upper gate guiding.
- Check the assembly screws.
- Check if the door runs correctly into the guide-in bracket resp. guide-in fork bracket.
- Clean the inside of the profile.

2. Mounting

Aluminium cantilever system Rollco® LWA 115/1A

Foundation- and assembly plan

Dimensions Rollco® LWA 115

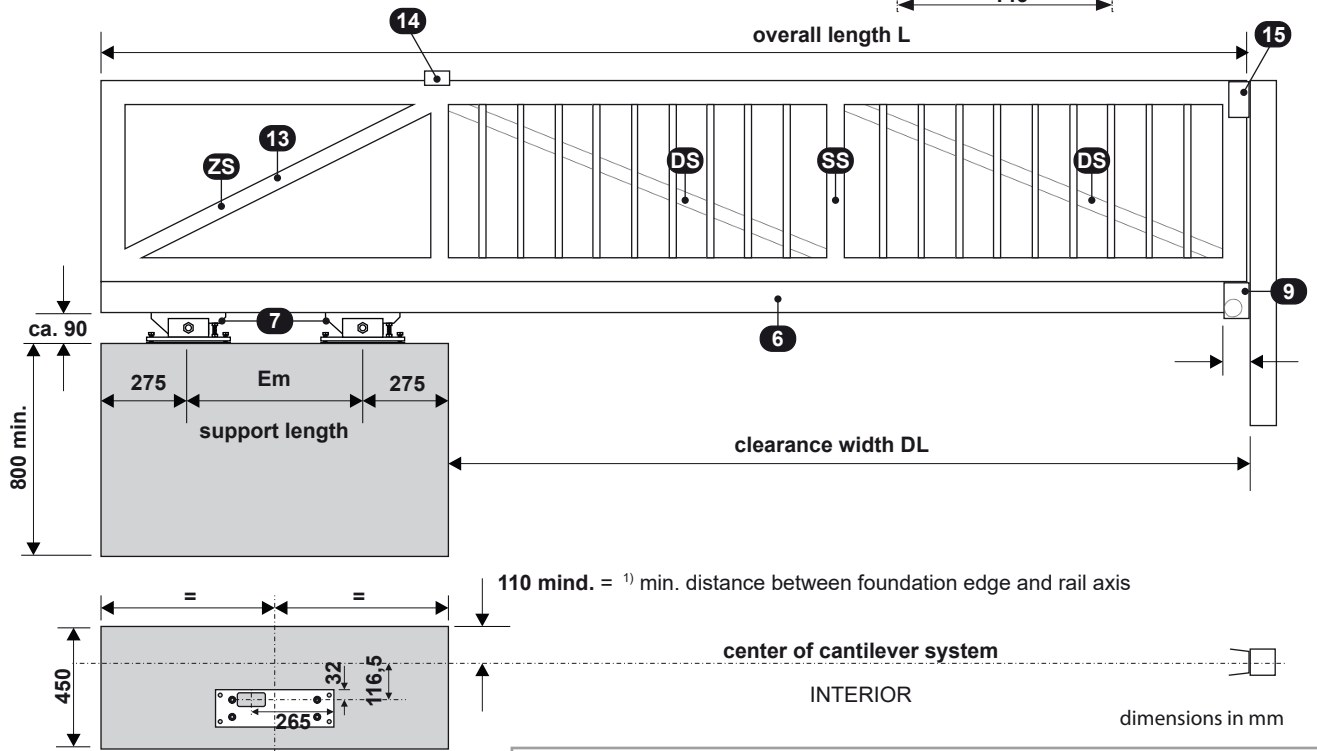
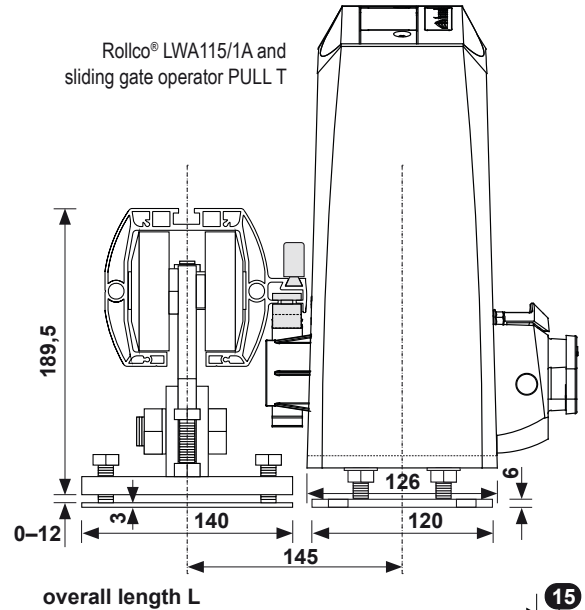
dimensions in mm

DL	profile length	Em	max. load
3000	4300	750	40kg/m
3500	4900	850	40kg/m
4000	5600	1050	40kg/m
4300	6000	1150	40kg/m
4500	6250	1200	35kg/m
5000	6900	1350	35kg/m
5500	7550	1500	30kg/m
5800	8000	1650	30kg/m



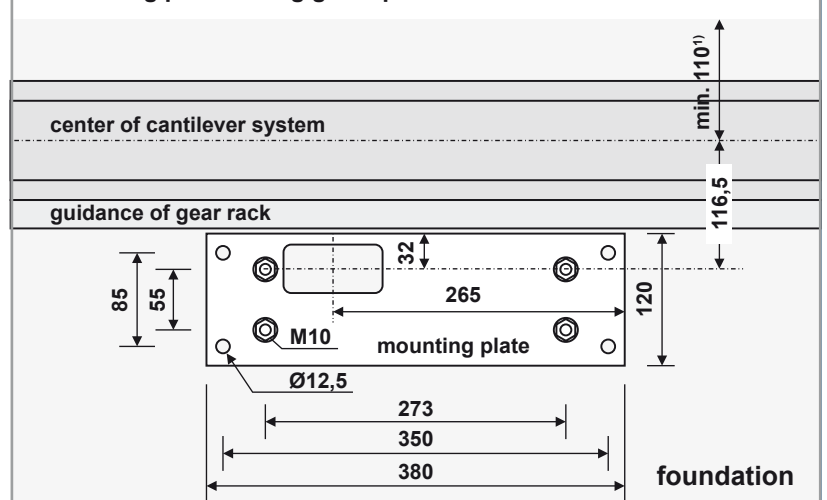
NOTE: overall length $L = \text{profile length} + 6\text{mm}$
 The cantilever profile Rollco® LWA 115 is available in stock length **4.300, 6.000 and 8.000mm**. Lengths in between these measurements have to be shortened.

Rollco® LWA115/1A and sliding gate operator PULL T

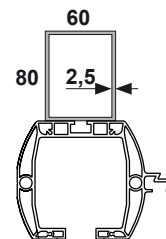


- (6) profile
- (7) rolling gears
- (9) guide-in bracket
- (13) turnbuckle
- (14) guide bracket
- (15) guide-in fork bracket
- (ZS) diagonal tie bar
- (DS) diagonal tie
- (SS) vertical tie

Mounting plate sliding gate operator:

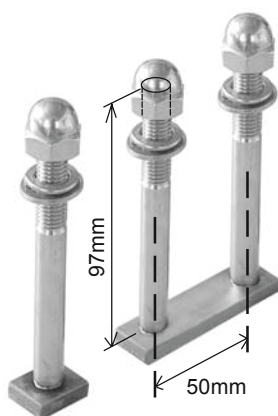


- Recommended dimensions for aluminium gate frame: steel profile 80/60/2,5mm, on edge.
- In the area of the support length the gate frame should be furthermore equipped with a diagonal tie, and for an overall length of 5 m and more, a turnbuckle has to be foreseen.
- Starting from a clearance width DL of 3 m, the gate frame should at least be parted in 2 sections and equipped with diagonal ties. Further important notes (see page 4).
- These values are only standard values, the gate frame has to be designed according to the static requirements.
- The gate frame is fixed with T-head bolts, at the ends of the gate frame the double T-head bolts are inserted.
- The fixation of the ends should be carried out as far on the ends of the gate frame as possible.
- The gate frame should generally be fixed in distances of max. 500 mm.

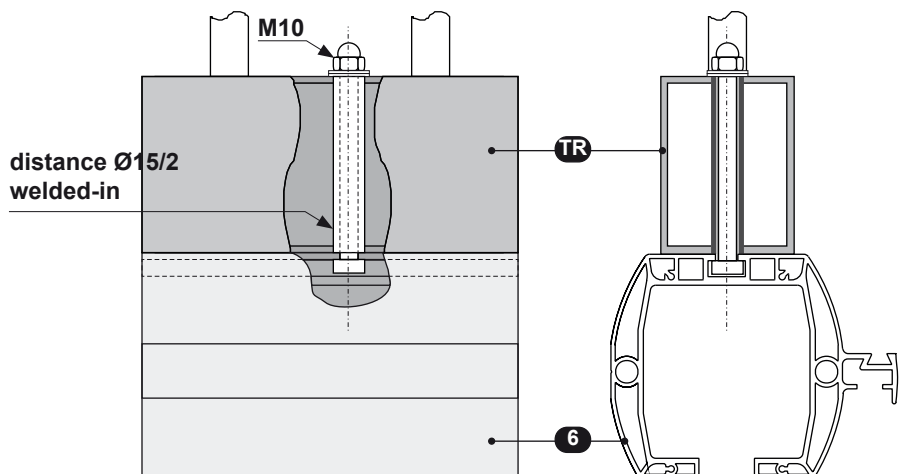


Examples for mounting the gate frame on Rollco® LWA 115/1A

Version: T-head bolts



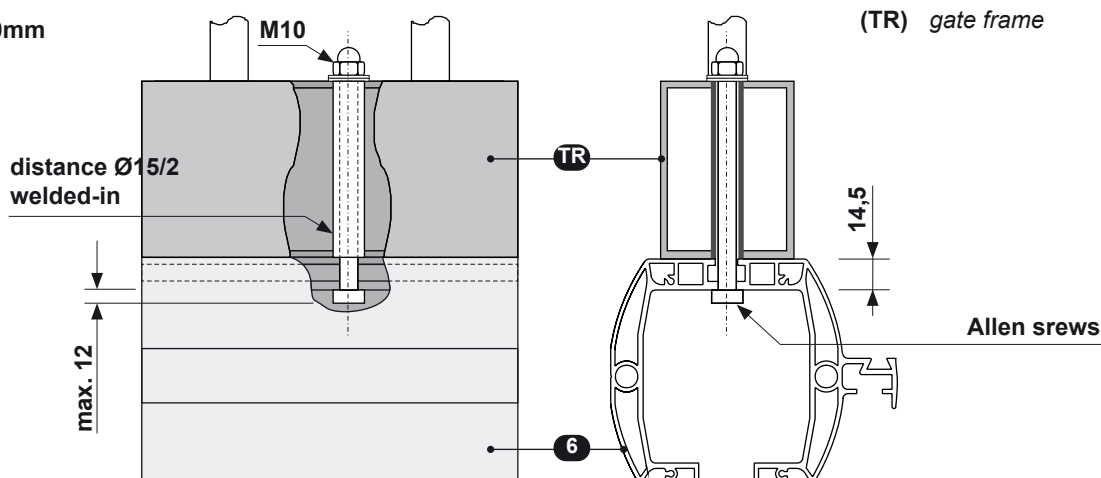
T-head bolts (M10, single and double) are inserted in the foreseen guiding at the profile.



The gate frame is screwed every 500 mm, at the ends of the frame the double T-head bolts are used, everywhere else the single ones.

Version: Through bolts

screwed all 500mm



(6) profile
(TR) gate frame



Important

- the cantilever track and gate frame have to be connected together in a stable way!

2b. Mounting the rolling gears

- Put the rolling gears on the ground plates in line with the thought gate axis. The **support length "Em"** may not be lower than given in the table (see page 5).
- The adjusting bolts of both rollers (**JS**) have to show into direction of clearance width.

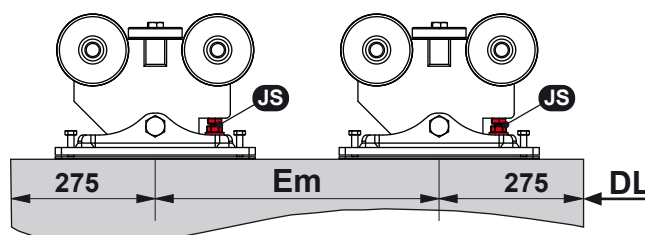


Important

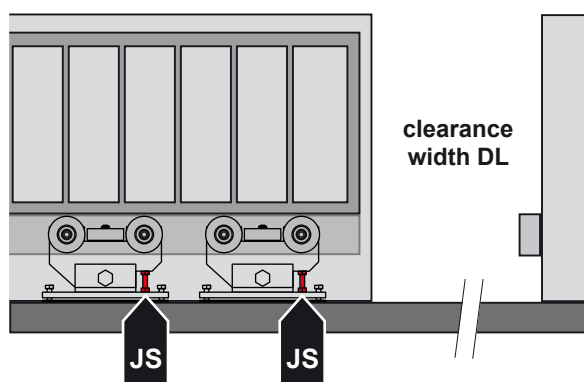
- The support length "Em" may not be lower than given in the table (see page 5).
- Note the true sided arrangement of the rolling gears (see illustrations)



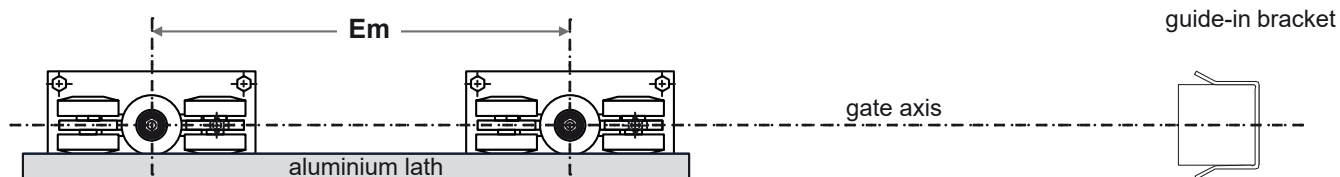
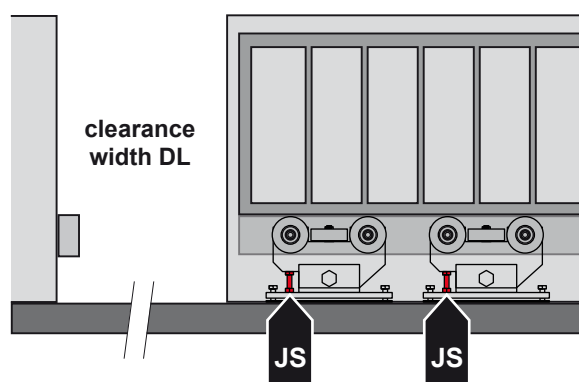
Install rollers with adjusting bolts JS showing into direction of clearance width.



Arrangement at LEFT installation

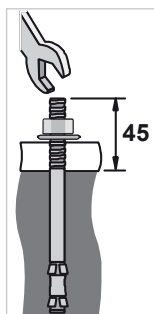


Arrangement at RIGHT installation

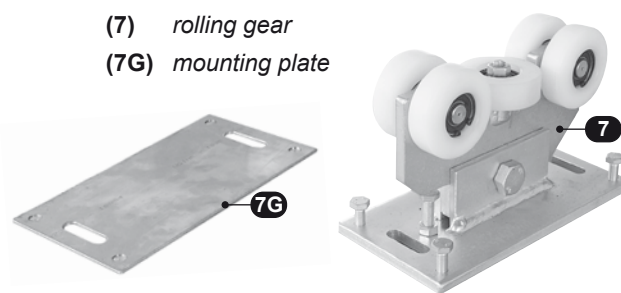


- Now it has to made sure, that both rolling gears are standing in line (e.g. by applying an aluminium lath).
- Now bore the holes, blow them out and drive in the heavy-duty anchors. **Do exclusively use the supplied heavy-duty anchors!**

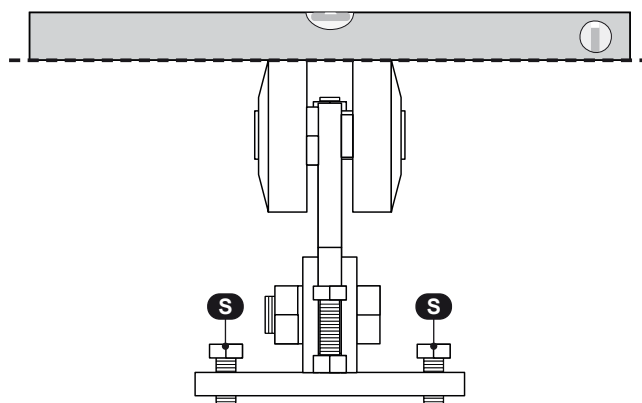
Anchor M12-50/145 (M12 X 145)		
bore hole depth	Ø hole	nut torque
100mm	12mm	50Nm



- (7) rolling gear
- (7G) mounting plate

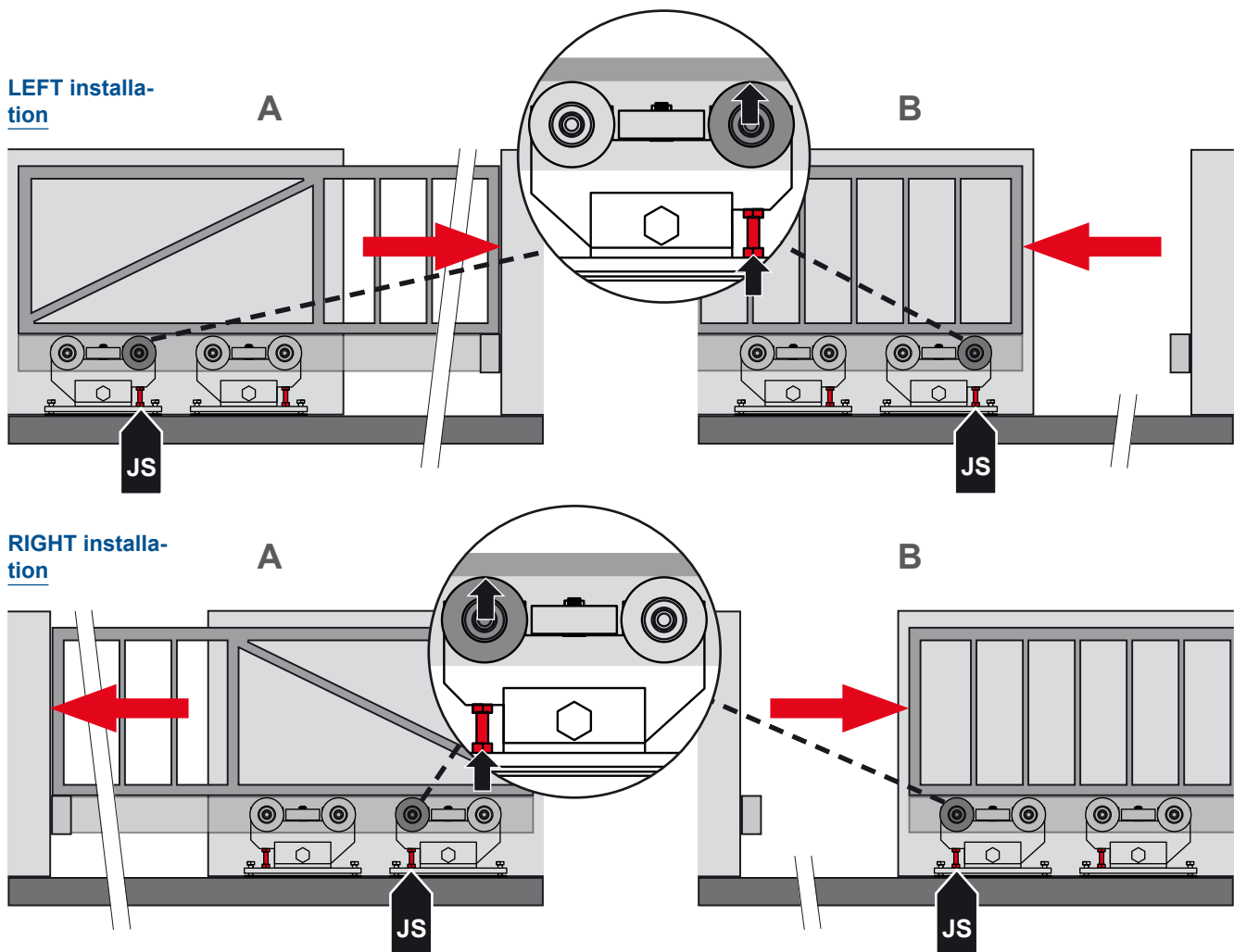


- Before fastening the rolling gears please check with the help of a water level, if they are standing **horizontally**. Eventually re-adjust them with the adjusting screws (**S**).
- Now the cantilever profile with the mounted gate frame is put on the rolling gears



Vertical adjustment of the rolling gears

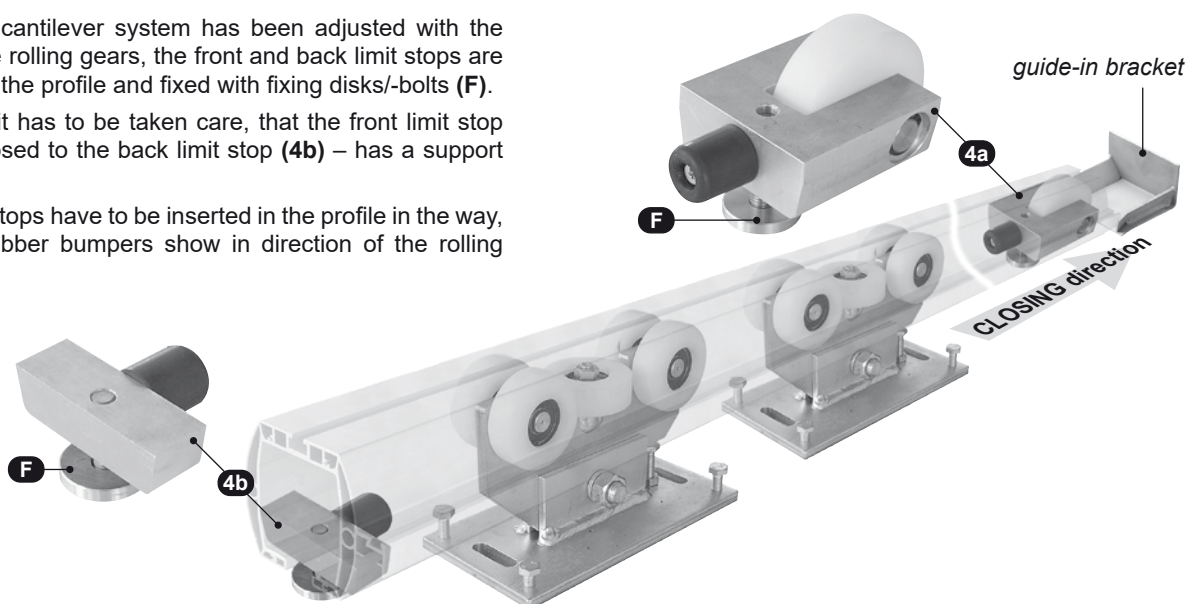
- A** Drive gate in **position CLOSED** and with adjusting bolt (**JS**) put up the indicated roller of the rear rolling gear as much as possible so that it can be moved by hand - then tighten counter nut of adjusting bolt again.
- B** Drive gate in **position OPEN** and with adjusting bolt (**JS**) put up the indicated roller of the front rolling gear as much as possible so that it can be moved by hand - then tighten counter nut of adjusting bolt again.



2c. Assembly of limit stops

Mounting

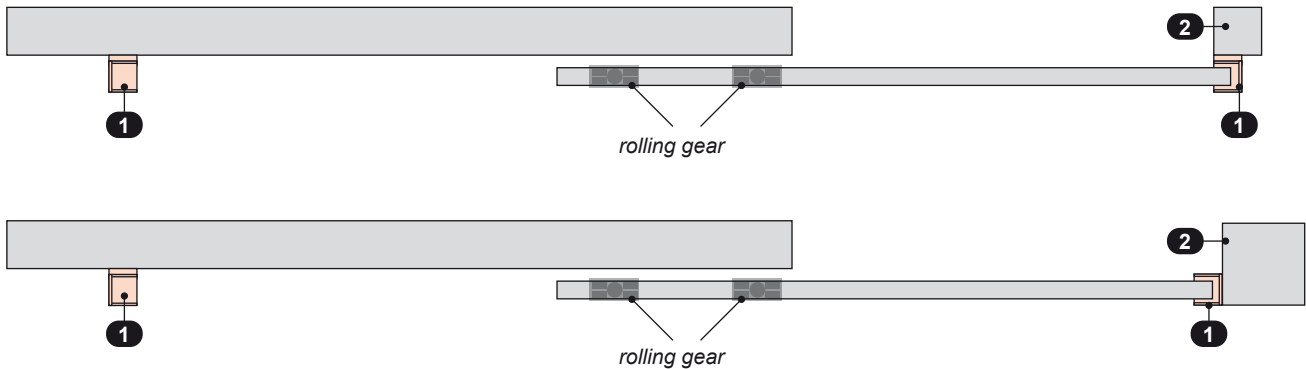
- When the cantilever system has been adjusted with the bolts of the rolling gears, the front and back limit stops are inserted in the profile and fixed with fixing disks/-bolts (**F**).
- Therefore it has to be taken care, that the front limit stop (**4a**) – opposed to the back limit stop (**4b**) – has a support roller.
- Both limit stops have to be inserted in the profile in the way, that the rubber bumpers show in direction of the rolling gears.





ATTENTION: blocking of the gate

- Firmly bolted mechanical stops prevent the running of the sliding gate on the rolling gears, when in OPEN or CLOSED position! ➡ see page 8, point 2c
- Examples of fixed limit stops as safety devices: (1) Guide-in bracket, (2) counter pillar



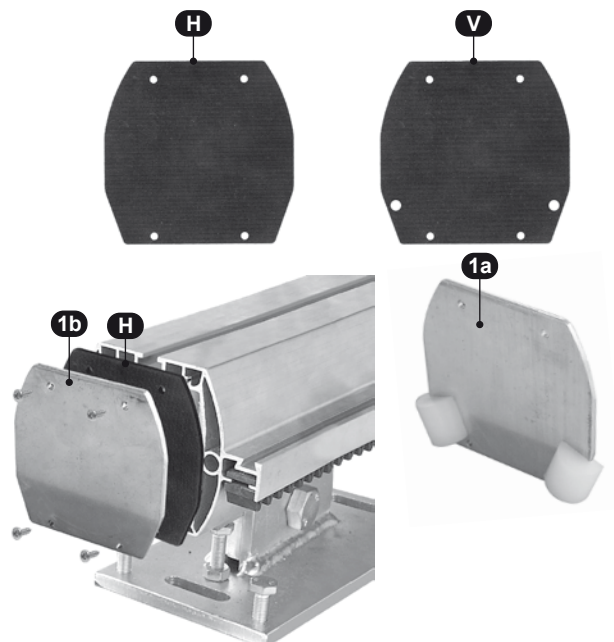
2d. Assembly of the end plates

Mounting



Important

- The front end plate (1a) must be mounted with the enclosed seal (V) and the back end plate (1b) with the seal (H) !
- After fixing the front and back limit stop at the profile, the two endplates are set with seals on the ends of the profile and fixed with 4 screws each. At the assembly of the end plates it has to be taken care, that they are executed in different ways. The front end plate (1a) has two plastic guidings at the sides and has to be mounted at the side of the profile, which is running into the guide-in bracket.



2e. Mounting the gear rack

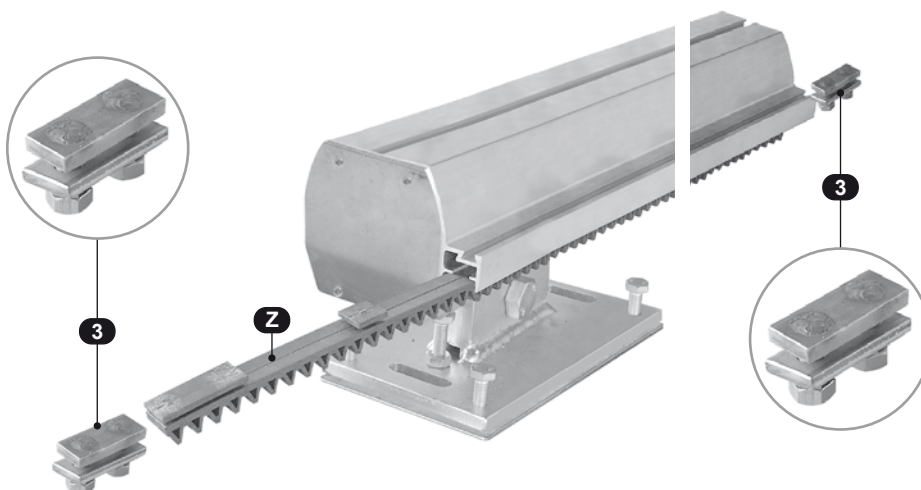
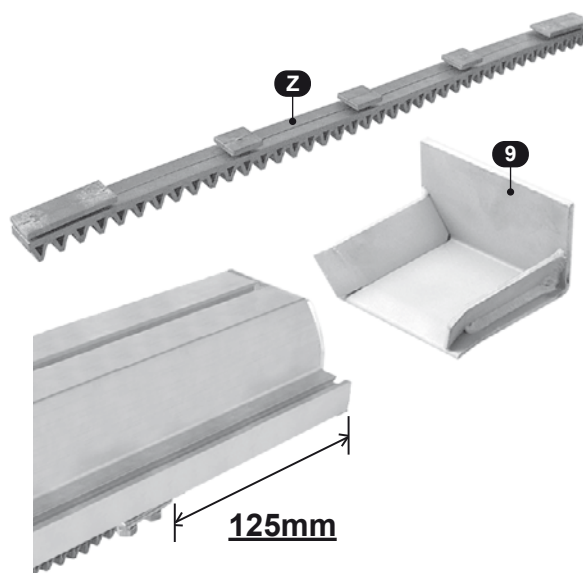
Mounting

- The plastic gear racks (**Z**) (parts of 49 cm length) have to be sequentially lead in the foreseen guiding at the profile.
- It has to be taken care that they touch each other without gaps.
- The two clampings (**3**) serve as fixation of the gear rack, they are also lead in the guiding for the gear rack at both ends of the profile and fixed with screws.



Attention

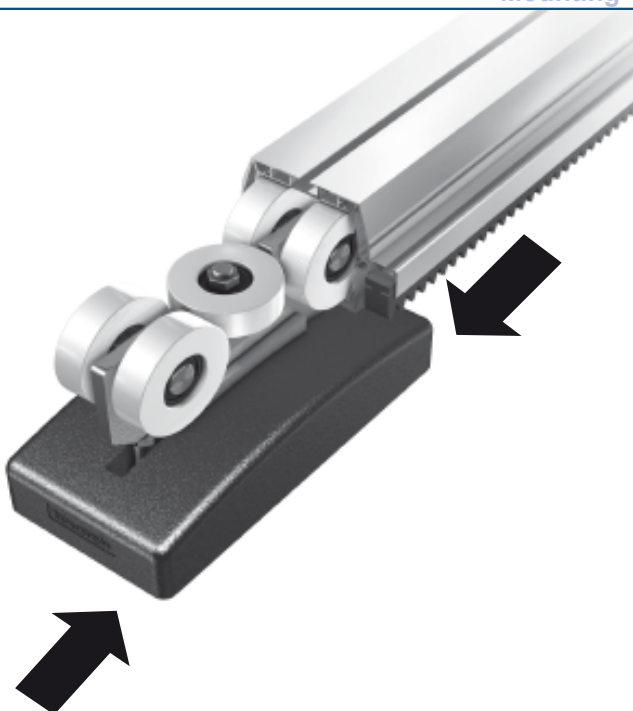
- If a guide-in bracket (**9**) is used, the front clamping has to be mounted with at least 125 mm distance to the profile end, to make sure that the profile runs properly in the guide-in bracket !



2f. Mounting the rolling gear covers

Mounting

- When installation of the cantilever system is finished put both parts of the covers on each rolling gear, one from the left and the other from the right, and push them together.



Aluminium cantilever system Rollco® LWA 115/1A

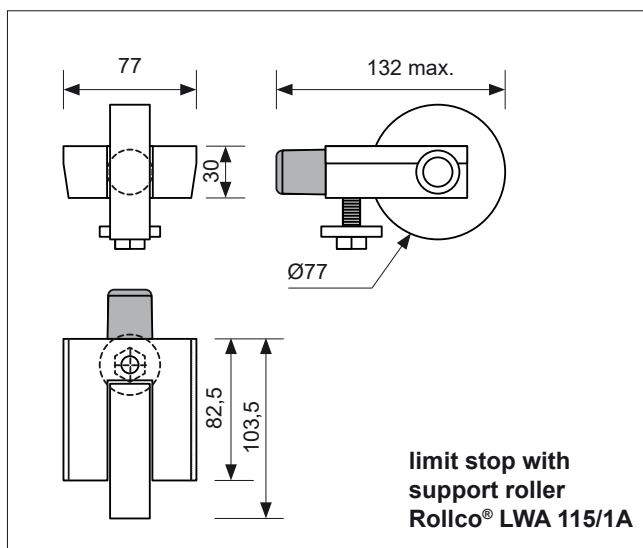
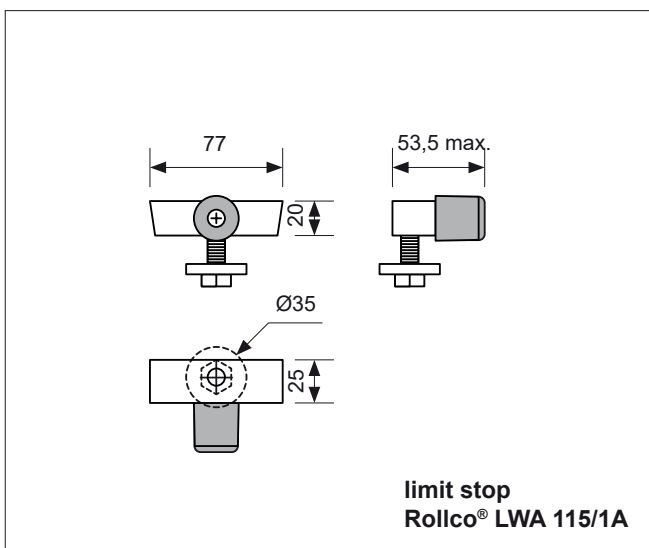
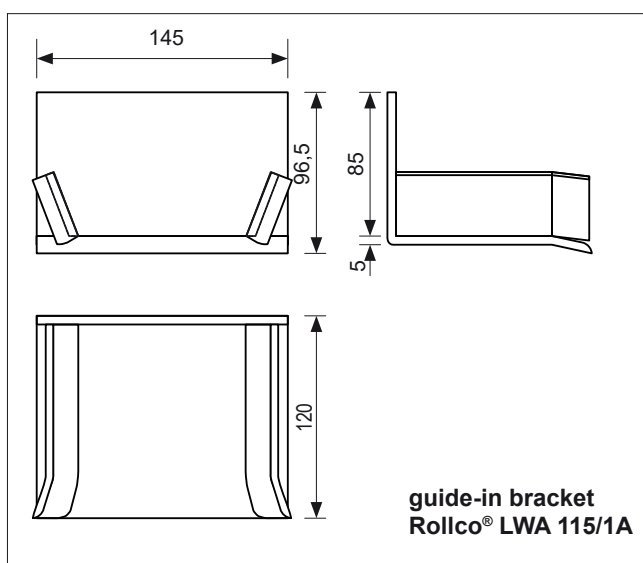
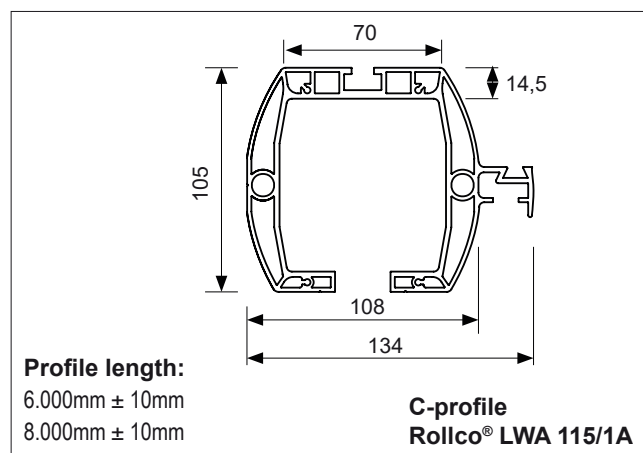
Technical drawing of the rolling gear Rollco® LWA 115/1A, showing front and side views with dimensions.

Front View (Top):

- Overall width: 244
- Overall height: 175
- Roller diameter: $\varnothing 79$
- Roller width: 25
- Base width: 270
- Base height: 12
- Base mounting holes: 0-12 (spacing), 3 (hole diameter)
- Roller mounting holes: M10

Side View (Bottom):

- Overall width: 240
- Overall height: 140
- Roller diameter: $\varnothing 77$
- Roller width: 25
- Roller mounting holes: 14 (spacing), 25 (hole diameter)
- Base width: 220
- Base height: 50
- Base mounting holes: 100 (spacing), 14 (hole diameter)



tousek / E_LWA-115/1A_40800708 / 14. 09. 2020

tousek PRODUCTS

- sliding gate operators
- cantilever systems
- swing gate operators
- garage door operators
- folding door operators
- traffic barriers
- electronic controls
- radio remote controls
- key operated switches
- access control
- safety devices
- accessories

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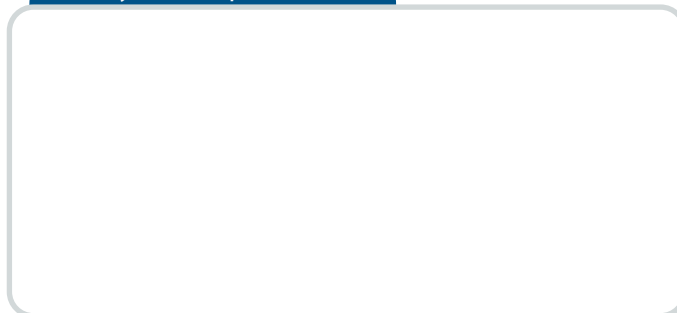
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