

Installation manual

Steel cantilever system Rollco® LWS 125/X



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. for 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.



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, (3) transverse bore and through screw (M12) in the profile



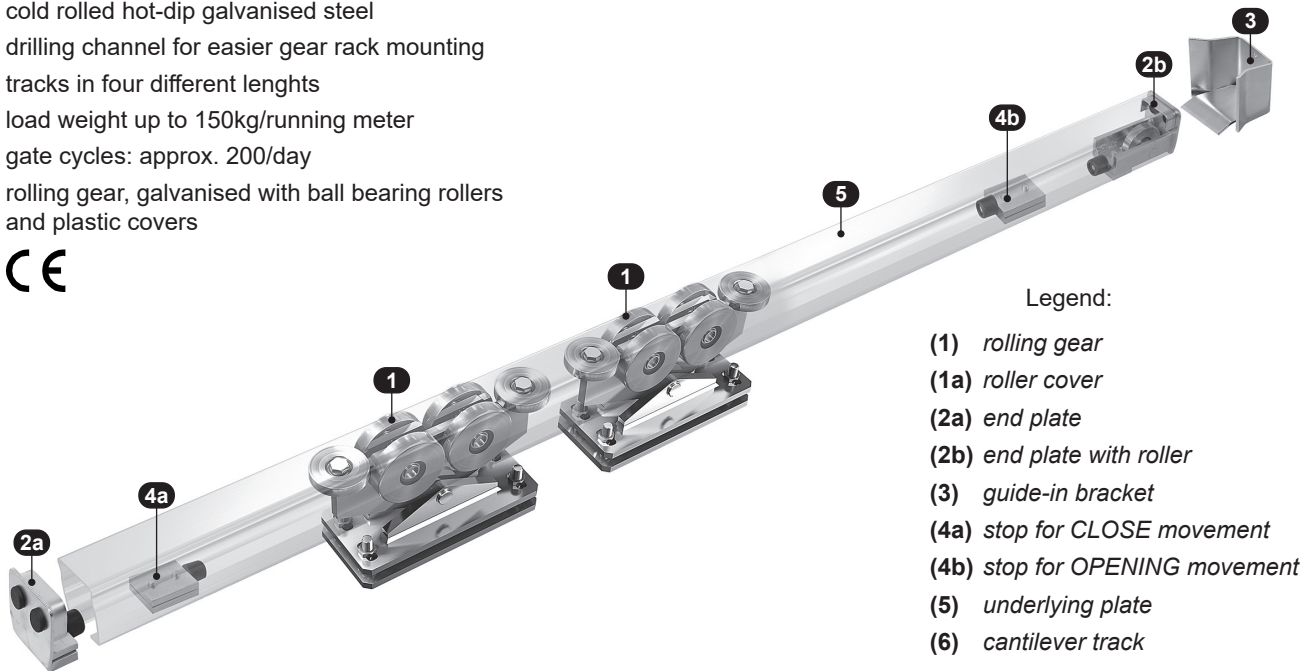
Maintenance

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 and slightly grease the tread in the inside of the profile.

Characteristics

- the perfect system for cantilever sliding gates
- steel track 125/105/5 mm
- cold rolled hot-dip galvanised steel
- drilling channel for easier gear rack mounting
- tracks in four different lengths
- load weight up to 150kg/running meter
- gate cycles: approx. 200/day
- rolling gear, galvanised with ball bearing rollers and plastic covers



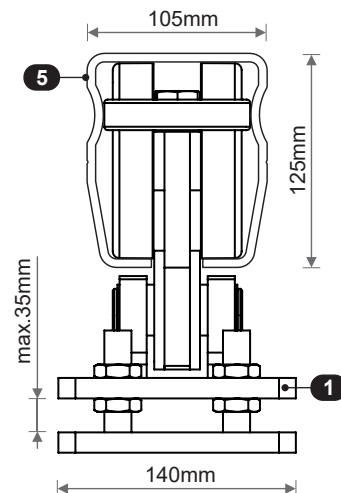
Legend:

- (1) rolling gear
- (1a) roller cover
- (2a) end plate
- (2b) end plate with roller
- (3) guide-in bracket
- (4a) stop for CLOSE movement
- (4b) stop for OPENING movement
- (5) underlying plate
- (6) cantilever track

General

The steel cantilever system Rollco® LWS 125/X is the perfect system for cantilever sliding gates. Modern cantilever sliding gate constructions have the advantage that the gate moves easily over any ground unevenness. The massive roller with large, ball-bearing steel wheels enables optimal guidance and guarantees even with maximum load and big and heavy gates a smooth and reliable gate movement. The adjusting bolts on the rollers prevent a tilting effect from load capacity changes during gate movement.

As the rollers do not guarantee a vertical gate guidance please ensure that appropriate guidance brackets are included on site.



Technical Data

Steel track Rollco® LWS 125/X		Art.No.
Steel tracks	<i>load capacity: up to 150kg/m, weight: 15kg/m</i>	
for max. DL 5.000mm	7.100mm steel track	14620230
for max. DL 6.000mm	8.500mm steel track	14620240
for max. DL 7.000mm	10.000mm steel track	14620250
for max. DL 8.500mm	12.000mm steel track	14620260
rolling gear LWS 125/X	2 units necessary, adjustable in height and inclination, steel rollers, galvanised, incl. plastic cover and heavy load anchor and stainless steel plate, gate cycles: approx. 200/day	14620290



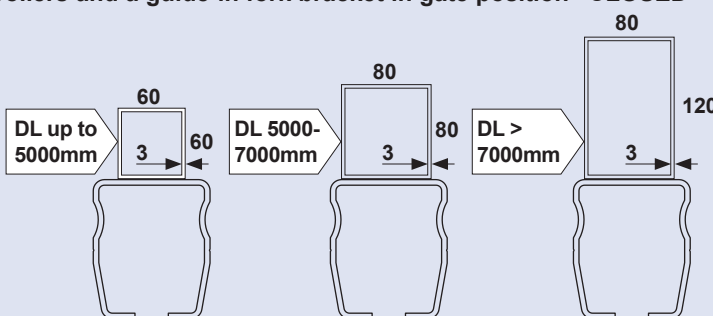
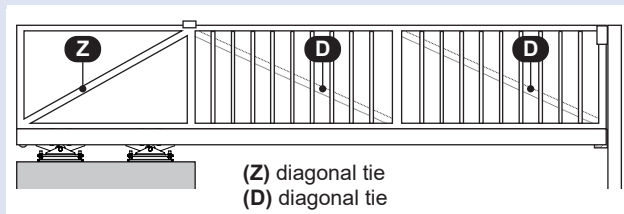
ATTENTION: the assembly and installation of the gate and cantilever system may only be carried out by trained and qualified staff. For perfect function and avoiding damages at the cantilever system, the following planning- and processing rules have to be strictly followed!



Important

- The cantilever track is made of hot-dip galvanized strip steel. It may in no case be additionally hot-dip galvanized later, since this would lead to damages. For reasons of production the cut surfaces are not galvanized, and therefore have to be foreseen with an according rust protection.
- If the gate frame is welded on the cantilever track please make sure that the cantilever track does not have any distortion.
- When using different materials (e.g. aluminium gate frame), an anti-corrosion contact tape has to be set in between gate frame and cantilever system.
- The gate frame may not show any distortion.
- In the area of the support length, a diagonal tie (Z) has to be inserted. From 5000 mm DL and upwards, this tie has to be adjustable.
- the max. loading per run. m should not be exceeded, please see table (p. 5) .
- For relieving the gate in position "CLOSED", an end plate with support roller and a guide-in bracket have to be mounted. From a clearance width of 5 m on, this should also be foreseen for gate position "OPENED".
- For the upper gate guiding, guide brackets with rollers and a guide-in fork bracket in gate position "CLOSED" have to be foreseen.
- Recommended pipes for the gate frame:

clearance width DL	gate frame tube	gate bars
up to 5000mm	FR 60/60/3	FR 25/25/2
5000–7000mm	FR 80/80/3	FR 30/30/2
> 7000mm	FR 120/80/3	FR 30/30/2



These specifications are only standard values, the gate has to be constructed according to the static requirements.

- 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.
- The measurements for 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 system (remove possibly existing swarfs)
- 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 bolts
- Check if the door runs correctly into the guide-in bracket resp. guide-in fork bracket.
- Clean the tread in the inside of the profile

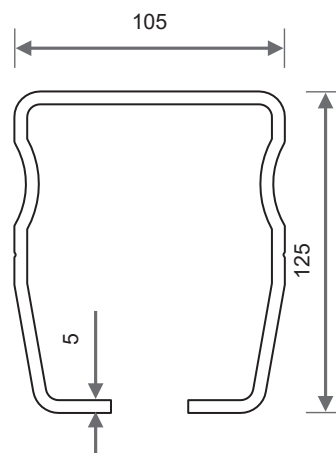
Foundation and installation plan

Measurements table Rollco® LWS 125/X <small>measures in mm</small>			
DL	track length L	Em	max. load weight
3500	5000	850	150kg/m
4000	5700	1050	150kg/m
4500	6400	1250	130kg/m
5000	7100	1450	130kg/m
5500	7800	1650	120kg/m
6000	8500	1850	120kg/m
6500	9200	2050	110kg/m
7000	10000	2350	110kg/m
7500	10600	2450	100kg/m
8000	11300	2650	100kg/m
8500	12000	2850	90kg/m

higher load with less entrance width:

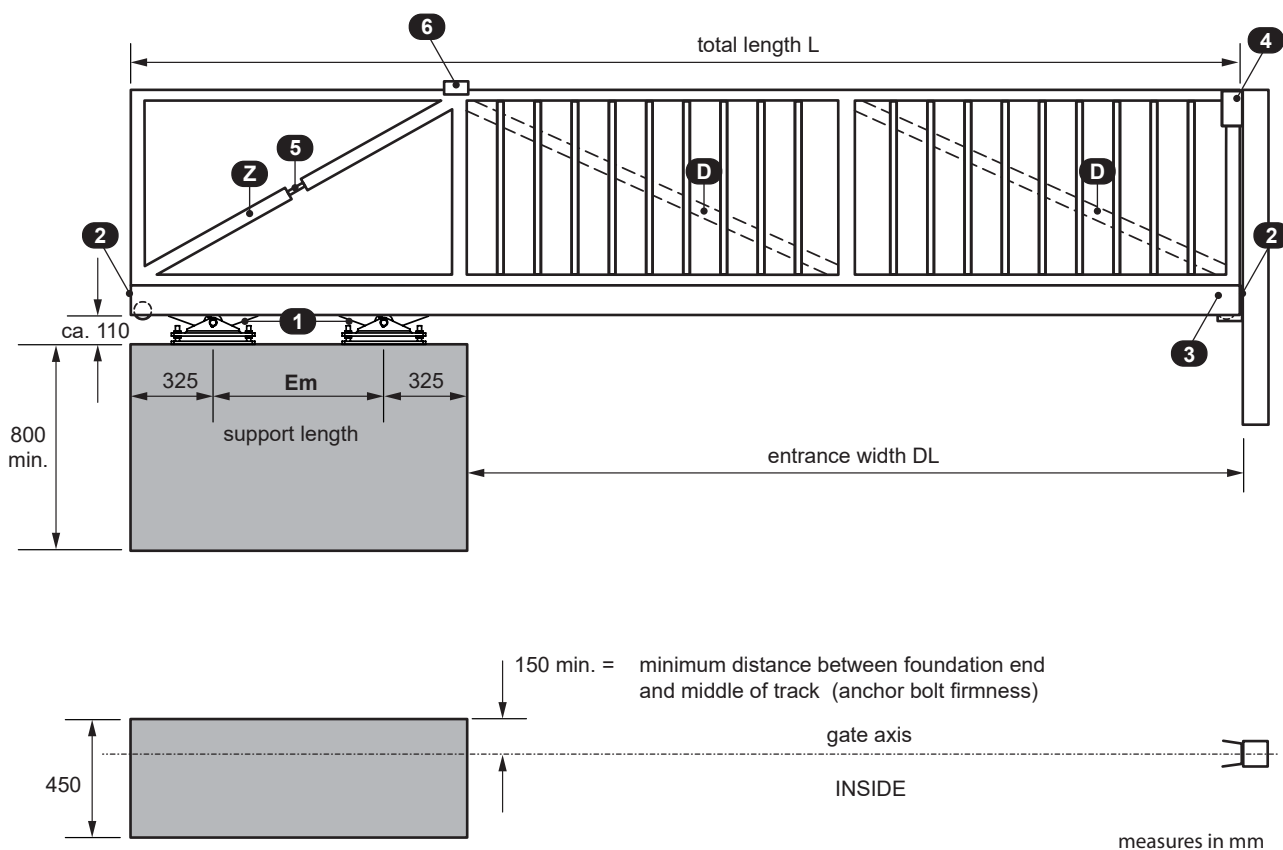
9100	12000	2250	60kg/m
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NOTE:
total length L = profile length + 10mm
 The track LWS 125/X is available in the following stock lengths:
7.100, 8500, 10.000 and 12.000mm



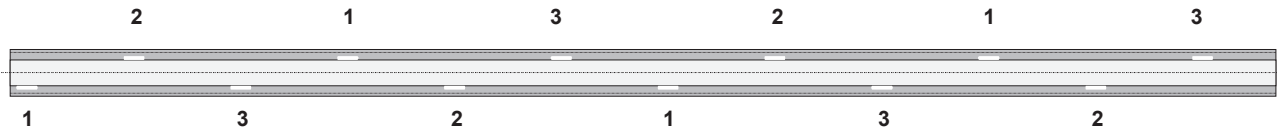
Legend:

- (1) rolling gear
- (2) end plate
- (3) guide-in bracket
- (4) guide-in fork bracket
- (5) turnbuckle
- (6) guide bracket
- (Z) diagonal tie
- (D) diagonal tie



Mounting through welding

- If the cantilever track is welded with the gate frame the following welding seams are suggested (to prevent distortion of track): 1 - 1 - 1..., 2 - 2 - 2..., 3 - 3 - 3... etc. (see picture). The welding seams have to be conducted following the static requirements.



Important

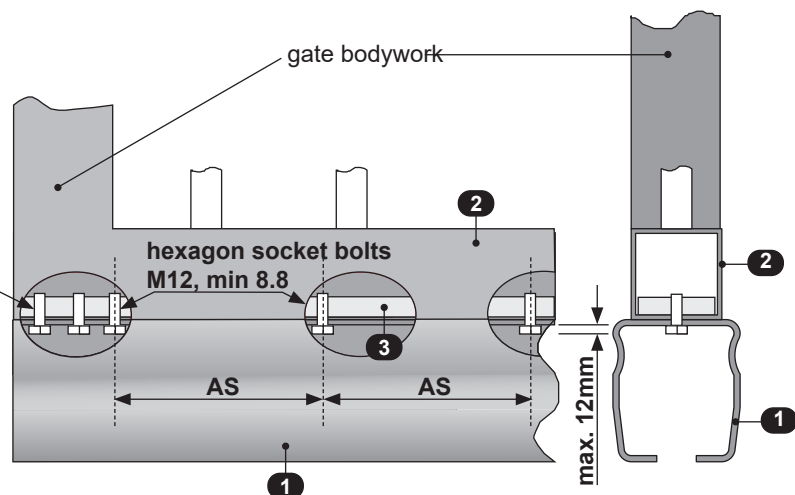
- the welding of the frame body with cantilever track should never be done with the rolling gears inside as this would lead to damage of rollers!

Bolt-on mounting

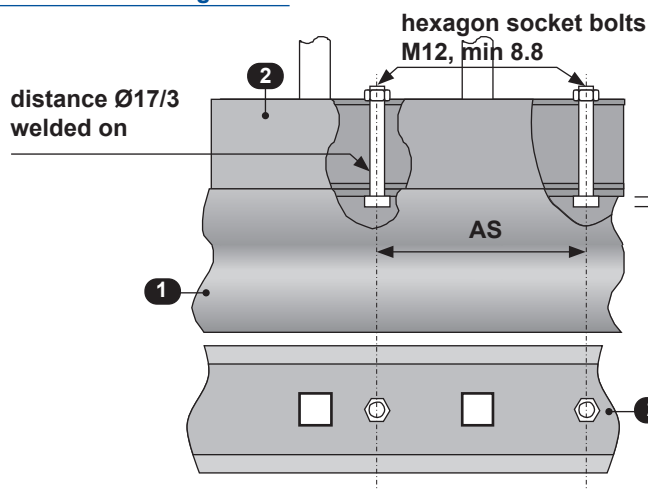
Version: transparent bolt-on mounting

- flat steel with threaded holes versehen.
- assign bore holes onto cantilever track and forming tube, then drill the holes.
- insert flat steel into the forming tube, correct positioning and then weld.
- bolt the track with the gate bodywork.

at the beginning and end of frame (bodywork) 3x bolts !



Version: through bolts



Legend:

- (1) track
- (2) forming tube as required
- (3) flat steel



Important

- the distance AS between bolts is depending on entrance width and load weight (250–500mm).
- the cantilever track and gate frame must be connected with each other in a fixed way!

2b. Mounting of rolling gear (rollers)

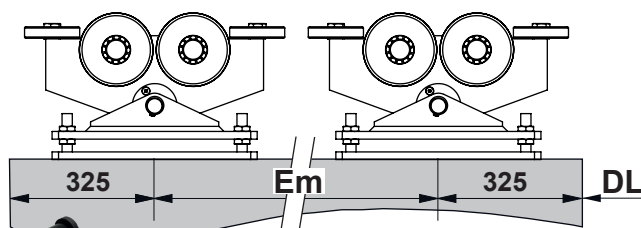
Mounting

- Put up the 2 rolling gears and base plates according to the drawing and following Em measure. Put the rolling gears in-line with the planned gate axis and mark the drill holes.



Important

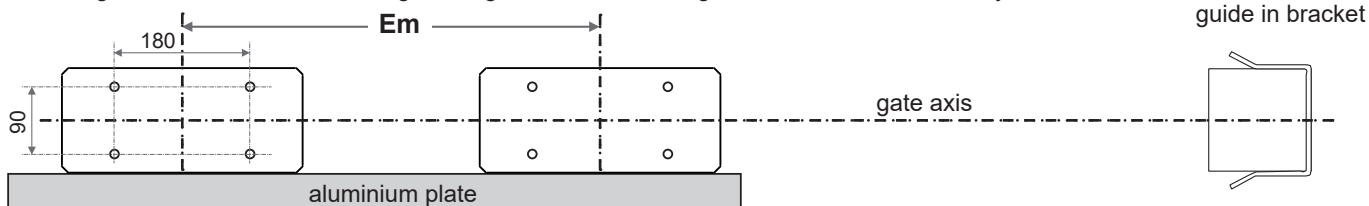
- The support length Em may not be lower than given in the table (p. 5)
- Respect the accurate to side alignment of rolling gears (see pict.)



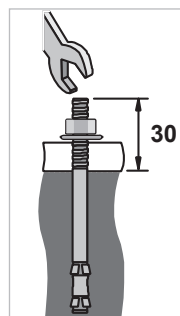
Spirit level

A spirit level is included for optimum alignment of the dollies.

- For installation the upper parts of the rollers must be unbolted from the lower plates. The ground plates have to be placed according to the measure Em and aligned to gate axis. Then assign/draw bore holes for heavy load anchor bolts.



- draw the bore holes. After drilling blow out holes and insert anchor plugs. **Please use only heavy load anchors.**
- now mount the two ground plates with anchor bolts.
- place the upper parts of rollers and fix them with nuts in middle position of slotted holes (L1–L4).
- now slide the cantilever track with the gate onto the rolling gears. If necessary it is possible to make readjustments (height adjustment or adjustment in slotted holes L1–L4).



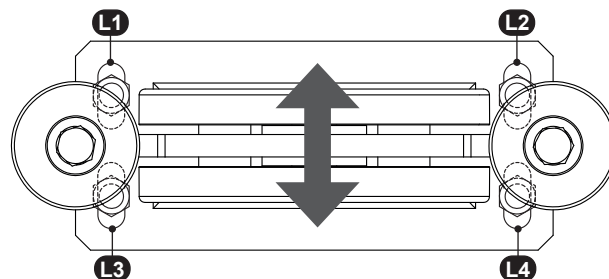
Anchor M12-50/145 (M12 x 145)

bore hole depth	Ø hole	nut torque
120mm	12mm	50Nm



Important

- As the rollers do not guarantee a vertical gate guidance please ensure that appropriate guidance brackets are included on site.



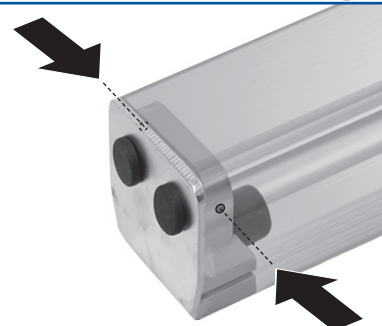
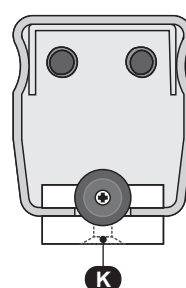
2c. Befestigung der Endplatten

Montage



Important

- before mounting the end plates please provide rust protection on the cut surface as they are not galvanised when leaving factory.
- loosen the clamp bolt (K) of end plates and then insert the end plates into the track. **We also suggest to fix the end plates with two side bolts.**



Important

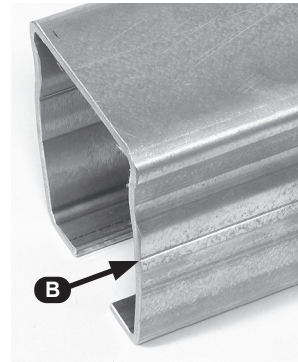
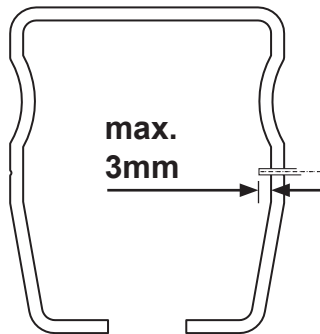
- the cantilever track opens slightly at the ends when coming out of factory. When tightening the side bolts the track profile will be tighten together. **This additional fixing is absolutely essential when using the end plates also as limit stops!**

- the drillings for mounting the gear racks have to be effected along the channel **(B)** in the according gaps.
- then cut thread M8 for mounting of gear rack into track profile.
- *check the installation of the gear rack in the corresponding sliding operator manual!*



Important

- **drilling** on the cantilever track should only be effected along the drilling channel **(B)**.
- make sure that before mounting the gear rack the mounting bolts should go max. 3mm inside!
- clean the track before moving the gate!



Installation example Rollco® LWS 125/X and sliding gate operator PULL T

with steel gear rack

- the steel gear rack has to be mounted onto the cantilever track with the bolt spacers (distance sleeves) and bolts M8 x 45 (incl. with delivery).

form tube

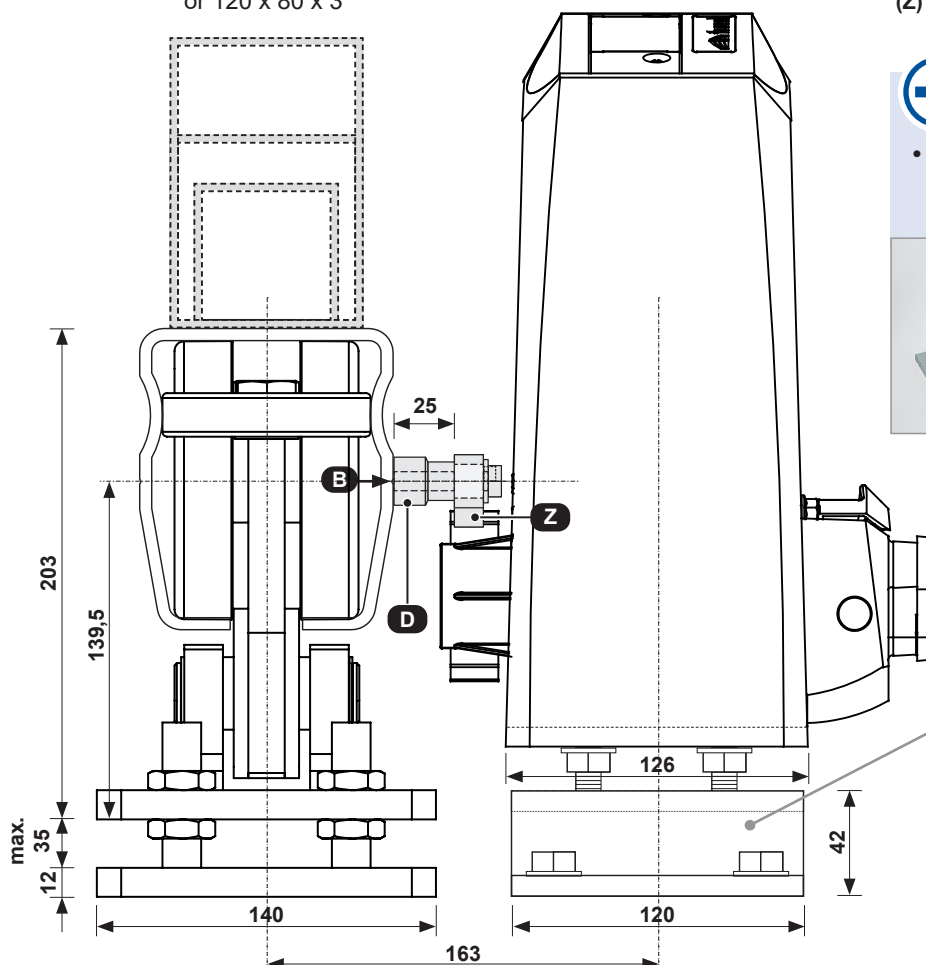
60 x 60 x 3, 80 x 80 x 3,
or 120 x 80 x 3

- (B)** drilling channel
- (D)** bolt spacer
- (Z)** steel gear rack

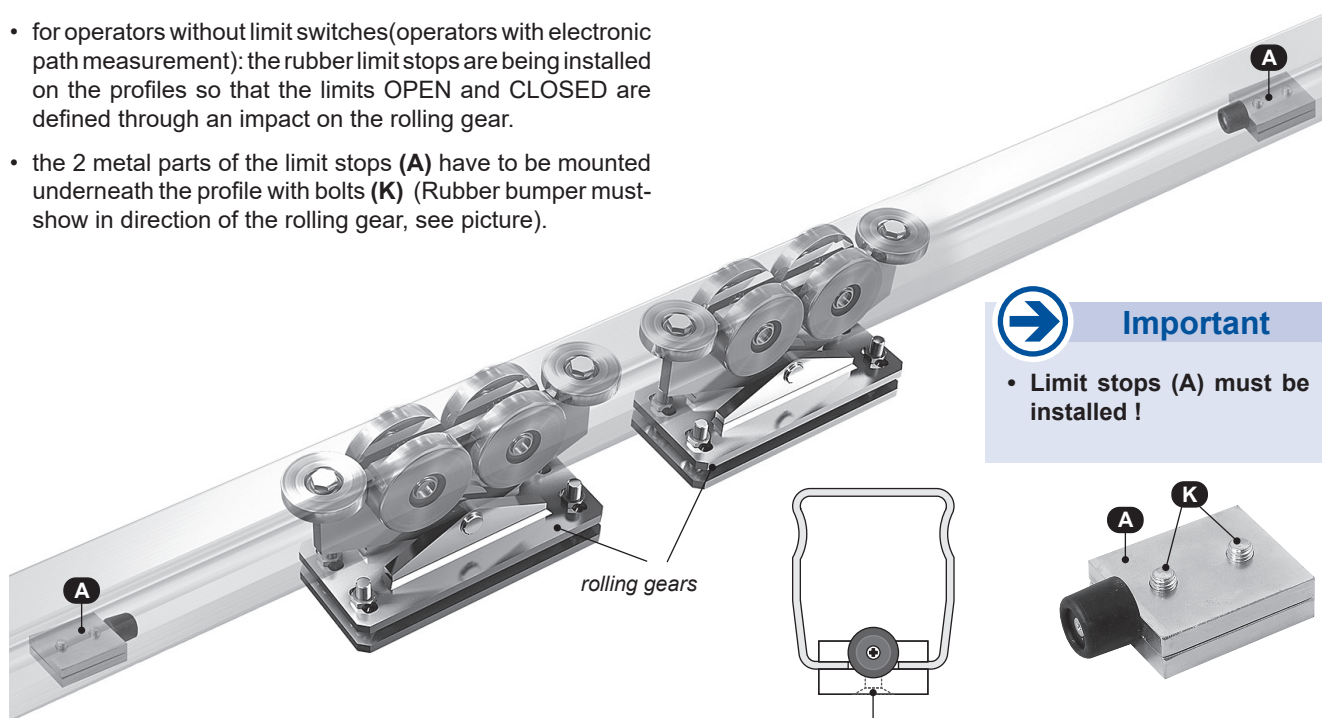


Important

- with steel gear rack please use the edged mounting base plate.

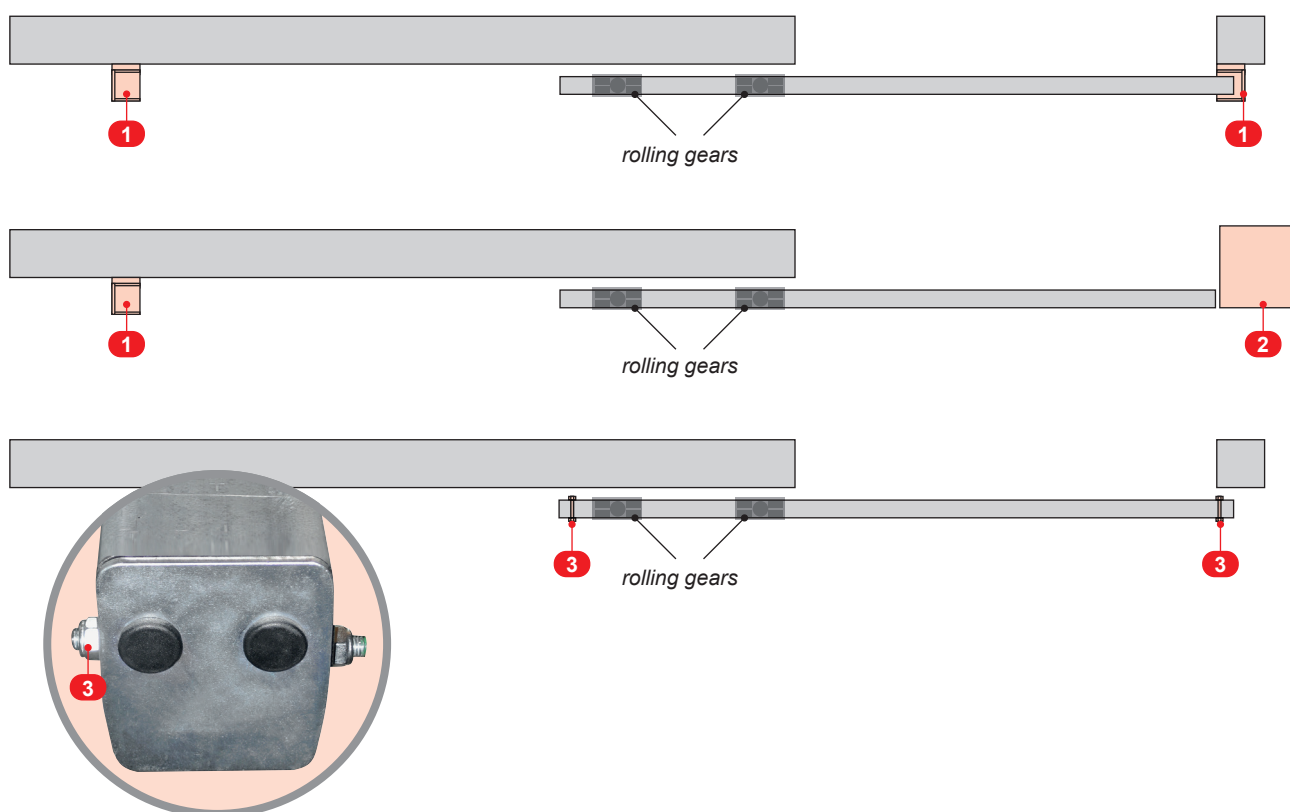
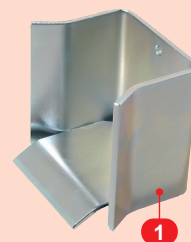


- for operators without limit switches (operators with electronic path measurement): the rubber limit stops are being installed on the profiles so that the limits OPEN and CLOSED are defined through an impact on the rolling gear.
- the 2 metal parts of the limit stops (**A**) have to be mounted underneath the profile with bolts (**K**) (Rubber bumper must show in direction of the rolling gear, see picture).



ATTENTION: blocking of the gate

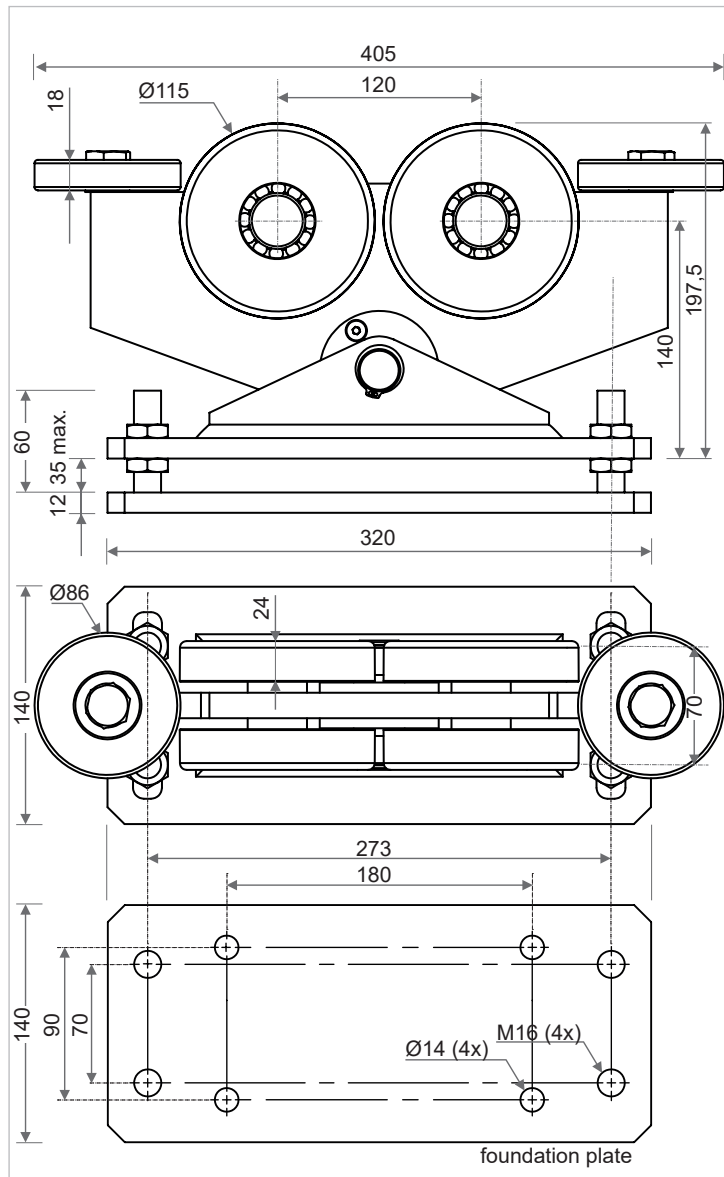
- **Firmly bolted mechanical stops prevent the running of the sliding gate on the rolling gears, when in OPEN or CLOSED position!**
- **The sole end stops, clamped to the profile (A), are not sufficient for this purpose.**
- Examples of fixed limit stops as safety devices:
(1) Guide-in bracket, (2) counter pillar, (3) transverse bore and through screw (M12) in the profile



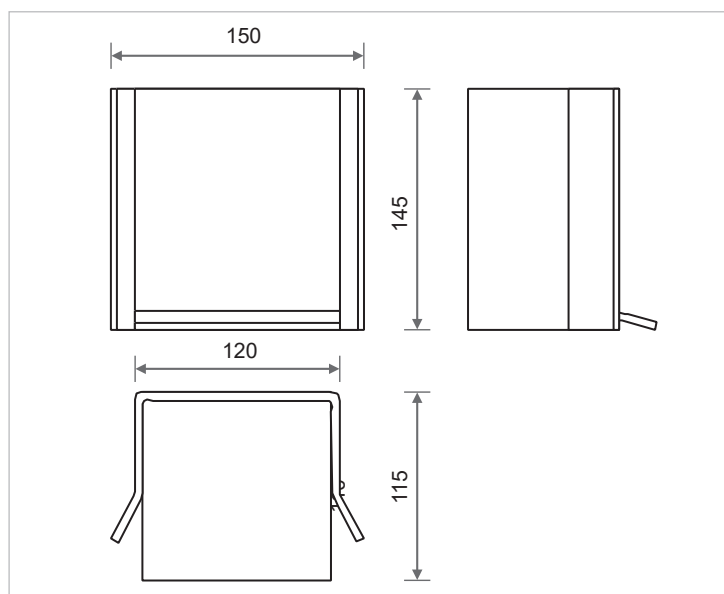
3. Dimensioned drawing (measures in mm)

Steel cantilever system Rollco® LWS 125/X

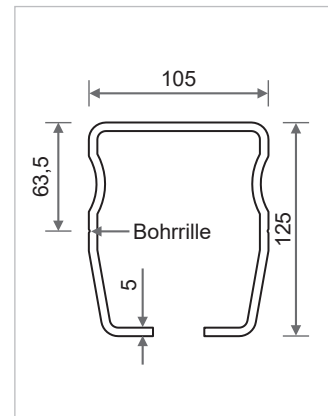
Roller Rollco® LWS 125/X



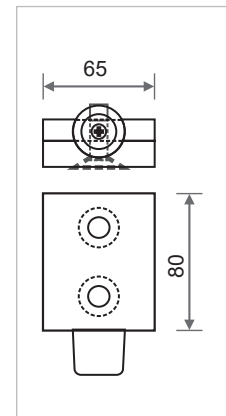
Guide-in bracket Rollco® LWS 125



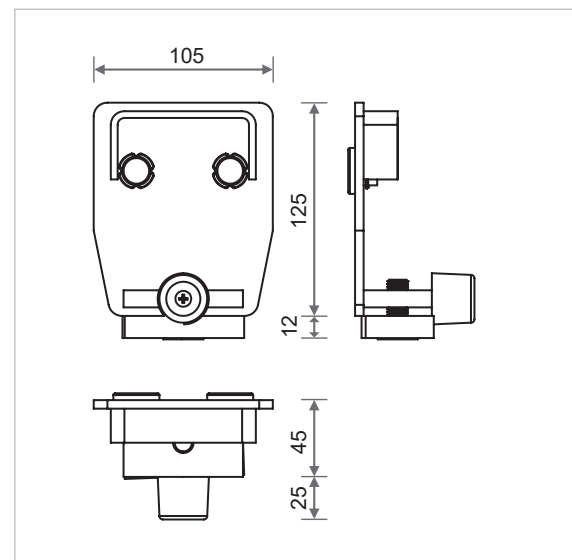
Track Rollco® LWS 125



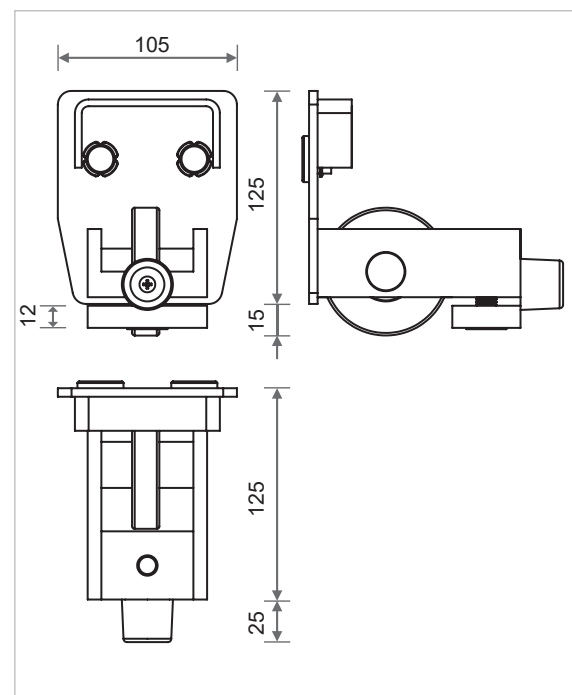
End stops Rollco® LWS 125



End plates Rollco® LWS 125



End plate with roller Rollco® LWS 125



We reserve the right to change dimensions and technical specifications without prior notice.

tousek / EN_LWS-125-X_X40801104 / 22. 05. 2018

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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