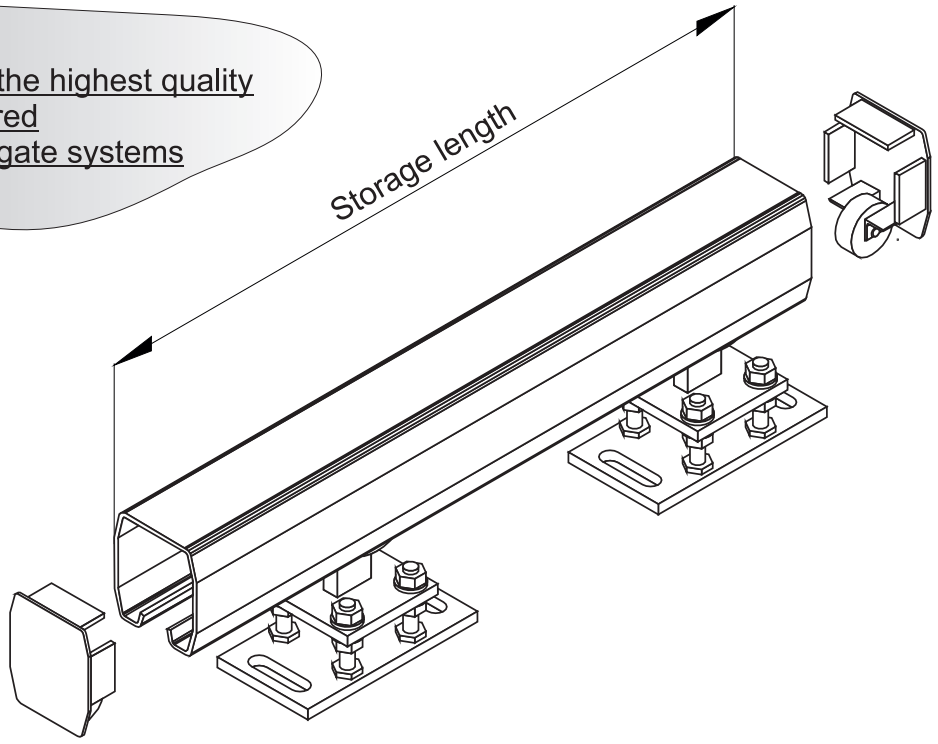
Installation Instructions

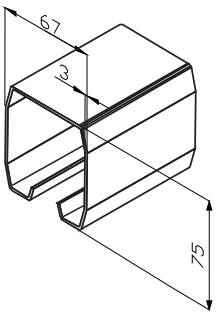
ATTAS® - Profile Technology 75

Guarantees the highest quality
for cantilevered
steel sliding gate systems



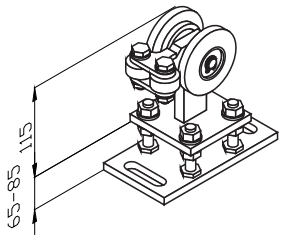
- **The complete system for cantilevered sliding gates**

- steel roller profile FST 75 75 x 67 x 3 mm
- hot-galvanised slit strip (length side alloyed)
- Storage lengths of the roller profiles 4,2m, 4,9m, 6,1m und 8,4m
- Max. gate structure weight 250 kp
- Electrogalvanised track roller brackets with ball-bearing rollers made of PA 6



- **Accessories**

- Base plate
- Cover plate with track roller
- Guide shoe
- Inlet fork
- Guide rollers
- Anti-climb profiles



The installation and putting into operation of gate systems may only be carried out by qualified personnel!

For proper putting into operation and a long service life of the gate system the following planning and processing points must be observed!

1. General

a) Depending on the type of connection between the gate frame and the track roller profile (weld- or screw connection), a coating of the connection points is required (zinc spray, cold galvanising according to DIN 50976). Under no circumstances should the track roller profile be subsequently hot-dip galvanised, as this would result in damage (for example, due to distortion or uneven bearing faces caused by zinc residues within the profile).

b) The gate structure must not show any distortion. The consequences are uneven and heavy gate running.

c) The max. gate structure weight of 250 kg must not be exceeded.

d) To relieve the gate, cover plates with track rollers and guide shoe must be fitted in each of the "gate open" and "gate closed" positions.

e) For the upper gate guide, guide rollers (guide brackets) and an inlet fork for the "gate closed" must be provided. Otherwise, it may not be possible to comply with the static specifications.

f) Recommended material cross-sections for the gate structure.

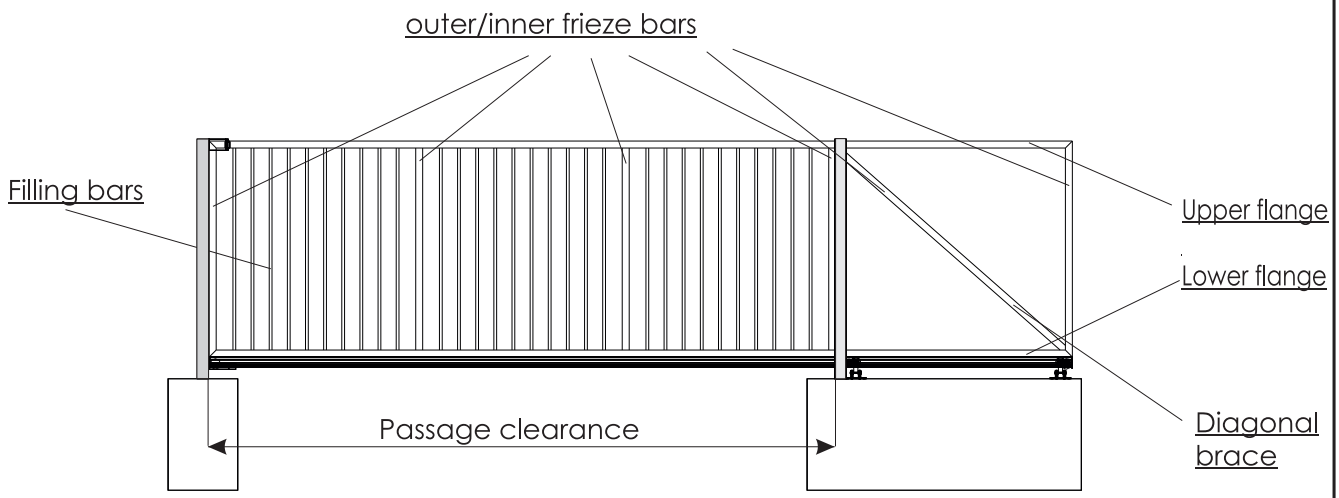
Passage clearance in mm	Upper/lower flange	outer and inner bearing bars	filling bars
up to 4500 mm	QR 50 x 3,0	QR 50 x 3,0	QR 20 x 2,0

The specifications (mm) are given statically, the gate structure must be designed according to these specifications.

g) The roller calculation includes the wind load with a gate filling in the form of bearing bars or a wire mash design.

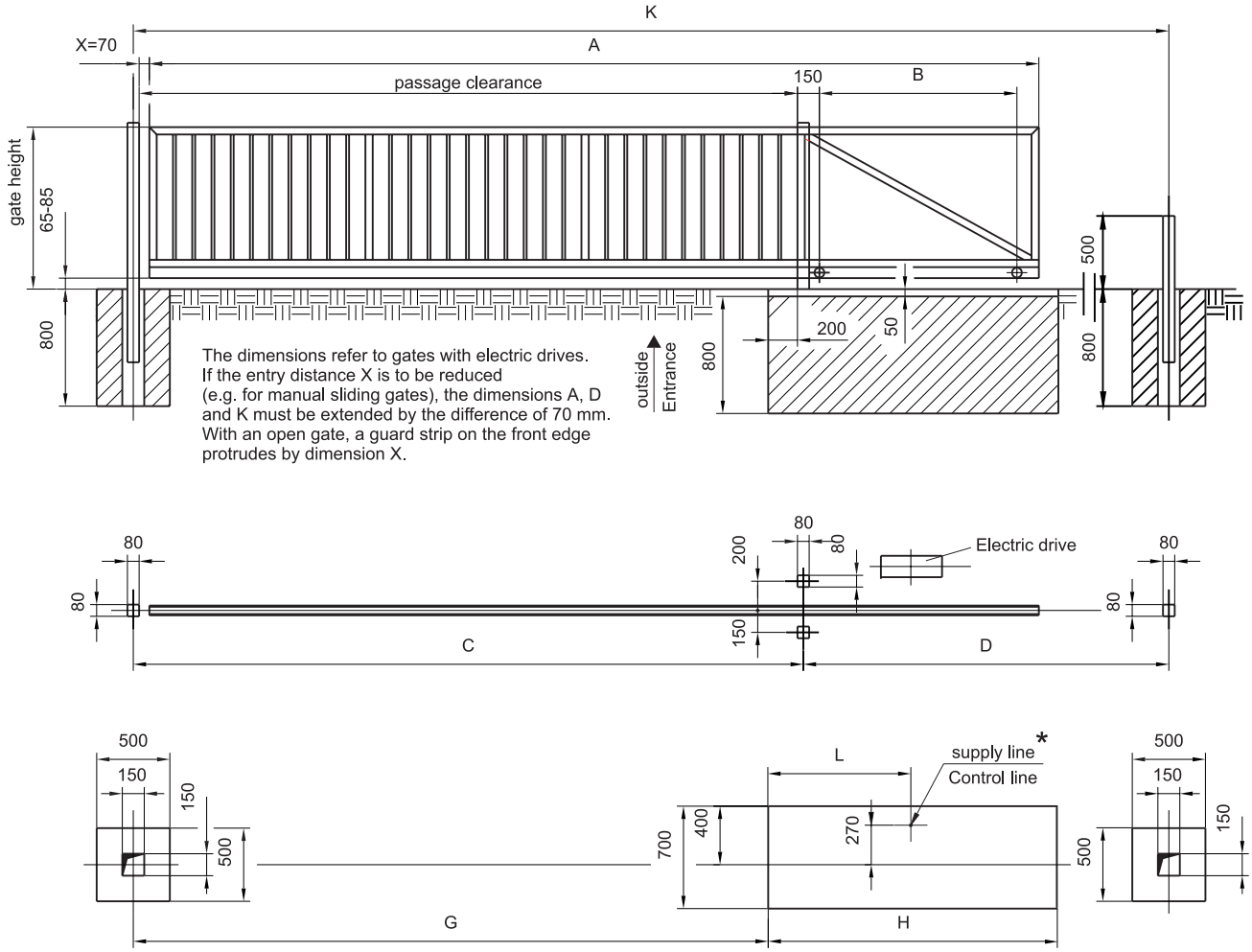
h) The foundation measurements are guidelines. The foundation must always be adapted to the soil conditions. It should be made of B25 quality concrete at soil classification 3 horizontal and free of cracks. Reinforcement (reinforcing steel) may only be provided from 200 mm AOKF (heavy-duty dowel) onwards.

i) The technical processing instructions apply exclusively to horizontally running gates.



2. Construction and foundation dimensions up to 4.5 m passage clearance

Lightweight construction, standard
Wind load 300 N/m² as per DIN EN 12424



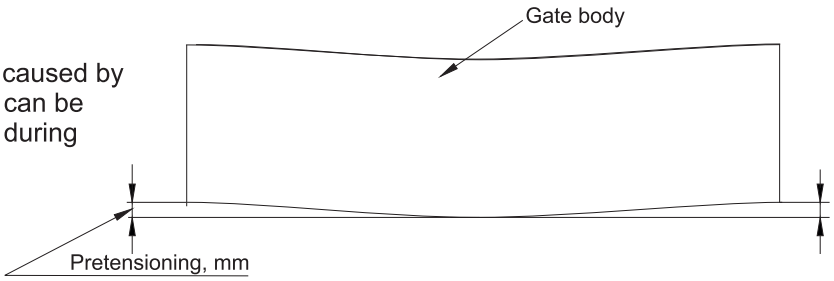
Construction measures / passage clearance	A	B	C	D	G	H	K	L *
2,0m	2.900	670	2.080	2.950	1.840	1.270	5.030	600
2,5m	3.550	820	2.580	3.600	2.340	1.420	6.180	630
3,0m	4.200	970	3.080	4.250	2.840	1.570	7.330	650
3,5m	4.900	1.170	3.580	4.950	3.340	1.770	8.530	680
4,0m	5.530	1.300	4.080	5.580	3.840	1.900	9.660	750
4,5m	6.100	1.370	4.580	6.150	4.340	1.970	10.730	750

Actual profile length = A minus 2x cover plates material thickness (here 2 x 4 mm)

* May vary depending on drive type.

3.Gate structure pretensioning

The convex gate frame deformation, caused by the extremely protruding self-weight, can be minimised by concave pretensioning during the manufacturing process.



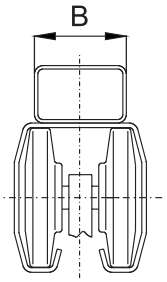
Guidelines for pretensioning:

Type	max. passage clearance in m	max. deflection of the gate structure in mm	Pretensioning in mm
FST 75	4,50	11	10

The lower beam widths "B" specified in the processing guidelines (regarding the static proof) must be strictly observed.

Thus, the lateral, vertical lower beam profiles stabilise the running surfaces of the support rollers.

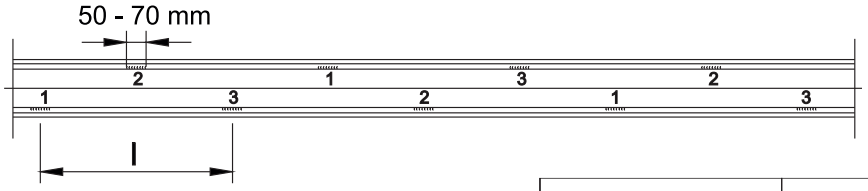
Type	FST 75
B, mm	50



4. Gate frame connection - welding and screwing pictures

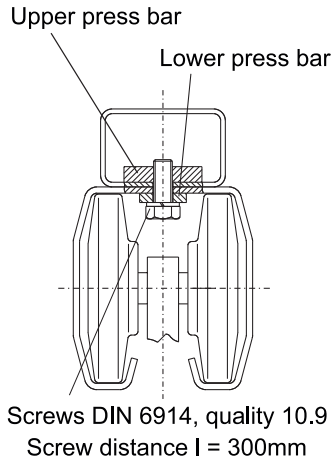
It is recommended to weld the track roller profile and the frame with 50 mm long welds and gaps of length "l" mm.

To prevent distortion of the track roller profile, the following welding sequences must be observed: 1-1-1..., 2-2-2..., 3-3-3... etc. (see drawing).



In case of deviation from our specifications, weld seams directly in the rolled edges of the track roller profile should be avoided; otherwise the running qualities could change due to thermal characteristics.

Type	Seam spacing l, mm	Seam thickness a, mm
FST 75	≥ 400	3



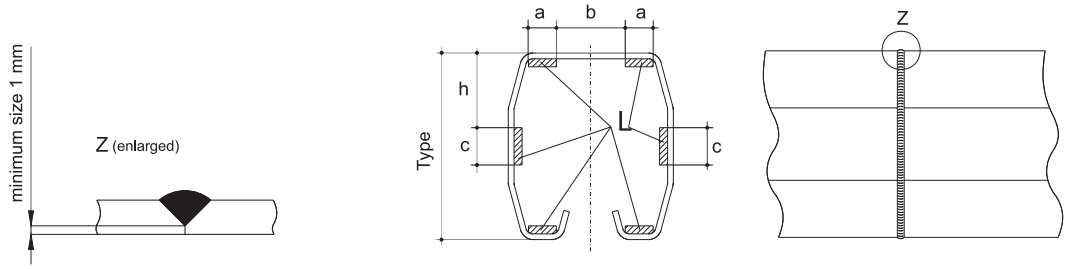
For welding galvanised materials, it is recommended to use stainless steel electrodes, e.g. Niro-Super electrodes or similar, for manufacturer's notification contact ATTAS.

The connection between the roller profile and the gate structure can also be made with screw techniques. This requires two press bars along the entire length of the gate (see drawing).

Type	Screws	Pretension-force Pv, kN	Upper press bar St 50	Lower press bar St 37
FST 75	M 10x25	30	FL 30x10	keine

5. Joint and welded connection

When butt welding the track roller profiles, it is essential to ensure that no burn through occurs in the marked areas "L". Areas "L" are running surfaces of the support and cross rollers.



Type	a, mm	b, mm	c, mm	h, mm
FST 75	≥ 11	≥ 28	≥ 20	≥ 27

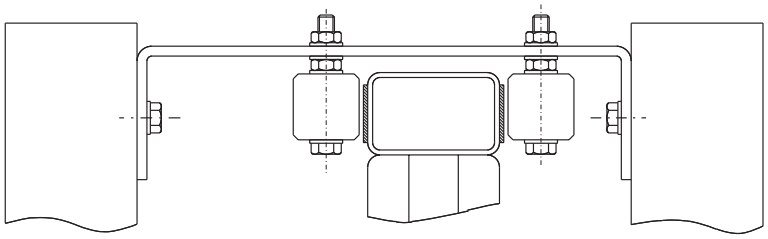
For welding galvanised materials, it is recommended to use stainless-steel electrodes.

6. Upper guide rollers – construction details

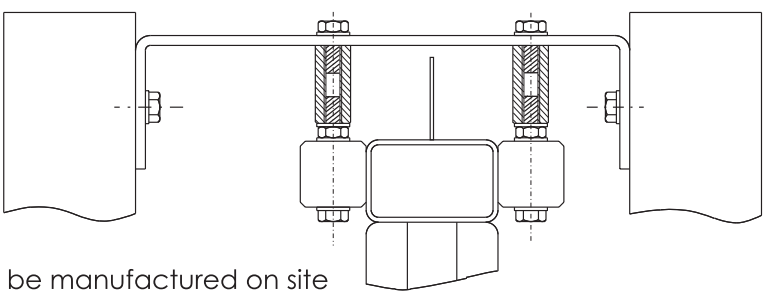
2 pieces of upper guide rollers, arranged in pair, ensure the stability of the gate system in the overall height.

1. The galvanised cantilever sliding gates are equipped with upper guide rollers, running directly at the lateral parts of the upper beam.
2. Painted or powder-coated cantilever sliding gates are designed with additional, untreated running surfaces for the upper guide rollers. A common design is, e.g., to attach aluminium flat profiles 30 x 2 mm on both sides with pop rivets along the entire beam length. These prevent damage to the coating and ensure a permanently visually attractive system.
3. If an anti-climb profile is fitted, the upper guide rollers must be extended by the height of this profile.

Painted



Galvanised with anti-climb profile



Spacer sleeves are to be manufactured on site

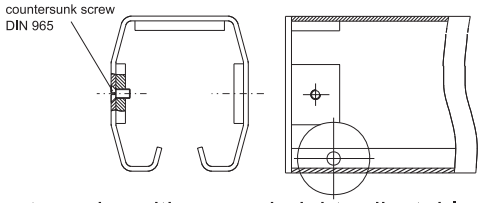
7. Assembly of the cover plate

The cover plates (KD) are of welded steel construction, galvanised and equipped with an integrated support roller.

The shape adapted to the roller profile stabilises the profile against deformation in both end positions and prevents it from opening up after sawing, which is inherent in the production of profiles of a roll.

The assembly and screwing of the cover plate in the roller profile is shown below.

Type	Screw
75	M6

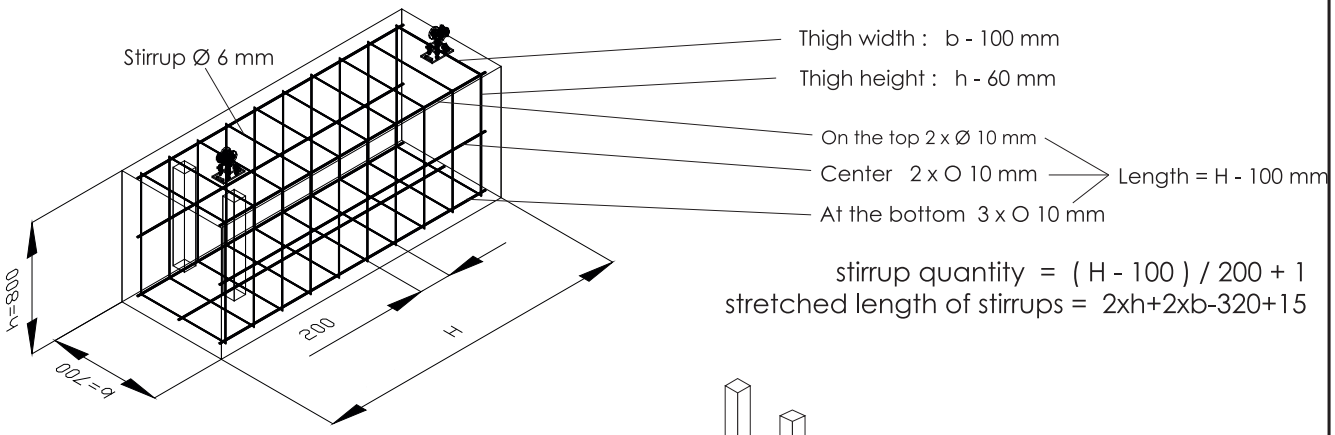


Only general drawing,
Varies depending on size

The support roller runs in the gate end position on a height-adjustable guide shoe.
The guide shoe reduces the extreme load on the roller units caused by the gate structure weight in the end position, and the convex deformation of the gate structure is minimised.
The construction of the cover plates is designed in such a way that it is not necessary to remove the track roller profile for mounting the cover plate.

8. Foundation for cantilevered sliding gates

Our foundation plans are designed in such a way, that the upper edge of the foundation is lower than the finished floor (space for pavement or other floorings).
The difference between the upper edge of the foundation and the finished floor corresponds to the height of the base frame generally recommended by us using U-NP - steel shape (DIN 1026).
For the foundation (concrete quality 25, reinforcing mesh R221), the subsoil must be checked by the site supervisor prior to carrying out the work. Due to the unfavourable effect of one-sided foundation settlement, it is necessary that at least the soil according to DIN 1054, Tab. 4 (firmly bedded, mixed-grained) is available. Otherwise, the soil must be replaced to a sufficient depth (lean concrete filling or mechanically compressed gravel).

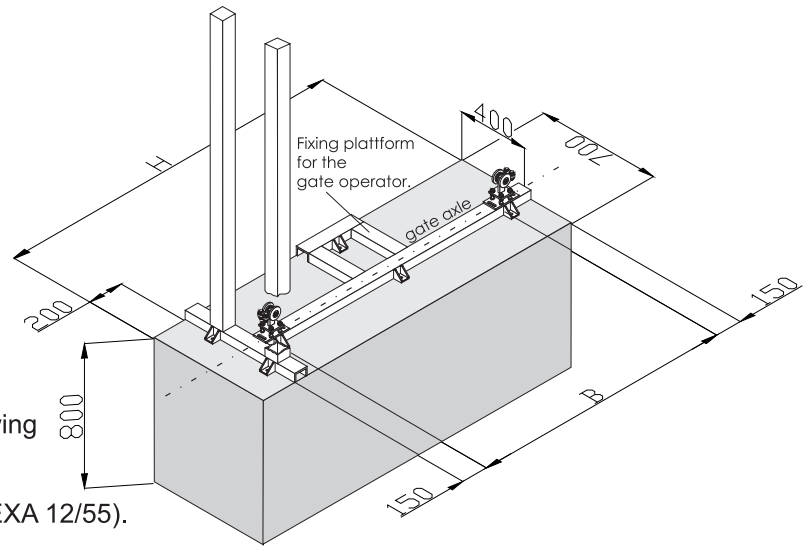


stirrup quantity = (H - 100) / 200 + 1
stretched length of stirrups = 2xh+2xb-320+15

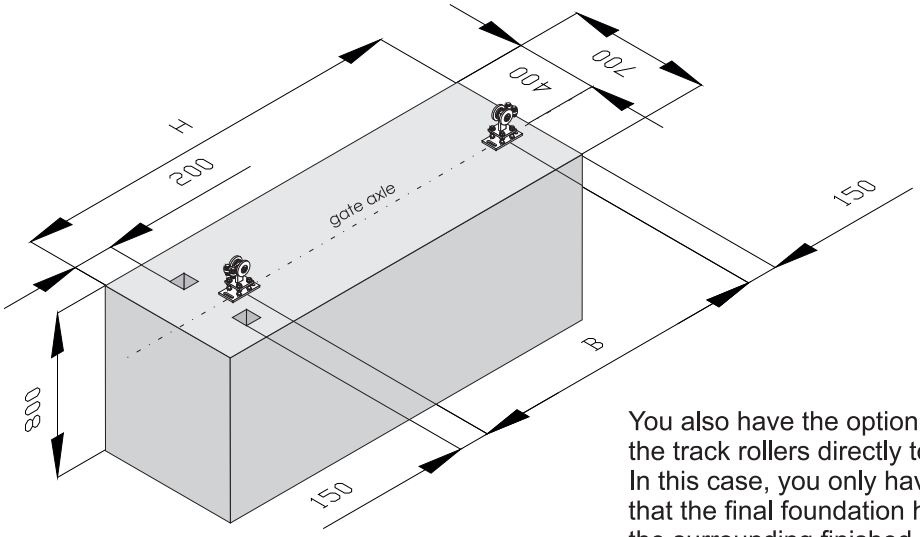
9. Mounting the track rollers

Place the track rollers aligning with the imaginary gate axis as shown in the figure and mark the drill holes.

The clamping length "B" specified in the table overleaf must not be reduced.

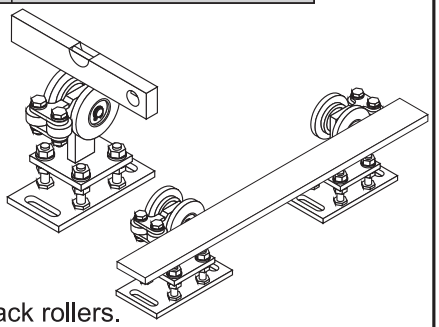


Drill the holes, clean the drill holes by blowing them out and fit dowels according to the processing information.
Use only heavy-duty anchors (e.g. UPAT EXA 12/55).



You also have the option of fastening the track rollers directly to the foundation. In this case, you only have to make sure that the final foundation height is level with the surrounding finished ground.

steel dowel	Drill hole depth	Ø Drill hole	Tightening torque
M 12 x 150	145 mm	12 mm	65 Nm



Before screwing the roller brackets into place, check with a spirit level that the brackets are level. If necessary, align with shims.

Furthermore, make sure that both track rollers are aligned (e.g. use a ruler). Do not measure at the base plates, but at the rollers (production tolerances).

Now push the track roller profile with the assembled gate onto the track rollers. Make sure that the track roller profile has been cleaned inside (free of burr) and that the running surfaces of the track rollers are free of stones and the like.

10. Putting into operation and maintenance instructions

After assembly and before putting into operation, the following points must be carried out:

- Clean the inside of the track roller profile (remove any burr)
- Also remove any other dirt from the gate structure to prevent first signs of corrosion
- Check whether the gate runs smoothly and without seize

Depending on the operating frequencies, but at least once a year, we recommend carrying out the following maintenance work:

- Check if the track rollers are aligned.
- Check whether the gate runs smoothly and without seize.
- Check the upper gate guide.
- Check the mounting screws.
- Check that the gate runs correctly into the guide shoe, resp. in the inlet fork.
- Check for dirt inside the track roller profile, clean if necessary.

Please note the special regulations for power-operated gates, these must absolutely be observed.