INSTALLATION MANUAL

SELF-SUPPORTING GATE

Robusta®

SC

WITH MOTORISATION

EN

TABLE OF CONTENTS

1. PRECAUTIONS

These precautions are an integral and essential part of the product and must be passed on to the user. Read the precautions in this section carefully, as they provide important information on safe installation, use and maintenance. Keep this booklet in a safe place for future reference.

1.1. PRECAUTIONS FOR THE INSTALLER AND THE END USER

After removing the packaging, check that the equipment is in good condition. If in doubt, do not use the equipment; instead, hire qualified professional personnel. Keep packaging materials (plastic bags, polystyrene foam, nails, etc.) out of the reach of children as they are a potential source of danger.

Installation must be carried out by qualified personnel who have received technical training on the product, in accordance with current regulations and the manufacturer's instructions. Installation regulations may vary from country to country. Incorrect installation may cause damage to people, animals or objects, for which the manufacturer cannot be held responsible.

If the equipment stops working and/or malfunctions, contact qualified professionals only. Only the manufacturer or an authorised installer is authorised to carry out any repairs to the product, using original spare parts. Failure to comply with the above could compromise the safety of the equipment.

This gate may only be used for the purpose for which it was expressly designed (the complete system). Any other use must be considered incorrect and therefore dangerous. Betafence cannot be held responsible for any damage caused by incorrect or unreasonable use.

1.2. SPECIAL POINTS TO BEAR IN MIND

- Avoid working near moving mechanical parts that could cause dangerous situations, as parts of the body and clothing can easily get caught in them and are then difficult to free.

- Only operate the gate when it is fully visible and free of obstructions and obstacles.

- Do not oppose the movement of the gate, as this could lead to dangerous situations.

- Remember that the gate can exert very considerable forces, which could be a source of danger. Do not stand in the direction in which the gate opens when it is moving.

- Prevent children from playing at opening and closing the gate.

- Prevent children from playing within the opening radius of the gate.

- Make sure the lock is installed, in working order and closes properly when the gate is closed.

- When you close the gate, make sure that the lock is in the open position to avoid any impact with the counter-lock. You risk breaking it.

- Make sure that someone holds the wing correctly when opening or closing the gate to prevent it coming off the guide. Avoid unnecessary shocks.

- In extreme weather conditions (strong winds), hold the gate firmly when opening or closing to prevent it from coming off the guide.

- Prevent anyone from moving:
  - Between the guide post and the wing, as this can cause serious injury to arms and legs.
  - Between the guide rollers and the receiving V as this can cause serious injury to hands and fingers.
  - Between the support rollers and the boom.
  - Between the wing and the closing post.
  - Between the gate and an object behind the wing.

  This is to prevent people from getting trapped between some of the above-mentioned components and to avoid serious injury.

- Do not climb over the wing.

- Inform all portal users of these precautions. If possible, post this information in an appropriate place.

- To ensure the efficiency of the system and its smooth operation, it is essential to follow the manufacturer's instructions.

Please note: in all cases, the user is ultimately responsible for his/her portal. The user is responsible for :
- Gate security
- Ensuring that your gate works properly
- Annual gate maintenance

With regard to security and the correct operation of the gate, it is understood that the user will check regularly (at least once a year) whether all the security devices and access control options are still operating correctly as they should.

With regard to annual maintenance, it is understood that the maintenance described by the manufacturer must be followed. If a maintenance contract has been concluded between the customer and Betafence, Betafence will take care of this maintenance. Otherwise, the user is responsible for maintenance.

For the German market, the person responsible for maintenance must also carry out the annual measurements prescribed by DIN EN 12453. If these measurements reveal any faults, immediate action must be taken under the responsibility of the user, once the user has been informed.

In the case of older gates not built to DIN EN 13241-1, the user must in all cases bring the gate into line with the latest regulations.

2. PARTS OF THE GATE

2.1. PACKAGING

To facilitate unloading, the wing and posts are packed together.



2.2. PARTS

- 2 posts
- 1 wing
- 1 roll of support (if clear passage > 5 m)
- Accessories (screws and nuts) are packaged in a separate bag.
- The key for the lock is on the gate.

2.3. OPTIONAL MOTORISATION

3 versions are available:

- Motorised version :
    - height-adjustable rack
    - motor unit with integrated controller with additional base plate for indoor foundation mounting
    - two rolling code RF transmitters
    - photocells
    - active safety edges on the guide post
    - 1 safety edge at the front of the wing
    - fully pre-wired
    - warning light

- Full automatic version :

    - Manual version with toothed rack, but reception portal not aligned and without lock.

All operators are mounted separately on a plate. The motor is always mounted on the inside of the gate.

3. GUIDELINES FOR INSTALLING AND LIFTING THE GATE

The gate can only be lifted with the right handling equipment, large enough to bear the weight. Preferably use flexible loading ropes with sufficient lifting capacity.

Lifting points for unloading and positioning during installation

4. INSTALLATION

4.1. PREPARATION OF THE FOUNDATION IN ACCORDANCE WITH THE CORRESPONDING PLAN

For all standard and non-standard gate designs, please refer to the special foundation plan supplied with the gate.

The gate cannot be installed following the slope of the site. Make sure that the foundations for the receiving gantry are at the same level as those for the guiding gantry.

Concrete quality C25 = pressure resistance 25N/cubic mm.

WARNING!
FOUNDATION PLANS ARE PROVIDED AS EXAMPLES ONLY!
ALWAYS USE THE DRAWINGS SUPPLIED WITH THE ORDER DOCUMENT.

4.2. GROUND ANCHORAGE

1. Install the ground fixings for the guiding gantry and the receiving gantry in the positions shown on the foundation plan. Fixing material required: M16 chemical anchors (minimum 100 mm above finished floor level. For depth, please consult the chemical resin supplier's installation manual). Betafence does not supply chemical anchors.
2. Mark the position of the holes with a small-diameter concrete drill bit. This will make it easier to centre the final drill.
3. Drill the appropriate holes for the fixing, following the chemical anchor supplier's installation instructions. The holes must be vertical.

4. Remove all dust and small particles from the holes using a brush and hand pump. This will ensure perfect adhesion between the ground-anchoring resin and the concrete foundation.
5. Place the chemical anchors in accordance with the supplier's instructions. Drying times must be respected. Use "high adhesion" type anchors for correct installation.

4.3. PREPARATION OF INSTALLATION LEVELS

1. Screw the lower adjusting nuts onto their floor anchors and place the washers on the nuts.
2. Select an anchor for the guide gantry and turn its nut until the washer is 30 mm above the concrete level. Use this anchor as a reference point to adjust all the other nuts and washers on the guide gantry and reception gantry so that they are all perfectly level.

Note:
It is very important to fill the free space under the plate of the guiding gantry and the receiving gantry with shrinkage-compensated concrete.

4.4. INSTALLING THE GATE ON THE GROUND ANCHORS



Do not position the guiding gantry and the receiving gantry unless the anchors are completely hardened.

The gate is positioned as a single unit with its guide gantry and rear guide wheels on the corresponding floor anchors.

Chronological order of actions :

1. Remove the packaging from the gantry. Do not remove the strap that holds the base beam and plate together.

2. Place the gate with the guide portal above the ground anchors at a height of approximately ± 50 cm from the ground.

3. Cut the straps securing the rear guide wheels to the underframe beam.

CAUTION: Keep the wheels in place and prevent them from rolling towards the guide gantry.

4. Now lower the gate until the rear guide wheels and the guide portal rest on the washers of the floor anchors. Place a washer and a nut on each ground anchor. Tighten the nuts slightly for temporary fixing. Remove the straps from the gantry plate.

5. If you have a double-wing sliding gate, repeat all the steps in points 4.3 and 4.4 to install the 2nd gate.

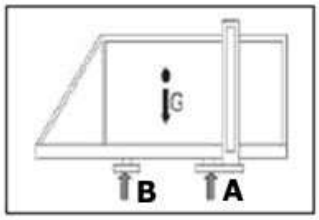
4.5. ALIGNING AND LEVELLING THE GATE

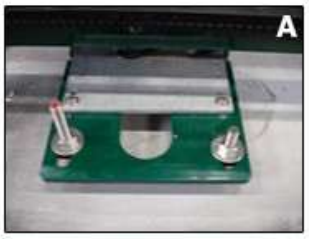
1. Align the rear guide wheels and the guide portal with the centring line of the gate. Make sure the gate slides parallel in the guide frame.

   The guide gantry and rear guide wheels can be moved sideways in the sleeves of the plates.

   When the alignment between the rear guide wheels (B) and the guide gantry is complete, lightly tighten the nuts on the ground anchors on the guide gantry and rear guide rollers.

   Check that the gate moves easily by hand through its full travel when opening and closing.
   Proceed slowly, as not all the settings have been made yet.





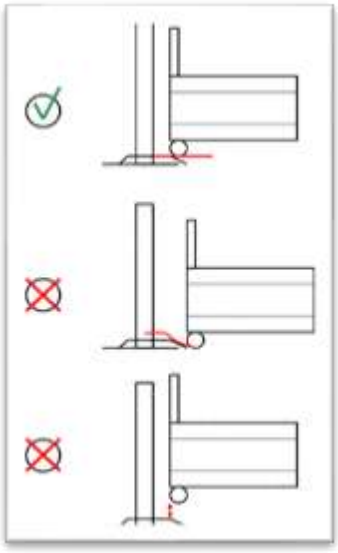
2. Close the gate almost completely by hand and align the receiving gate. Make sure that the guide rollers on the gate enter the centre of the receiving V. Do not force on either side when adjusting.

   2.1 If you have a double gate, it does not have a reception gate: this is replaced by a central support plate. The central support plate must be installed as shown in the foundation plan. After aligning the two gates and levelling the leaves horizontally, adjust the height of the central support plate so that the wheel at the front of the wing slightly touches the central support plate just below the horizontal plane. Take care to maintain verticality and positioning in the reception V. The height can be adjusted using the nuts on the gate anchors.

3. Position the wing so that it is supported by the rear guide wheels and the guide wheels at the location of the guide gate. Place a level in the middle of these sets of guide wheels. If necessary, place in a horizontal position by lowering or raising the support for the rear guide rollers using the nuts on the ground anchors. Make sure you maintain the horizontal level of the plate.

WARNING!
IN ALL CASES, DO NOT ADJUST THE HORIZONTAL POSITION USING THE M10 NUTS AND BOLTS CONNECTING THE PLATE TO THE WHEEL SUPPORT.

4. After aligning the receiving gantry and levelling the wing horizontally, adjust the height of the receiving gantry so that the support wheel under the front of the bottom beam touches the ramp (of the receiving gantry) just below the horizontal surface. Take care to maintain vertical levels and positioning within the V of the receiving gantry. The height is adjusted using the nuts on the ground anchors.



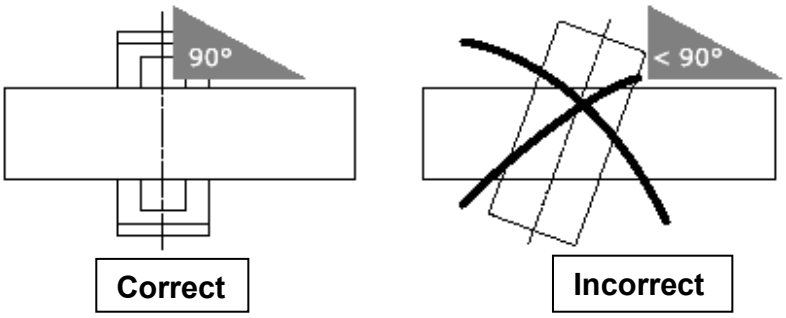
IMPORTANT! The support wheel of the bottom beam must not hit the ramp violently when the gate enters the gantry crane.

5. Once the gate has been fully adjusted, tighten all the ground anchor nuts. Then cut the lengths of the ground anchors to 1/2 cm above the nuts, and apply an anti-corrosion coating.

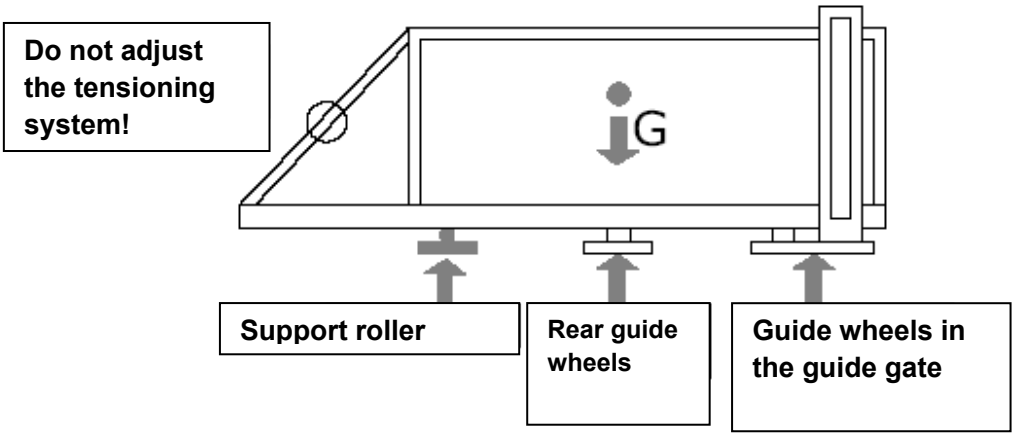
6. Gates with a clear passage of more than 5.00 m have a rear support roller for the wing in the open position.

Install the roller on the foundation as described on the next page :

Correct adjustment of this roller is essential for the correct operation of the Robusta® self-supporting sliding gate. Both the height of the support roller and its perpendicularity to the bottom beam of the gate must be adjusted.



A support roller installed too high will add undesirable frictional forces to the wing, which will increase as the wing opens.



The height of the support roller must be adjusted when the wing is approximately 50 cm from the fully open position.

In this position, the support roller may come into contact with the underside of the base beam. Adjust the height if necessary.

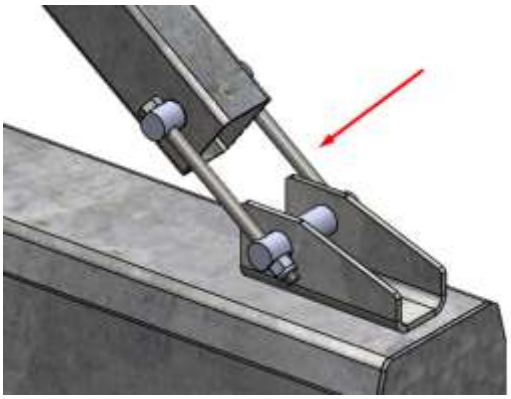
7. Leave the wing in the balanced position as shown in the image above.

8. Place metal plates measuring at least 80x80x5 mm under the gantry plate at the 2 positions of the pressure bolts on the gantry plate.

   Lower both bolts until they make contact with the metal plate and give the bolt 1/2 turn of pre-tension.

   This avoids bending the plate when the wing is suspended freely in the gate opening.

Do not adjust the tensioning system!



5. ADJUSTMENT OF MECHANICAL STOPS

5.1. ADJUSTMENT OF THE MECHANICAL FRONT LIMIT STOP

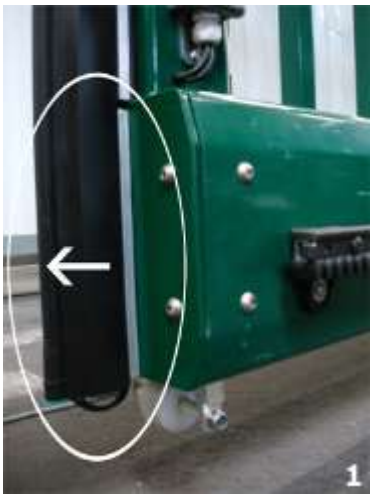
WARNING!

The mechanical limit stop must always be checked and/or adjusted. If the limit stop is not adjusted correctly, irreversible damage may be caused to some parts of the gate.

The mechanical limit stop is located on the front and rear guide wheel support in the underframe beam. To access it, open the front and rear of the underframe beam.

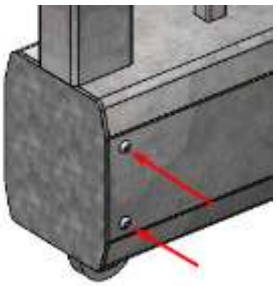
If the gate is installed correctly according to the foundation plans, the front stop does not need to be adjusted. The factory setting (13 cm) will suffice.

However, if there is a difference with the foundation plane, or if an obstacle at the back of the gate prevents the wing from opening to its full travel, adjust the stop as described below:



1. Remove the lower part of the safety edge from its aluminium mounting profile.

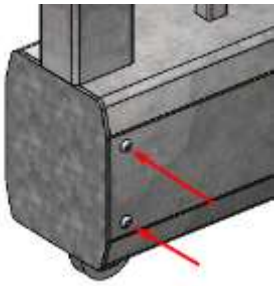
2. Remove the front cover from the bottom beam by unscrewing the 4 screws at the front of the beam.



3. Loosen the locknut. Turn the threaded rod anti-clockwise so that the rubber stop protrudes 0.5 to 1.0 cm from the bottom beam. Secure the threaded rod with the lock nut.

ATTENTION
Do not turn clockwise.
The default setting of 13 cm is the minimum distance.

4. Replace the cover to close the bottom beam and tighten the screws with moderate force.



5. Refasten the rubber profile of the safety edge to its aluminium profile.

To make fixing easier, we recommend spraying a little silicone-based lubricant on the rubber fixing flaps and the sensor strip sheaths. Then manually press the flaps into the aluminium profile.

6. Now adjust the position of the front detection unit when the wing in open position is locked against its mechanical limit stop.

5.2. ADJUSTING THE MECHANICAL BACKSTOP

The mechanical rear limit stop is installed on the rear guide wheel support and its length is adjustable up to a maximum of 45 cm (except for gates over 4 m, where it is adjustable up to a maximum of 20 cm). This is the maximum adjustment permitted to ensure correct gate operation, given the forces applied.
That's why we strongly recommend that you always comply with the dimensions on the foundation plans.

1. Remove the rear cover from the underfloor beam by unscrewing the 4 beam screws.

2. Close the wing so that there is a distance of 1.0 to 2.0 cm between the top guide rollers on the top of the wing and the bottom of the V-shaped receiver on the receiving gantry.

3. Loosen the locknut. Turn the threaded rod anti-clockwise so that the rubber stop protrudes 0.5 to 1.0 cm from the bottom beam. Secure the threaded rod with the lock nut.

4. Replace the cover to close the bottom beam and tighten the screws with moderate force.

5. Now adjust the position of the rear sensor unit so that the wing is locked against its mechanical limit stop in the closed position.

6. MOTORISATION OVERVIEW

Engine: see table below:

Type	Engine table	
Base beam	R2000	R2000 HD (Heavy Duty)
Application	Intensive use	Intensive use
Engine	746 C	844 C
Controller board	E 781	E 781
Plug-in receiver	868 MHz	868 MHz
Number of transmitters	2	2
Photocells	XP20WD	XP20WD
Number of photocells	2	2
Height of photocells	180 /900 MM	180 / 900 mm
Warning light	FAAC - X LED	FAAC - X LED
Safety edges	resistive (ASO)	resistive (ASO)
Number of safety edges on PG	2 (SSGP) / 4 (DSGP)	2 (SSGP) / 4 (DSGP)
Sensor strip at the front of the wing	resistive (ASO)	resistive (ASO)
Contact edges at the back of the wing	-	-
Wireless transmission system	AERF WIRELESS TRANSMISSION SYSTEM	AERF WIRELESS TRANSMISSION SYSTEM

NOTE:

- The plug must be connected to an electrical socket where the main switch can be protected against accidental switching on. The switch must be installed so that it is visible from the motor.

PLEASE NOTE:
TO INSTALL THE MOTOR AND SAFETY DEVICES, PLEASE REFER TO THE FAAC MANUAL SUPPLIED WITH THE GATE.

7. MAINTENANCE

- Check the vertical position of the gate.
- Check that no part of the gate has been damaged by a vehicle or misuse.

- Tighten the screws and replace any that are loose or damaged.
- Only original parts should be used for necessary replacements.
- Any damage to the coating can only be repaired using PU paint and by a professional.

8. CE CERTIFICATION

A CE label from Betafence guarantees that the gate has been built in compliance with CE regulations, as specified by the EU Construction Products Regulation (no. 305/2011).

A specific Declaration of Performance (DoP) is available for this portal, bearing the number DoP-Beta-Oxx (used on the CE label). The text of this Declaration of Performance can be consulted at www.betafence.net/CE.

Delivery Installation

Customer : _____

Location: _____

Date : ___/___/_____

Technician : _____

1. Description of the installation

Sliding gate Sliding gate ☐ Rail-mounted self-supporting ☐

Robusta sliding gate® :

Manual version..... ☐

Motorisable version..... ☐

Robusta sliding gate® :

Version full automatic ..... ☐

2. The installer hereby declares that the gate has been installed in accordance with the installation manual.

Technician's signature

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Notes

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