

SHU

ASSEMBLY INSTRUCTIONS

TOOLS REQUIRED:

- Screwdriver
- Allen key
- Drill
- Grooving tool

FIXING SLIDING RAIL/BEAM AND ENGINE

The rail is supplied in two sizes: 2.5 m for the single-wing system and 4 m for the two-winged system.

Cut the runner to size: approximately 2 times the width of the wing (single-wing system) or 2 times the sum of the width of the 2 wings (two-winged system).

Fix the rail as shown in the photo.

NB: the rail is not pre-drilled.



Place the engine on the right/left side, according to the appropriate groove in the cover to be installed at the end of the system.



The engine is supplied as follows:



(top)



((side/assembled on the left as our example))

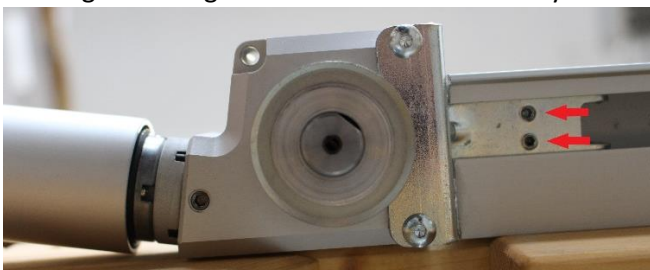
To place the engine correctly, it must be inserted into the crankcase as shown in the photo:



This is how it will look once it has been entered correctly:



Now tighten the grub screws to secure it firmly to the rail:



(view from below)

BOGIES AND BUFFERS

Buffers, which will block the movement of the wings in the opened and closed positions, and bogies, which will allow the wings to slide, are to be inserted inside the slide rail.

TWO-WINGED SYSTEM

You will need 2 bogies and 2 buffers for each wing, making a total of 4 bogies and 4 buffers.

To begin with, all buffers and bogies must be inserted into the slide rail, taking care to follow the order shown in the scheme.

For a two-winged system, insert all buffers and bogies in the following order:

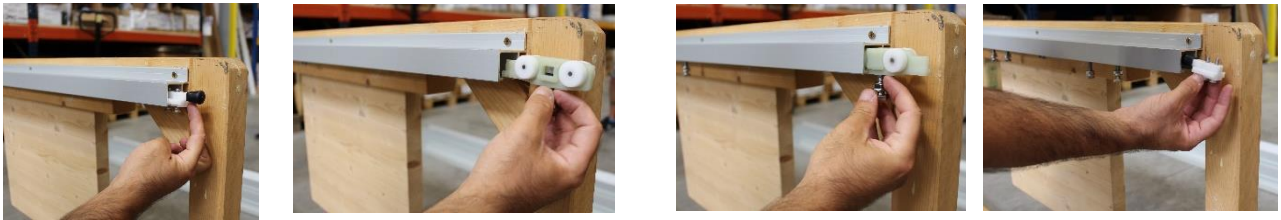
Buffer - bogie - bogie

buffer – buffer

bogie - bogie - buffer



Placement components first wing:

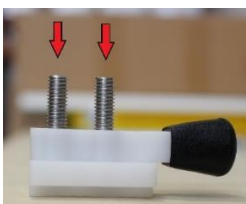


Placement components second wing:

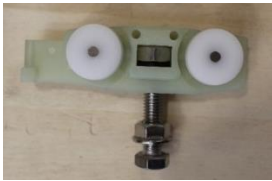


ATTENTION - FOR A CORRECT ASSEMBLY OF THE AUTOMATION

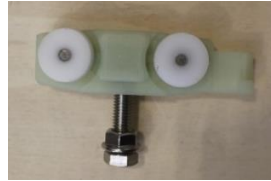
(1) before inserting the buffers, loosen the screws so that they can later be secured at the point required to lock the wings in opening and closing. We recommend inserting the buffer with the rubber stop (which may be white or black) facing the bogies and with the screw heads facing downwards.



(2) the bogies must be positioned as shown in the scheme, the first one with the bearing to the buffer facing left and the second one with the bearing to the buffer facing right.



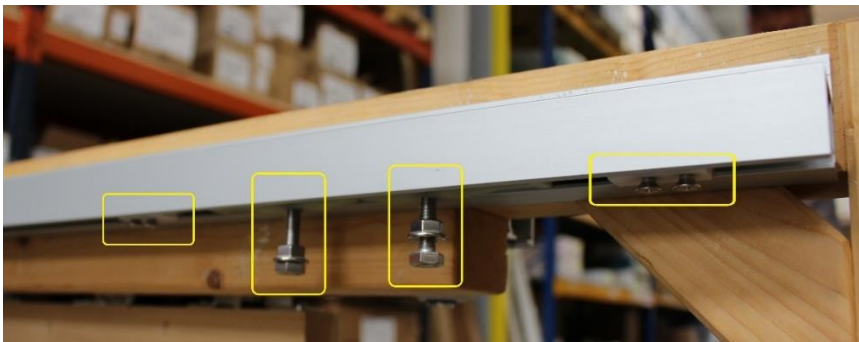
(left)



(right)

Slide all buffers and bogies along the rail. Arrange the elements, particularly the buffers, in the approximate positions where they are to be secured later.

Once all the necessary buffers and bogies have been inserted, observing the rail from below you should notice the screws for attaching the buffers and the feet of the bogies sticking out:



NB: this picture shows the parts for a single wing - for the two-winged system you will need twice as many parts arranged along the beam.

Once all the buffers and bogies have been inserted in the correct order, insert the belt deflection unit at the opposite end of the engine without securing it:

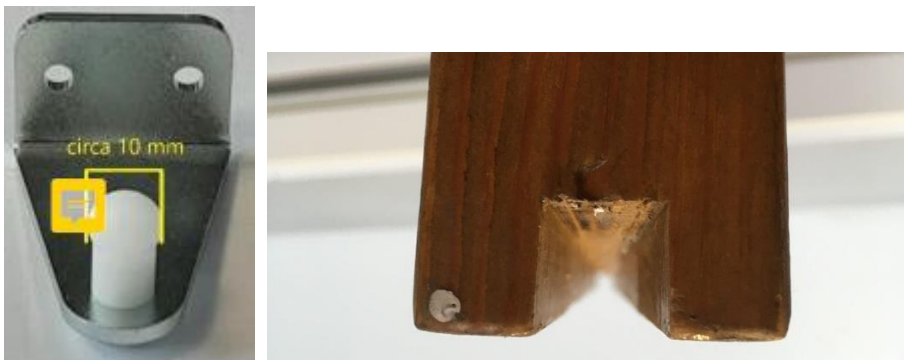


WINGS

PREPARATION OF THE WING(S)

Before proceeding with the assembly of the various components, a groove must be made in the base of the wing: once the automation has been assembled, this groove will allow the wing support runner to slide (see section on 'RUNNER').

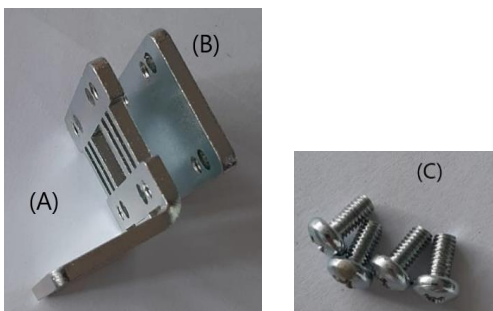
The groove must be approximately 10 mm wide, i.e. the diameter of the pin of the runner.



On each wing, the 2 bogies attachment hooks and the belt attachment plate must be attached with screws.

The plates are supplied unassembled. Each piece consists of:

- (A) plate (L-shaped, consisting of base and back)
- (B) back of plate
- (C) 4 screws for attaching the back of the plate to the back



Fasten the base of the plate (A) to the upper part of the wing with two screws. This piece is to be assembled in the centre of the wing.



ATTENTION: the belt attachment plate must be assembled differently on the two wings: on one wing it must have its back facing outwards (i.e. towards the person installing the automation) and on the other it must be positioned in the opposite direction, i.e. with its back facing inwards, 'hidden'.

Wing 1

(back facing the person installing the automation)

Wing 2

(back facing inwards, 'hidden')



Instead, use 6 screws to attach the hooks to the bogies, following the points indicated by the arrows. Take care to assemble the piece with the groove that will engage the bogie in the correct direction.



Once the assembly completed, the upper part of the wing should look like this:



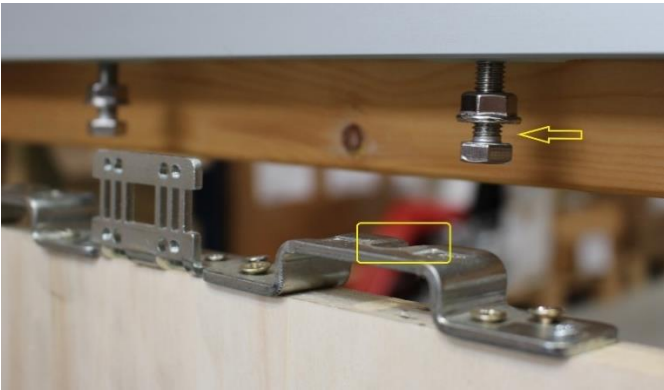
NB: the image shows the assembly of the wing with the plate with the back 'hidden'. For the second wing, the plate must be assembled in the opposite position, as previously indicated.

When finished, the two wings should look like this:



ASSEMBLY OF THE WING(S) TO THE AUTOMATION

Insert the attachment hooks into the bogies feet that protrude from the rail, inserting the groove on the top of the attachment (yellow box) into the bogie foot (yellow arrow).



Tighten the bolt to secure the wing.



When finished, it should look like this:

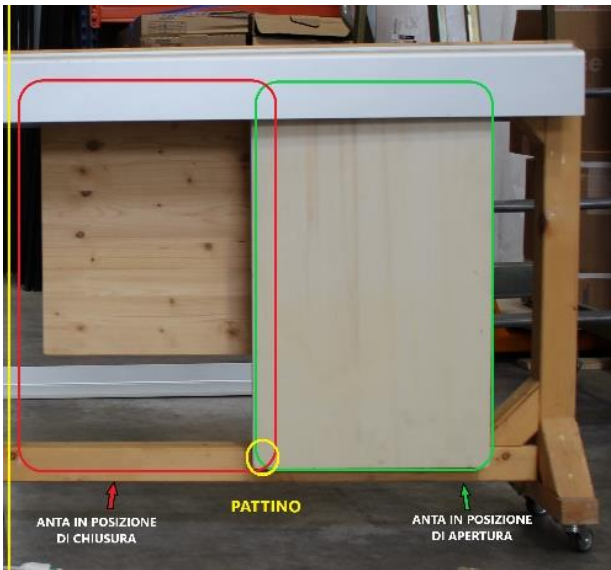


Slide the wing along the beam to check that it is correctly fitted to the bogies and place the buffers correctly.

Using the screwdriver, fix the buffers in the correct positions for opening (outer buffers) and closing the wings (centre buffers) - taking care to measure properly.

The space between the buffer in the opened position and the buffer in the closed position should be approximately 2 times the width of the wing.

ATTENTION: it is correct that a small 'overlap' area remains between the wing in the opened and closed position, as the support runner will need to be fixed at that point at the bottom of the system.

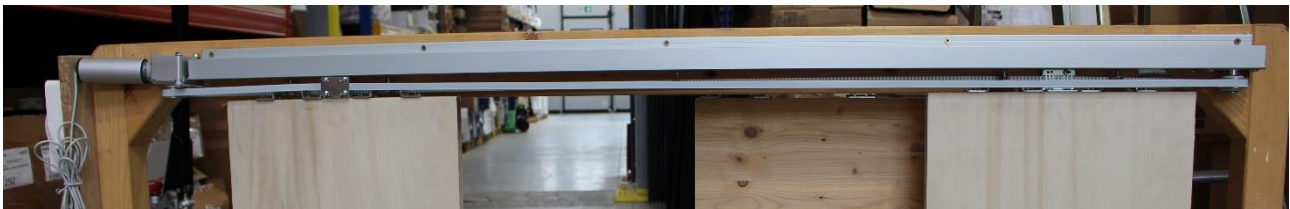


Once the buffers secured, use an Allen key to fasten the deflection unit to the opposite end of the engine (where it was already placed).

BELT

The belt is supplied in pieces of 5.20 metres (single-wing system) and 8.20 metres (double-winged system).

In order for the wings to move, the belt must pass through the attachment plates, the deflection unit and the pulley located in the lower part of the engine. Following this path:



We suggest to remain generous with the size of the belt, in order to have a small margin of manoeuvre to simplify the procedure and, if necessary, to cut off the excess ends when fastening.

Then cut the belt according to these length guidelines (remember to remain generous):

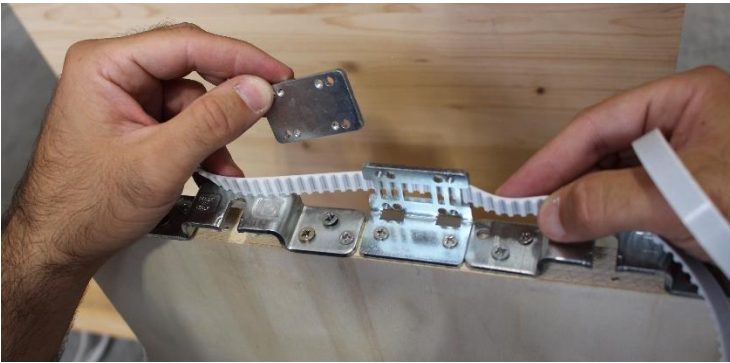
2 x length of the beam + 20 cm (encumbrance of the engine wheels and deflection unit).

Now it is necessary to run the belt all the way along, starting with the plate that has the 'hidden' back.

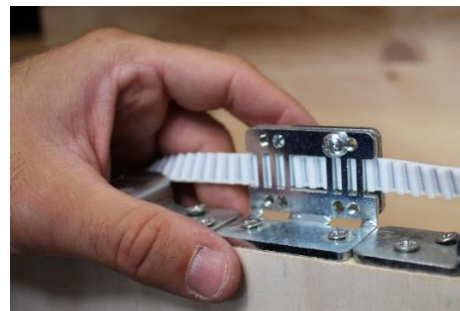
Remember that the small plates are supplied unassembled. Each piece consists of (A) the L-shaped base - part already fixed to the wing, (B) the back of the plate, (C) the 4 screws for fixing the back of the plate to the back (see page 5).

Passing the belt through the first plate (hidden back)

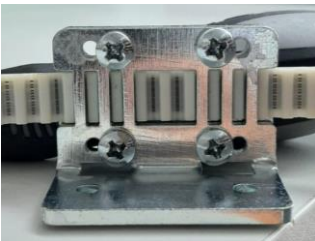
Pass the strap between the back and the back plate:



Replace the back plate and secure it with the screws, taking care to insert them in the innermost hole on the front side of the back as shown in the photo.



This is the plate with the 'hidden' back once completed the assembly:



Continue by running the belt all the way through (A) the pulley of the belt deflection unit, (B) the pulley on the underside of the engine, and finally (C) join the two ends in the back of the second wing plate, i.e. the one with the back facing outwards

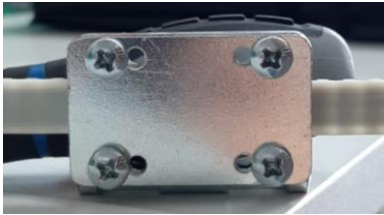


(C) Passing the belt through the second plate (outer back)

To fix the ends of the belt in the plate with the outer back, join the two ends of the belt on the back of the plate, place the back of the plate and fix with the screws, taking care to insert them in the outermost hole on the back of the plate as shown in the photo:



This is the plate with the outer back at the end of the assembly:

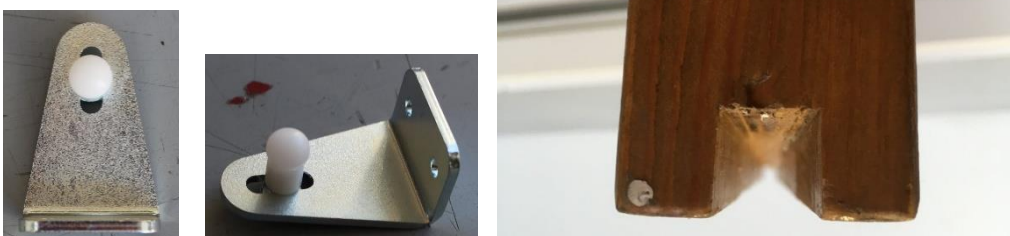


At the end of this procedure, the automation should be assembled like this:



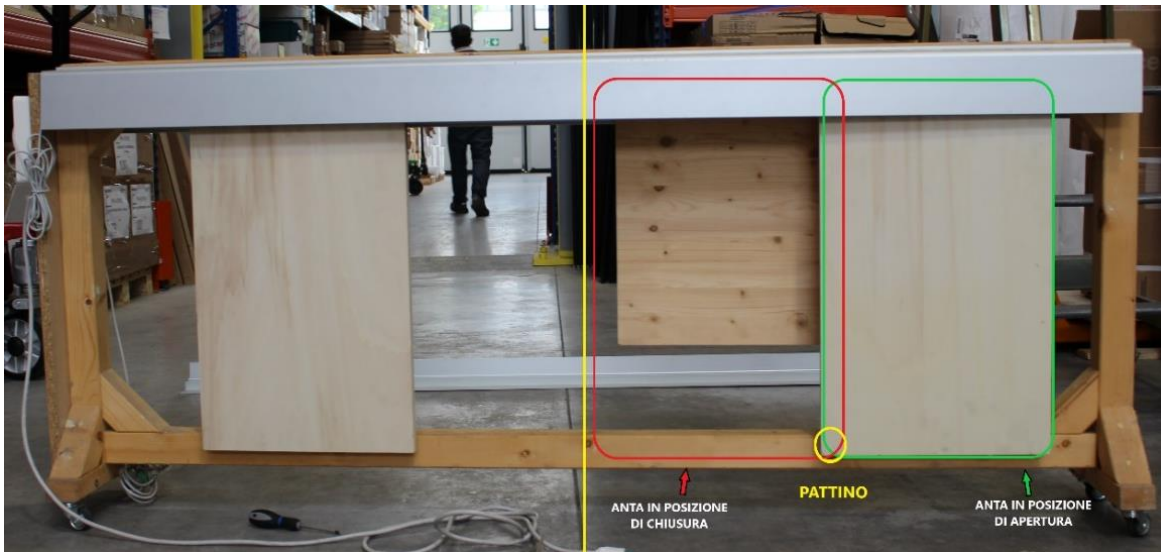
SLIDING PAD

An adjustable sliding runner is supplied for each wing, to guide the movement of the wing from the base during sliding and in the open/close positions, keeping it always in the correct position. The runner is installed in the lower part of the automation.



Before assembling the runner, a groove must have been drilled in the wing base to slide the pin of the runner as previously indicated in the section WINGS.

The runner must be placed in the overlap area between the opened and closed position of the wing so that it always remains in the groove in the wing base.



Use two screws to secure the runner to the frame through the two holes in the base:



Once the runner is assembled and the correct pin position has been found, tighten the pin screw to secure it:



CRANKCASE

Cut the crankcase to size before fitting it. To calculate the correct crankcase size, measure the length of the beam starting from the end of the engine slot:

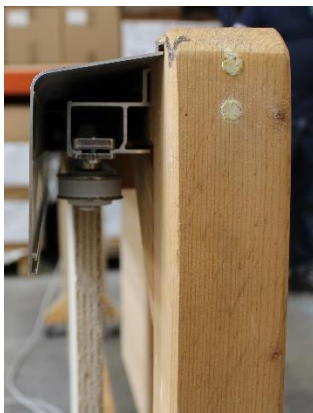
(A) engine slot already provided in the crankcase (215 mm) + (B) beam length (customised) = total crankcase length



Finally, assemble the protective crankcase over the slide rail. As mentioned at the beginning, the crankcase comes with the space for the engine already slotted, so be sure to place the crankcase correctly.

To mount the crankcase, simply place it over the guide rail and fit it, no screws are needed.

Once the protective crankcase is assembled, the automation should look like this:



Once the mechanical parts have been assembled, it is necessary to connect the engine to the control unit and program it: follow the instructions of the control unit.