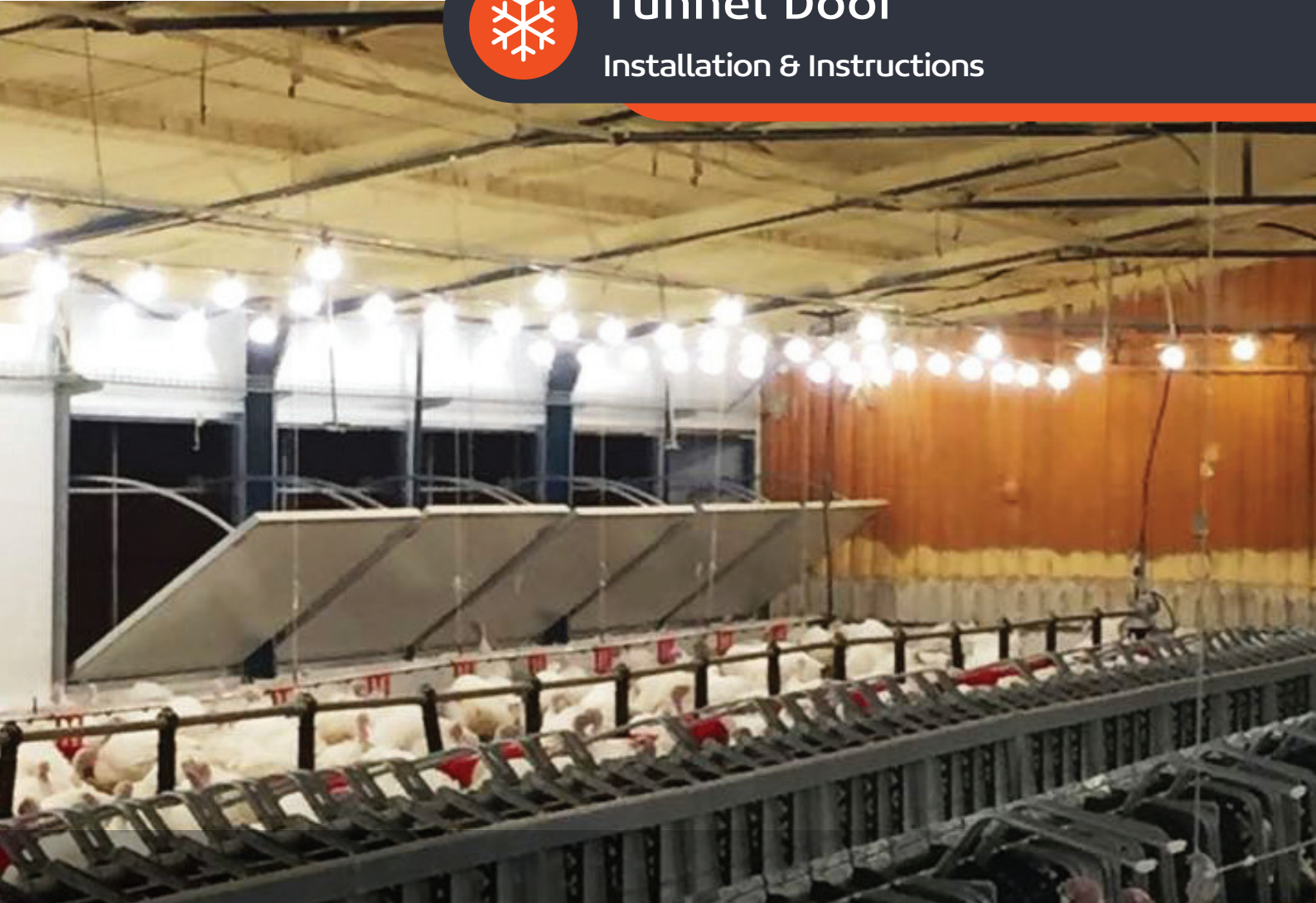




Tunnel Door

Installation & Instructions



Global Presence - Local Commitment



Feeding



Drinking



Climate



Housing

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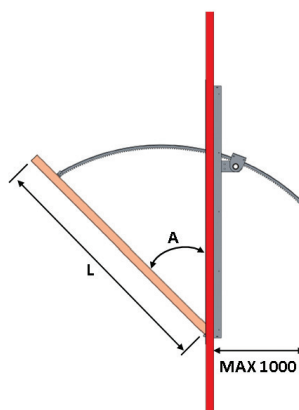
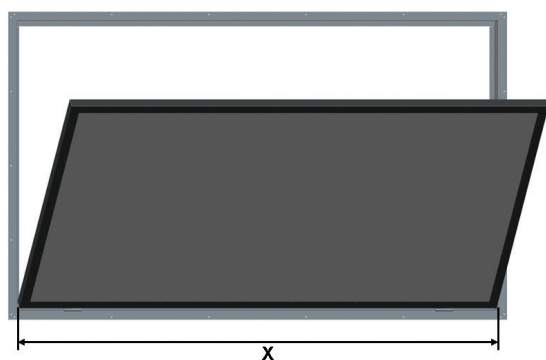
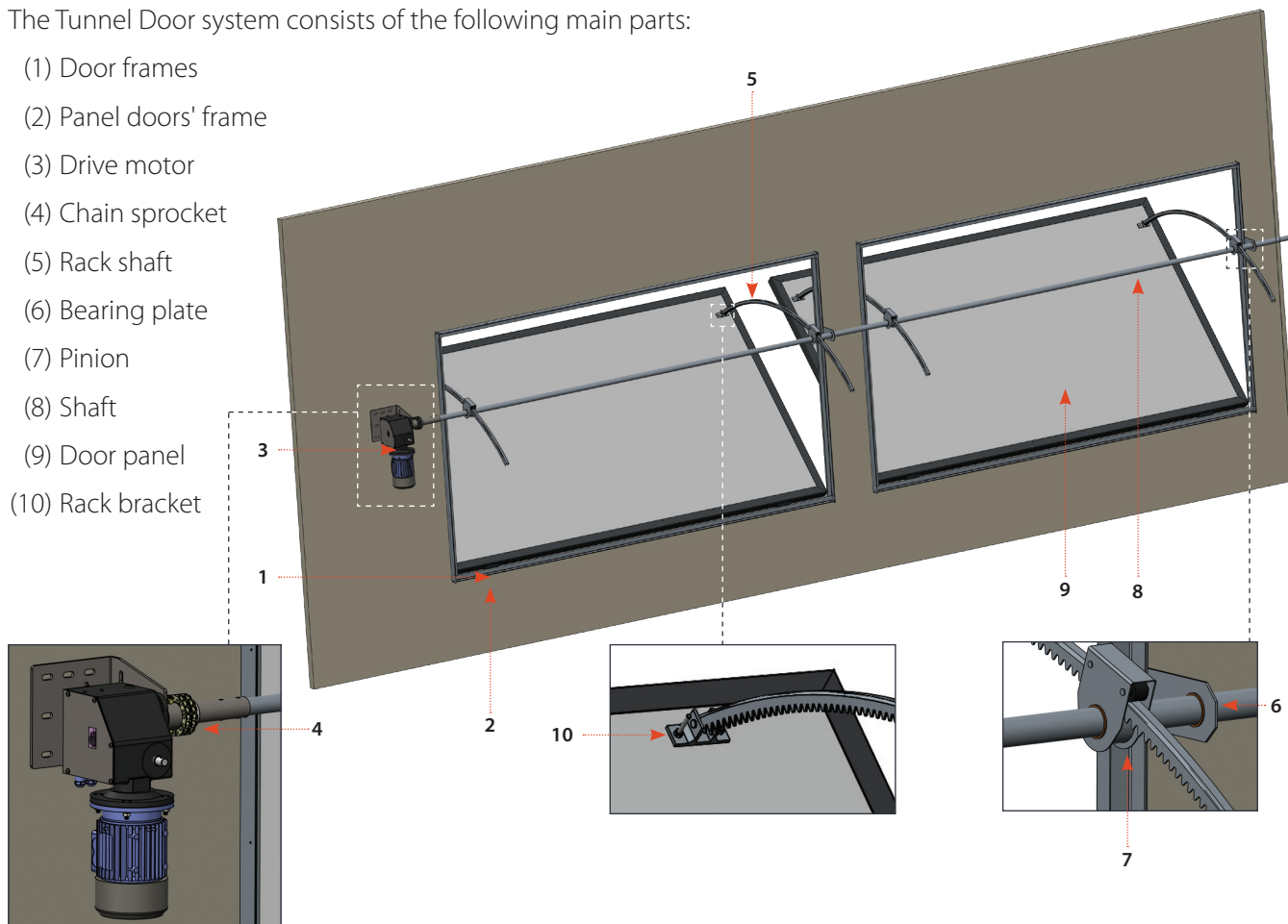


1. System compound

1.1. Single Tunnel Door

The Tunnel Door system consists of the following main parts:

- (1) Door frames
- (2) Panel doors' frame
- (3) Drive motor
- (4) Chain sprocket
- (5) Rack shaft
- (6) Bearing plate
- (7) Pinion
- (8) Shaft
- (9) Door panel
- (10) Rack bracket



Optional Sizing Models (m)

L Door Height (mm)	L1 Net Air Path Height (mm)	X Door Length (mm)	X1 Net Air Path Length (mm)	Air path (m ²) Area
650	600	1700	1660	1
650	600	2700	2660	1.6
1400	1310	1700	1660	2.2
1400	1310	2700	2660	3.5

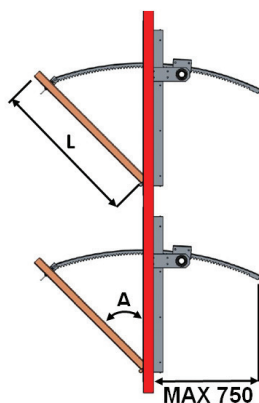
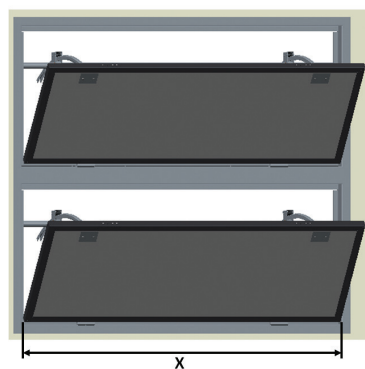
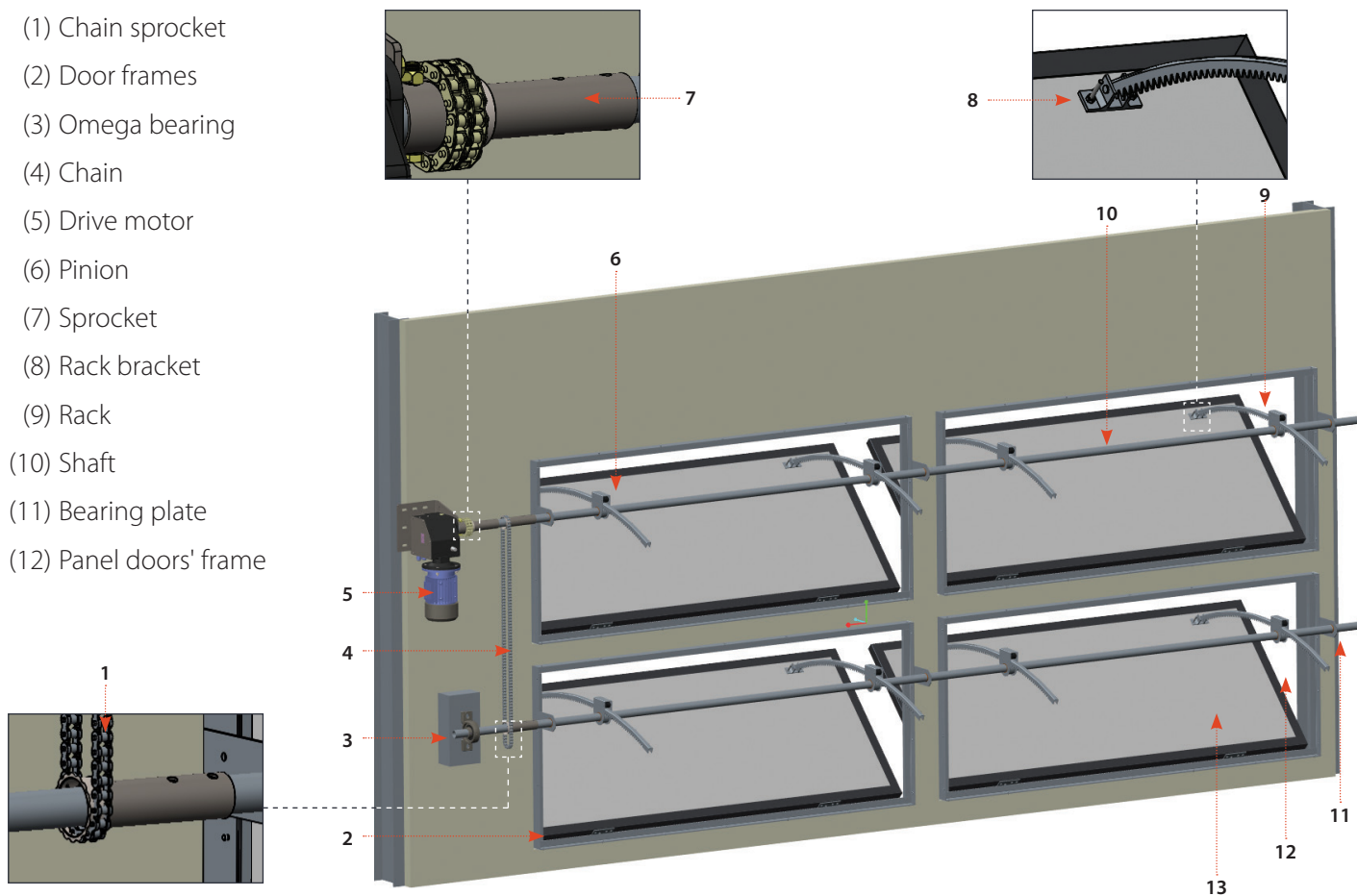
A max = 60°

Max. Door weight 12.5 kg/m²

1.2. Double Tunnel Door

The Tunnel Door system consists of the following main parts:

- (1) Chain sprocket
- (2) Door frames
- (3) Omega bearing
- (4) Chain
- (5) Drive motor
- (6) Pinion
- (7) Sprocket
- (8) Rack bracket
- (9) Rack
- (10) Shaft
- (11) Bearing plate
- (12) Panel doors' frame



- (13) Door panel

Optional Sizing Models (m)

L Door Height (mm)	L1 Net Air path Height (mm)	X Door Length (mm)	X1 Net Air path length (mm)	Air path (m ²) Area
2X600	1200	1700	1660	2
2X600	1200	2700	2660	3.5

A max = 60°

Max. Door weight 12.5 kg/m²



2. Mounting Kit Compounds

Parts for installation of Tunnel Door mechanical parts

2.1. Rack & Pinion Kit

One set per Door unit

02381226 Connection kit to R&P 1500

02381227 Connection kit to R&P 750

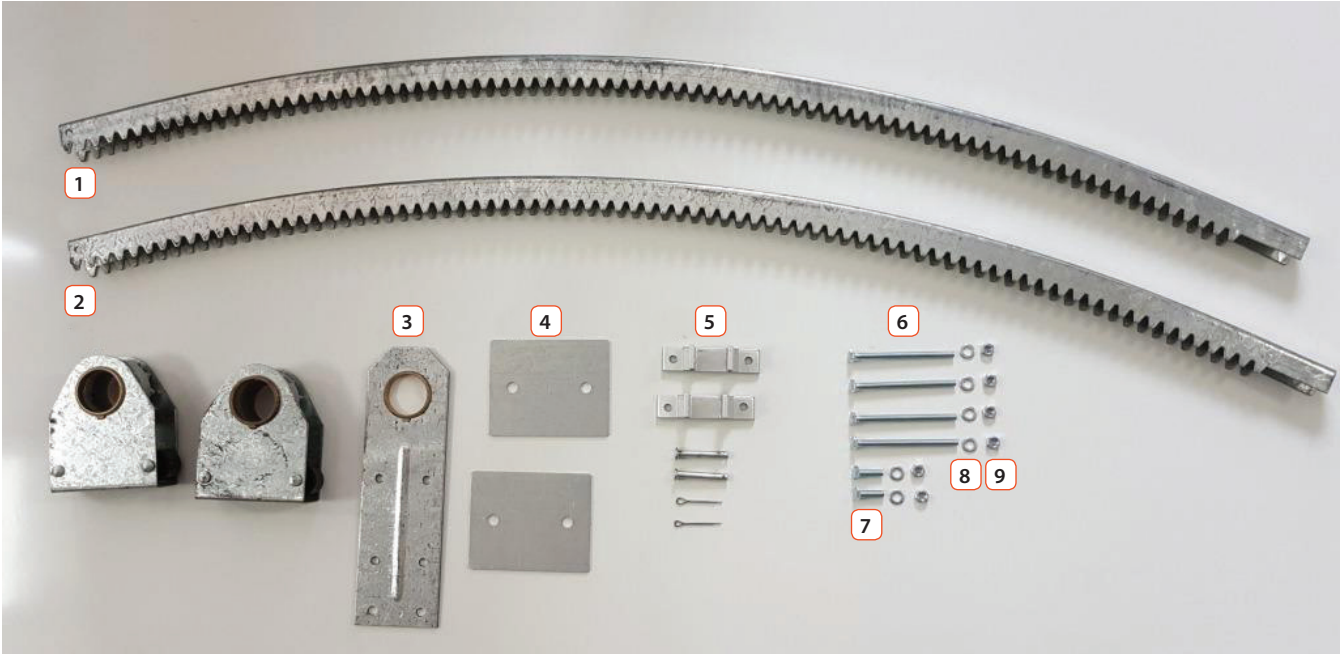
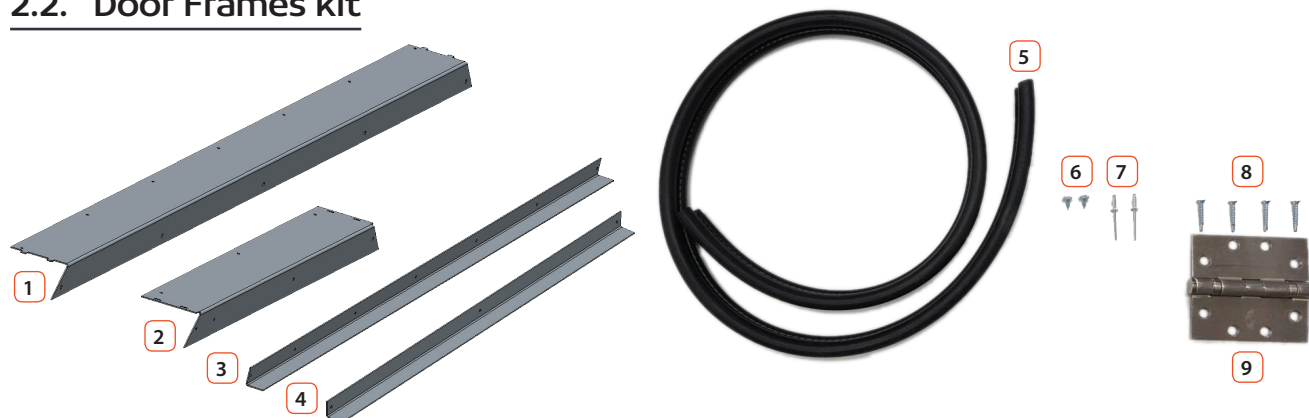


Table 1: Parts for installation of Rack & Pinion mechanical parts:

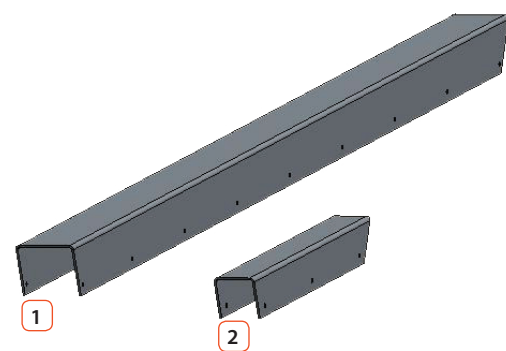
No.	Cat no.	Description	Pcs.
1	02381202	1650 Curve rack	2
	02381203	1050 Curve rack	
2	02381205	Pinion	2
3	02381200	Bearing plate	1
4	02381208	Back plate	2
5	02381207	Rack bracket	2
6	02381213	Screw m6x80	4
7	02320019	Screw m6x20	2
8	02310459	Washer 6mm	6
9	02320017	Nut m6	6

2.2. Door Frames kit



No.	Cat no.	Description	Pcs.
1	02381185	Frame 1800	2
	02381186	Frame 2800	
2	02381184	Side frame 750	2
	02381185	Side frame 1500	
3	02381187	L frame 1500	2
	02381188	L frame 750	
4	02381189	L frame 1800	2
	02381190	L frame 2800	
5	02381215	Rubber seal (per meter)	2
6	02381211	Screw m4x13	
7	02310472	Rivet m4x12	
8	02381219	Drilling screw 4.8X32	16
9	02381199	Hinges	2

2.3. Panel Door Frame kit

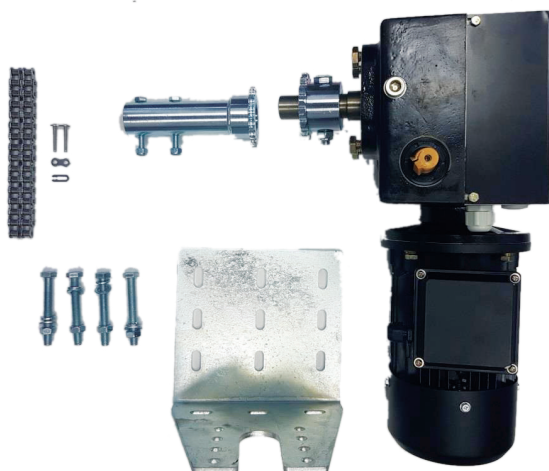


No.	Cat no.	Description	Pcs.
1	02381197	U Profile 1800	2
	02381198	U Profile 2800	
2	02381195	U Profile 1500	2
	02381196	U Profile 750	



2.4. Drive Shaft and mounting kit for Single / Double Door

02382083



2.5. Mounting kit for Double Door

No.	Cat no.	Description	Pcs.
1	02381230	Chain 0.5	1
2	02381228	Sprocket	2
3	02381229	Omega bearing	1
4	02381231	Lock 1/2	1
5	02381232	Half link	1



1



2



3



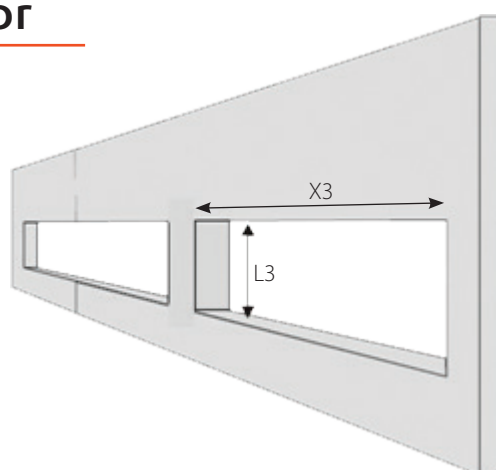
4



5

3. The opening for the Tunnel Door

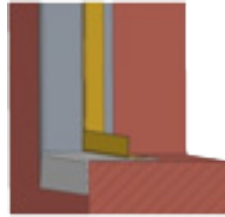
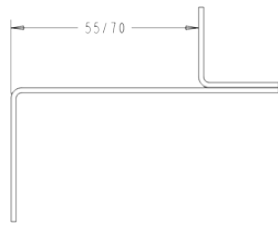
Door Size (mm)	L3 Opening Height (mm)	X3 Opening Length (mm)
650X1700	690	1750
650X2700	690	2750
1400X1700	1400	1750
1400X2700	1400	2750
2X650X1700	1400	1750
2X650X2700	1400	2750



4. Assembling the Door Frames

Note:

For a 50 mm panel thickness the gap of the L profile is 70 mm. For a 35 mm Panel Thickness the gap from the L profile is 55 mm



Side bars are equipped with grooves



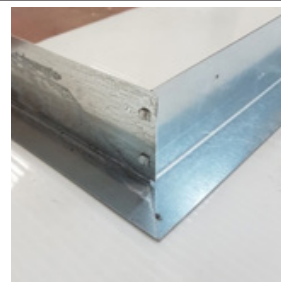
Cross bars are equipped with tongues



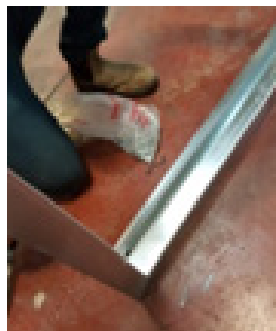
1. Connect the Side bars to the Cross bars. Insert the tongues into the grooves



2. Use a hammer to bend the tongues over the grooves
Repeat for all 4 corners

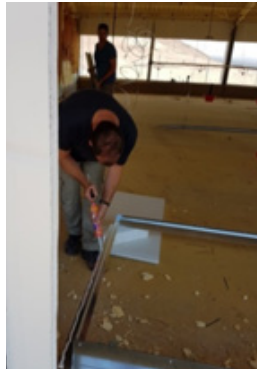


3. Assemble the 'L' profile beams to the frame. Use the required holes to match with the Door panel width in use (35/50 mm)





-
4. Apply a layer of sealing compound



-
5. Lift the frame and insert it into the opening



-
6. Check for equal diagonals or level it with a bubble level



-
7. Use the screws to fix the frame to the wall.
For panel wall consider the use of passing through screw with nut in all 4 corners



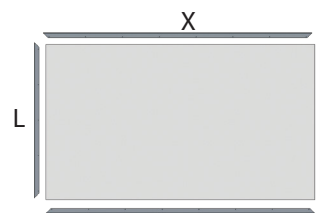
-
8. Fix the rubber seal in place



5. Preparing the Door

1. Cut the door panel to the required size

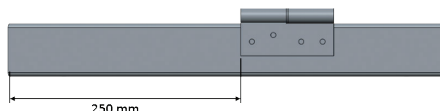
L (mm)	X (mm)	Door Panel Height = (L-10mm)	Door Panel Length = (X-10mm)
650	1700	620	1690
650	2700	620	2690
1400	1700	1330	1690
1400	2700	1330	2690



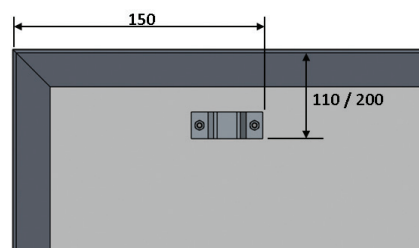
2. Attach the U profile to the panel. Check diagonals and apply silicon before securing the frame with screws/rivets



3. Fix the hinges to the door (250 mm) from the corner. Do it on both sides



4. Mark the location and drill the holes in the panel with a 6.5mm drill. Fix the bracket with the support plates
Note: For a 1500 mm height door, fix the bracket at a distance of 200 mm from the frame. For a 750 mm height door, install the bracket at a distance of 110 mm.

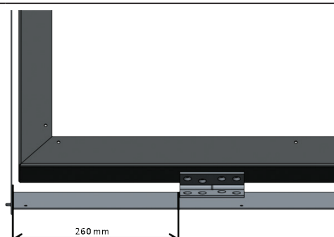


6. Mounting the Doors

1. Place the Door next to the opening frame (Door frame)



2. Fix the hinges to the wall opening frames. Measure 260 mm from the side frame and fix with the drilling screw

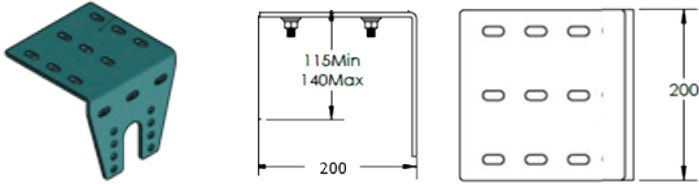




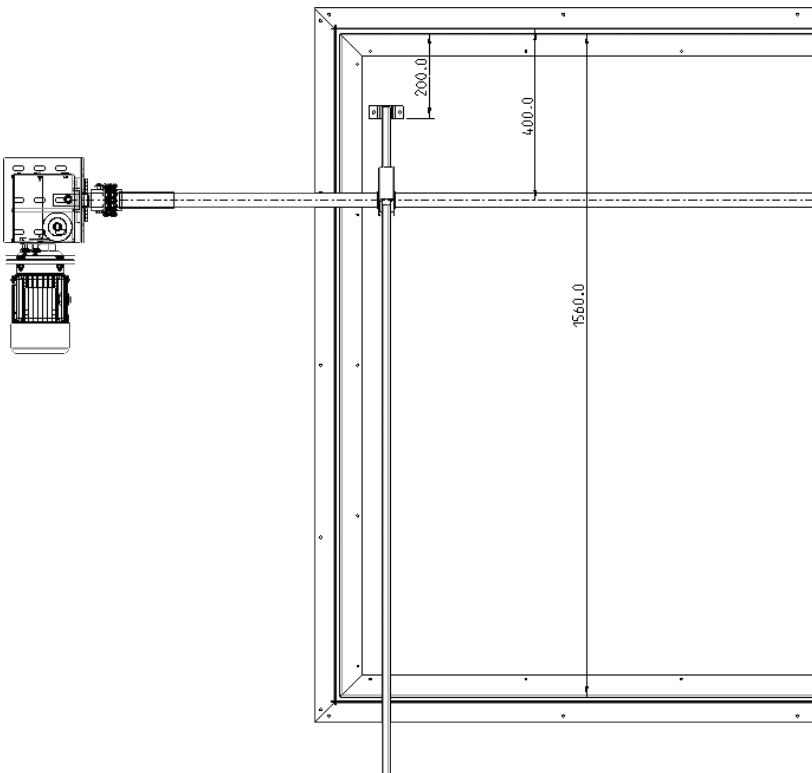
7. Mounting the Gear Motor and Drive Shaft

7.1. Mounting the Gear Motor

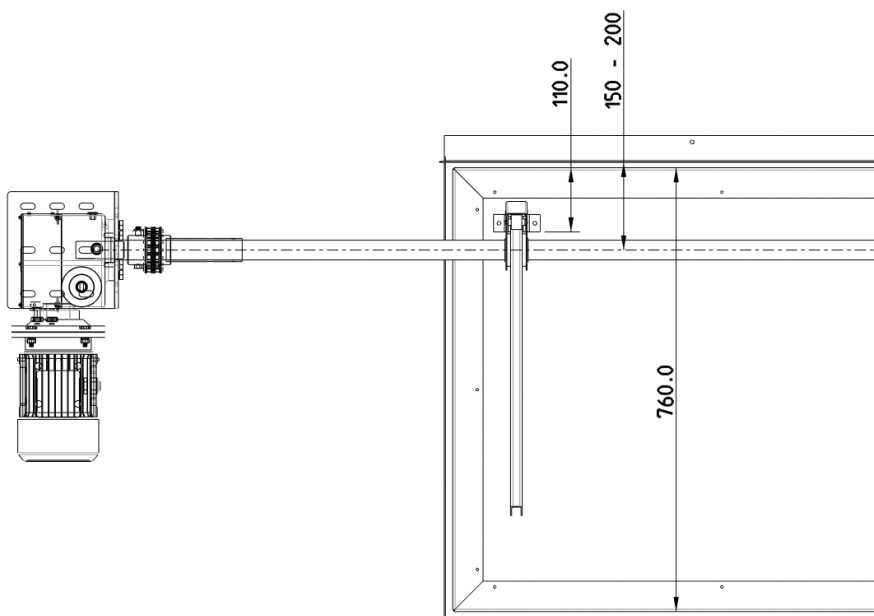
Mount the Motor bracket at the required position



On a 1560 mm Door Height: Drive shaft center is 400 mm below door frame

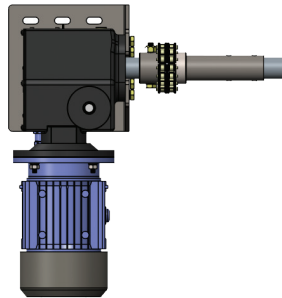


On a 750 mm Door Height: Drive shaft center is 150-200mm below door frame

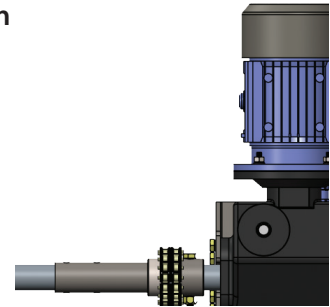


Mount the Gear Motor to the bracket

Left side installation



Right side installation



7.2. Mounting the bearing plates

Mount one bearing plate on the frame per door. The far end of shaft requires bearing plate support.

Installation of the bearing plate depends on the installation of the motorgear:

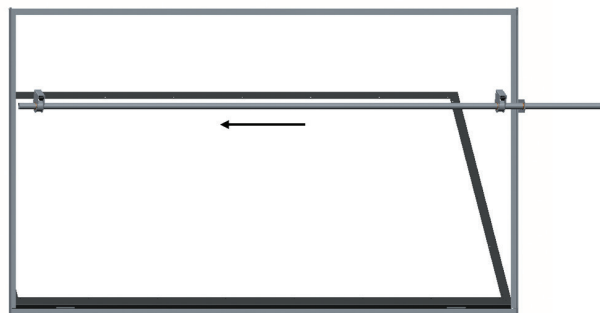
For a 1500 mm height door, the axis center of the motorgear should be 400 mm from top of the frame.

For a 750 mm height door the axis center should be between 150-200 mm.

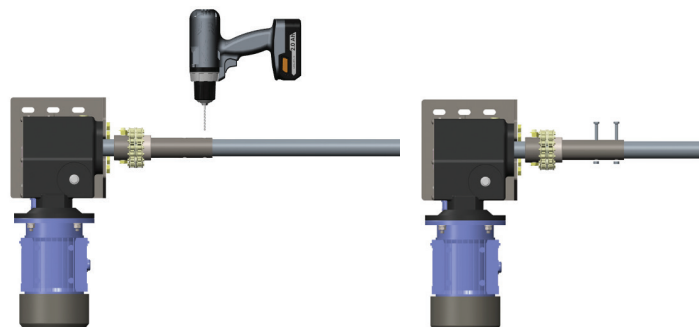


7.3. Installation of the Drive Shaft and pinions

1. Insert the pipe through the bearing plates. Make sure you insert 2 pinion per door (or every 3 meters on longer door)



2. Insert the pipe into the sprocket adapter of the gear motor and drill holes (8.5 mm)

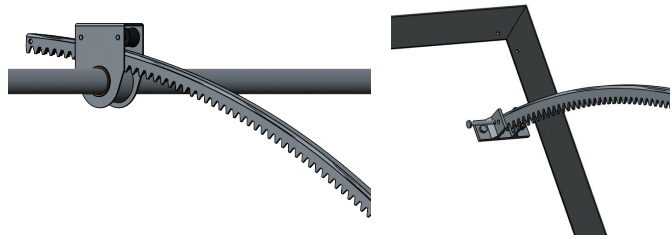




8. Mounting the racks

1. Connecting the doors:

- Close the doors, secure it in closed position
- Move the rack through the pinion and attach it to the Rack bracket
- lock it with the pin



Note:

Loose The pinion screws before inserting Insert the rack into the pinion, after connecting the pinion to the rack bracket you can close the Allen screw (4 mm) so that the door does not move.

2. After all the doors are connected:

- Make sure the limit switch is in "closed" state.
- Close all doors
- Using the Allen key, torn the pinion towards the door, pressing the door on the seal (to cancel all backlash), tighten Allen screw



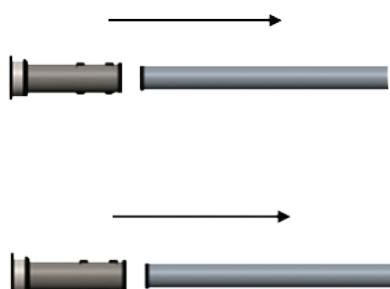
9. Mounting Double Door

1. When installing double doors:

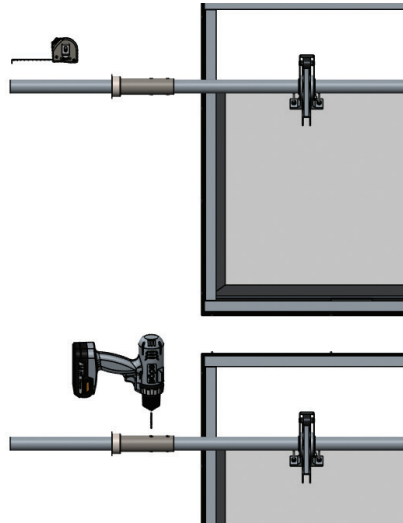
Add to the first doors closest to the gear motor bearing plates on motor side



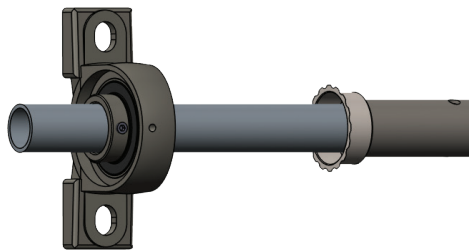
2. Before installing the gear motor, Insert the chain sprocket in the shafts



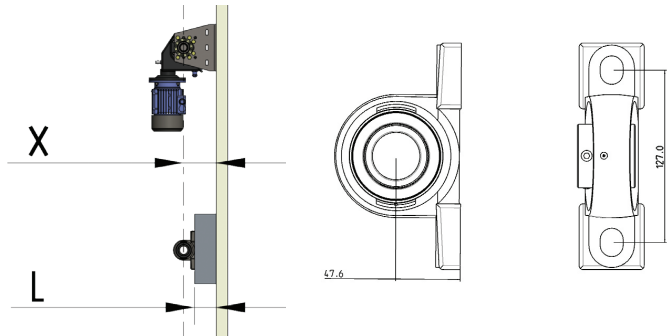
-
3. The chain sprocket should be aligned. Make sure that the distance from the end of sprocket both pipes is equal and set the sprocket with the screw



-
4. Install omega bearing on the lower shaft, set it up with a spacer

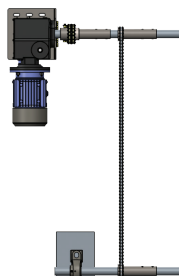


-
5. The distance of the two shaft from the wall should be equal. Prepare the spacer to the required measure and install the Omega bearing on it



-
6. Cut the chain to the required length. Connect it with the connecting link. Cancelling of backlash is possible by:

- a. Using half-link (supplied)
- b. Adjust the Omega bearing positioning using the slots
- c. Add chain tensioner





10. Installing the Gear Motor

10.1. General Instructions Notes:

Installation of this equipment and related Plasson equipment should be in accordance with these instructions, Plasson installation instructions and local codes (if applicable). Failure to follow specified instructions may cause damage to equipment and/or personal injury or death.

Take special note of any Warnings or Safety Decals on the equipment and in manuals.

Discarded materials, equipment and boxes should be recycled in accordance with local and national codes.

10.2. Safety Instructions:

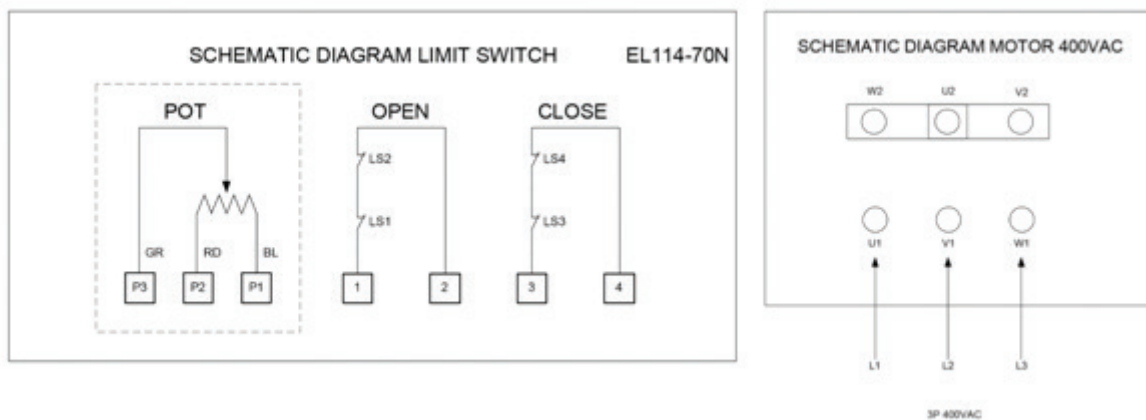
Read all safety messages in this manual and on equipment safety decals. Follow recommended precautions and safe operating practices.

Ground all electrical equipment for safety. Ground all non-current carrying metal parts to guard against electrical shock. Always keep safety decals in good condition and replace missing or damaged decals.

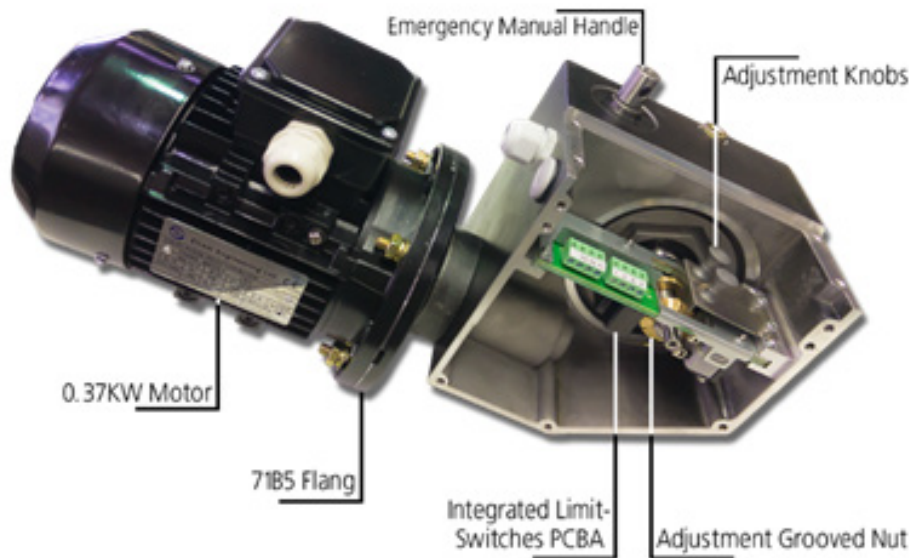
10.3. Electrical schematic diagram:

Connect the electrical wires and test for rotation as shown on the following page. If the belts are wound clockwise on the pulley, then OPEN will be CW rotation, and CLOSE will be CCW rotation.

Note: The limit switches are preset for limited travel. If the motor does not move in one direction, the limit switch may be activated. If so, try activating in the opposing direction.



10.4. Limit switches system adjustments



The limit switches integrated inside the gear consist of 4 switches (two switches in series as backup), spring sheet metal fixing plate and two adjusting nuts. See picture below.

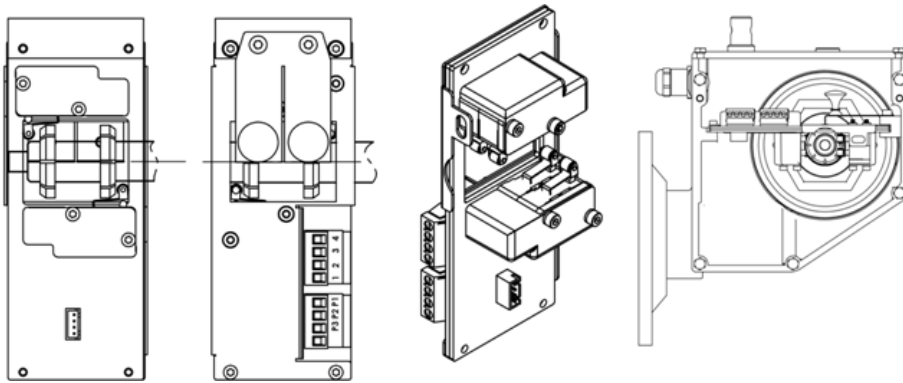
Notes:

1. Installation and adjustments must be done by certified electrician.
2. During all time of adjustments no live electric current will be at the control panel or motor.
3. It is very recommended that two persons will do the adjustment, one at the control room and one at the limit switches position, visual and sound contact have to be during the all process.
4. At all time the adjustment nuts shouldn't be at the end positions (near the edges).
5. For any question, please contact Plasson service.



Adjusting process:

- a. Connect electrical wires to the connecting clamp (Terminals 1 and 2 are strap OPEN direction, Terminals 3 and 4 are strap CLOSE) as routed by electrician to motor. Verify all motor other electrical connection are done properly.
- b. Apply electricity and test motor for both direction. Push the limit switch levers for OPEN and verify its stop the motor, do the same for CLOSE.
- c. Bring the system to approximately the middle position.
- d. Unscrew the Allen bolts of the adjusting plate and hold the nuts by hand during adjustment, turn to out direction position one nut for Max. OPEN position adjustment and do the same with other nut to the Max. CLOSE position adjustment.
- e. Be sure adjusting plate in its nuts slot and try at last two times to verify it is return to the required position and then tighten the Allen bolts back to lock the adjusting plate in place.
- f. If further adjusting is needed please do step d to e again. Close limit switches box cover and verify all other covers are sealed and secured in place



11. Maintenance (Every 6 month)

1. Apply grease to the Omega bearing
2. Check the chain, tension, general condition
3. Close the system and check doors tightness
4. Check the seal around the wall frames
5. Check limit switches, fully open position and close pinions are firmly fixed to the shaft

Global Presence - Local Commitment



Ventilation



Cooling



Fogging



Heating



Lighting



Control



Feeding



Drinking



Climate



Housing

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