

# INSTALLATION

## AC-105-CH





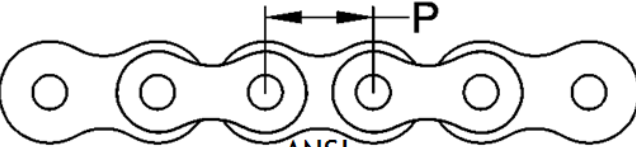

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### Note to the reader :

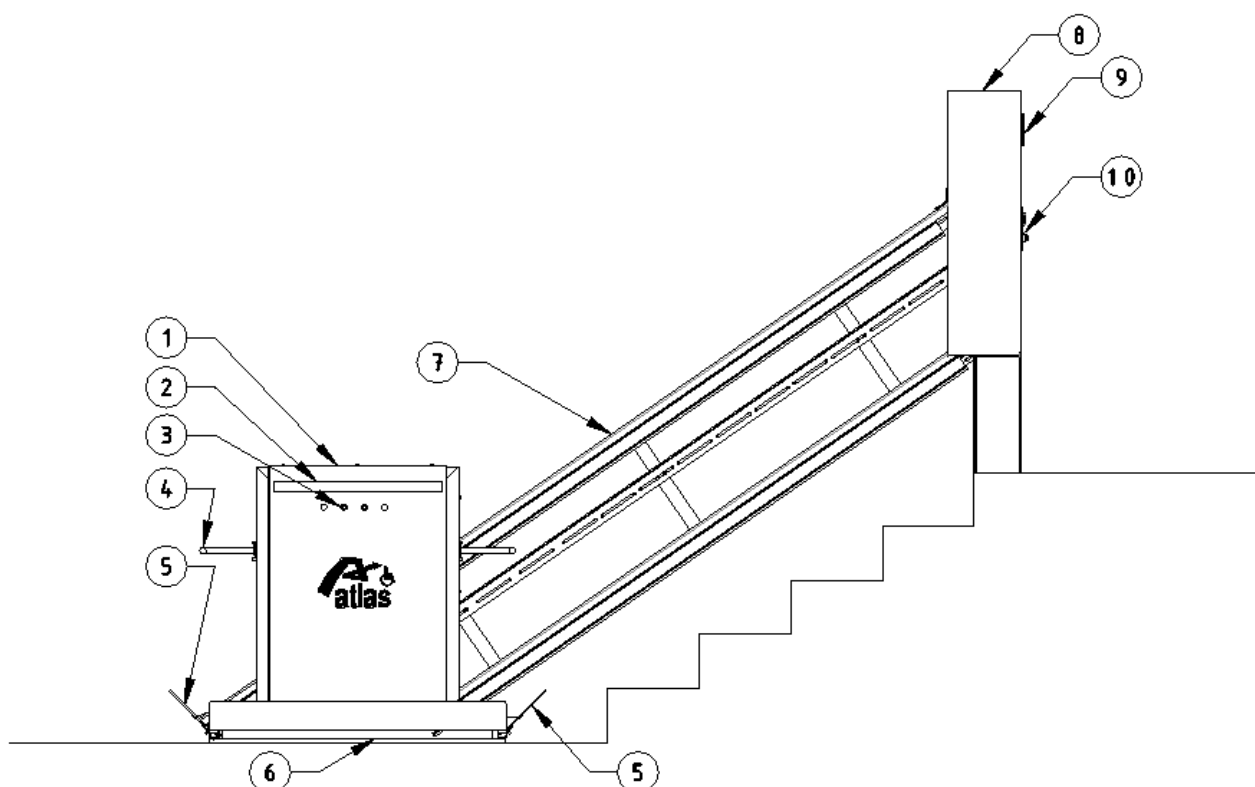
1. This document is dedicated to elevator technicians already trained on this kind of equipment.
2. Technical training must be attempted at Atlas before servicing any of their equipment.
3. Every components shall be provided by the lift manufacturer
4. Make sure to have all required parts and tools

### RATING PLATE

		<b>Les Escalateurs Atlas inc.</b> <b>www.atlasacces.com</b>	
MODEL	SERIAL	FAB	INST
<b>AC-105-CH</b>	<b>XXXX</b>	<b>XX/2015</b>	<b>XX/2015</b>
MAX LOAD / CHARGE MAX		SUSPENSION MEANS / ORGANE DE LEVAGE	
 <b>500 Lb</b>			
NOM SPEED / VITESSE NOM		ANSI B29.1	
 <b>19' /min</b>		CHAINE #50	RESISTANCE MIN
		<b>P=1/2"</b>	<b>6600 LB</b>
INSTALLER: INSTALLATEUR:		<b>LES ESCALATEUR ATLAS</b>	
		LA00114	

## MAIN COMPONENTS

- 1) PLATFORM
- 2) HAND RAIL
- 3) VEHICULE COMMANDS
- 4) SAFETY ARM
- 5) SAFETY FLAP
- 6) UNDER PAN
- 7) GUIDE RAILS
- 8) EMERGENCY MOVING DEVICE
- 9) CUT-OFF
- 10) TOP LANDIN CALL STATION

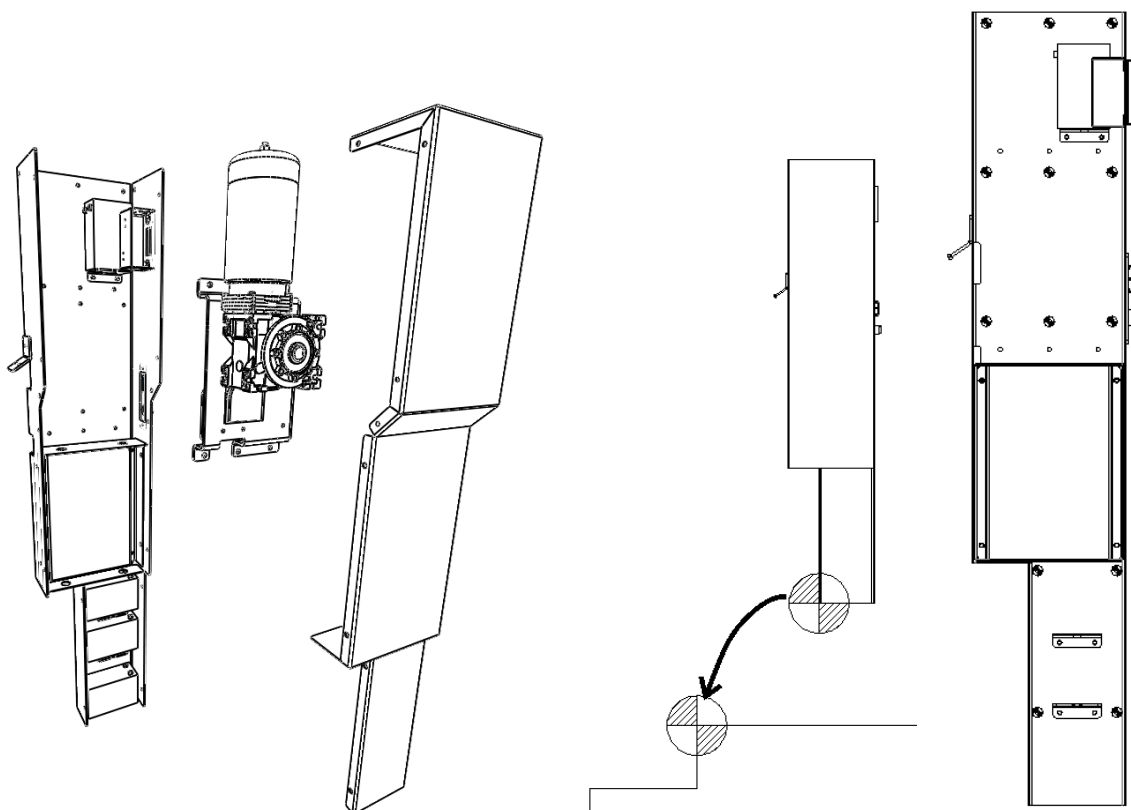


## GLOSSARY

<b>INSTALLATION .....</b>	<b>1</b>
<b>PRINCIPAUX COMPOSANTS .....</b>	<b>Erreur ! Signet non défini.</b>
<b>INSTALLATION DE LA COLONNETTE .....</b>	<b>Erreur ! Signet non défini.</b>
<b>INSTALLATION DES RAILS GUIDES.....</b>	<b>Erreur ! Signet non défini.</b>
<b>INSTALLATION DE LA PLATEFORME .....</b>	<b>Erreur ! Signet non défini.</b>
<b>BRAS DE SÉCURITÉ .....</b>	<b>Erreur ! Signet non défini.</b>
<b>PLANCHER .....</b>	<b>Erreur ! Signet non défini.</b>
<b>FINALISATION .....</b>	<b>Erreur ! Signet non défini.</b>
<b>PROCÉDURES INSPECTION .....</b>	<b>Erreur ! Signet non défini.</b>
<b>VÉRIFICATION AVANT MISE EN SERVICE .....</b>	<b>Erreur ! Signet non défini.</b>
<b>PROCÉDURE D'ESSAI DU PARACHUTE.....</b>	<b>Erreur ! Signet non défini.</b>
<b>DÉPLACEMENT EN CAS D'URGENCE .....</b>	<b>Erreur ! Signet non défini.</b>
<b>PROCÉDURE DE TEST DU CHARGEUR À BATTERIE .....</b>	<b>Erreur ! Signet non défini.</b>
<b>TEST DE PROTECTION EN CAS DE DÉFAILLANCE</b>	<b>Erreur ! Signet non défini.</b>
<b>ENTRETIEN.....</b>	<b>Erreur ! Signet non défini.</b>
<b>UTILISATION .....</b>	<b>Erreur ! Signet non défini.</b>
<b>AVERTISSEMENTS .....</b>	<b>Erreur ! Signet non défini.</b>
<b>Caractéristiques .....</b>	<b>Erreur ! Signet non défini.</b>
<b>Garantie.....</b>	<b>Erreur ! Signet non défini.</b>
<b>Principaux Composants .....</b>	<b>28</b>
<b>DÉPLACEMENT EN CAS D'URGENCE .....</b>	<b>Erreur ! Signet non défini.</b>
<b>Entretien Domestique.....</b>	<b>Erreur ! Signet non défini.</b>
<b>Utilisation .....</b>	<b>Erreur ! Signet non défini.</b>
<b>Déploiement .....</b>	<b>Erreur ! Signet non défini.</b>
<b>Obstacles .....</b>	<b>Erreur ! Signet non défini.</b>

## COLUMN INSTALLATION

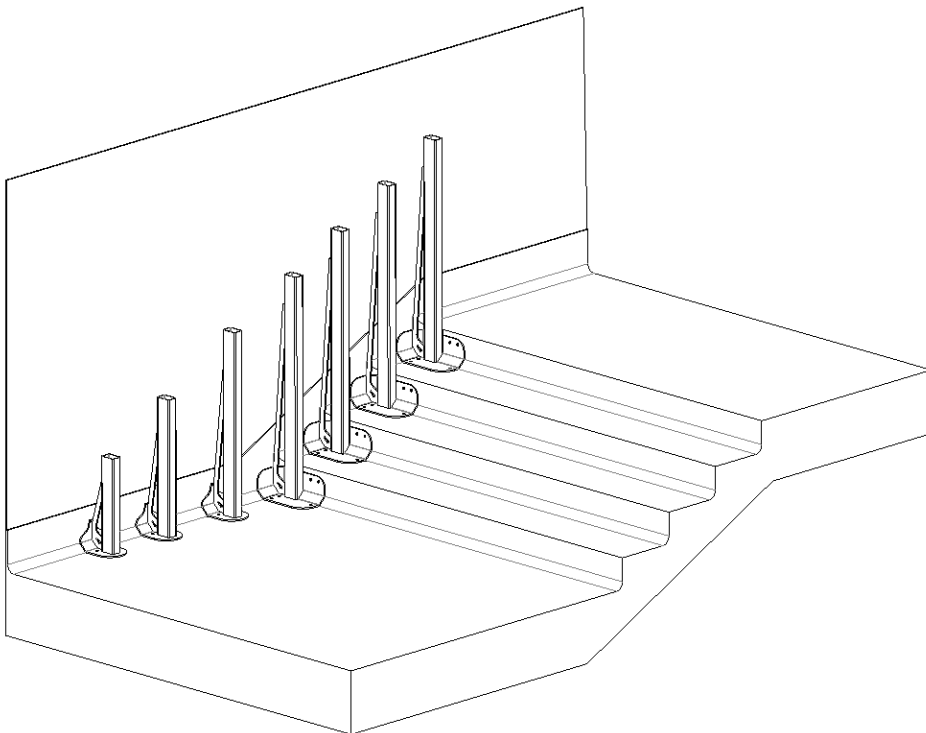
- a) Remove column front facia by removing perimeter.
- b) Remove the motor gearbox assembly.
- c) Locate column lower corner with the last step bullnose.
- d) Use no.12 wood screw for column anchoring.



## GUIDE RAILS INSTALLATION (SELF SUPPORTING)

If the adjacent wall is not strong enough to support the reactions stated in the installation drawing, it is feasible to install self supporting legs on each step. These legs shall be evenly distributed, the same way as the stud would be located in a standard wall. The maximum spand between 2 legs is 16''.

- a) Locate the legs on each step, plumb.
- b) Use all mounting holes
- c) Use only specified anchors on the installation drawing
- d) Use 1/4-20 UNC screw for rail mounting on the legs.

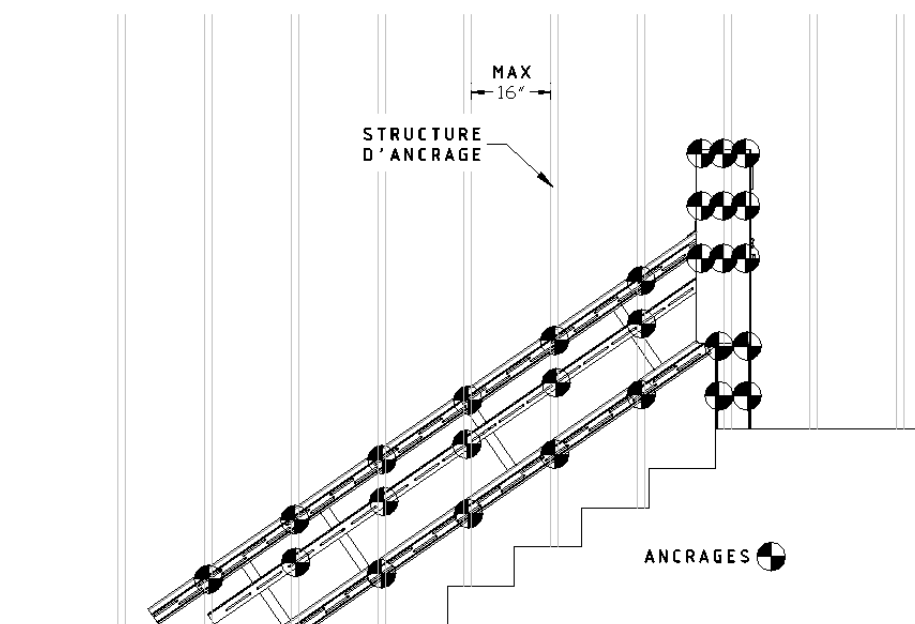
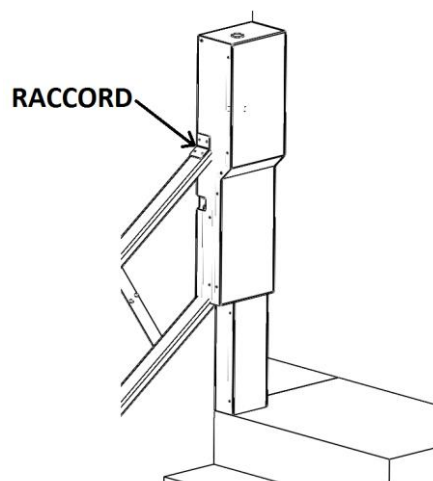


Anchors legs example

## GUIDE RAIL INSTALLATION (STUD WALL)

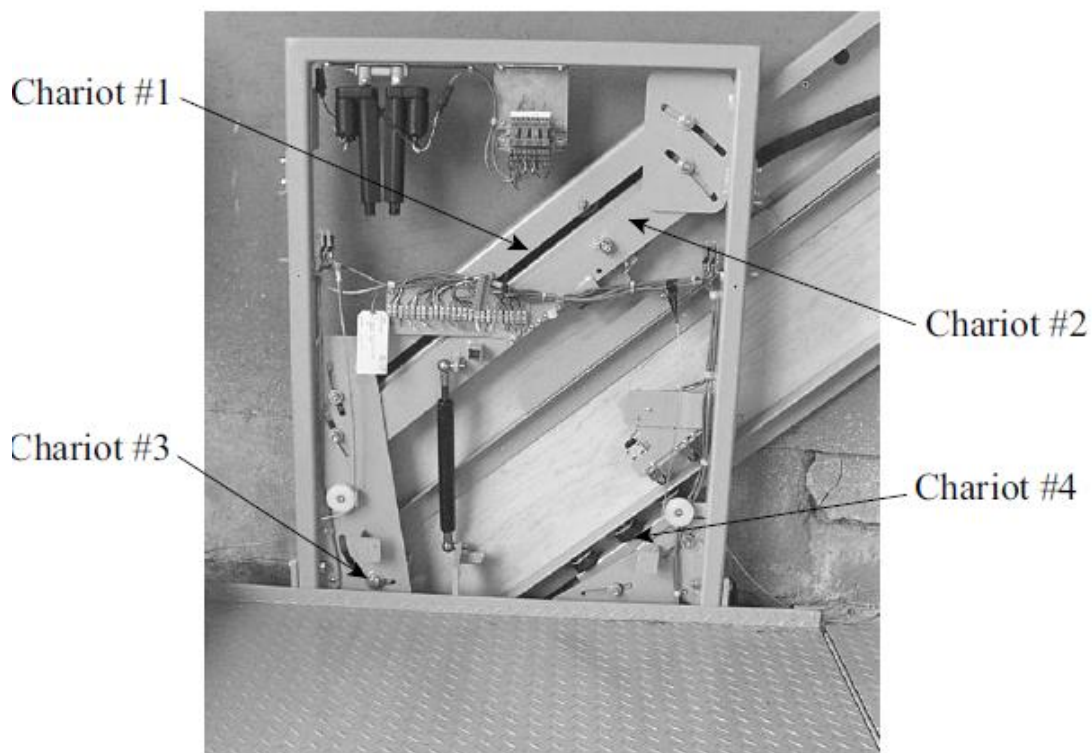
Guide rail will be shipped already assembled with spacers or screwed on plywood. The installer needs to join the column to the rail itself using the metal bracket "RACCORD" already installed on the column.

- Place the rail assembly on the wall
- Screw the rail "Raccord" to the upper rail end
- Locate anchoring structure in the supporting wall
- Screw each Rail into each anchoring structure
- Use only no.12 wood screw for wooden stud wall.
- Use only 1/4-20 UNC for steel structure.
- Reinstall metal covers



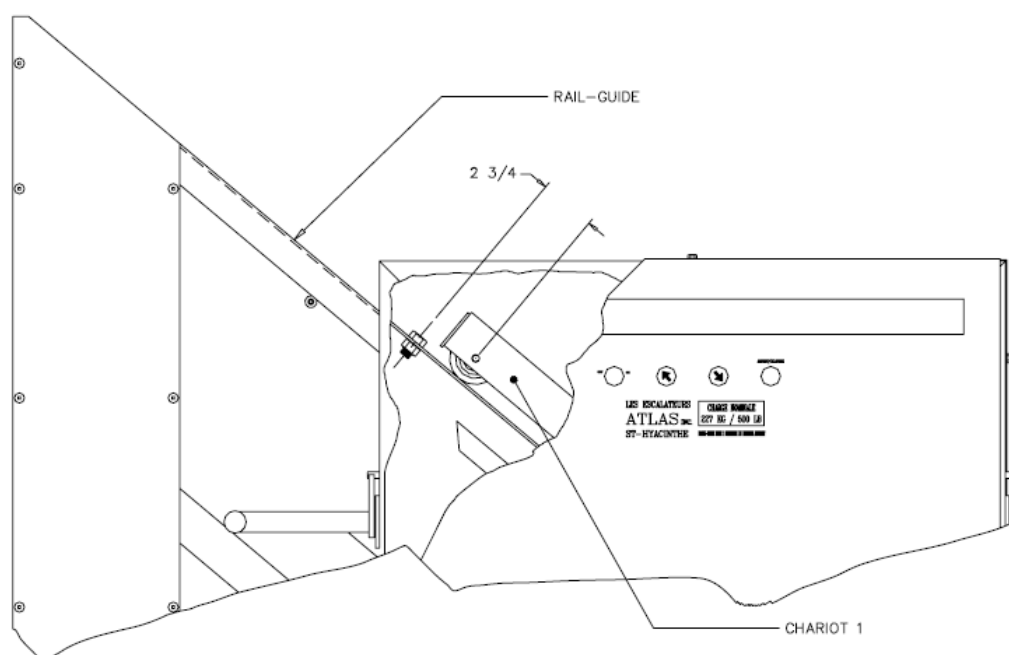
Anchoring Structure Example

## PLATFORM INSTALLATION



- a) Install platform on rail by inserting Chariot #2 in the rail. Make sure to leave about 1/8" gap between chariot #4 wheel bolts heads and the inside face of the rail.
- b) Slide in chariot #1 between back of platform and supporting wall
- c) Slide the bolts in the arc shaped slots
- d) Make sure all wheels are running on the rail surface, otherwise adjust chariot accordingly. Tight in place and add cotter pins on each bolt.
- e) Attach the lifting chain to the safety brake using the #50 quick link provided with the chain.
- f) Install the upper mechanical stop.
- g) Remove the brake lock screw. ( Front panel will not fit otherwise )
- h) Make all electrical connections as per schemes BEC03 9X9 au BEC04Z3





UPPER MECHANICAL STOP

## SAFETY ARMS



ARM JOINT

FLAP CABLE

- a) Install lower arm by using the provided bolts un the platform structure
- b) Install the (gas spring or linear actuator)\*\* on the lower arm lever
- c) Join the lower and upper arm in the arm joint
- d) Install the upper arm the same way the lower arm was installed
- e) Install the (gas spring or linear actuator)\*\* on the upper arm lever
- f) Install the flaps cables on both arms and adjust so those flats are more than 45° with the horizontal in the uppermost position.
- g) Adjust the arm switch in such way that electrical circuit is opened when one of the arms is more than 15° with the horizontal.

**\*\*NOTE:**

**MANUAL ACTION VEHICULE REQUIRE GAS SPRING**  
**AUTOMATIC ACTION REQUIRE LINEAR ACTUATOR**

## FLOOR

- a) Install the (gas spring or linear actuator)\*\* on the floor rocker
- b) Adjust the floor level with 1/2 nominal weight (250 LBS)
- c) Adjust all floor level switches so that a 15° will open the circuit

## \*\*NOTE:

MANUAL ACTION VEHICULE REQUIRE GAS SPRING  
AUTOMATIC ACTION REQUIRE LINEAR ACTUATOR

## FINALIZING

- a) Install the lower call station
- b) Rout the electrical power to the cut off
- c) Install screw covers on rails
- d) Install front platform cover

# INSPECTION AC-105-CH




## BEFORE SERVICING


- a) Run a safety brake functional test
- b) Check the alarm and E-stop while traveling
- c) Check the emergency lighting by cutting the main breaker off, not the cut-off.
- d) Check the underpan safety by lowering the platform and activate the circuit.
- e) Make sure Flaps are working fine, and that the platform will not move if flaps are down.
- f) Double check all structure bolts torques
- g) Run a safety test in case of failure
- h) Run a couple of complete travels of the elevator.

## SAFETY BRAKE TEST

- a) Jam the lowering of the vehicle with the means of a 2X4 stud about 1M long
- b) Lower the platform frame against the stud in order to create a chain loose
- c) Stay away from the platform trajectory and wipe out the stud with the means of a rope.
- d) Platform must stop in less than 60mm measured along the travel line.
- e) Chain must be still loose, meaning the brake really stopped the car.
- f) All command must be inhibited
- g) Use the manual moving device to lift the platform and release the safety brake.
- h) Rearm the safety brake and the manual reset safety switch
- i) Reset the controller

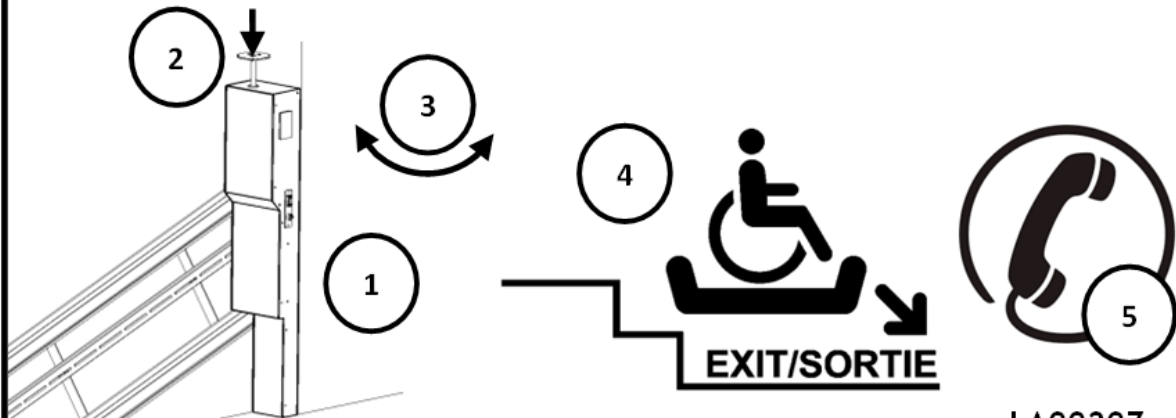
## MANUAL MOVING OF THE PLATFORM





### MANUAL LOWERING / DESCENTE MANUELLE

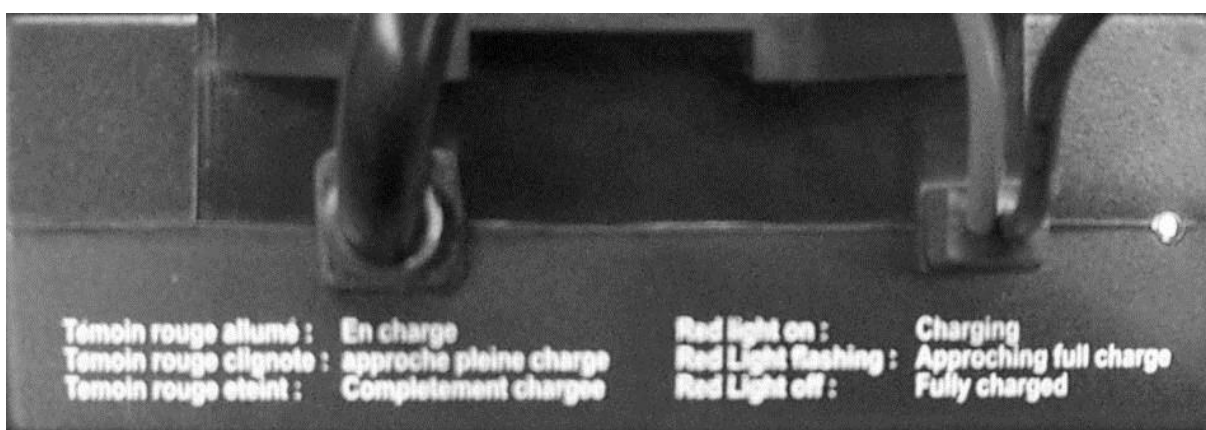
1. LOCATE THE CABINET / LOCALISER LE CABINET
2. INSERT HANDWHEEL / INSÉRER LE VOLANT
3. ROTATE AS SHOWN / TOURNER TEL QUE INDIQUÉ
4. STOP AT THE EXIT LEVEL / ARRÊTER AU NIVEAU DE LA SORTIE
5. CALL INSPECTION SERVICE / APPELER LE SERVICE D'INSPECTION



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## BATTERY CHARGER TEST PROCEDURE

- a) Unplug the charger unit from the 120Vac socket
- b) Run 5 complete travel in order to partially discharge the battery bank
- c) Make sure the electrical connections are connected such as the red terminal is on the positive electrode and the black on the negative terminal.
- d) Using an ampmeter, measure the charging current on the red wire.
- e) If current is over 1/2A, chargers are fine
- f) Once the battery are charged, the pilot light must remain off



## TEST PROCEDURE IN CASE OF FAILURE

This procedure explains how to test the protection in case of failure. This procedure must be followed only by certified technicians.



**DANGER:** THIS TEST PROCEDURE WILL CAUSE ELEVATOR MOVEMENT, SAFE SECURE HOISTWAY AND ADVISE EVERY PERSONS SURROUNDING THE PLATFORM.

**CONTACT ATLAS FOR CORRECTIVE ACTION IF TEST FAIL**



## MAIN CONTACTOR C1

- a) Install a min 18AWG jumper between terminal 60 and 68. This will apply 24Vdc directly on the C1 coil
- b) After 1.5 sec, the controller will code a fault. The indicator for output A will become negative image.
- c) Remove the jumper between terminal 60 and 68
- d) Reset the controller by pressing the Z4 button
- e) Connect one end of a jumper to the terminal 60
- f) Call for an upper landing, connect the other end of the jumper to the terminal 68 and press the E-Stop.
- g) Lift should stall immediately
- h) Remove jumper between terminal 60 and 68
- i) Reset the controller by pressing the Z4 button
- j) Disconnect the wire from terminal 65
- k) Call for an upper, or lower landing
- l) Lift should stall about ½ second after the beginning of the movement
- m) Reconnect wire to terminal 65
- n) Reset the controller by pressing the Z4 button

### **UP CONTACTOR ( M1 )**

- a) Install a min 18AWG jumper between terminal 60 and 67. This will apply 24Vdc directly on the M1 coil
- b) Call for an upper landing, after 1.5 sec, the controller should code à fault
- c) Reset the controller by pressing Z4 on the PLC
- d) Call for an upper landing and press the CAB E-stop, Lift should stall immediately.
- e) Reset the controller by pressing Z4 on the PLC
- f) Call for an upper landing and activate the upper safety flap the same way it would hit an obstacle by moving upward.
- g) Lift should stall and code à fault
- h) Remove jumper between terminals 60 and 67.
- i) Reset controller by pressing Z4 on the PLC
- j) Remove wire from terminal 64
- k) Call for an upward move , lift should stall after 0.5 sec, and code a fault
- l) Reset controller by pressing Z4 on the PLC
- m) Reconnect wire to terminal 64
- n) Reset controller by pressing Z4 on the PLC

## **DOWN CONTACTOR (M2)**

- a) Install a min 18AWG jumper between terminal 60 and 66. This will apply 24Vdc directly on the M2 coil
- b) Call for an lower landing, after 1.5 sec, the controller should code à fault
- c) Reset the controller by pressing Z4 on the PLC
- d) Call for a lower landing and press the CAB E-stop, Lift should stall immediately.
- e) Reset the controller by pressing Z4 on the PLC
- f) Call for a lower landing and activate the upper safety flap the same way it would hit an obstacle by moving downward.
- g) Lift should stall and code à fault
- h) Remove jumper between terminals 60 and 66.
- i) Reset controller by pressing Z4 on the PLC
- j) Remove wire from terminal 63
- k) Call for an downward move , lift should stall after 0.5 sec, and code a fault
- l) Reset controller by pressing Z4 on the PLC
- m) Reconnect wire to terminal 63
- n) Reset controller by pressing Z4 on the PLC

## GROUNDING

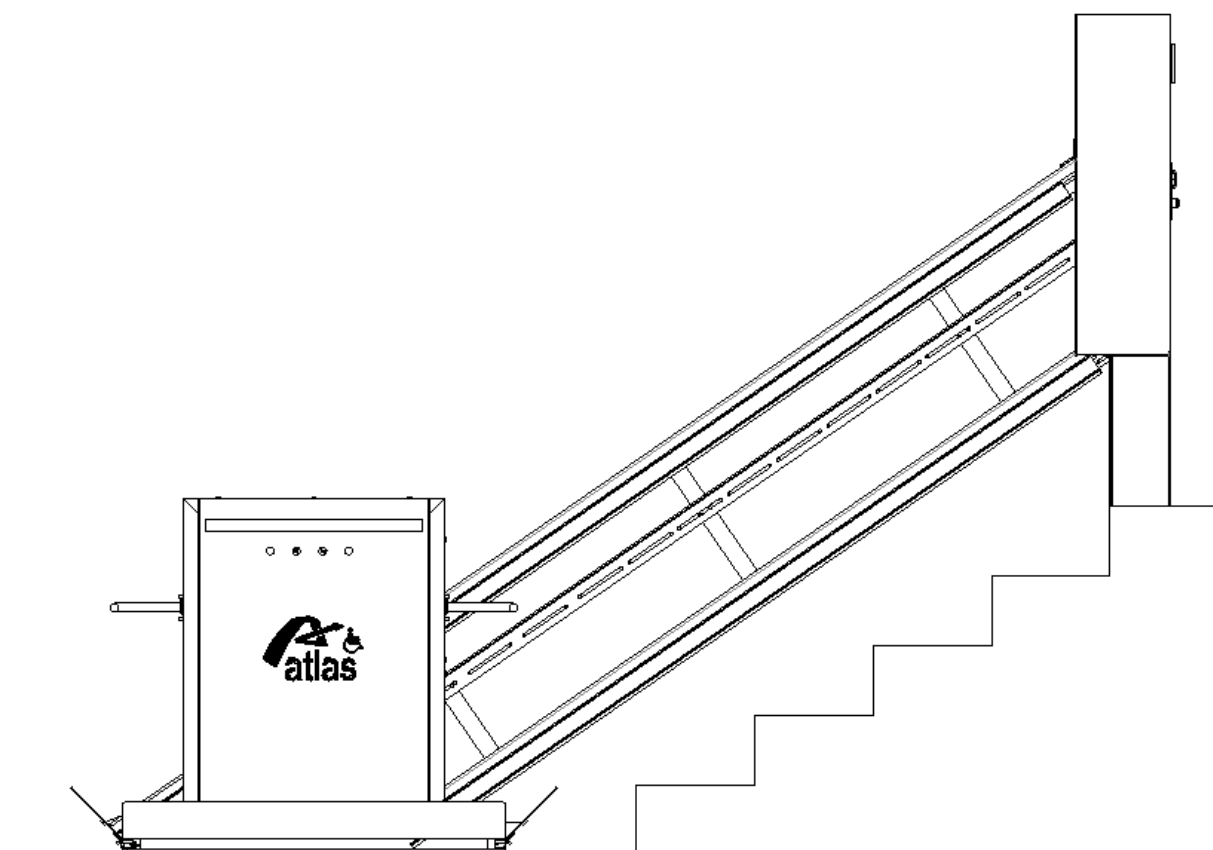
This test will prove that over current protection devices are working fine and will protect the electrical equipment in case of short circuit. Connect the negative terminal from an ohmmeter to the negative terminal of the battery bank. Measure electrical resistivity between battery negative terminal and:

- ✓ Electrical enclosure mounting plate
- ✓ Ternimanl 61 into each contrôller
- ✓ Metallic points around each switch
- ✓ Metallic points around call station
- ✓ Ruide Rails
- ✓ Platform frame
- ✓ Underpan
- ✓ Flap
- ✓ Column

**Each meausre must be under  $0.3\Omega$**

# MAINTENANCE

## AC-105-CH



## **BIANNUAL MAINTENANCE**

### **CAB**

- ✓ Commands buttons are in good shape
- ✓ Adjust level switches
- ✓ Check ultimate limits switch
- ✓ Check emergency lighting
- ✓ Check floor movement and limit switches ( Cut over 15°Deg )
- ✓ Check safety arms movement and limits switches ( Cut over 15°Deg )
- ✓ Check safety flaps movements and limits switches ( Cut under 45°Deg )
- ✓ Check if phone is working properly
- ✓ Make a safety brake test
- ✓ Test E-Stop in motion, lift should stall immediately and chime should be heard.

### **UNDER PAN**

- ✓ No foreign debris is located inside the underpan
- ✓ Underpan is free of movement in any direction
- ✓ Check and test all safety switches

**BOGGY**

- ✓ Check the chain connecting link on safety brake
- ✓ Check tightening torque on guide wheels 3/8-16 NC at 23 lbft
- ✓ Check for undesirable noise and/vibration
- ✓ Vérifier le bon état de la maille de raccord de la chaîne
- ✓ Serrage des boulons de roues 3/8-16 NC à 23 LBxPI

**COLLONETTE**

- ✓ Inspect lifting chain
- ✓ Inspect chain drive pignon
- ✓ Inspect chain guide and change if any wear can be seen
- ✓ Inspect controller general condition, cleanness, no modification
- ✓ Cleanness of power contactor contacts
- ✓ Battery terminal ( No corrosion )
- ✓ Battery Bank ( No Leak )
- ✓ Battery are not swollen
- ✓ Check call station functionality
- ✓ Make a cab command priority test
- ✓ Remove any foreign debris in the chain compartment
- ✓ Make a test of protection in case of failure
- ✓ Test the manual lowering device

# USER MANUAL

## AC-105-CH





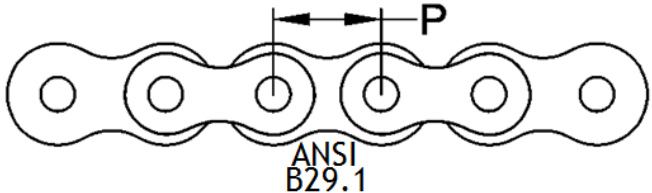



# WARNING



- This is not a dumbwaiter
- This is not an amusement ride
- This is not a rollercoaster
- This unit is dedicated to be used only by people in a wheelchair
- Never overload this lift
- Do not use in case of emergency
- Do not use in case of flooding
- This unit is not dedicated to be used in a humid place
- Kid should not use this lift unless it is a pediatric dedicated unit
- Never go under the lift
- Never modify the lift without the manufacturer approval
- Any modification on the stair shaft is prohibited after lift installation
- Never try to repair the lift by yourself
- A biannual maintenance is recommended for a safe use of the lift.

# RATING PLATE

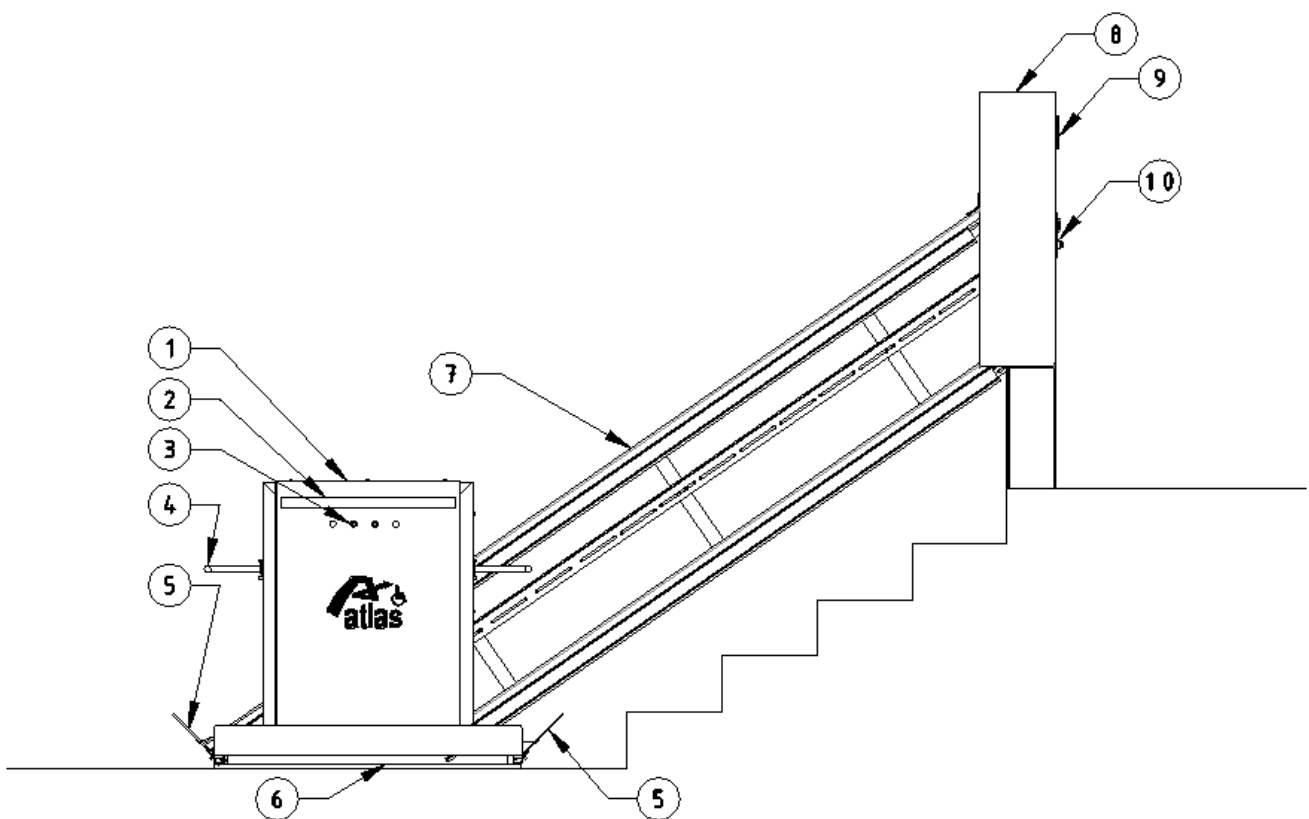
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MAX LOAD / CHARGE MAX  <b>500 Lb</b>		SUSPENSION MEANS / ORGANE DE LEVAGE 	
NOM SPEED / VITESSE NOM  <b>19 '/min</b>		CHAINE #50 <b>P=1/2"</b>	RESISTANCE MIN <b>6600 LB</b>
INSTALLER: INSTALLATEUR:		<b>LES ESCALATEUR ATLAS</b>	
		LA00114	

# Warranty



The inclined lift AC-1005-CH is warranty for a period of one year after commissioning. This warranty covers parts and labour for any manufacturing defect or failure under a normal use of the lift. This does not cover warranty of merchantability for a specific use or need. Customer and ergo therapist are responsible to ensure this unit suit the needs of the limited mobility user. Also, Architect and building engineer are responsible to ensure this unit suit the building code and structure strength. Always try disable lift before purchasing, any order is assumed to be in conformity with local building codes and will be delivered as ordered. Dealers and installers are responsible to collect all permits before starting the installation.

# Principaux Composants

- 1) PLATFORM
- 2) HAND RAIL
- 3) VEHICULE COMMANDS
- 4) SAFETY ARM
- 5) SAFETY FLAP
- 6) UNDER PAN
- 7) GUIDE RAILS
- 8) EMERGENCY MOVING DEVICE
- 9) CUT-OFF
- 10) TOP LANDIN CALL STATION

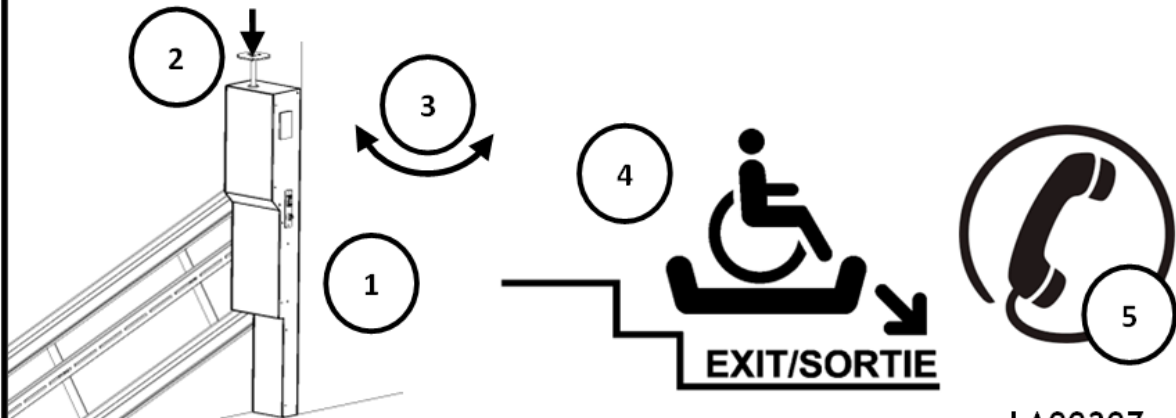


## MANUAL MOVING OF THE PLATFORM



### MANUAL LOWERING / DESCENTE MANUELLE

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# DOMESTIC MAINTENANCE

- Do not attempt mechanical maintenance or modification
- Do not add or remove lubricant on any part of the installation
- Any defect should be reported to the installer
- Clean painted parts with the means of a soft soap and cloth
- It is allowed to use automotive wax and shine on painted surface
- The best maintenance you can do is to keep your lift clean
- Clean rails as often as possible in order to prevent dust accumulation on guide wheels.

# USE

- Call the lift by using the call station
- Unfold the floor
- Roll on the lift with your wheelchair facing front
- Put your parking brake on your wheelchair
- Unfold safety arms
- Use the commands to reach the other landing
- Hold until the vehicle has reached the other landing
- Open the safety arm
- Leave the lift
- Fold the floor back to the wall to free the staircase

# FLOOR UNFOLD

(Electrical)

The AC-105-CH is available with an electric action of the floor and safety arm. Usually the floor and arm must be unfolded manually, but in some case it is too difficult for the user depending on its disability. The electrical option is using the same commands for all operations. Any commands asking for a move beyond the travels limits will activate the floor and arm.

- A command to the other landing of a folded lift will unfold the lift for boarding.
- A command to the current landing will fold the floor and arm along the supporting wall.

# SAFETY EDGES

The AC-105-CH is equipped with safety edges sensors. In the event of a contact with any object along the travel, the lift should stall this motion and allow for a backward movement of the lift. This mean the user will be able to free the obstruction. The first thing to do in the event of an irresponsive lift is to check all safety edges, and free any obstruction.