Kalliotis Lift
Doors + Cabins

Technical Installation Manual 2-Panel Automatic Central Opening Doors

2013

General Information

The ACL Central Opening 2 Panel Automatic Door is designed and manufactured by Kalliotis Elevators Company. Kalliotis Doors companied High Standard Quality ,High Efficiency and Low cost Maintenance. Our range of Doors comply with E.U council directive 95/16/EC Norms EN81-1 y EN81-2

Contact Information

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Technical Data which make our Doors Successful

- Smart Encoder attached on the DC Motor: Gives the ability to control the Door at any Point.
- Efficient and reliable Board Control **AUDO.100** for movement of the Door.
- Doors are set up without the use of an extra programmer. Any change may need by the client is done straight from Board Control **AUDO.100**
- Easy and fast installation with the advantage of low need of maintenance is a must for our products.
- Built Up Evacuation on the Board Control **AUDO.100**
- Door Returns back when on its movement there is a Obstacle
- Built On Light Curtain or Photo cell (single or double) on the Board Control **AUDO.100**
- The sensor is common for the evacuation.

CAR DOOR

The Panels are made of steel DKP 1.25mm thickness with extra reinforcement to provide stability and resistance for major impacts. The movement of the Panels is on aluminum guide. The Paint is made with ANTIRUST POWDER H / B RAL 7010

Car Door Operator

All the movement of the Panels (Open-Close) is controlled by electronic and the mechanism is working with a Motor controlled by the Board Control **AUDO.100** the user can adjust the speed (Open-Close) of the Panels.

Open Range Adjustment (200……1000mm/s)

Close Range Adjustment (150…….600mm/s)

The maximum acceleration range is from 800 to 1500 mm / s2.

In case of power failure recharged batteries are placed in the mechanism for evacuation.

Passenger Protection is taking place with the light curtain and the photocell (single or double) and with the Obstacle Movement (electronically controlled and adjustable 80 ... 180 Nw). Board Control **AUDO.100** of the Automatic Door is regulated direct by buttons without the use of an extra programmer. Movement and Control of the is done electronic by the encoder and not mechanic which minimize damages deviations in the operation.

LANDING DOOR

Landing Door Frame

Is Manufactured by Steel DKP 1.25mm thickness and the paint is ANTIRUST POWDER H / B RAL 7010

Landing Door Panels

The Panels are made of steel DKP 1.25mm thickness with extra reinforcement to provide stability and resistance for major impacts. The movement of the Panels is on aluminum guide. The Paint is made with ANTIRUST POWDER H / B RAL 7010

Landing Door Operator

The Landing Door Operator includes all the necessary security locks and locking contacts which applied from E.U council directive 95/16/EC Norms EN81-1 y EN81-2

Casing of Automatic Door

The cover of the Automatic Door is done by Stainless Steel 0.8 mm thickness

All the manufacturing of the Automatic Doors complies with the instructions of E.U council directive 95/16/EC Norms EN81-1 y EN81-2

Electrical Specifications

Power supply: 20-24V AC motor Nominal voltage: 24V DC

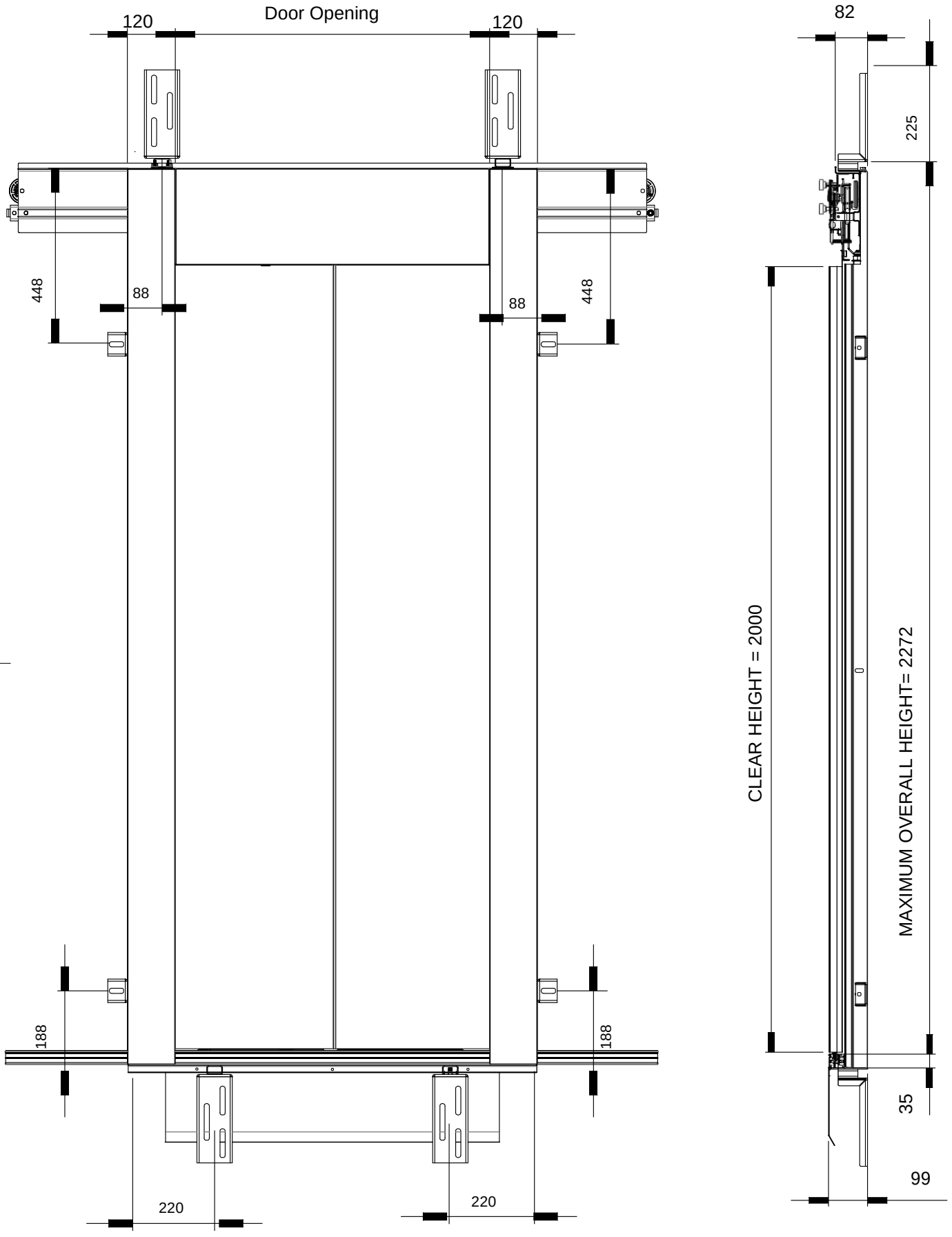
Maximum FORCE motor: 100W (0.134HP)

Maximum current (Plaque + Engine Engine): 5A

Nominal Battery Voltage: 24V

Maximum load BATTERY: 1,5 Ah

Power supply encoder: 5V



	ΟΝΟΜΑΤΕΠΩΝΥΜΟ	ΥΠΟΓΡΑΦΗ	ΗΜΕΡ.
ΣΧΕΔΙΑ.	Σταματιου Θ.		
ΕΛΕΓΧ.	Σταματιου Θ.		

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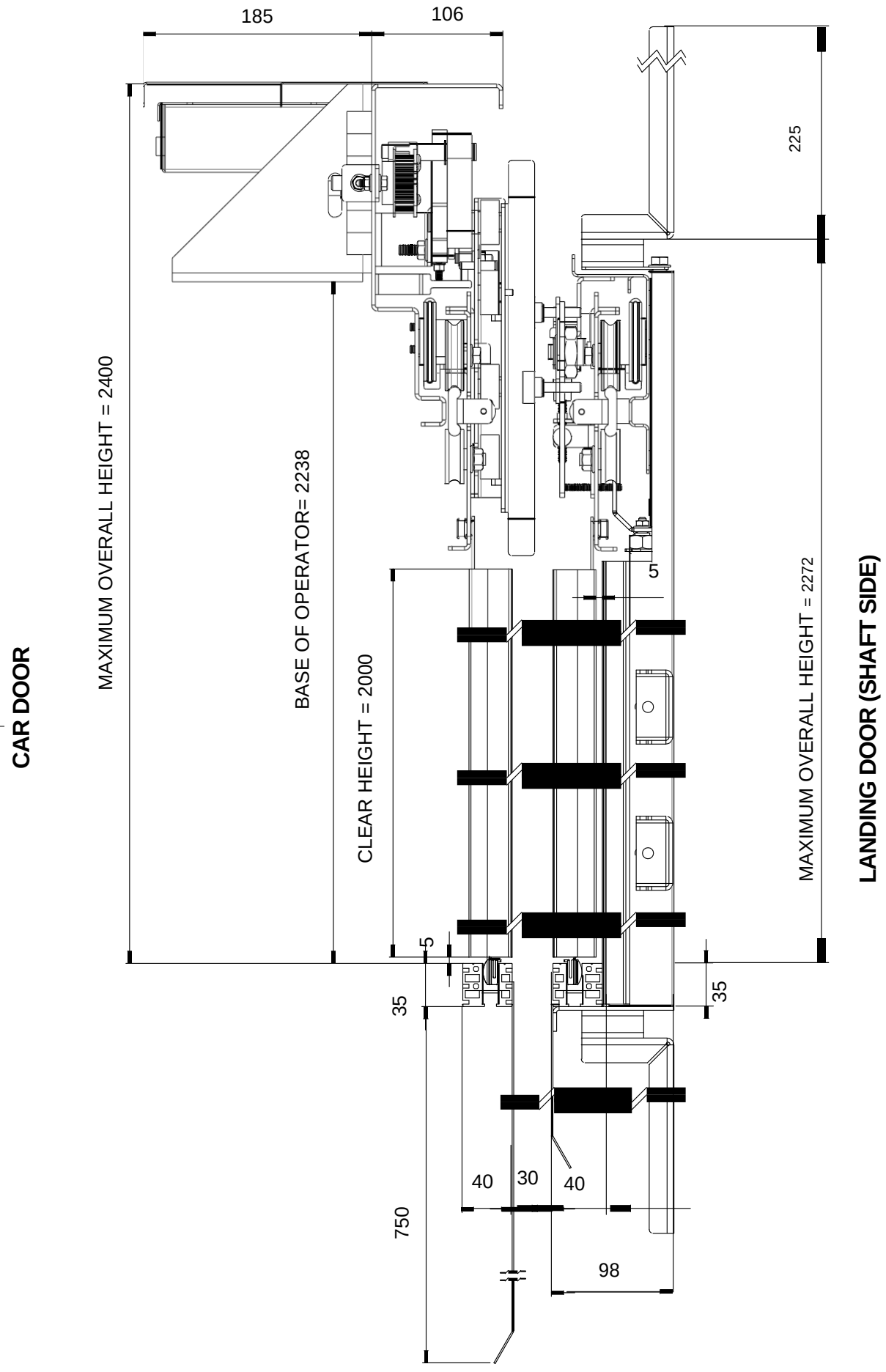
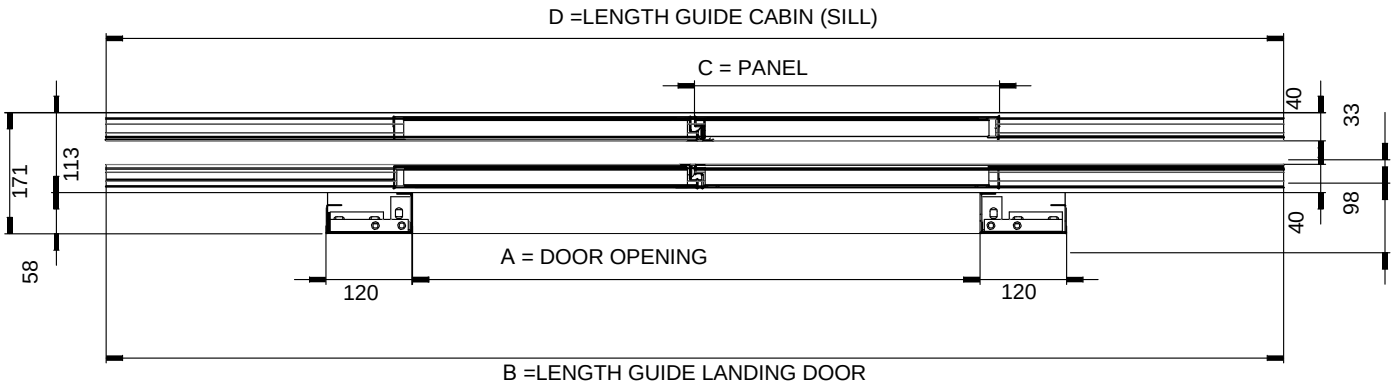
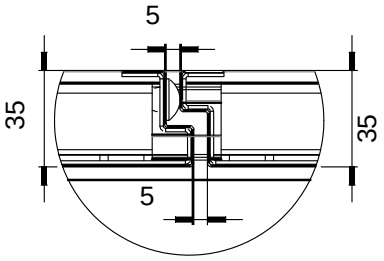
TYPE	2-PANEL CENTRAL OPENING DOOR
Drawing:	Dimensions 2PANEL CO
ΚΩΔΙΚΟΣ	ACL.2C
Dimensions on : mm	scale:

A4



	ΟΝΟΜΑΤΕΠΩΝΥΜΟ	ΥΠΟΓΡΑΦΗ	ΗΜΕΡ.	Kalliotis Lift Doors+Cabins 17 Klm Thessalonikis-Poligirou P.C 57001 PO Box 60640 T:+302310466454, F:+302310466533 www.kalliotis.gr e-mail:kalliotislift@yahoo.com	ΚΑΤΗΓΟΡΙΑ 2Φ κεντρικη	
ΣΧΕΔΙΑ.	Σταματιου Θ.				ΤΙΤΛΟΣ ΣΧΕΔΙΟΥ: Dimensions 2PANEL CO	A4
ΕΛΕΓΧ.	Σταματιου Θ.				ΚΩΔΙΚΟΣ	
					Διαστασεις σε: mm	ΚΛΙΜΑΚΑ:





(A) DOOR OPENING	(B = D) Length Guide (landing-cabin) (Sill)	(C) Panel Width
600	1260	330
650	1360	355
700	1460	380
750	1560	405
800	1660	430
850	1760	455
900	1860	480
950	1960	505
1000	2060	530
1050	2160	555
1100	2260	580
1150	2360	605
1200	2460	630
1250	2560	655
1300	2660	680
1350	2760	705
1400	2860	730
1450	2960	755

(A) Door Opening	(B = D) Length Guide (landing-cabin) (Sill)	(C) Panel Width
1500	3060	780
1550	3160	805
1600	3260	830
1650	3360	855
1700	3460	880
1750	3560	905
1800	3660	930

	ΟΝΟΜΑΤΕΠΩΝΥΜΟ	ΥΠΟΓΡΑΦΗ	ΗΜΕΡ.
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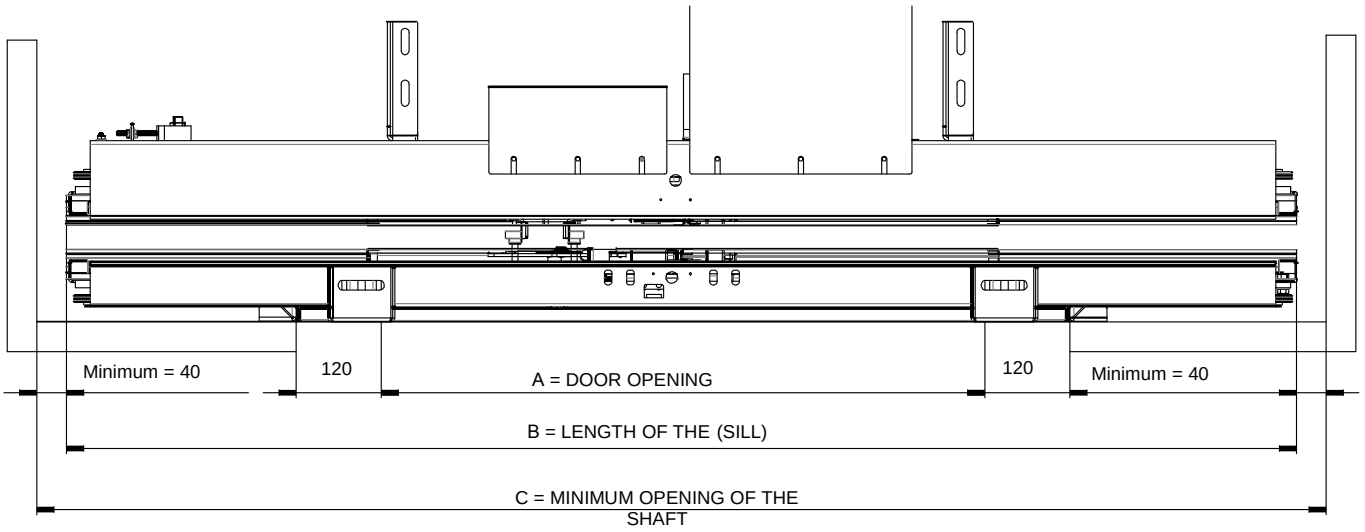
ΚΑΤΗΓΟΡΙΑ 2Φ κεντρικη

ΤΙΤΛΟΣ ΣΧΕΔΙΟΥ: Βασικες διαστασεις 2Φ κεντρικης

A4

ΚΩΔΙΚΟΣ

Διαστασεις σε: mm



(A) Door Opening	(C) Minimum-Shaft Opening
600	1340
650	1440
700	1540
750	1640
800	1740
850	1840
900	1940
950	2040
1000	2140
1050	2240
1100	2340
1150	2440
1200	2540
1250	2640
1300	2740
1350	2840
1400	2940
1450	3040
1500	3140

(A) Door Opening	(C) Minimum-Shaft Opening
1550	3240
1600	3340
1650	3440
1700	3540
1750	3640
1800	3740

	ΟΝΟΜΑΤΕΠΩΝΥΜΟ	ΥΠΟΓΡΑΦΗ	ΗΜΕΡ.
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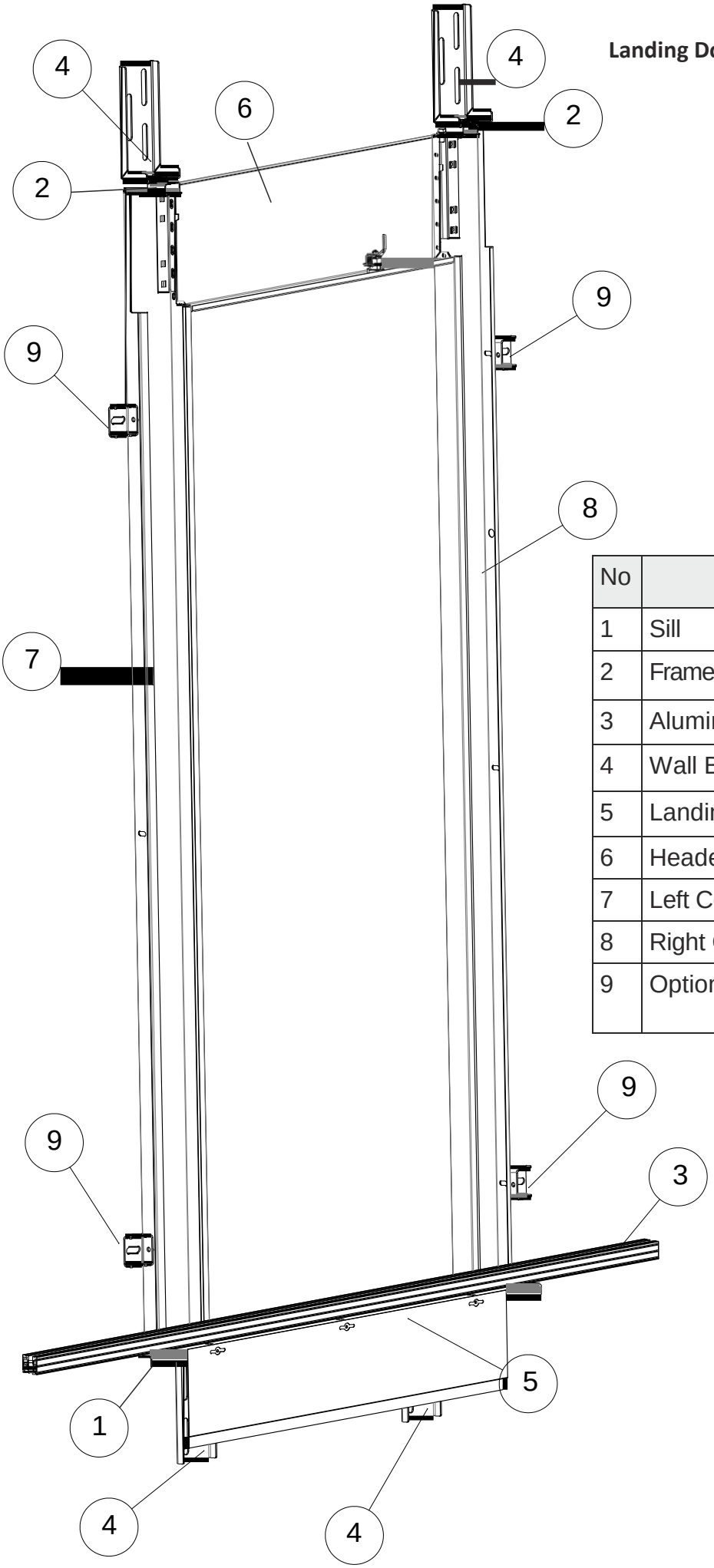
ΚΑΤΗΓΟΡΙΑ 2PANEL CENTRAL OPENING

ΤΙΤΛΟΣ ΣΧΕΔΙΟΥ: Dimensions 2PANEL CO

A4

ΚΩΔΙΚΟΣ

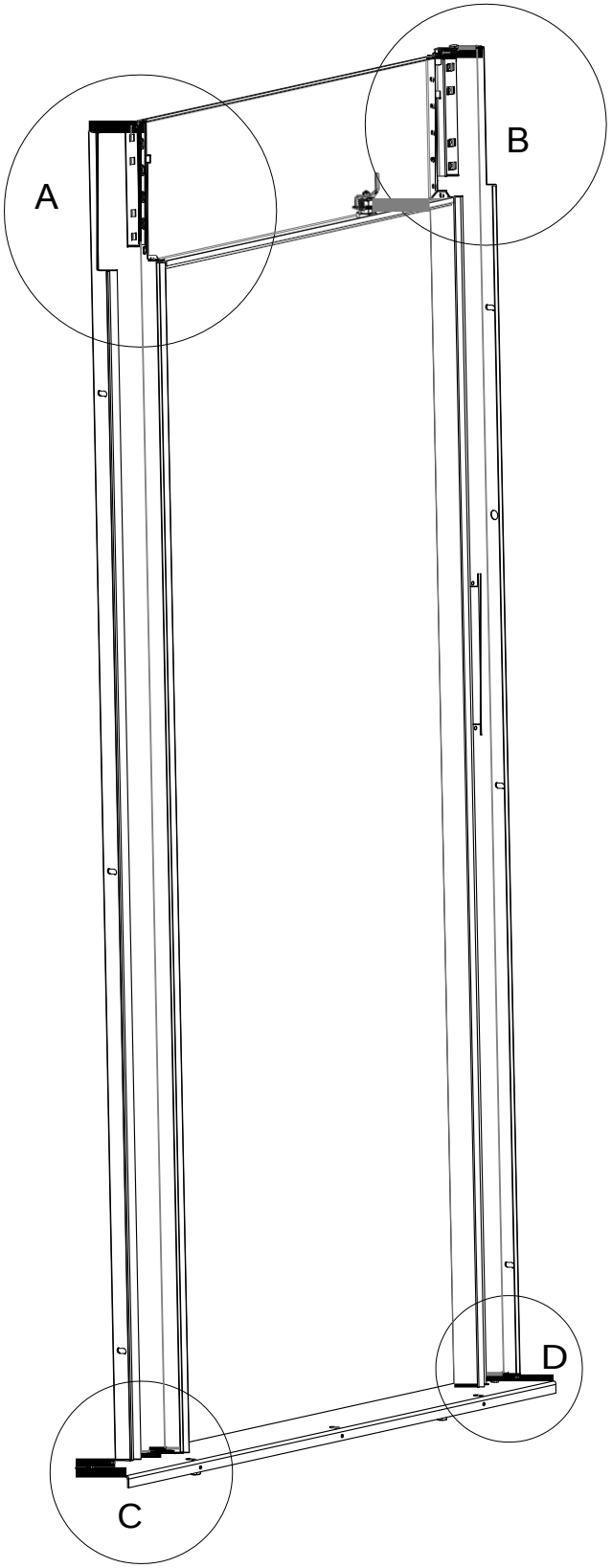
Landing Door Frame Installation (2-Panel CO)



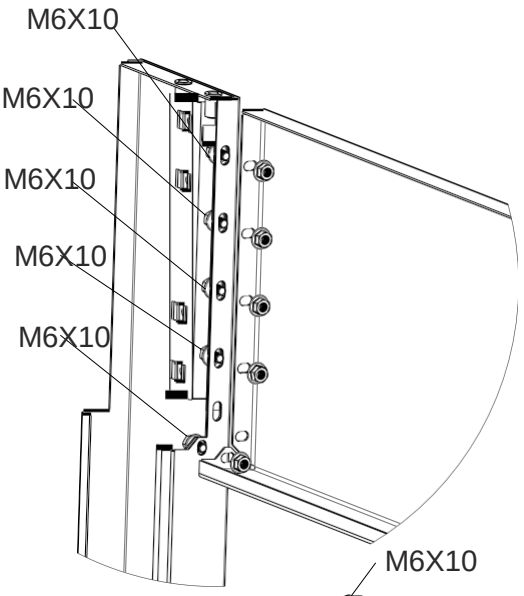
No	PARTS	Τεμ.
1	Sill	1
2	Frame Bracket	4
3	Aluminum (sill) Guide 2-PANEL CO	1
4	Wall Brackets Support	4
5	Landing Door Apron	1
6	Header	1
7	Left Central Frame -2-PANEL CO	1
8	Right Central Frame -2 PANEL CO	1
9	Optional Side wall Brackets	4

Landing Door Assembly 2-PANEL CO

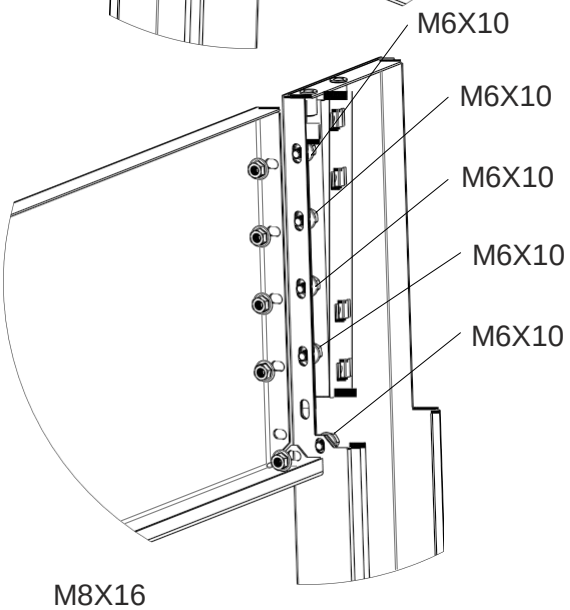
Connect **Left central Frame** (No 7) and the **Right Central Frame** (No 8)
With **Header** (No 6) according the drawing A and B. We proceed by connecting the Frame (No 7 και No 8)
With the Sill(No1) according Drawings C και D.



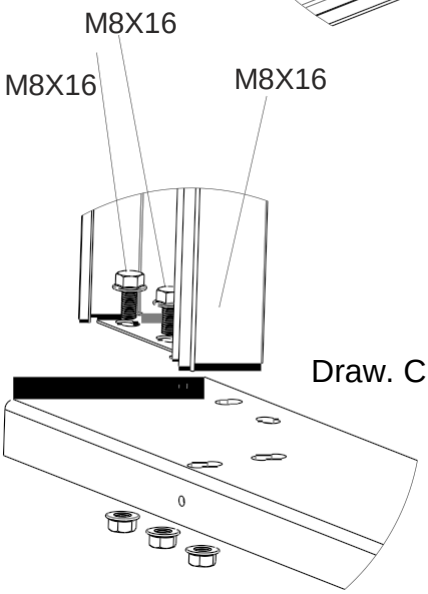
DRAW.A



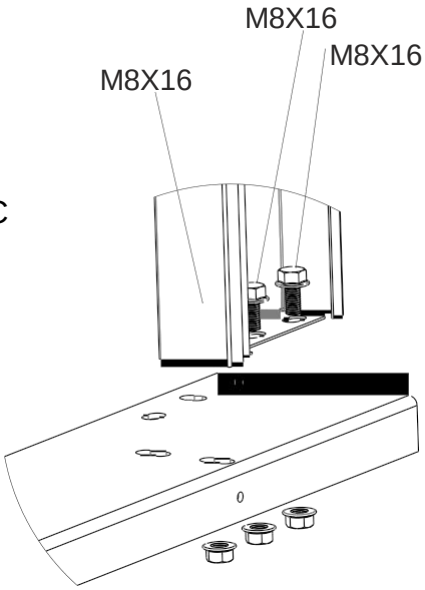
DRAW. B



Draw. C

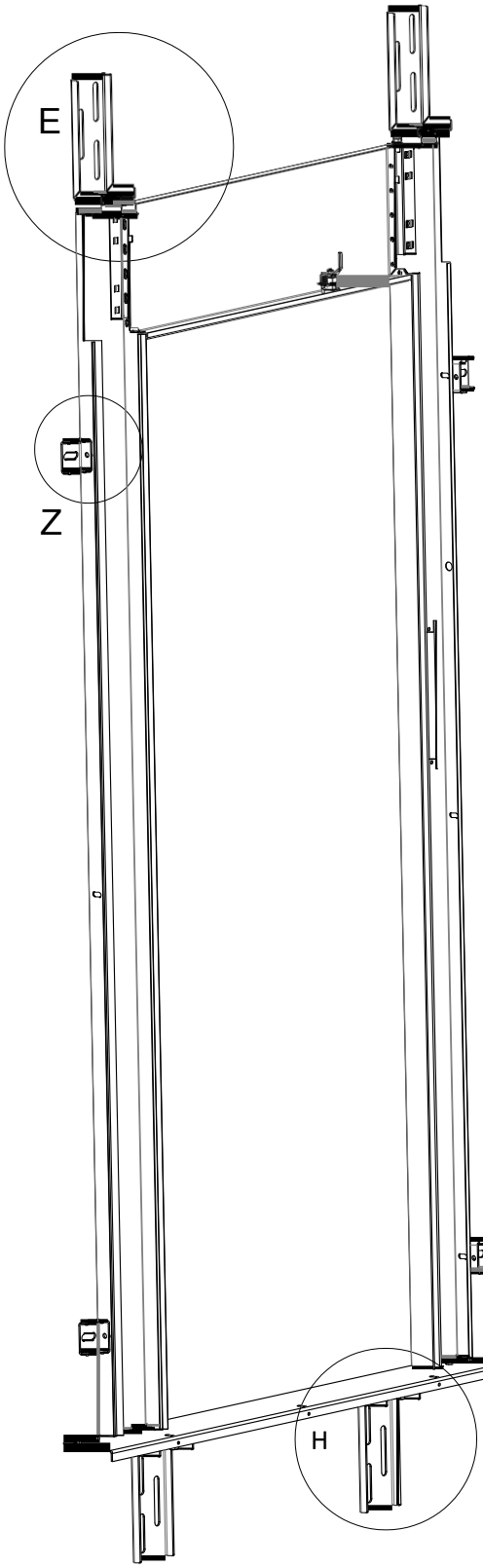


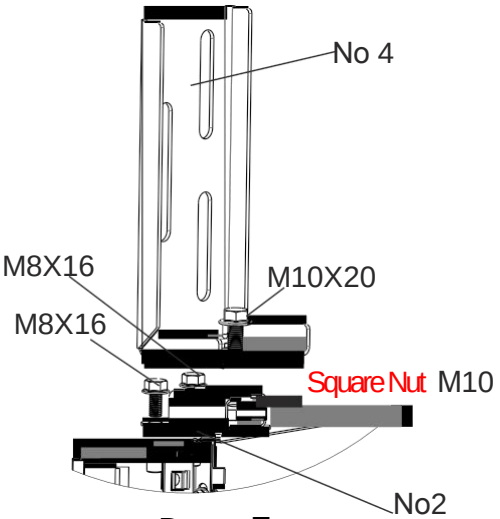
Draw.D



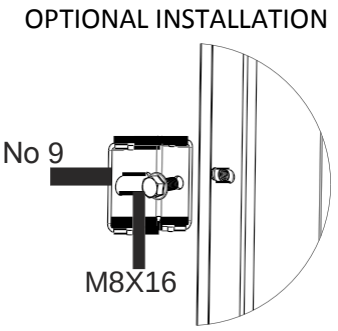
Landing Door Installation

Connect Frames (No 7 και No 8) with brackets (No 2) on we connect the wall brackets (No 4). Brackets (No 2) we found them on the top of each Frame and we mount them also the same to those they are on the down side and they are welded on the Sill (No 1).Assembly according Plans E και H . Wall Bracket on the side (No9) their installation is optional. Draw Z

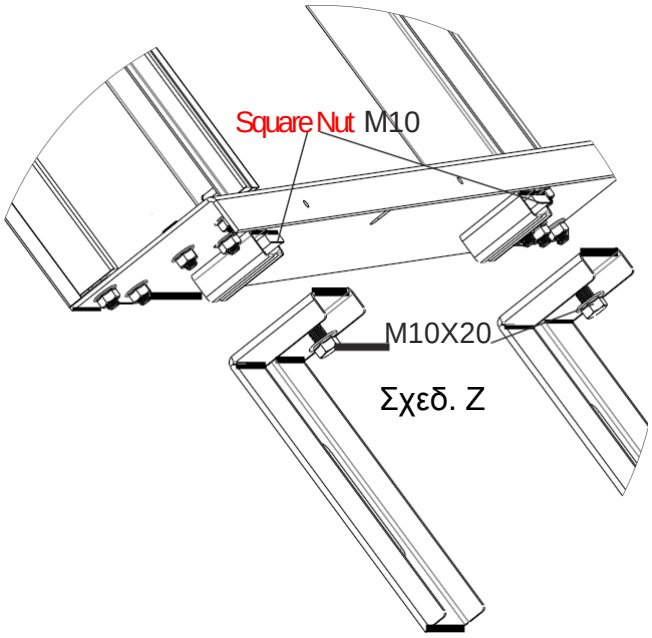




Draw. E



Σχεδ. Z

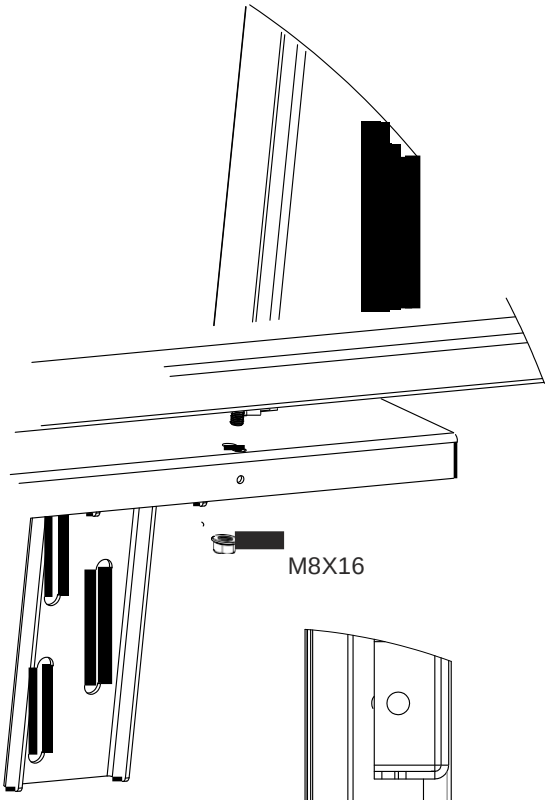


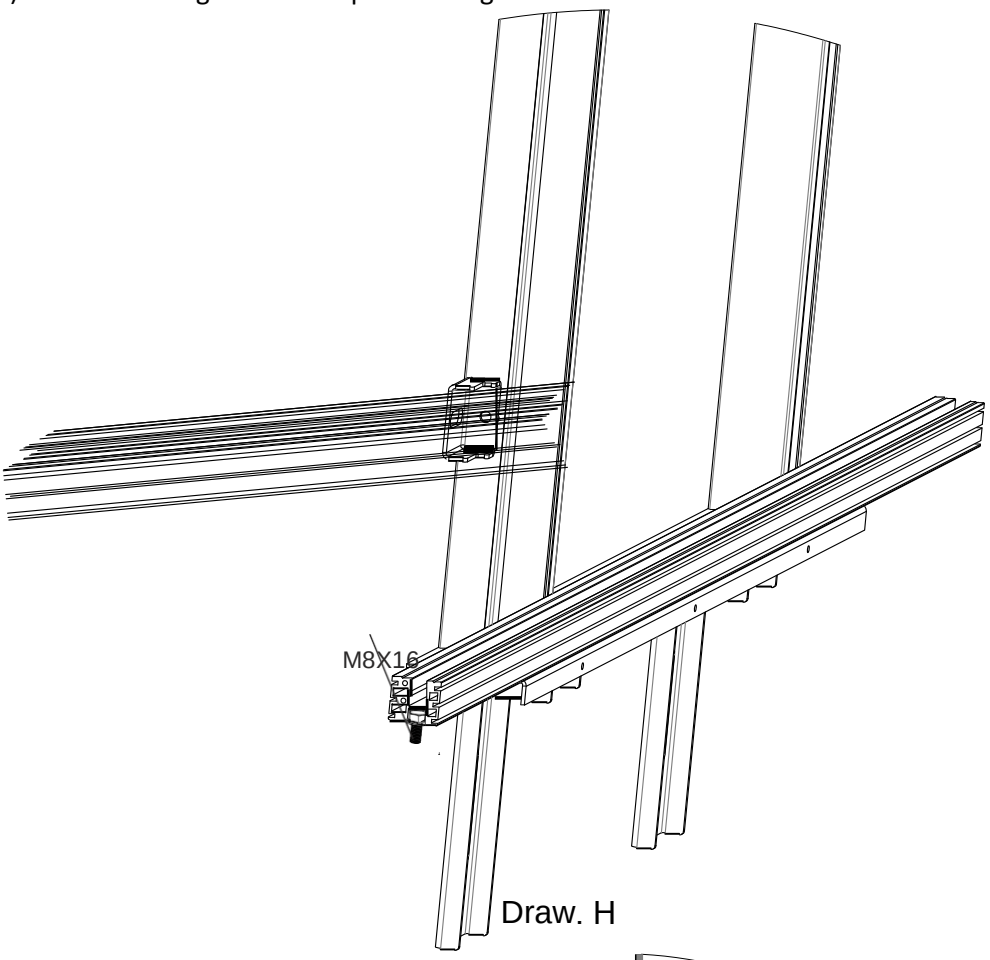
Σχεδ. Z

Installation Of the Aluminum (sill)

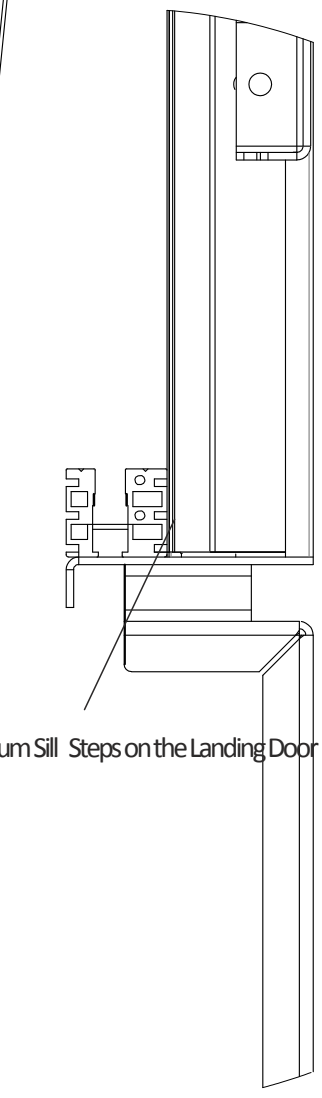
We pass the hexagon flush Bolts M8X16 between the gaps on the down part of the aluminum Sill (No 3) and we screw them with the oval on top of the Landing Door Sill (No 1). As much are the oval number the same is for the number of the bolts that will be passing the gap as per drawing H.

Last we mount the landing door Apron (No 5) on the landing door sill as per drawing I

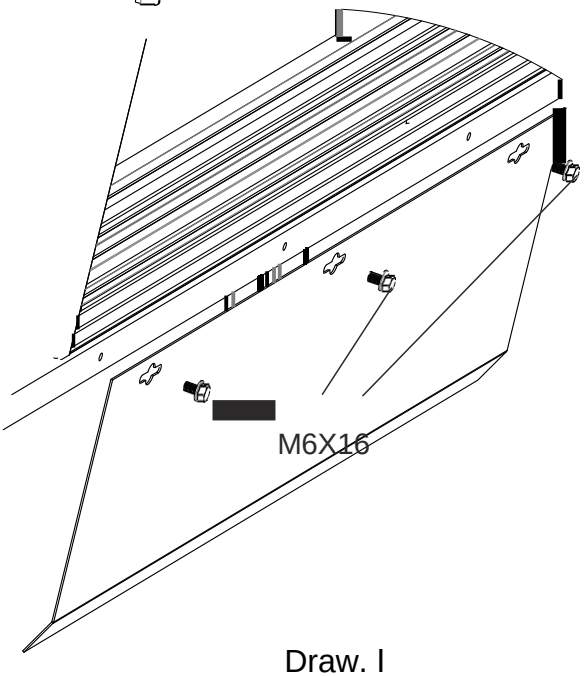




Draw. H



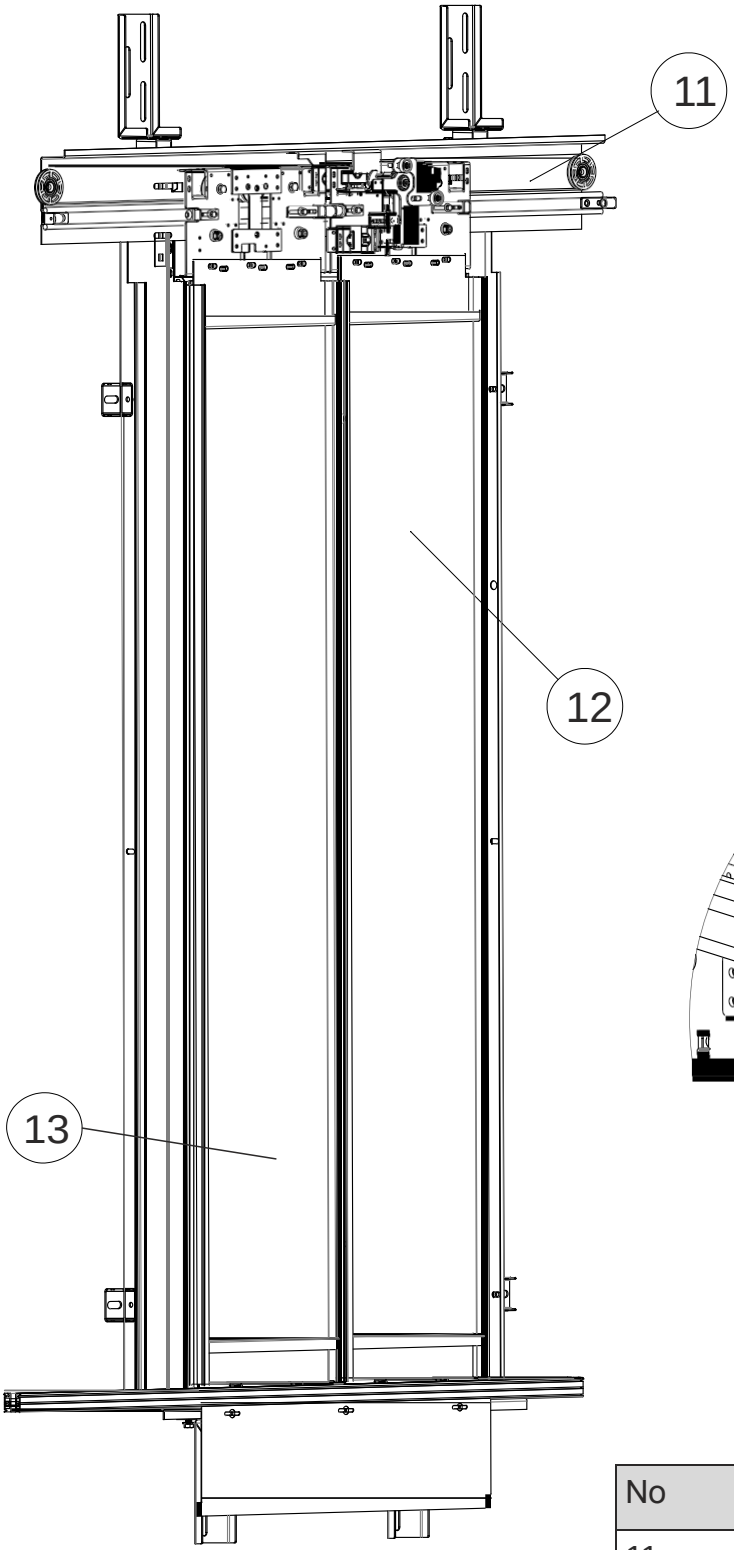
The aluminium Sill Steps on the Landing Door Sill

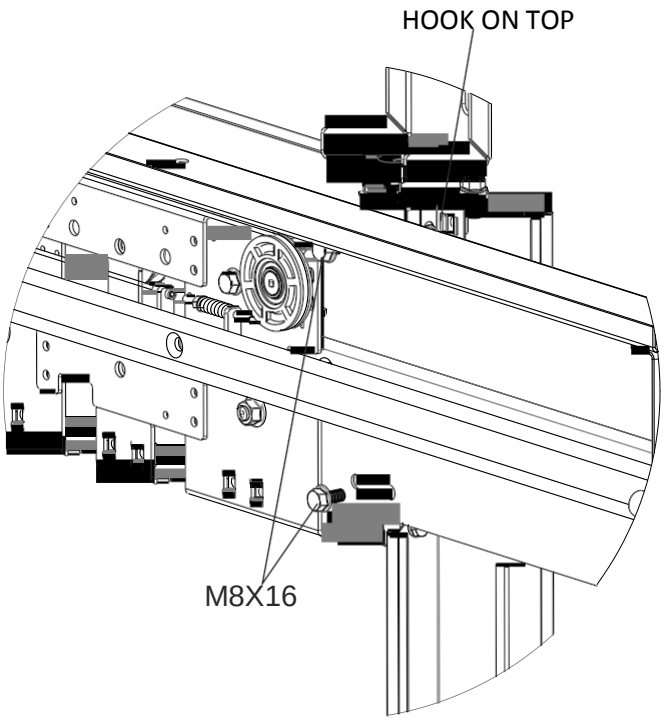


Draw. I

Landing Door Operator

We install the Landing Operator and we mount it to the hooks and on the frames with the 4 hexagon bolts M8X20 according drawing K. M8X16 bolts we mount them on the M8 through the horizontal



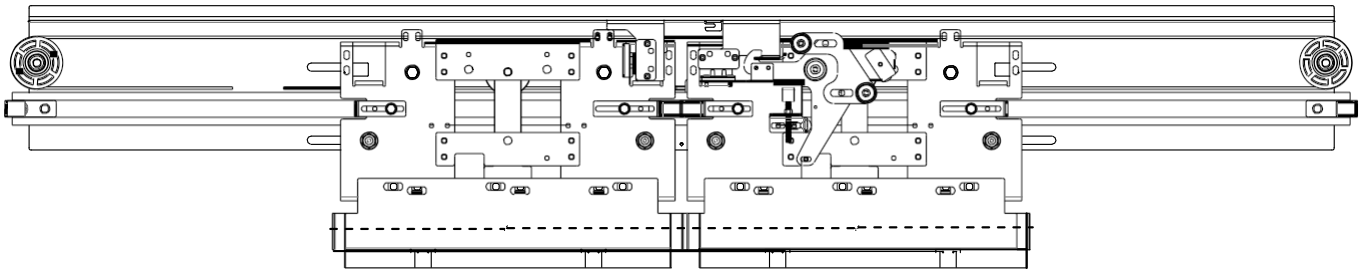


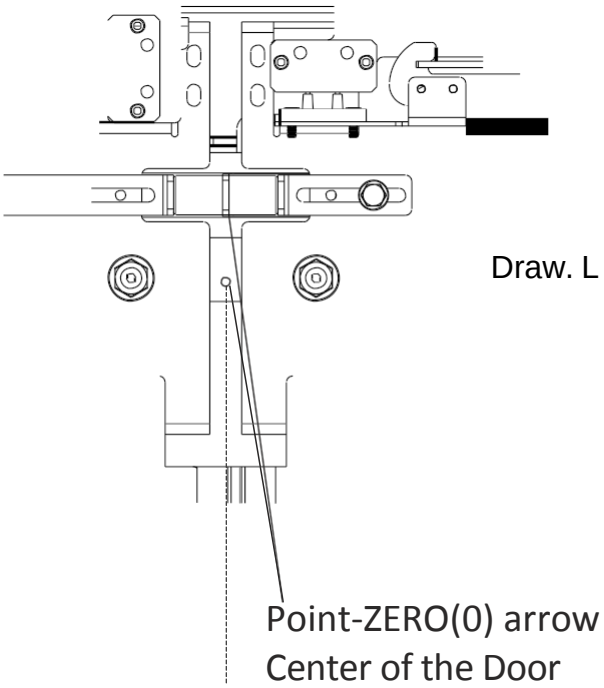
Σχεδ. K

No	Parts	Quant
11	Landing Door Operator	1
12	L.Door Panel Left	1
13	L.Door Panel Right	1

Operator Mechanism Adjustment

We place the Landing Door Operator in the middle of our opening like a recognizing spot there is a hole with diameter D6 just like the drawing L.

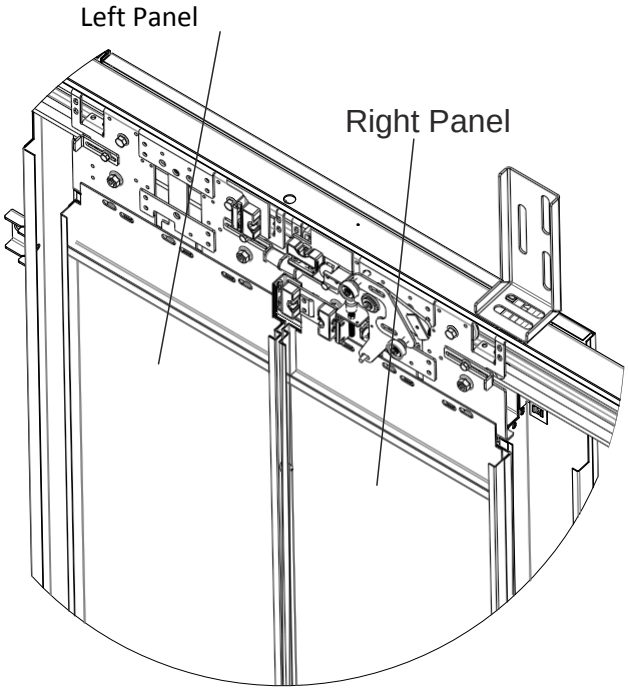


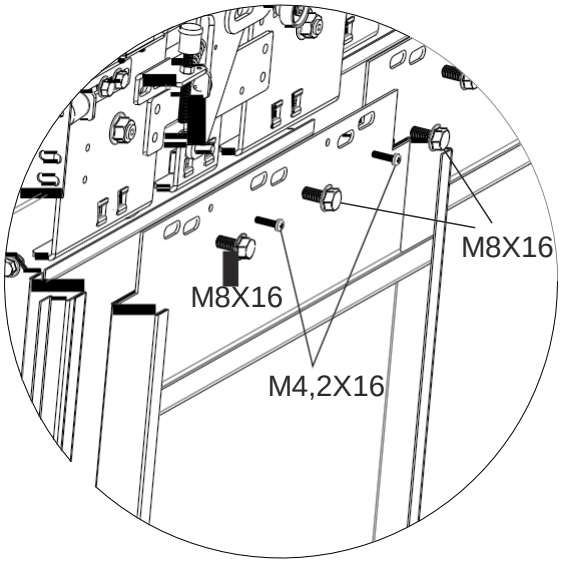


Draw. L

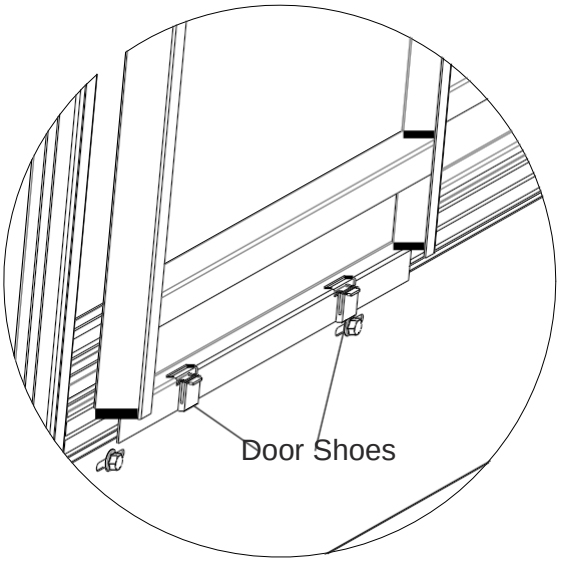
Installation of the Landing Panels

Landing Panels we mount them with 3 hexagon bolts M8X16 over the metal stretcher. If we want to put more up the we screw it on the down holes and if we want to put it down we screw it on the top holes. When we place the panels for safety we mount both bolts M4,2x16.Also on the down part of the Panel there are shoes so the panel to able to move inside the aluminum guide sill. The door shoes are place with the panels for more information check the drawings M and N





Draw. M

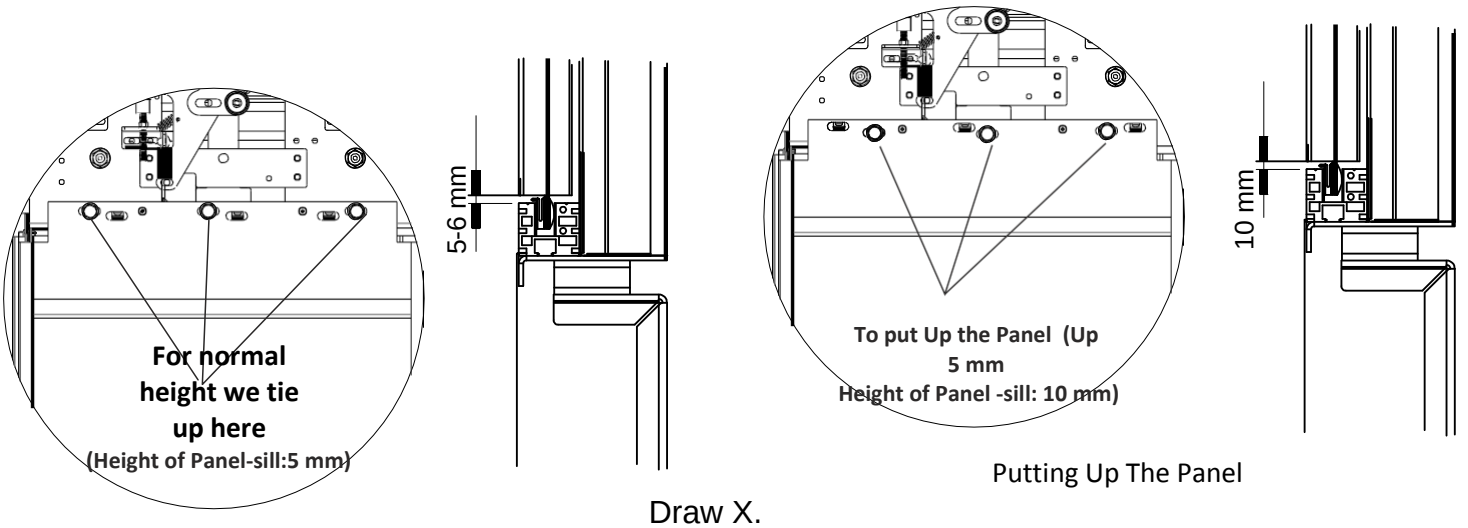


Draw. N

Adjusting The Landing Door Panels

Smooth operation of the Door is critical and that's why the Panels need to have distance 5mm for the aluminum sill so the door to be able to close with the power of the Spring. Height of the panel you can adjust it from Oval Holes which are placed on the Top side of the Panel. Caution the Door should close with the power of the Spring so it is important that if this is not achieved the Dorr won't Work correct Problems that accurate this issue is cause the Panels are stretched or cause the caster wheels are eccentrically over tightened onto the gearing of the guide carriage of the metal stretcher. On the installation of the Panel on the metal stretcher we need to check if the panel is stretch bended, should be always equal and same distances with the metal stretcher. If we see this issue we need to press the Panel on the opposite side from the side that exceeds. Please have a look on the following drawings X and O.

Correct Setting adjustment of Panels

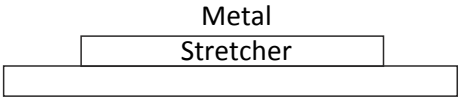


Normal Height

Putting Up The Panel

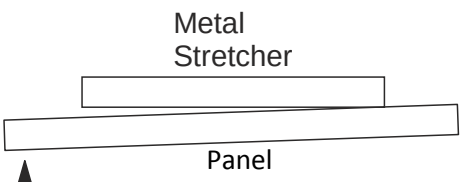
Draw X.

Correct Position of the Panel on the metal Stretcher

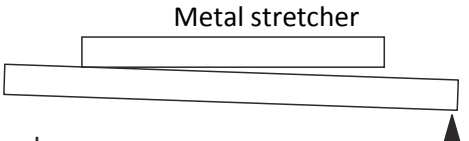


Panel

Wrong Position Of the Panel on the Metal Stretcher



Panel «Not placed correct» We need to add force
On the Left put it in the correct position.



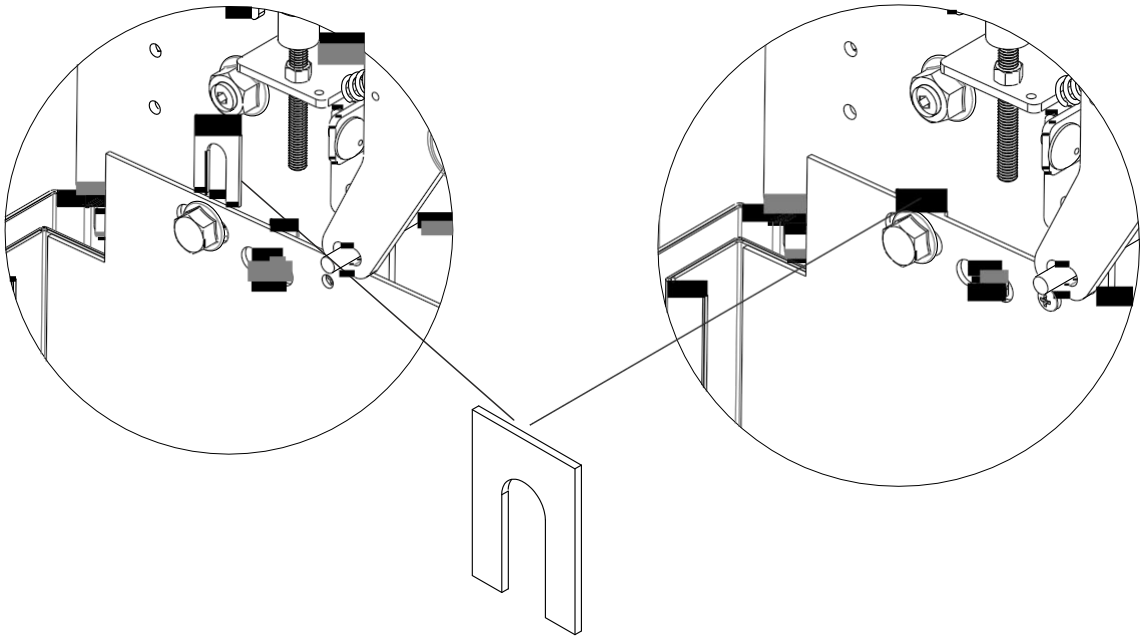
Panel «Not placed correct» We need to add force
On the Right put it in the correct position.

Draw. O

Adjustment of the Panels In and Out

If we want to adjust the Panel IN-OUT then BEFORE we tie the Panel over the Metal Stretcher we add a piece o metal plate an adjustment plate for the Panels. All the adjustment Plates for the Panels have thickness 1,25mm and we add them in each side so to receive the the dimension we want. The installation of the adjustment plate is optional .Always the gap between the Panel and the Installation frame should be 5mm .If this is not achieved then we place the adjustment Plates between the metal stretcher and the Panels and then between the Landing Door Sill.

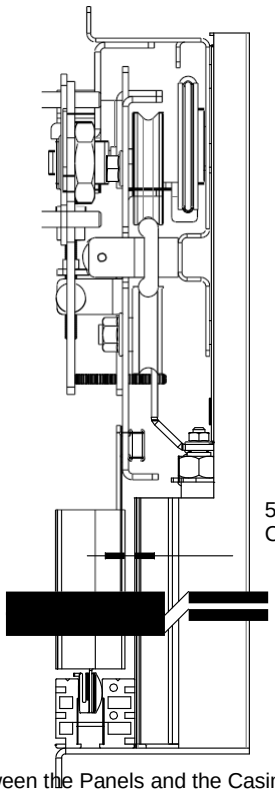
For more Information Please have a look on the below drawings



Adjustement Plate

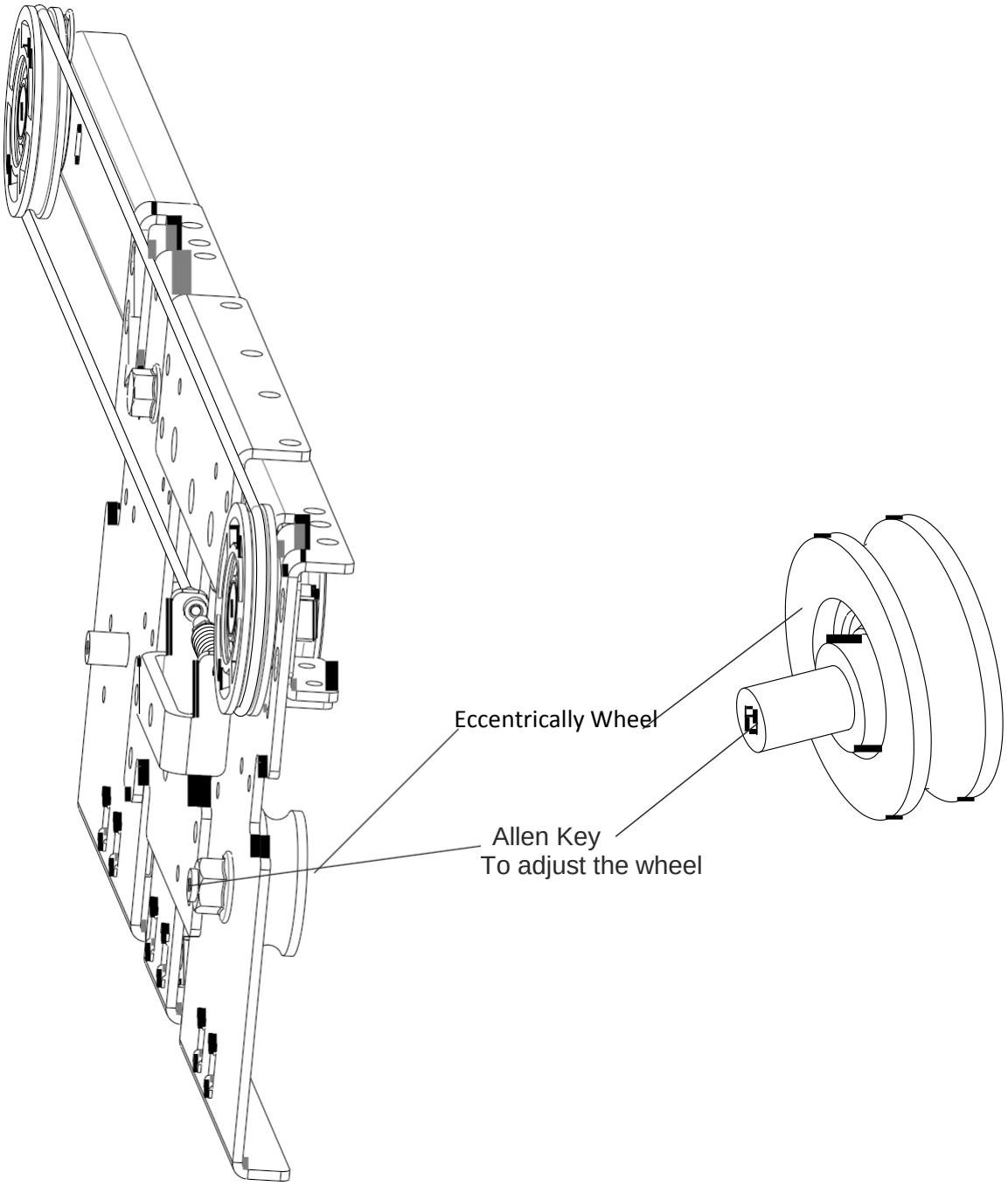
(Optional Installation, Important to use it only when the Gaps between the Panels is smaller than 5mm)

The adjustment Plates for the Panels calibration are placed inside each operator, when we decide that is critical to use them (untie the bolt M8 but not take it out all the bolt) that unites the Panel and the metal stretcher so much only to leave a small gap 2-3mm and then we place the quantity of the Plates we need. Example if the gap is 4mm against 5mm that we need then we mount on adjusting Plate. After we tie up the bolt M8 that holds the Panel on the metal stretcher



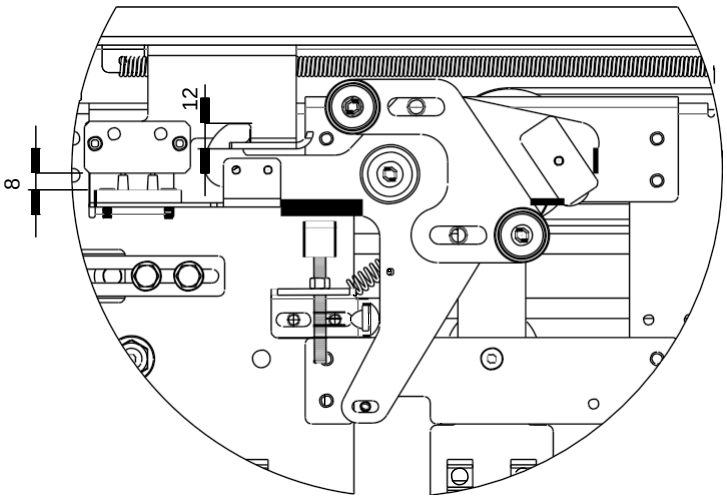
5mm: Gap Between the Panels and the Casing

Gap Between the Panels and the Casing **:5 mm**

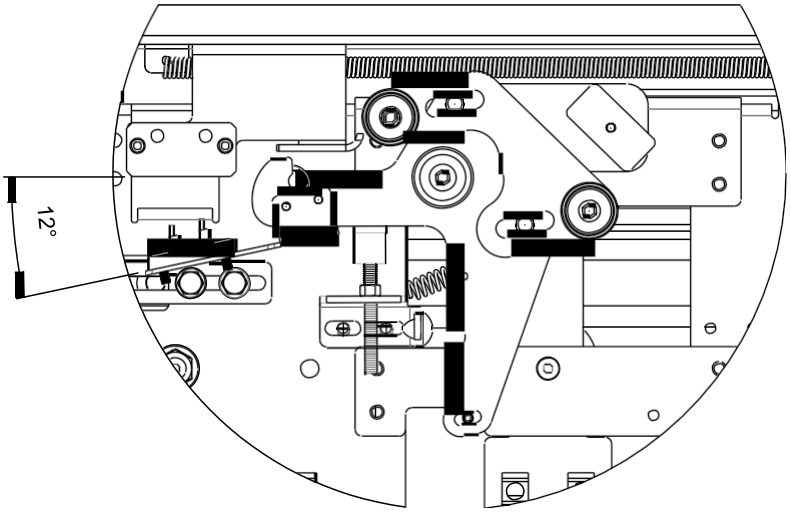


Draw. P

The eccentrically wheels,the landing panels and the landing Door operator they are adjusted in the factory and before the delivery to the client but it would be good for the client to always check them before the installation as there are a lot of factors that may cause problems as one of them is the installation of the door in the Shaft. Important is that when the landing door is installed by its own without the car door should close only with the force of the Spring, if this can't happen then we need to check the followings:1)or the eccentrically wheels are too tie up and we don't achieve the correct movement of the metal stretcher on the guide.2)The panels are stretched bended because we install wrong the Frame of the doors or cause the Operator is wrong placed.3)The spring is not acting well the door. Problems (1) and (2) can be solved with the already solutions we have already refer to. Problem (3) we can adjust the force of the spring by fixing its heights as we are going to see below.



Locking System On Floor
LOCKED
Distance between contact and Safety contact:8 mm

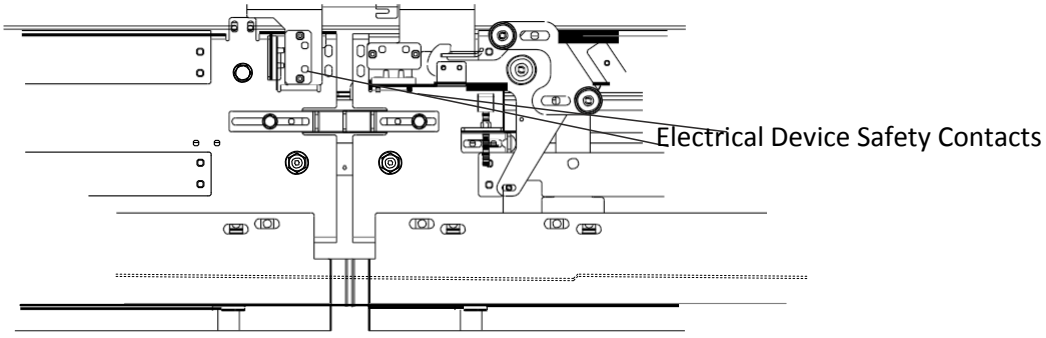


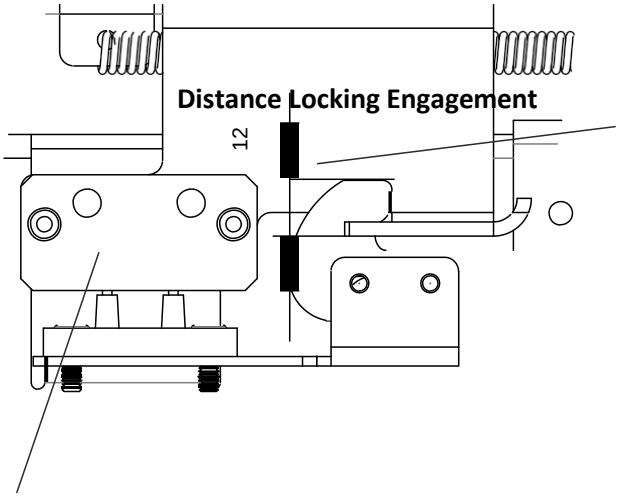
Locking System On Floor
OPEN

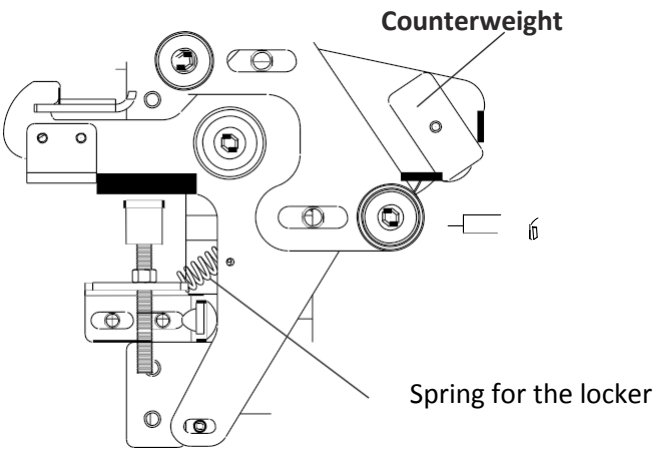
The locking System of the Floor has an electric safety device of a German supplier Bernstein to check and for the position of the locking and it can show us when the door of the shaft is closed and it is according the EN 81.1 and EN 81.2

The distance of the locking system and the locking base is 12 mm. The Lock is held and maintained by the counterweight and the use of the springs.

Also the mechanism shaft bearing and second electric safety devices in the same type as another that secures and the other windows



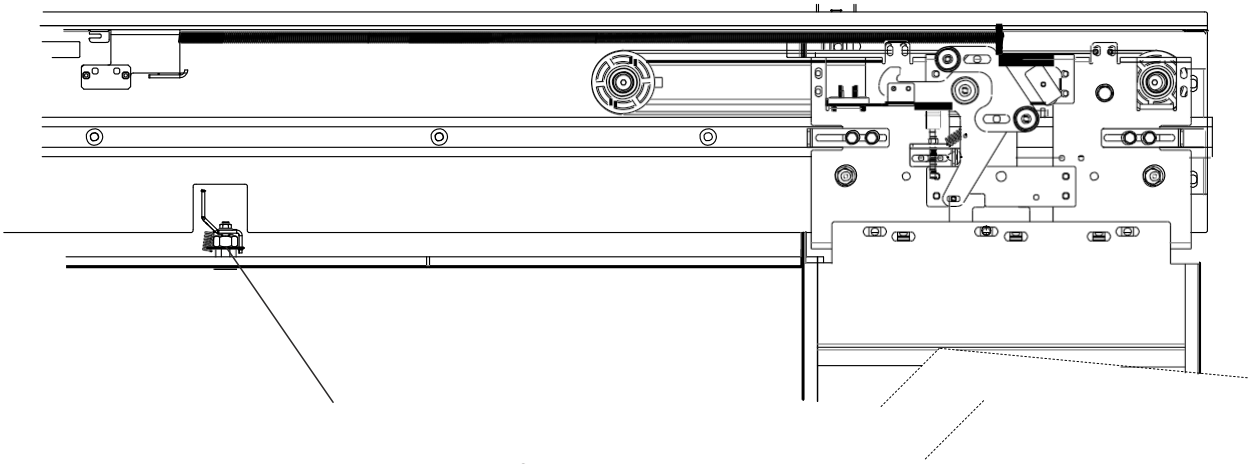




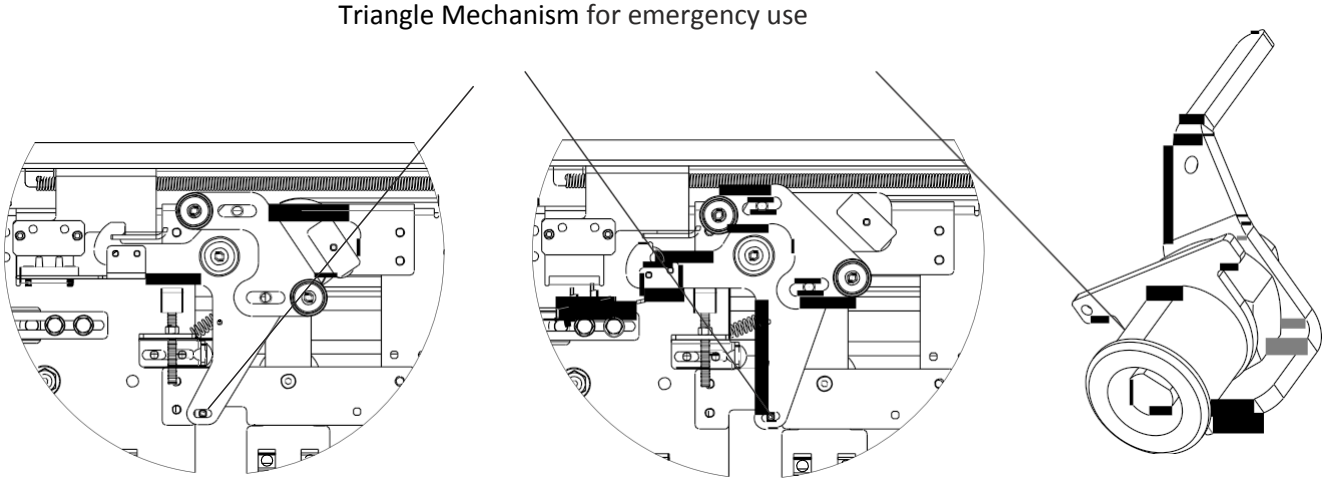
Electrical Device Safety Contacts

Emergency Locking -Reset

Every Landing Door of the shaft has a special Device mechanism Key in a Triangular Shape. This gives the ability to the Door to can be open-end from outside in emergency situations.



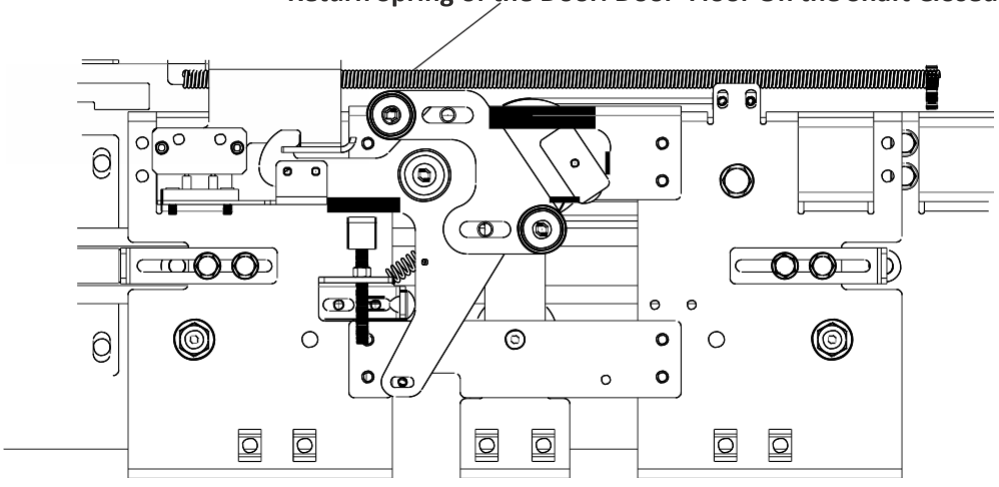
Triangle Mechanism for emergency use

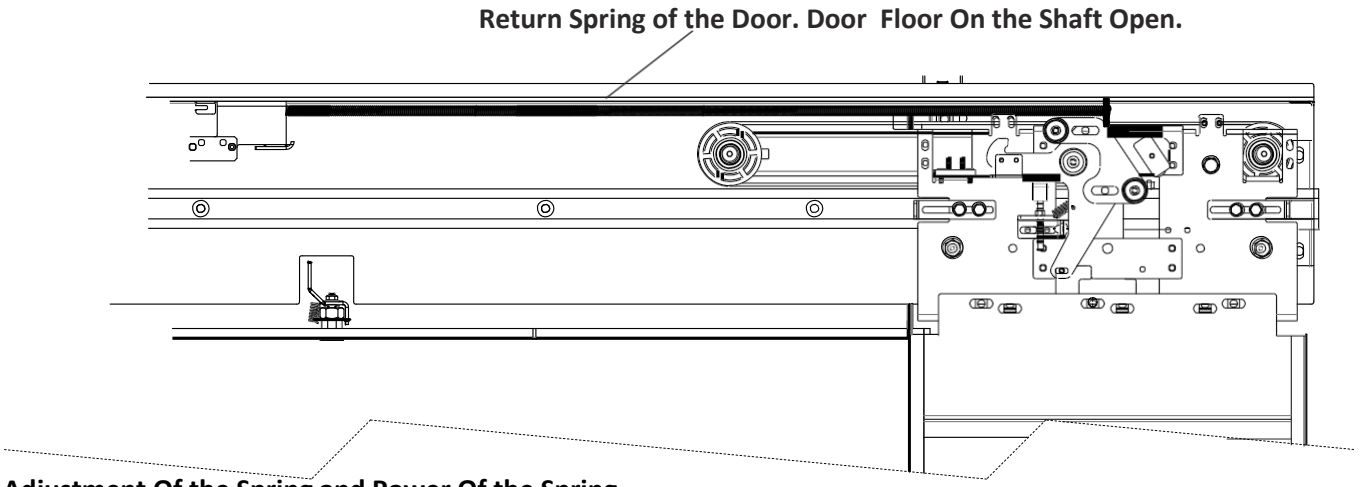


Return Spring

The Return Spring of the Landing Door ensures the automatic Close of the Landing Door of the Floor (shaft),in case the open for any reason when the Cabin is outside the Zone of the Locking.

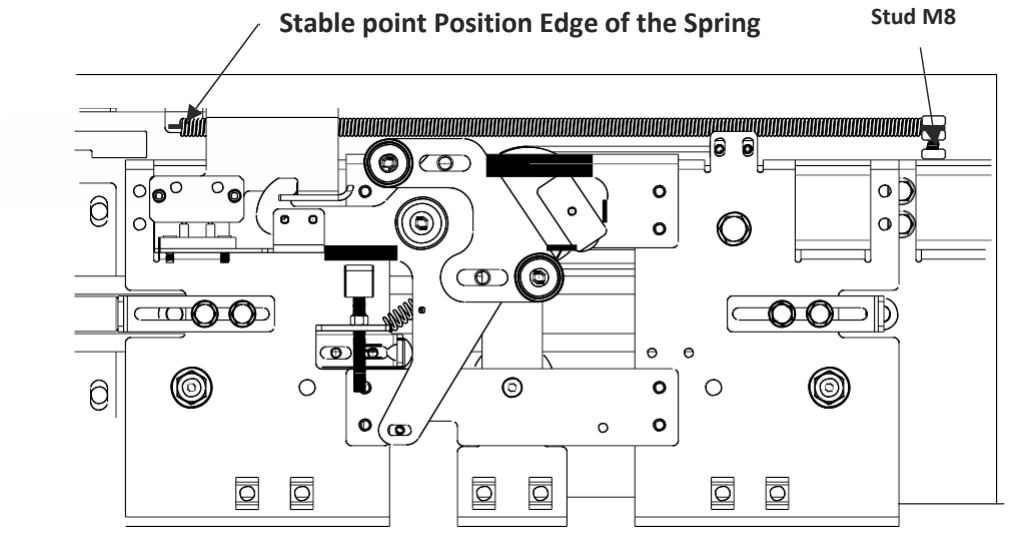
Return Spring of the Door. Door Floor On the Shaft Closed





Adjustment Of the Spring and Power Of the Spring

There is the possibility to adjust t the power Of the Spring. One edge of the spring is Placed on the body of the Shaft Mechanism and the other edge of the spring is placed in 5 different positions on the Metal Stretcher it depends what force we need give. On those 5 positions there are ready small holes M8.On those holes we can place a metal stud which holds the other edge of the spring. All the small holes have certain distance by each other by 50mm to be able to play with the force of the spring.



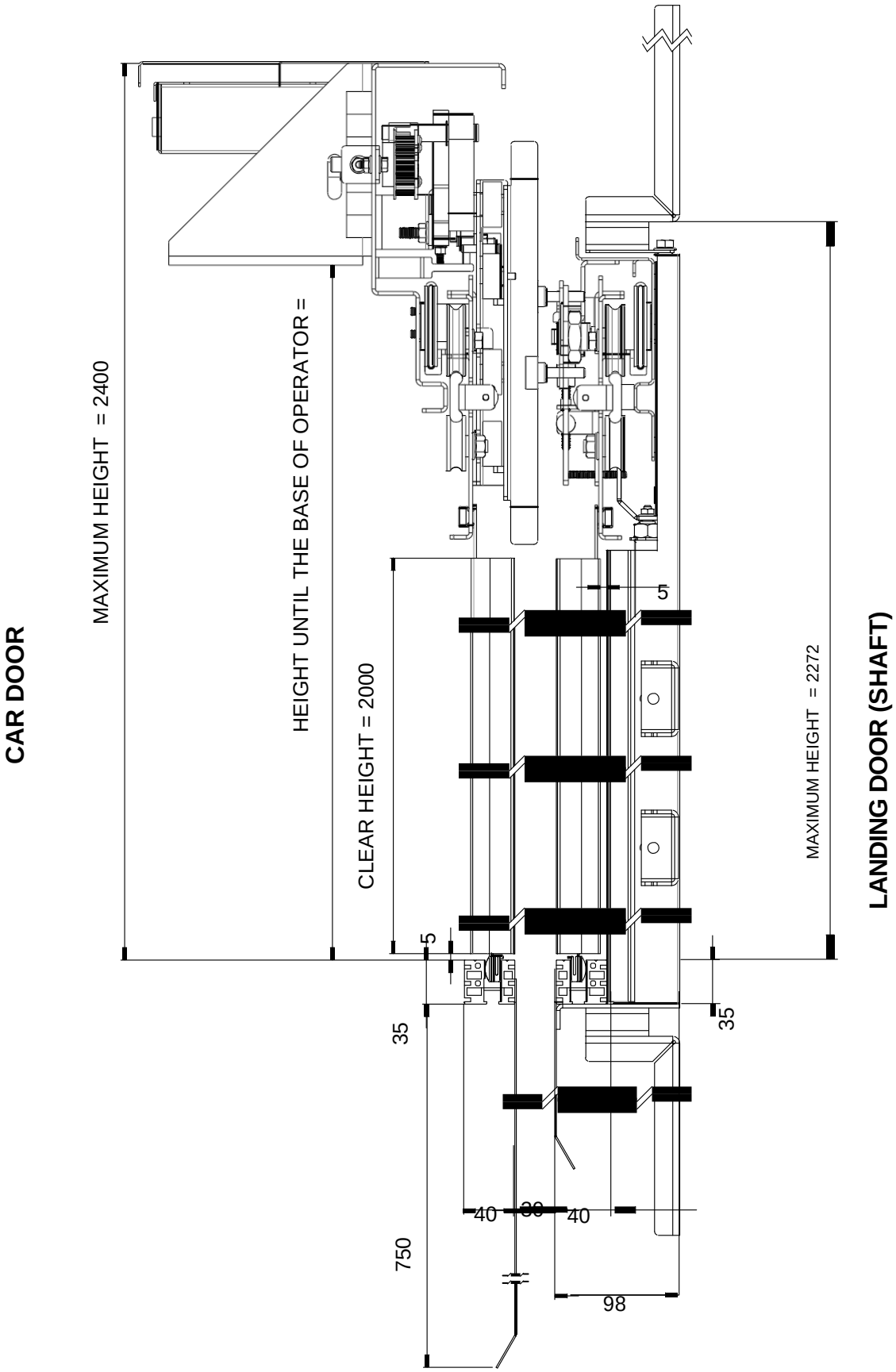
Traction Spring

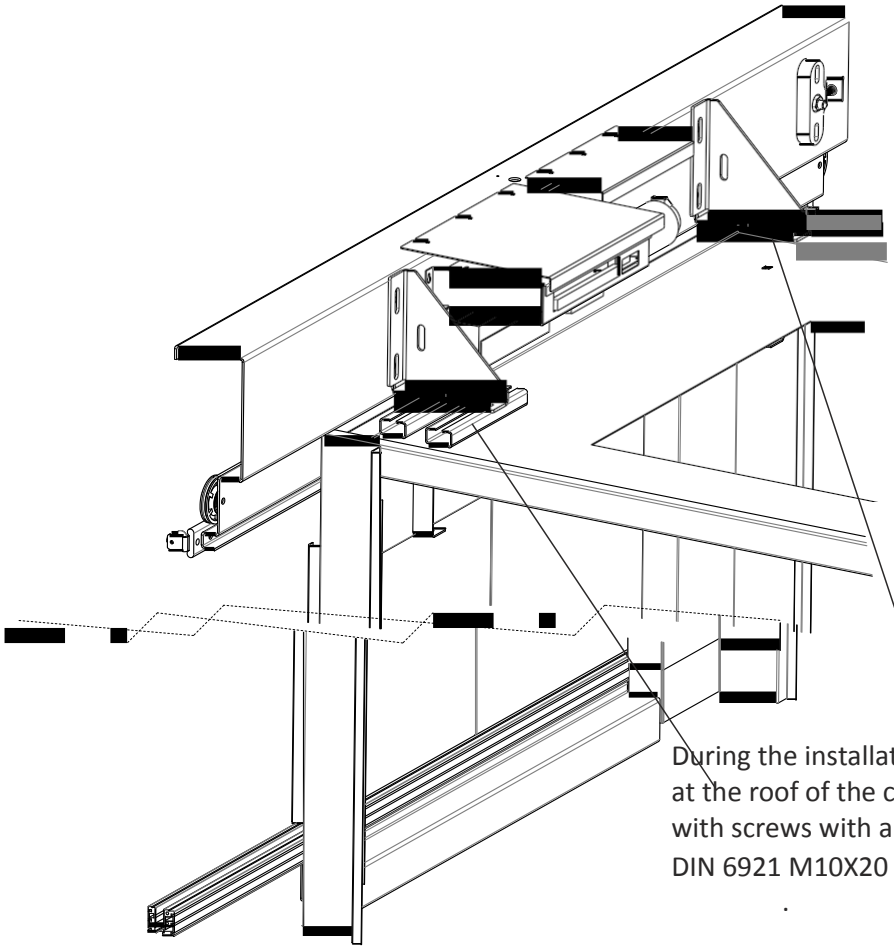
Spring Diameter(mm): 1,5
Spring Outer Diameter(mm): 14,5
SPRING average diameter (mm): 13
SPRING body length (mm): 285
Freedom length of the spring (mm): 310,3
Total number of spirals: 191
Maximum permissible length SPRING (mm): 1097,348
Maximum allowable route SPRING (mm): 7873,048

Natural frequency coordination (Recurrent / sec): 17,018
Pre stressing SPRING (Kp): 0,951
Maximum strength (Kp):10,906
Spring constant (Kp/mm: 0,013
Material wire: C Class Patent ert DIN DIN 17223
SPRING Weight (gr): 108,210
Maximum strength for avoiding fatigue: 9,419
Route springs against fatigue: 679,723

Installation Of the Landing Door Operator

When we want to place the Landing Door Operator we need to take care the distance between the Landing Door Aluminum Sill and the CAR door Aluminum Sill to be 33mm.When we place the Aprons of the landing Door and the Apron of the Cabin the distance between them should be 30mm as it seems in the drawing P

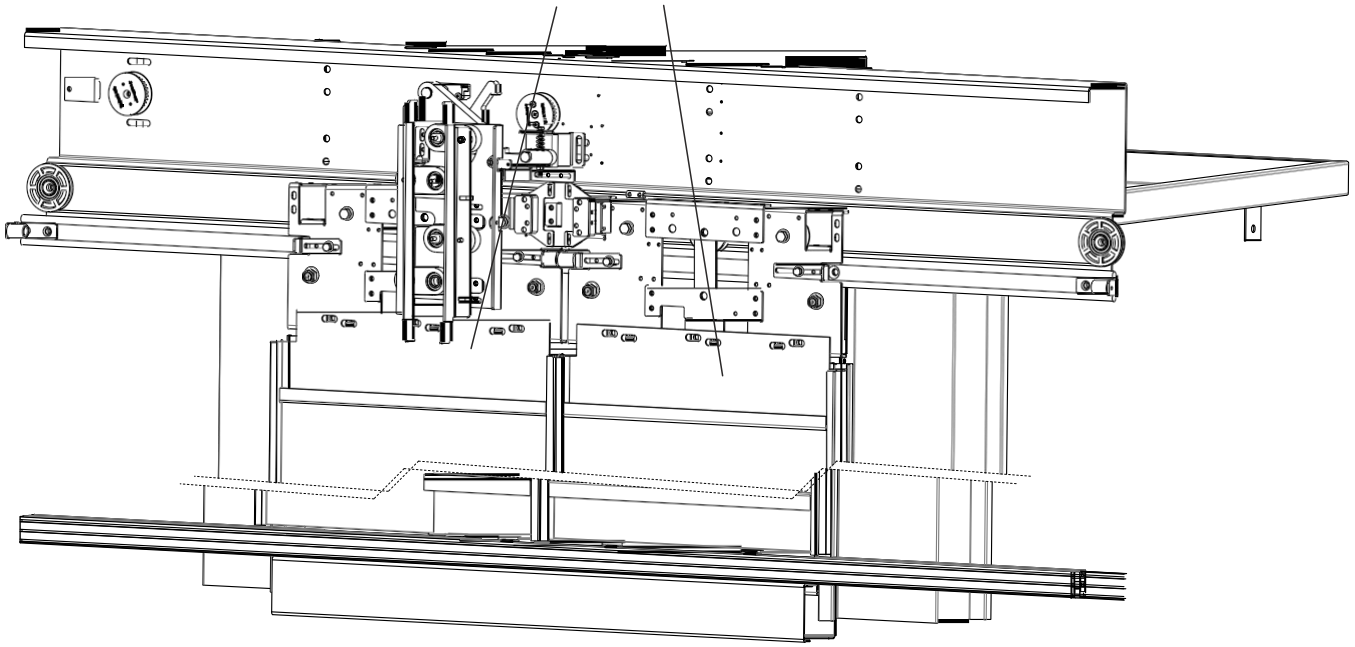




During the installation the Car door Operator shall be located at the roof of the cabin steping over the channels and screwed with screws with a hexagon flange head and notches
DIN 6921 M10X20

.

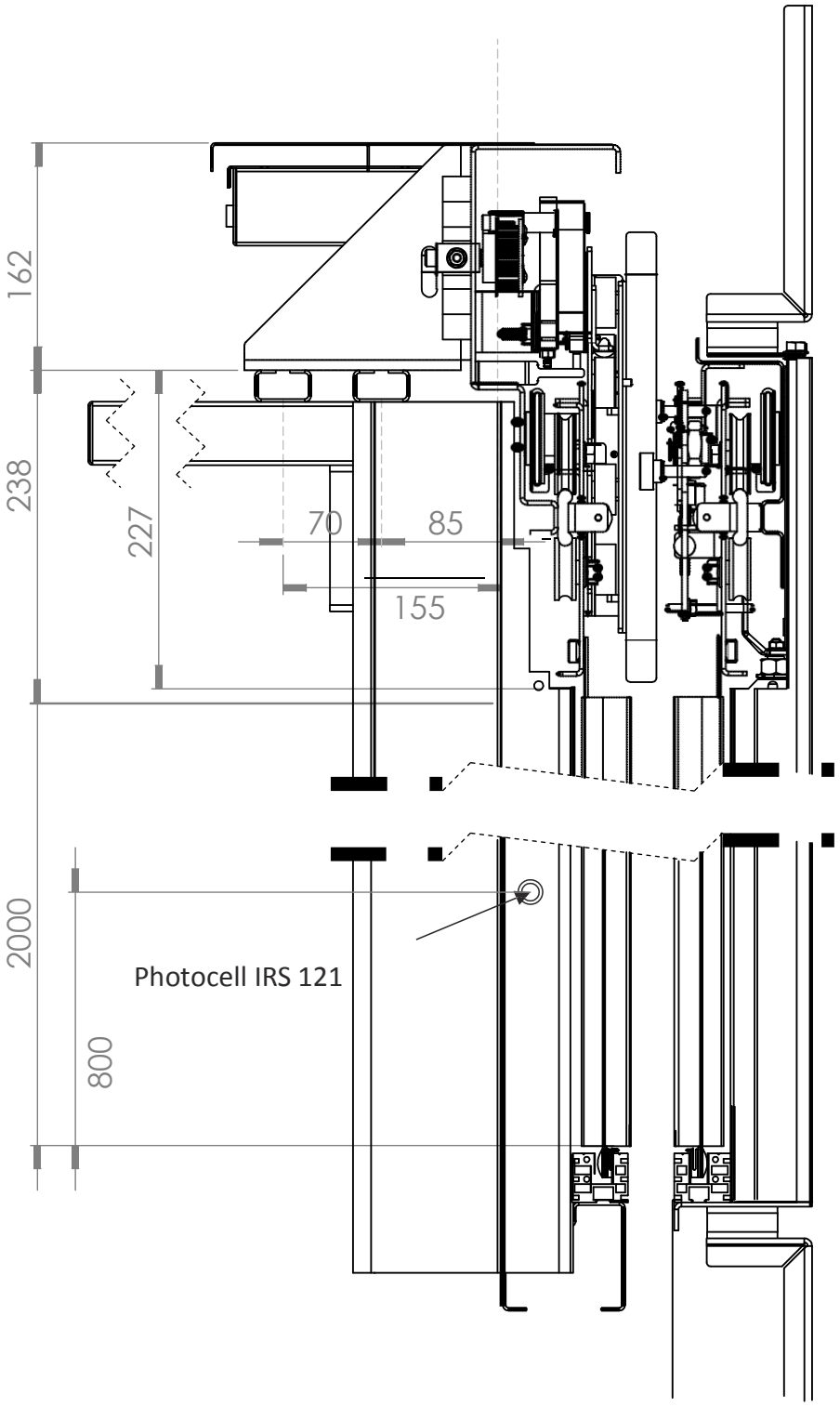
For the Panel we need to follow the same rotation as we did for the landing Panels



We check the eccentrically wheels and the Door Panels with the same way we did for the landing Door Panels. The cabin door mechanism should have smooth movement with no obstacles. If for any reason the movement is not good we let loose the eccentrically wheels and we check the door panels. The mechanism of the car door and all the components are checked and set up from the factory before the delivery .It is good one checked to be made by the installer before we give power to the door.

Photocells-Light Curtain

The protection of the passengers when they enter and they get out of the Cabin is succeed by the photocells (singles or double) IRS 121 or by the use of the light curtain and with the operation obstacle return to the open position (Electronically controlled and adjustable 80 ... 180 Nw) All the above accessories are placed on the cabin front Corners and they are connected with Car door Mechanism. The photocells are from Optea Company



Certificate IRS 121

OPTEA s.r.l. Via Saragat , 14
40062 Molinella (BO) - ITALY

Tel.: +39 051 665.00.71 Fax.: +39 051 665.00.28

DECLARATION of CONFORMITY

The company OPTEA s.r.l. declares that the following equipment

Equipment name : IRS 121

Type of equipment: AUTOMATIC DOORS SENSOR

It is in agreement with the following standards :

EN51081-1

EN51082-1

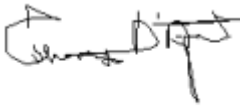
the apparatus specified above is declared moreover that it has been tested in typical application and it complies with the directives : **89/336/EEC**

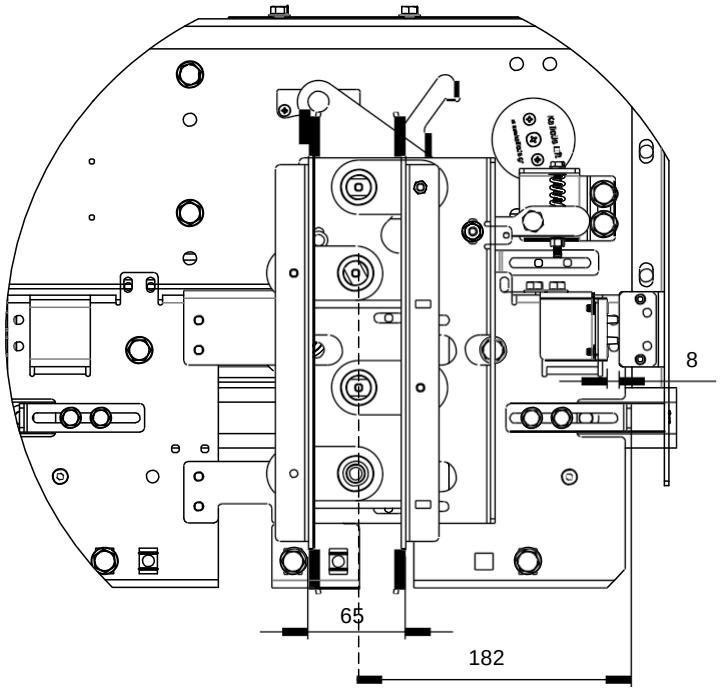
PLACE: Molinella (BO) - ITALY

DECLARING NAME: TOMMASO D'AGOSTINO

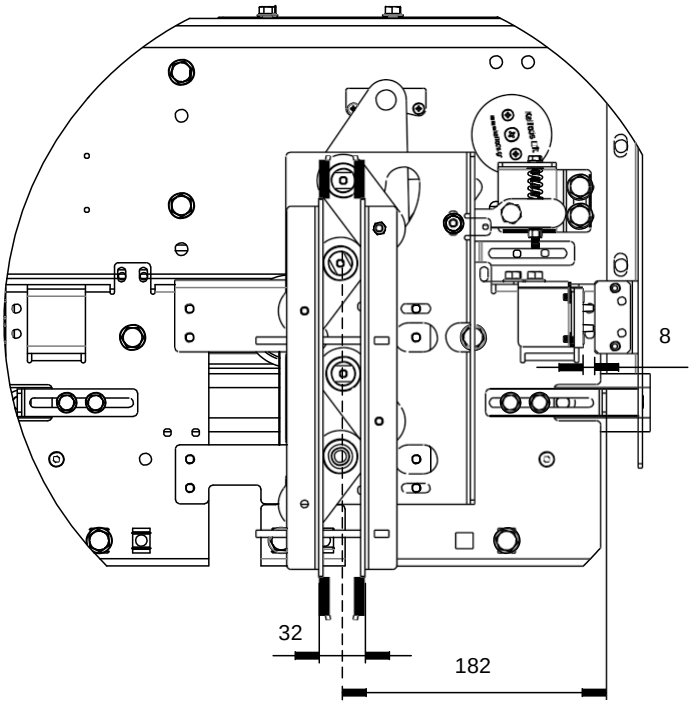
COMPANY POSITION: Technical manager

Signature



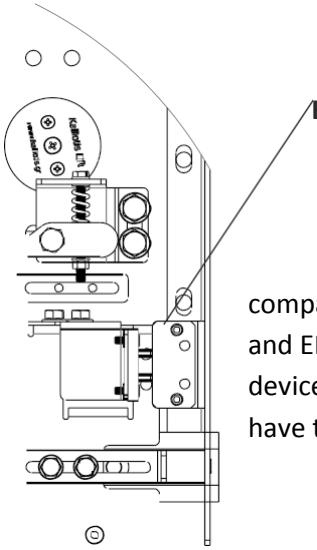


Scissor Open



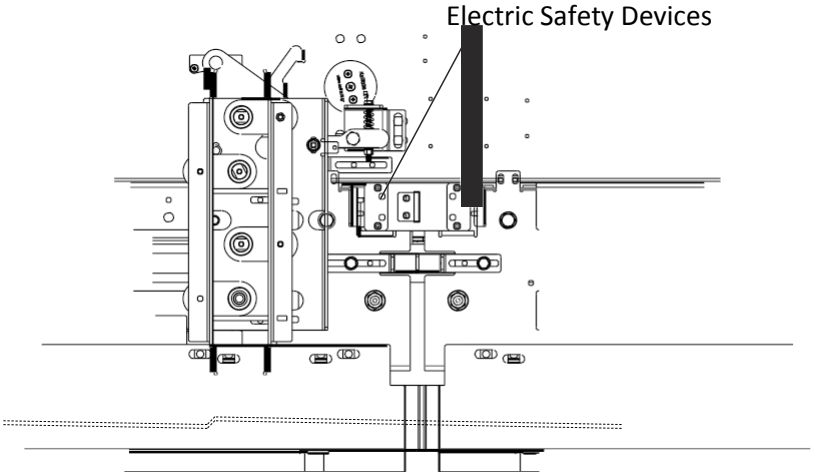
Scissor Closed

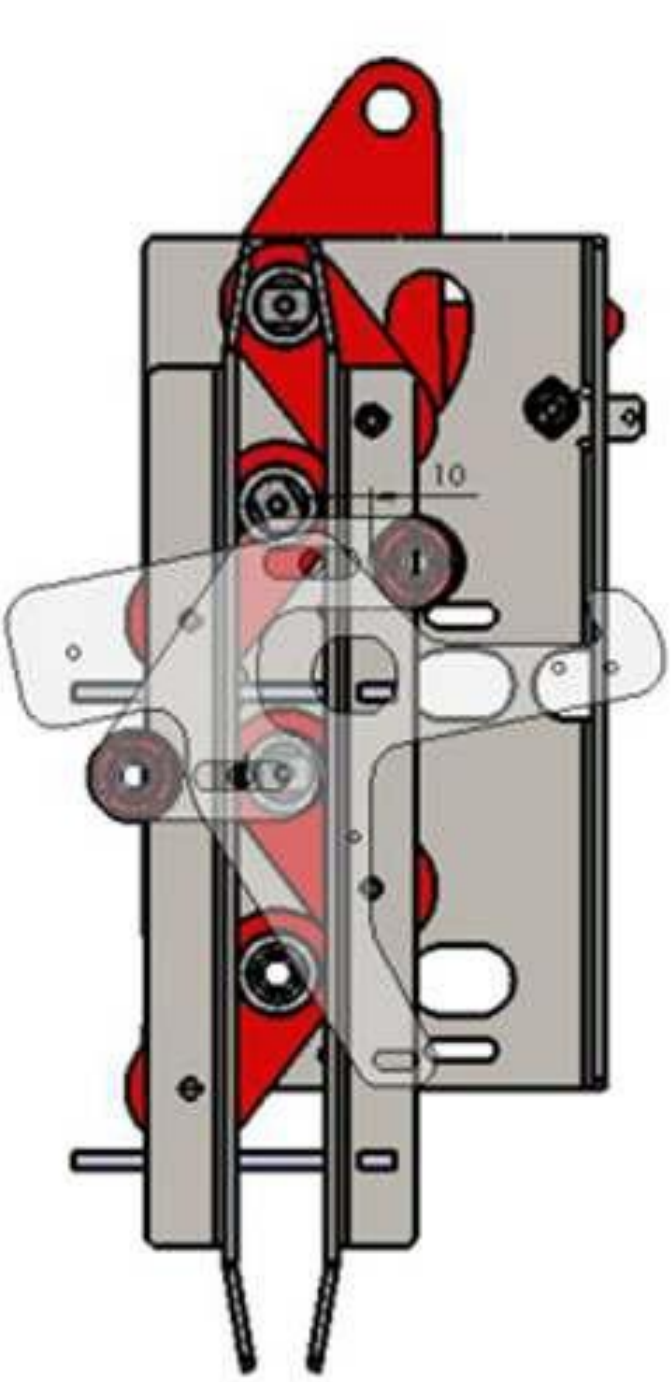
- **Scissor Open: 65 mm**
- **Scissor Closed: 32 mm**
- **Distance stopper-Scissor: 182 mm**
- **Distance electrical contact from contact: 8 mm**



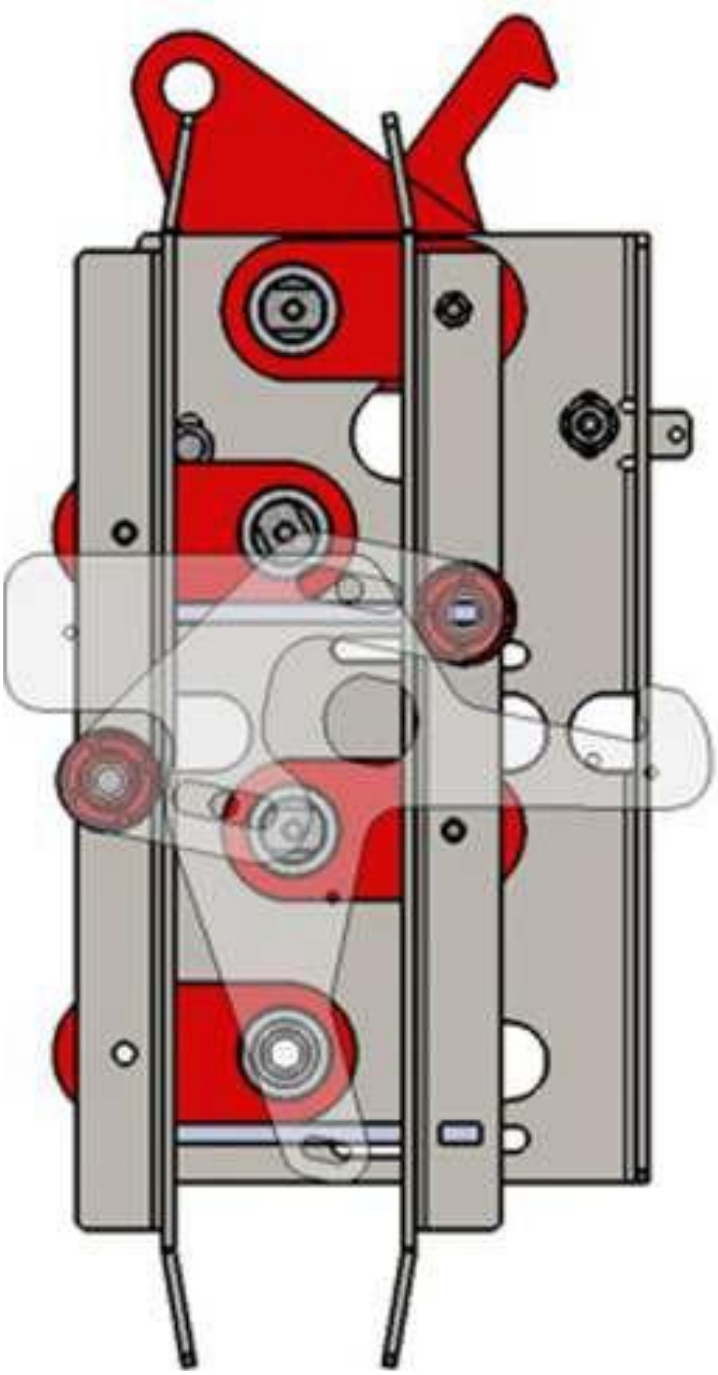
Electrical Safety Device (contact)

The system between scissor of the car door has an electric safety device of the German company Bernstein same like the Lading Door Operator and it meets the standers of the EN 81.1 and EN 81.2 .The electric safety device of the cabin with combination with the electric safety device of the floor shows us when the door of the floor and the cabin are closed. Also here we have the same electric safety device same type for more safety.





Scissor Adjustment.
Scissor Closed-Floor locked
Closed



Scissor Adjustment.
Scissor Open-Floor Locked
Open

Distance front wheel locking the Floor – cama Scissor 10 mm.

- E Preventive maintenance shaft and car door and troubleshooting

- Check and confirm periodically that the closing spring of the shaft door always closes the door. If not then the spring will close the door of the well then proceed according pages 16-18

- Check and confirm periodically that the shaft lock rotate around its axis freely without problems and it always locks.

- Check and confirm periodically that the carriage moves smoothly on the guide. If for some reason does not move smoothly then act according to page 18. If still is not moving well please have a look on the eccentrically wheels and the concentric wheels

- Check and confirm periodically that the opening and closing the plastic stopper chamber mechanism closes properly. Should by placing first ends by opening and closing the stopper chamber mechanism and not the shaft mechanism. If for some reason before the end chamber device terminates then the shaft mechanism will then be pulled accordingly stopper of shaft mechanism

- The concentrically and eccentrically wheels and the rope they don't need maintenance . If they got damaged we always have to change them. Do not lubricate the guides and rollers and other parts.

- Check and confirm periodically the tension of all springs of the landing door operator and the car door operators. If you see any malfunctioning they should be replaced

CAUTION
Any modification that is not listed in this manual, before any trial, should be FIRST inform the technical department Kalliotis Lift Company

Notes:

Kalliotis Lift
Doors + Cabins

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