

Dichiarazione di conformità UE / EU - Declaration of conformity EU – Konformitätserklärung / Déclaration de conformité – UE Declaración de conformidad de la UE

Il Fabbricante / The Manufacturer / Hersteller / Producteur / Productor

Alberto Sassi S.p.A.
Via Guido Rossa, 1 – Loc. Crespellano,
I-40053 Valsamoggia, BOLOGNA – ITALY

Dichiara che i componenti di sicurezza per ascensori elencati / Declares that the listed security components for lifts / Erklärt dass die angeführten Sicherheitskomponenten für Aufzüge / déclare que le composants de sécurité pour ascenseurs décrits / declara que los componentes de seguridad para ascensores indicadas

Dispositivo di frenatura che agisce sull'albero della puleggia di trazione, come parte di un dispositivo di protezione per la limitazione della velocità eccessiva e i movimenti incontrollati della cabina / Braking device acting on the shaft of the traction sheave, as a part of a protection device as overspeed limitation and unintended car movements / Bremsenrichtung auf die Treibscheibenwelle, als Teil der Schutzeinrichtung die unkontrollierte Bewegungen verhindert und als Geschwindigkeitbegrenzer des Fahrkorbs wirkt / Dispositif de freinage qui agit sur l'arbre de la poulie de traction, faisant partie d'un système de protection contre la survitesse de la cabine et contre les mouvements incontrôlés de la cabine / Dispositivo de frenado sobre el eje de la polea como parte de un dispositivo de limitación de la sobrevelocidad y de los movimientos incontrolados de la cabina

Tipo / Type / Typ / Type / Tipo	DQ01, DQ02, DQ03, DQ11, DQ12, DQA1, DQA2, DQB1, DQB2, DQB3
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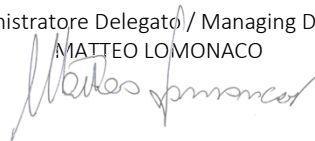
Anno di fabbricazione / Manufacturing year / Herstellungsjahr / année de production / año de fabricación	2023
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sono conformi ai requisiti delle Direttive e Norme / comply to the requirements of Directive and Standards / Entsprechen der EU-Richtlinie / sont conformes aux exigences des directives et normes / cumplen con los requisitos de las directivas y normas

Certificato di tipo UE / EU-type examination certificate / EU-Baumusterprüfbescheinigung Certificat d'examen de type UE / Certificado de examen UE	
Direttive o Norme / Standards or Directives / Richtlinie oder Normen / Directives ou normes / Directivas y normas	Directive 2014/33/EU EN 81-20:2020 EN 81-50:2020
Numero e data / Number and date Kennnummer und Datum / numéro et date / número y fecha	NL17-400-1002-243-01 Revision n. 2 13/09/2022
Organismo di certificazione e controllo della produzione / Certification body and monitoring of production / Zertifizierungsstelle und Überwachung der Produktion / Organisme de certification et contrôle de production / Centro de certification y control de la producción	LIFTINSTITUUT B.V. Buikslotermeerplein 381 1025- XE Amsterdam NETHERLANDS Notified Body: 0400
Nome e indirizzo della persona autorizzata alla compilazione del fascicolo tecnico / Name and address of the authorised person to compile the technical file / Name und Anschrift der Person, die bevollmächtigt ist, die technischen Unterlagen zusammenzustellen / Nom et adresse de la personne autorisée à constituer le dossier technique / Nombre y dirección de la persona facultada para elaborar el expediente técnico	MATTEO LOMONACO c/o Alberto Sassi S.p.A. Via Guido Rossa, 1 – Loc. Crespellano, I-40053 Valsamoggia, BOLOGNA – ITALY

Valsamoggia, 09/01/2023

Amministratore Delegato / Managing Director
MATTEO LOMONACO



INSE000310(w-d) – 01/2023



liftinstituut
SINCE 1933



EU-TYPE EXAMINATION CERTIFICATE

Issued by Liftinstituut B.V.
identification number Notified Body 0400,
commissioned by Decree no. 2022-0000107366

Certificate no. : NL17-400-1002-243-01 Revision no.: 2

Description of the product : Disc brakes used for Ascending Safety Device and Unintended Car Movement Protection

Trademark : Sassi

Type no. : DQXY series

Name and address of the manufacturer : Alberto Sassi S.p.A.
Via Guido Rossa 1
Località Crespellano
40053 VALSAMOGGIA (Bo), ITALY

Name and address of the certificate holder : Alberto Sassi S.p.A.
Via Guido Rossa 1
Località Crespellano
40053 VALSAMOGGIA (Bo), ITALY

Certificate issued on the following requirements : Lifts Directive 2014/33/EU

Certificate based on the following standard : EN 81-20:2020, EN 81-50:2020

Test laboratory : None

Date and number of the laboratory report : None

Date of EU-type examination : September 2022

Additional document with this certificate : Report belonging to the EU-type examination certificate no.: NL17-400-1002-243-01 rev. 2


Additional remarks : This revision replaces certificate NL17-400-1002-243-01 rev. 1 of 09-01-2020

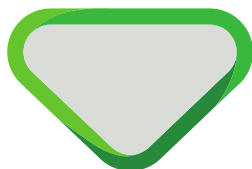
Conclusion : The safety component meets the requirements of the Lifts Directive 2014/33/EU taking into account any additional remarks mentioned above

Amsterdam

Date : 13-09-2022
Valid until : 13-09-2027


ing A.J. van Ommen
International Business
Manager


Certification decision by

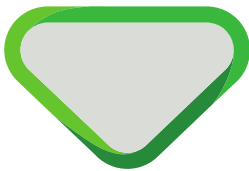


Report EU-type examination

Report belonging to EU-type examination certificate number	: NL17-400-1002-243-01
Date of issue of original certificate	: 14-11-2017
Certificate applies to	: Safety component
Revision number / date	: 2, 13-09-2022
Requirements	: Lifts Directive 2014/33/EU Standards: EN 81-20:2020, EN 81-50:2020
Project number	: P220310

1. General specifications

Description of the product	: Disc brakes used for Ascending Safety Device and Unintended Car Movement Protection
Trademark	: Sassi
Type no.	: DQXY series
Name and address of the manufacturer	: Alberto Sassi S.p.A. Via Guido Rossa 1 Località Crespellano 40053 VALSAMOGGIA (Bo), ITALY
Laboratory	: -
Address of examined product	: Via Guido Rossa 1 Località Crespellano 40053 VALSAMOGGIA (Bo), ITALY
Data of examination	: September 2022
Examination performed by	: E. Verkaik



2. Description safety component

The ascending safety device and unintended car movement protection consists of electro-mechanical brakes, acting on one, two or three disc brakes.

The main pressure plate is split into two and each half functions on the brake disc(s) independently from the other to create redundancy.

The brake torque is fixed and depends on the number of guided compression springs (8 or 10) and shall not be changed in the field. The number of springs are indicated on a sticker at the cover of the brake.

The mounting diameter of the brake shaft can be in two different diameters, with 15 or 18 teeth of the splined profile.

The brakes fulfill the requirements of EN 81-20 and are also used as holding brakes during normal operation of the lift.

The unintended car movement protection must be triggered by a system which fulfills the requirements of EN 81-20 art. 5.11.2.3. The total delay in the system must be small enough to fulfill the demands for stopping distances of EN 81-20 art. 5.6.7.5.

The maximum stopping distance for unintended car movement allowed is depending on the height of the entrances and the length of the apron.

The ascending car overspeed protection shall be actuated by a governor contact or equivalent device fulfilling the requirements of EN 81-20 art. 5.6.6 which was no part of this investigation.

There are various versions of the DQXY brake with front-mounted disks that differ in terms of size, the use of a different amount of brake disks and thrust springs in relation to the braking torque to be obtained and for the use of brake disks with a different splined profile. This product diversification of is further specified in Table 1 according to the abbreviation used (where Y indicates the number of braking disks used).

Table 1. Brief description of the design features of each type of brake.

<i>BRAKE</i>	<i>Number of thrust springs</i>	<i>Teeth of the splined profile</i>
DQ1Y	8	15
DQBY	8	18
DQAY	10	15
DQ0Y	10	18

The brakes of DQXY range are particularly suitable for use with gearless motors and geared machines by Alberto Sassi S.p.A. Table 2 shows the dynamic braking torque for each type of brake according to the energy that it needs to dissipate. The weight and dimensions of the brake alone from an axial point of view are reported as well. The dynamic torque value is not constant, but varies slightly according to the energy dissipated.

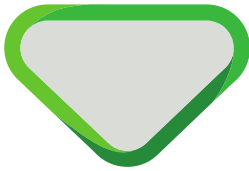


Table 2 - Models and features of the brakes produced.

Model	Dynamic Braking Torque [Nm]	Energy [J]	Length [mm]	Weight [kg]
DQ01	2 x 525	46460	110	50
DQ02	2 x 850		142	60
DQ03	2 x 1250		174	70
DQ11	2 x 250		110	50
DQ12	2 x 650		142	60
DQA1	2 x 525		110	50
DQA2	2 x 850		142	60
DQB1	2 x 250		110	50
DQB2	2 x 650		142	60
DQB3	2 x 850		174	70

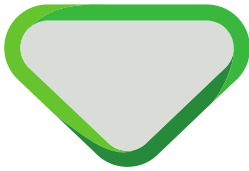
For each certified torque, reaction times for the brake must be defined [ms]
T₀ = time between switching DC current and starting braking action
T₁₀ = time to reach 10% braking torque
T₅₀ = time to reach 50% braking torque
T₉₀ = time to reach 90% braking torque

Max speed for traction sheave : 700 rpm

Total average time

Model	T10 [ms]	T50 [ms]	T90 [ms]
DQ01	10	30	95
DQ02			
DQ03			
DQ11			
DQ12			
DQA1			
DQA2			
DQB1			
DQB2			
DQB3			

See annex 1 for a general overview of the product



3. Examinations and tests

The examination covered a check whether compliance with the Lift Directive 2014/33/EU is met, if possible based on the harmonized product standards EN 81-20:2020 and EN 81-50:2020.

Issues not covered by or not complying these Standards are directly related to the above-mentioned essential requirements based on the risk assessment, where applicable with the aid of harmonized A-and B-standards.

The examination included:

- Examination of the technical file (See annex 2).
- Check of performed calculations according to EN 81-50:2020.
- Examination of the representative model in order to establish conformity with the technical file.
- Inspections and tests to check compliance with the requirements.

4. Results

After the final examination the product and the technical file were found in accordance with the requirements. The functional tests passed without remarks.

The load tests passed without remarks and did not lead to permanent deformations or loss of stability.

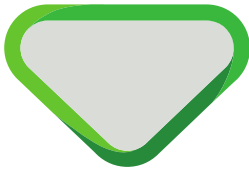
4.1 Calculations

The calculations were found accordance with the requirements.

5. Conditions

Additional to or in deviation of the applicable demands in the considered requirements / standards (see certificate and/or page 1 of this report), the following conditions shall be taken into account:

- The brakes shall be applied within the application range that is specified in chapter 2 of this report.
- The maximum tripping speed of the governor contact or similar device that is used to activate the ascending car overspeed protection shall be according EN 81-20 art. 5.6.6.
- The unintended car movement protection must be triggered by a system which fulfills the requirements of EN 81-20 art. 5.11.2.3.



6. Conclusions

Based upon the results of the EU-type examination Liftinstituut B.V. issues an EU-type examination certificate.

The EU-type examination certificate is only valid for products which are in conformity with the same specifications as the type certified product. The certificate is issued based on the requirements that are valid at the date of issue. In case of changes of the product specifications, changes in the requirements or changes in the state of the art the certificate holder shall request Liftinstituut B.V. to reconsider the validity of the certificate.

7. CE marking and EU Declaration of conformity

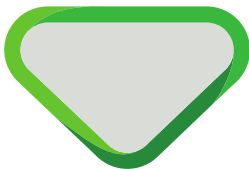
Every safety component that is placed on the market in complete conformity with the examined type must be provided with a CE marking according to article 18 of the Lift directive 2014/33/EU under consideration that conformity with eventually other applicable Directives is proven. Also every safety component must be accompanied by an EU declaration of conformity according to annex II of the Directive in which the name, address and Notified Body identification number of Liftinstituut B.V. must be included as well as the number of the EU-type examination certificate.

An EU type-certified safety component shall be random checked e.g. according to annex IX of the Lift directive 2014/33/EU before these safety components may be CE-marked and may be placed on the market. For further information see regulation 2.0.1 'Regulations for product certification' on www.liftinstituut.com.

Prepared by:

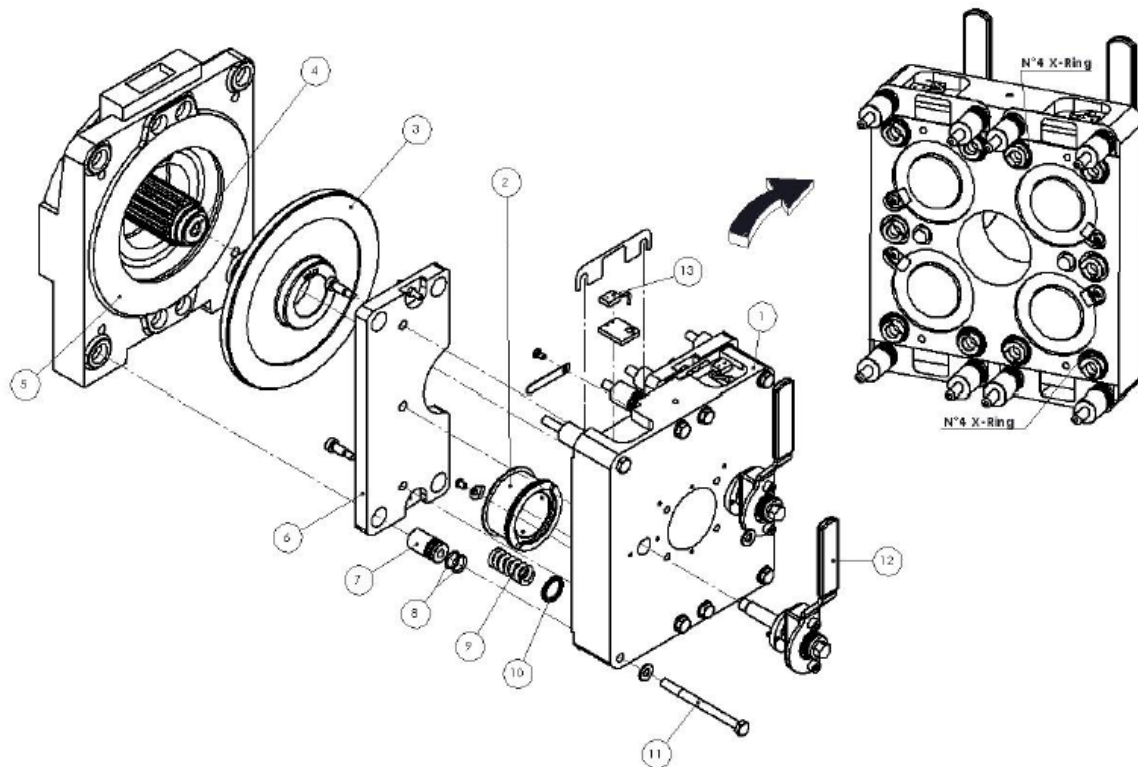
E. Verkaik
Product Specialist Certification
Liftinstituut B.V.

Certification decision by:

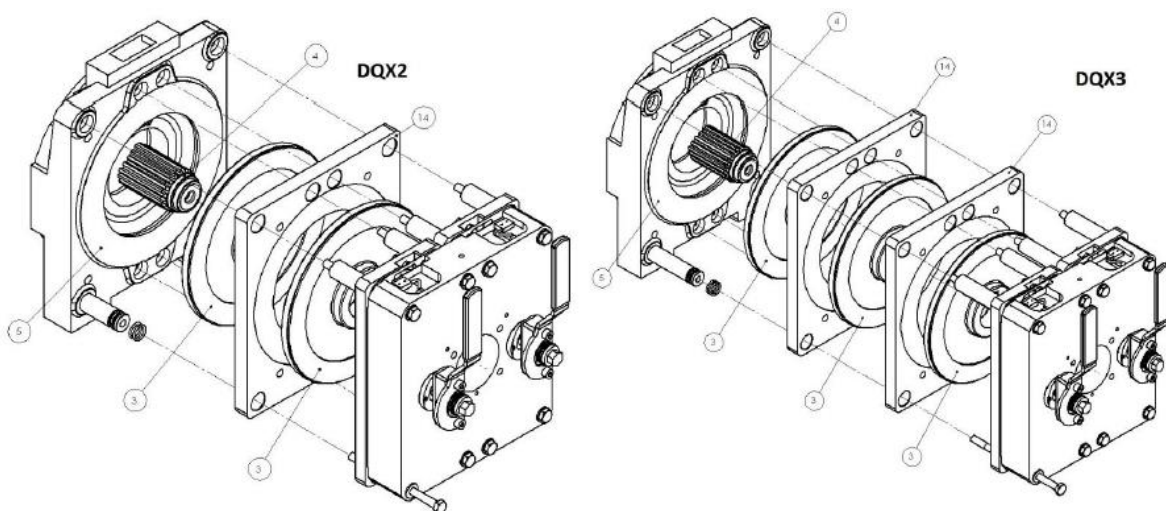


Annexes

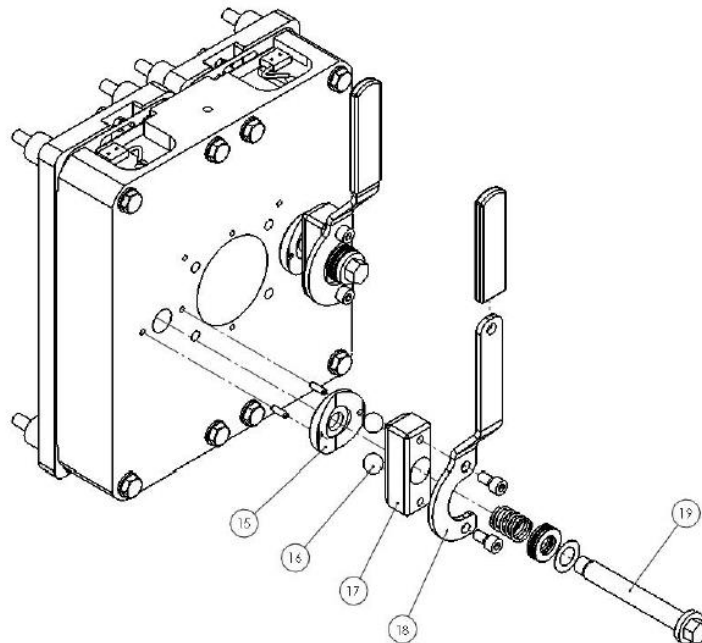
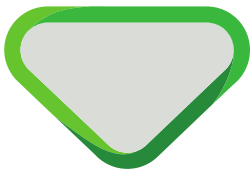
Annex 1. General overview of the product



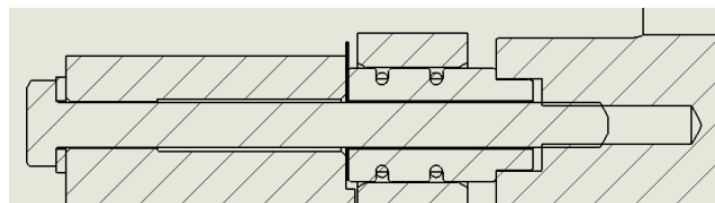
Exploded view of the DQX1 brake (with a view of the body of the coils)



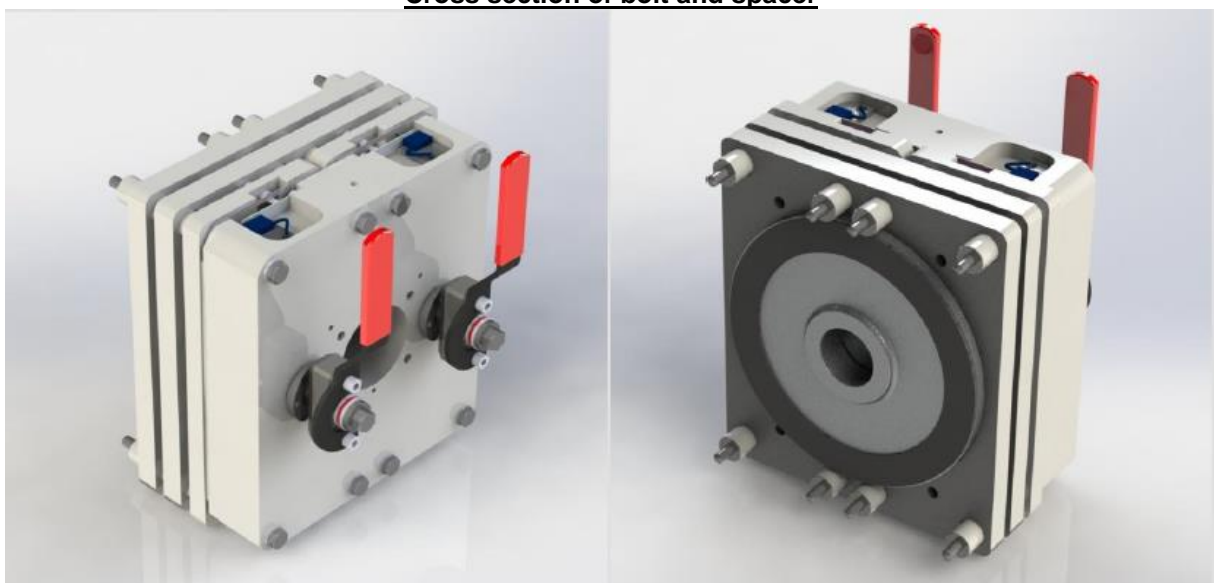
Exploded view of brakes DQX2 and DQX3

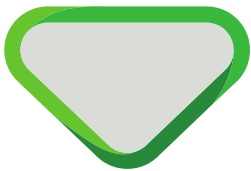


Exploded view of the manual release unit



Cross section of bolt and spacer





Type	Torque (Nm)	A	B	C
DQ01	2 x 525	110	-	-
DQ02	2 x 850	-	142	-
DQ03	2 x 1250	-	-	174
DQ11	2 x 250	110	-	-
DQ12	2 x 650	-	142	-
DQA1	2 x 525	110	-	-
DQA2	2 x 850	-	142	-
DQB1	2 x 250	110	-	-
DQB2	2 x 650	-	142	-
DQB3	2 x 850	-	-	174

Machine Type
FRENO DQXY

Size | Scale | Actual

A4 | 1:10 | w-0

Drawn by
DS

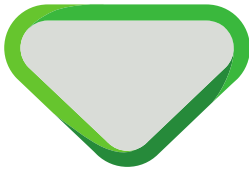
Date
31/10/19

Note

Revision

DQXY Freni di sicurezza a dischi frontali / Safety brakes with frontal disks

File name: freno_dqx_dq



Annex 2. Documents of the Technical File which were subject of the examination

Title	Document number	Date
Kinetic energy dissipated during the test	-	19/05/2017
TECHNICAL FILE RELATING TO Safety Brakes with Front Disks DQXY Rev.3	-	07/11/2017
TEST RESULTS	-	01/08/2017
Integration to DQXY brakes technical file	rev3_20171107	20/12/2019
Safety Brakes with Front Disks DQXY	Rev.5	26/07/2022

Annex 3. Reviewed deviations from the standards

No deviations of standards.

Annex 4. Revision of the certificate and its report

Rev.:	Date	Summary of revision
-	14-11-2017	Original
1	09-01-2020	Several textual changes and Annex 1 changed
2	13-09-2022	Renewal and EN 81-20/50:2020

Gearless G-100/180/200/300/400 + Brake DG/DF/DQ with manual release levers



Only skilled personell can operate according the following procedures

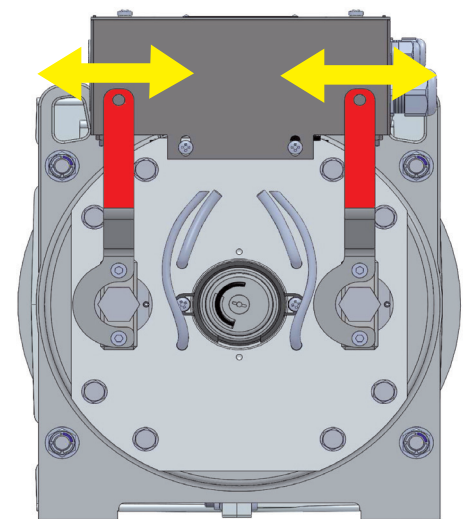
- 1** Close and block landingdoors;
Switch off the mains switch;
Do not deactivate safety devices.

- 2** Reassure passengers and inform them that they should not attempt to leave the cabin before the system has been secured.

- 3 HOW TO OPERATE THE MANUAL RELEASE OF THE SERVICE BRAKE**

- a- Turn the manual release levers very carefully.
- b- Turn the levers either right of left.

Each lever acts on half brake, thus annulling the braking torque!



ATTENTION : CABIN CAN MOVE UPWARDS OR DOWNWARDS WITH REGARD TO THE LOAD!



Open and close the service brake intermittently until you reach the nearest floor.



WARNING: IN THE EVENT OF SUDDEN ACCELERATION OF THE CABIN IMMEDIATELY CLOSE THE BRAKE BY RELEASING THE LEVERS.

- 4 EXIT OF PASSENGERS:**
 - a- Keep levers in vertical position with closed brake.
 - b- Cabin must be at still stand.
 - c- Open manually landing door and let people coming out.
 - d- Close landing doors properly.

IF UNABLE TO MOVE THE CABIN BY HAND AS INDICATED, IMMEDIATELY NOTIFY THE SAFETY RESCUE SERVICE.



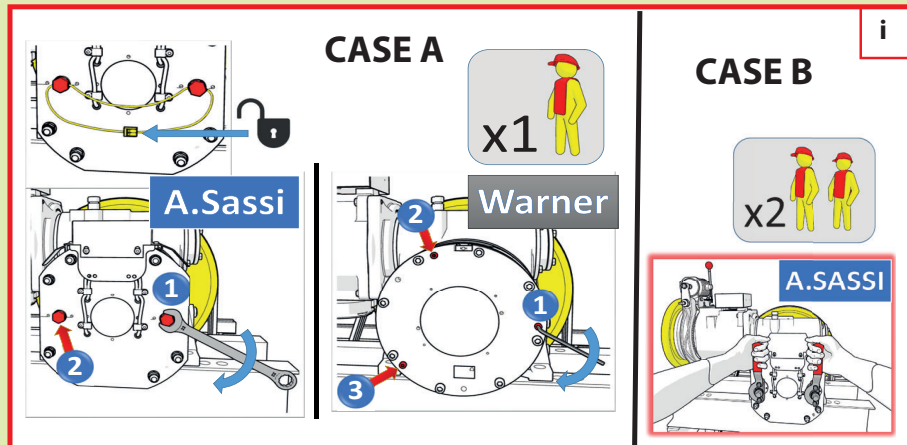
contact number or person in case of need: _____

1 Close and block doors at floor – Switch off the mains switch - **The service brake must be closed and no oil must be present in drum brake**

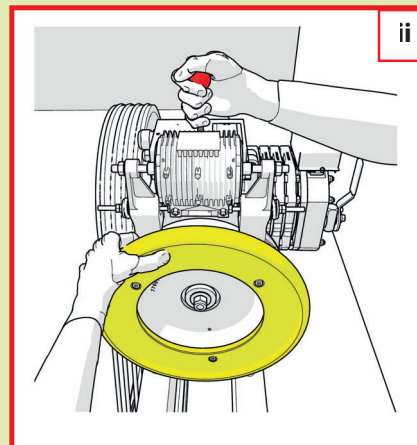
2 Reassure passengers and inform them that they **should not attempt to leave the cabin before the system has been secured**

3 HOW TO OPERATE MANUAL RELEASE OF THE BRAKE

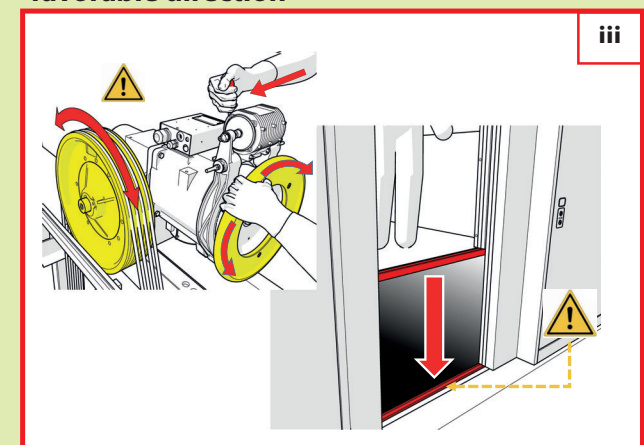
Release the emergency brake (if present)



Release the service brake



Rotate the flywheel in the most favorable direction



ATTENTION: THE CABIN COULD MOVE UPWARDS OR DOWNWARDS DEPENDING ON THE LOAD

Open the service brake carefully and intermittently (Fig. iii) and move the cabin slowly.

ATTENTION: IN CASE OF SUDDEN ACCELERATION OF THE CABIN , LEAVE THE LEVER FOR BRAKE OPENING IMMEDIATELY

4 **EXIT OF PASSENGERS** Manually open the doors at the floor where the cabin is positioned and let passengers get out

5 RESTART OF THE INSTALLATION

CASE A: unscrew the 2 or 3 nuts and position them at a distance of 4 mm from coil's body

CASE B: restore the initial position of brake levers

IF UNABLE TO MOVE THE CABIN MANUALLY, NOTIFY THE RESCUE SERVICE IMMEDIATELY