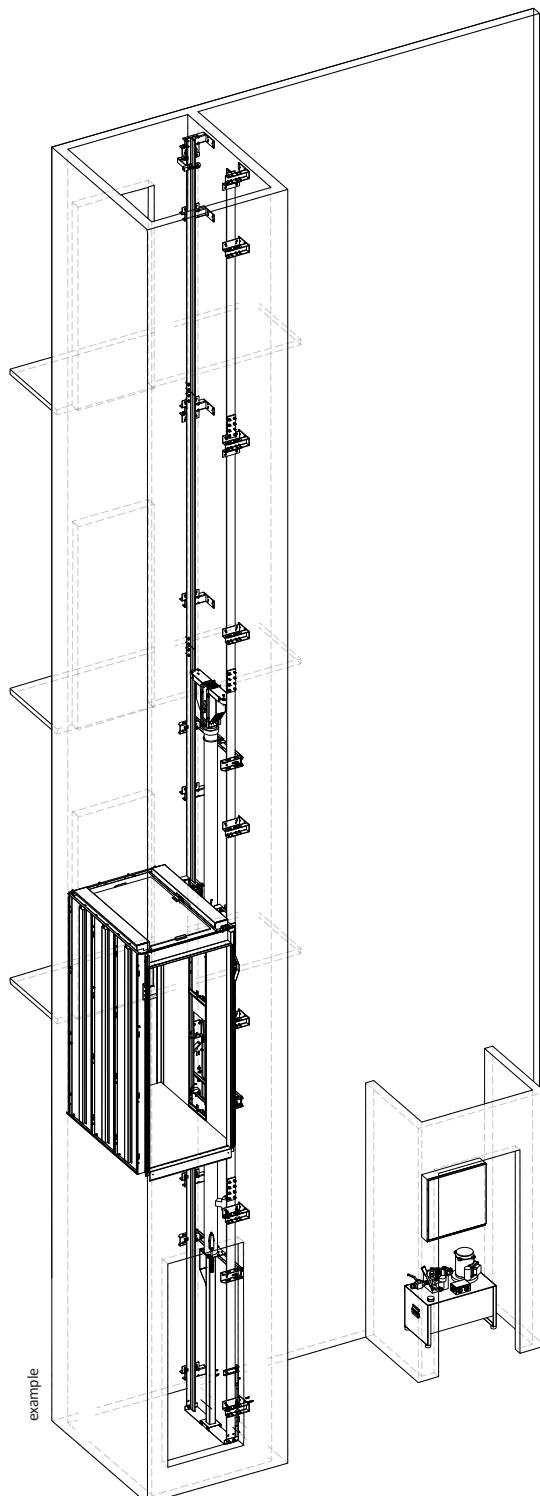


## inDOMO HP

Platform lift



## FINAL TESTS



As far as the following items are concerned : general instructions, safety instructions, responsibility and warranty, material receiving and storage on site, packing, waste disposal, cleaning and maintenance, please consult the manual "**SAFETY AND MATERIAL HANDLING ON SITE**".

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10.2	General update	30.11.2015
10.1	Update pages 5, 8	27.02.2014
10	General update and new layout	30.01.2013
Rev.	Descrizione	Data

## 0 MANUAL READING GUIDE

### 0.1 CHAPTER SYMBOLS

	General information		Positioning		2:1 lift specification
	Box content		Installation		1:1 lift specification
	Preliminary advice		Commissioning		
	Read carefully		Electrical Wiring		

### 0.2 IMPORTANT ITEMS

	General safety warning		Important notice		Read carefully
	Risk of electric shock		Risk of bodily injury (e.g. due to sharp angles or protruding parts)		Risk of damage to mechanical parts (e.g. during incorrect installation)
	Fire hazard		Hanging load		Risk of skin injury
	Risk of falling		No entry		Materials to be protected against bad weather conditions

### 0.3 INDIVIDUAL SAFETY DEVICES

	Hard hat		Ear protection		Safety harness and other accessories
	Overalls		Safety steel-toe boots with ankle protection		Safety glasses
	Dust masks		Work gloves Rubber gloves		First aid kit

The words **WARNING** and **CAUTION** are used to highlight the following risks of injury and damage:

<b>WARNING</b>	Serious danger to safety
<b>CAUTION</b>	Risk of damage to materials which may lead to safety risks



## 1 COMMISSIONING AND HANDOVER



This manual contains the list of final tests needed for lift commissioning by the installer. Upon the commissioning completed, the installer will sign the protocol, indicating the exact date and the data of the installation company and special notes, if any.

The manual must be signed by the owner of the lift, to confirm the final commissioning and handover of the lift and the ownership of all the related documentation.

This manual must be filled in, following the instructions stated in the below paragraphs: the manual must be kept nearby the lift as part of the conformity documents; the last page form must be sent to the Supplier within 15 days from the date stated on the form itself, so that the warranty period can start in due time.

Should the form not be sent as per the above instructions, the warranty will start on the date of shipment and will not exceed the standard term.



## 2 CONFORMITY TESTS



The single tests described below are to verify the correct assembly: each of them contains the requirements to be matched and the way to check them.



The operations described in this paragraph, can be carried out by adequately qualified personnel.



The below listed operations are to support standard test procedures required by project and electrical drawings.

Should any of these operations lead to negative results, the related assembly operation must be repeated in accordance with installation instructions.



Before accessing the pit, open the main driving force switch and activate the safe pit device.



Some of the operations require that the control cabinet be open and under power.

The tests are to be effected with the empty car, except those cases when the load is required.

**NOTE 1:** When the tests are to be effected "with the maximum static load", the car must be evenly loaded as follows:

Nominal car load (kg)	250	315	385	500
Weight to be loaded (kg)	313	394	481	625

**NOTE 2:** When the tests are to be effected "with the maximum load", the car must be evenly loaded with the weight equal to the nominal load (indicated on the car plate).

**NOTE 3:** When the instructions recommend to "Refresh", go backwards through the steps described, to bring the lift back to the starting conditions.

**2.1 CONTROL PANEL TESTING**

The control panel is compliant with the installation manual, paragraph **6.2**.

**2.2 FIRST TEST TRAVELS**

Carry out checks as reported on the installation manual, paragraph **17**.

(2:1)

**2.3 SAFETY BRAKES TESTING**

Verify that the safety brake operates correctly, as explained on the installation manual, paragraph **20**:

- i. with empty car;
- ii. with car loaded in accordance with its nominal flow rate;

**2.4 ORIGINAL MATERIALS FROM LIFTINGITALIA**

The lift must match the LIFTINGITALIA project requirements. Therefore, the installer has to confirm the exclusive use of materials supplied by LIFTINGITALIA.

**MAXIMUM STATIC LOAD****2.5 STRUCTURAL TEST**

After loading the car with the maximum static load, verify absence of **permanent deformities** of the lift.

**MAXIMUM LOAD****2.6 MAXIMUM STATIC PRESSURE**

Check the maximum static pressure with the maximum load:

- i. bring the car to the upper stop and open the valve of the pressure gauge;
- ii. **Pay attention to the value reported on the passage gauge: it must be the same as the one reported on page 1 of the design drawing (tolerance  $\pm 3$  bar);**
- iii. refresh.

**2.7 HYDRAULIC CIRCUIT**

Check the gradual lowering with the maximum load.

- i. send the car to the upper stop;
- ii. close the inlet valve and cut the power, by opening the Driving Force switch;
- iii. open the landing door and measure the gap between the landing level and the car doostep;
- iv. reopen the inlet valve (without restoring the power), then wait 10 minutes and repeat the gap measuring;
- v. **the car lowering must not exceed 10 mm;**
- vi. refresh.

**2.8 BLOCK VALVE**

Check the efficiency of the block valve with a fully loaded car:

- i. bring the car to the upper floor;
- ii. remove the calibration, to increase the downward speed of the car (approx 0,30 m/s) as explained in the Hydraulic Manual;

- iii. command the descent to the lowest floor;
- iv. the car speed will exceed the standard and the **block valve will block the descent**;
- v. send the lift upwards, to unblock the valve;
- vi. refresh.

## 2.9 OVERLOAD MANOSTAT

Check the efficiency of the overload manostat with a fully loaded car:

- i. send the lift to the lowest stop and enter the car;
- ii. **make sure the lift does not respond to commands from inside and outside the car.**
- iii. refresh.

## 2.10 ASCENT AND DESCENT SPEED

Check the car speed with a fully loaded car:

- i. measure the distance between two floors (meters);
- ii. from the landing, send the car to the upper floor and notice the travel time (seconds);
- iii. repeat the same downwards;
- iv. calculate the value "distance (m) / time (s)";
- v. **the speed cannot exceed 0,15 m/s;**
- vi. refresh.

## FOR EITHER FULLY LOADED OR EMPTY CAR

### 2.11 STOP PRECISION

Check the stop precision (either fully loaded or empty car):

- i. use the landing operation panel for commands;
- ii. with a loaded car, command an upwards travel, letting the lift stop by itself;
- iii. open the landing door and (without entering the car) measure the vertical gap between the car doorstep and the landing level;
- iv. repeat the same procedure in case of any other stops (upwards);
- v. repeat the same procedure for all the stops (downwards);
- vi. repeat upwards and downwards with an empty car;
- vii. **maximum acceptable gap in each case: 10 mm under or above the landing.**

## EMPTY CAR

### 2.12 SAFETY SPACE IN PIT

Check the safety space in the pit and the mechanical resistance of the safe-pit with a fully loaded car::

- i. bring the car to the upper stop;
- ii. open the landing door and insert the safe-pit device;
- iii. Close the door and, by pushing the emergency button, make the car descend till it touches the safe-pit device;
- iv. open the lowest landing door and (without accessing the pit) make sure the car is propped correctly, **the minimum free height being 500 mm;**
- v. bring the car to the upper floor and make sure **the pit prop and the fixing nave not been damaged;**
- vi. refresh.

### 2.13 "STOP" (if present ) AND ALARM BUTTONS

Check if the STOP button actually stops the lift and the alarm button activates the acoustic signal:

- i. stop the car between two stops, using the STOP button (if available, in case of doorless car);
- ii. try to move the car upwards and downwards: **the lift will not respond**;
- iii. repeat the commands from the landing operation panels: **the busy signal is on and the car does not respond**
- iv. push the alarm button: **the alarm signal will be activated**;
- v. refresh.

### 2.14 EMERGENCY POWER SUPPLY

Check the efficiency of the emergency power circuit:

- i. bring the car to the upper floor;
- ii. close the power supply by means of opening the main switch of the lift (not that of the Driving Force), in order to simulate a black-out;
- iii. **the car emergency lighting will be activated**;
- iv. push the alarm button: **the alarm acoustic signal will be heard**;
- v. press and hold any operation button, **the car will descend to the lowest floor, so the door can be open**;
- vi. refresh.

### 2.15 SHAFT CLOSURE

The shaft must be closed completely.

### 2.16 COMMANDS

Check the correct execution of the following commands:

- i. a person in car will try to send the lift to each of the stops (upwards and downwards), checking if the car stops automatically;
- ii. upon an early release of the button (without car doors), the lift will stop immediately; within the levelling zone the travel will continue until an unforced stop at the landing level;
- iii. test the call from each of the stops, to check the regular automatic stops and the function of busy/present signals.

### 2.17 CEILING CONTACT

Check if the ceiling opening activates the safety chain:

- i. with the car at the upper stop, unscrew the safety fixings of the removable lid;
- ii. push the call button at the lowest floor and (with the car moving) try to lift the ceiling at the COP side: **the lift will stop**;
- iii. refresh.

### 2.18 COP CONTACT

Check if the COP opening activates the safety chain:

- i. unscrew the fixings of the removable part of the COP;
- ii. press any of the car buttons: **the car will not move**.
- iii. refresh.

### 2.19 OVERRUN CONTACT AND HEADROOM SPACER

Check the efficiency of the overrun contact / headroom spacer:

- i. send the car to the upper floor;
- ii. Control the ascent of the car from the control panel till the overtravel contact takes action (proceed little by little: when the lift does not respond to an external call, it means the overtravel contact is in action);
- iii. from the car, measure the distance between the outer surface of the ceiling and the lowest surface of the shaft in the headroom: **minimum300 mm**.

### 2.20 LANDING DOOR LOCKS

Check the landing door locks.

- i. when the car is not on the floor level, check that all the landing doors are locked correctly.
- ii. standing inside the car (in case of a doorless car) and facing a closed landing door, verify that the lock lever cannot be manually pulled up.

### 2.21 DISTANCES FROM THE ENTRANCE

Verify the maximum distance between the shaft and the car entrances:

- i. measure the distance between the car entrance frame (doorstep, returns, main beam), the door and the shaft wall in front of the entrance;
- ii. **CAR WITHOUT DOORS**  
**the distance between the shaft and the entrances must be max 20 mm (valid for the full travel height).**
- ii. **CAR WITH DOORS**  
**the horizontal distance between the car and the landing doorsteps must be  $\leq 35$  mm.**

### 2.22 CAR LEVELLING DISTANCE

Make sure that the car is positioned within the door unblocking area:

- i. go to the upper floor;
- ii. make several attempts: execute a short descent and release the button until the car reaches the minimum distance from the stop, and the levelling starts; measure the gap (minimum 20 mm);
- iii. make several attempts: execute a short descent, then release the button, until the car reaches the maximum distance from the floor within the levelling zone; measure the gap (**maximum 20 mm**);
- iv. repeat for each of the intermediate stops;
- v. the levelling must function in an area between +30 mm and -30 mm in relation to each landing level;
- vi. the maximum acceptable gap after the levelling stop is equal to 20 mm above or under the landing level.

### 2.23 CAR LEVELLING

Make sure that the car levelling is efficient with doors open:

- i. go to the upper floor, with another person operating from the machine room;
- ii. keep the landing door open;
- iii. go downwards, pressing the emergency descent button;
- iv. **the levelling will be active with the door open**.

(2:1)

**2.24 MANUAL PUMP**

Verify the maximum pressure of the manual pump:

- ii. close the inlet valve and open the pressure gauge valve;
- iii. activate the manual pump;
- iv. the gauge will indicate the maximum pressure reached: **this value must be maximum 2,3 x maximum static pressure** described in the paragraph **2.4** of this manual;
- v. discharge the pressure opening the inlet valve;
- vi. refresh

**2.25 OVERPRESSURE VALVE TEST**

Check the calibration of the overpressure valve:

- i. bring the car to the lowest floor;
- ii. close the inlet valve and open the pressure gauge valve;
- iii. call the car to the upper floor, using the upward command;
- iv. the gauge will indicate the maximum pressure reached: **this value must be maximum 1,4 maximum static pressure** described in the paragraph **2.4** of this manual;
- v. refresh.

(2:1)

**2.26 PULLEY SAFETY COVERS**

Check the presence and the correct assembly of the **safety covers applied on the pulleys**.

**2.27 GUIDE BRACKETS CENTER TO CENTER DISTANCE**

Make sure that the vertical distance between the guide fixing brackets **does not exceed the distance indicated in the project drawing**.

**2.28 GROUNDING CONNECTION**

Check the electrical continuity:

- i. with the lift moving, generate a short circuit between the last point of the safety chain and the grounding;
- ii. verify the car stop and **the automatic valve activation (alternatively a fuse burning)**;
- iii. refresh.

**2.29 ELECTRICAL COMPONENTS INSULATION**

Check the insulation related to the grounding (**the minimum value must be 0,5 MΩ**) following the electrical drawings.

**2.30 SHAFT LIGHTING AND SOCKET (if any)**

- i. with the help of the switch, check the switching on and off of the shaft lighting (if present);
- ii. check the power in the socket (230 V).

### 2.31 PHOTOCELLS OR LIGHT BARRIERS (if any)

To check these devices proceed as follows:

**CAR WITHOUT DOORS**

With the car moving, catch the ray of a photocell (light barrier); **the lift will stop and remain stationary until the removal of the obstacle**. Then send the car upwards.

**CAR WITH DOORS**

when the car is stationary at a stop while the doors are closing, catch the ray of a photocell (light barrier), **the car doors will open and remain open until the removal of the obstacle**.

### 2.32 BUTTON ENABLING KEY (optional)

To test the key proceed as follows:

- i. in the car, without commuting to the enabling key, try to send the car upwards and downwards: the lift will not respond;
- ii. press the alarm button to activate the siren;
- iii. commute to the key and repeat the same operations: the lift will start moving regularly;
- iv. commute to the landing key and repeat from each floor.

### 2.33 CONTROL CABINET

Check the following conditions:

- i. the control cabinet is located in a suitable room, protected from bad weather conditions and humidity, and can keep the constant temperature comprised between 5 and 40 °C;
- ii. the area in front of the cabinet door is clean, and its width and height are sufficient for a safe access;
- iii. a relevant lighting is available, to ensure a perfect visibility and component identification inside the cabinet;
- iv. the hoses and electrical wires connected to the cabinet are adequately protected from damages, and inspectable.

### 2.34 SIGNAGE

Check the correct application of the following plates and signs:

- i. in the pit (access might be dangerous without safety devices);
- ii. on the car roof (not bearing surface);
- iii. on the control cabinet (electrical hazard, emergency operation instructions);
- iv. beside the main supply switch (operation mode);
- v. beside the red emergency descent button (for an easy identification);
- vi. in the car (duty load, capacity, name of manufacturer, emergency instructions for the COP in case of power cuts);
- vii. close to the outer alarm system of the lift (to explain its function).

### 2.35 NOISE EMISSION

Verify that the sound pressure emission does not exceed the maximum level in the following areas ( $\pm 3$  dB(A)):

- i. inside of the car: 60 dB(A);
- ii. by the landing area, at a distance of 1 metre from the landing door: 55 dB(A);
- iii. in front of the machine room cabinet, at a distance of 1 metre: 55 dB(A);

List of installed components:

Safety components	Component type
Landing door lock	
Block valve	
Safety brake	
Electronic safety device (floor levelling)	

LIFT N° _____	YEAR OF MANUFACTURE: _____	
LOAD: _____ kg	TRAVEL: _____ m	
N° STOPS: _____	N° SERVICES: _____	N° CAR ACCESSES: _____
Manufacturer: LIFTINGITALIA S.r.l. Address: V. Caduti del Lavoro, 16 - 43058 Bogolese di Sorbolo (PR) - ITALY ph. +39 0521.695311 - fax. +39 0521.695313	Supplier: LIFTINGITALIA S.r.l. Address: V. Caduti del Lavoro, 16 - 43058 Bogolese di Sorbolo (PR) - ITALY ph. +39 0521.695311 - fax. +39 0521.695313	
Owner: _____ Address: _____  Ph. _____ - Fax. _____	Installation site: _____ Address: _____  Ph. _____ - Fax. _____	
Installer: _____ Address: _____  Ph. _____ - Fax. _____	Tests effected (date) : _____ by _____ as installer's representative	
Special notes : _____  _____		

Final commissioning confirmation for lift N° \_\_\_\_\_

The tests have been carried out with positive results

**SI**

**NO**

in case of positive results, the lift can be considered compliant with the Italian law D.Lgs. 27.01.2010, n° 17.

Special notes : \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Date \_\_\_\_\_ Installer's / verifier's signature: \_\_\_\_\_

The installer certifies to have carried out the installation properly, because all the tests have given positive results.

The manufacturer will compile the related EC declaration of conformity, and the installer will be able to apply the EC mark in the car.

The lift can be put into operation after the fulfilment of the requirements as per par. 5 of the President's Decree n. 214 (Amendments to the art. 12 of the President's Decree n. 162 dated 30.04.1999), dated 05.10.2010.

***COPY FOR THE SUPPLIER***

Final commissioning confirmation for lift N° \_\_\_\_\_

The tests have been carried out with positive results **SI** **NO**

in case of positive results, the lift can be considered compliant with the Italian law D.Lgs. 27.01.2010, n° 17.

Special notes : \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Date \_\_\_\_\_

Installer's / verifier's signature: \_\_\_\_\_

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