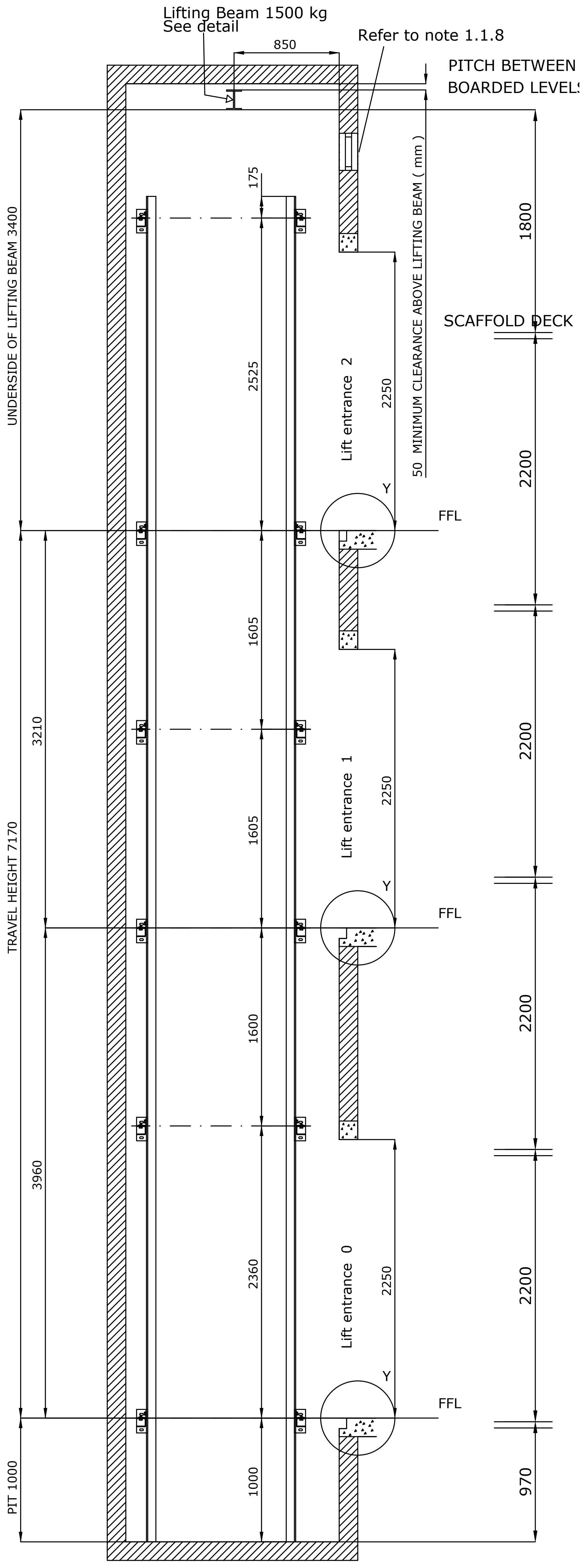
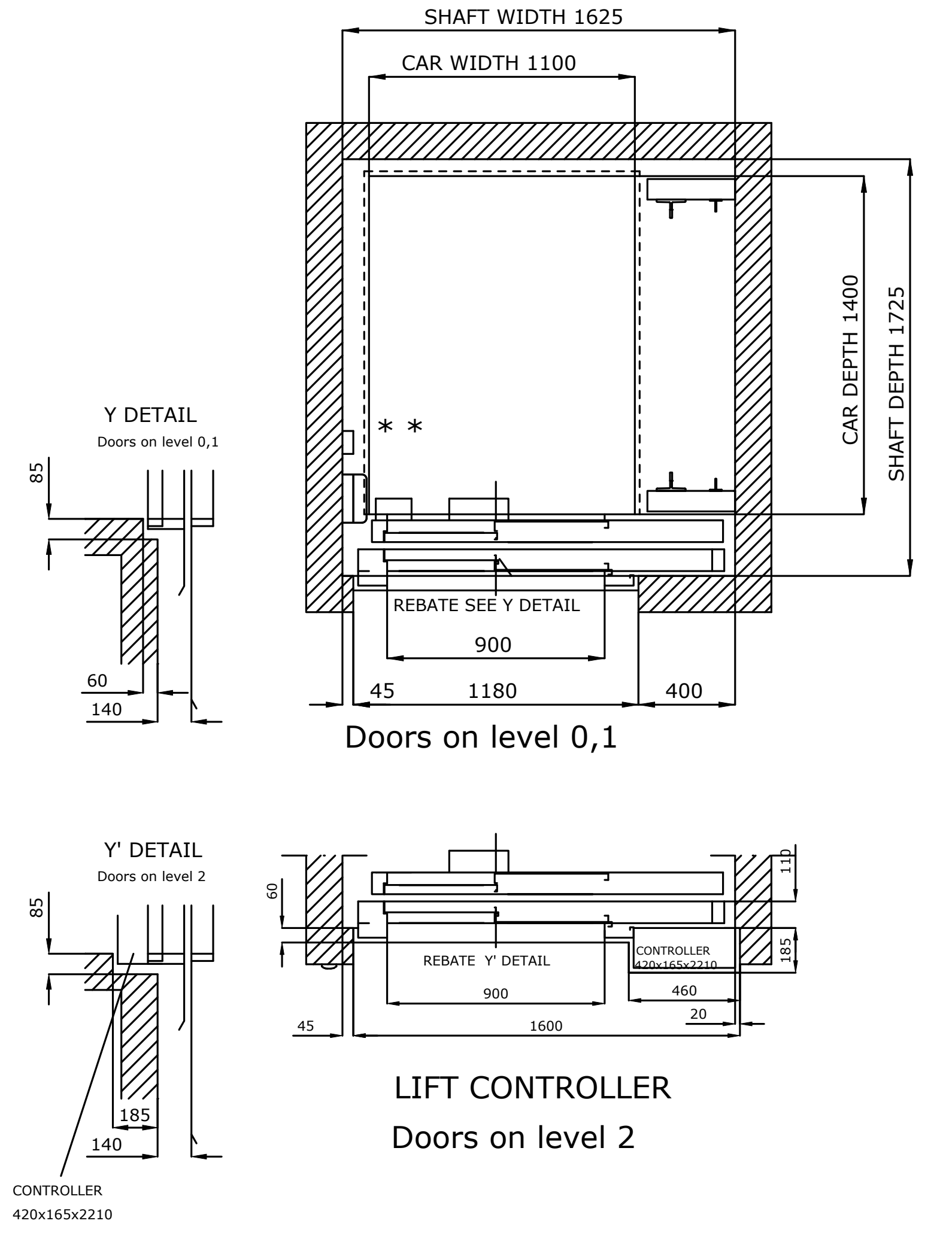
SHAFT VERTICAL SECTION



NUMBER OF BRACKETS 6
MAX DISTANCE BETWEEN BRACKETS 2840
GUIDE BRACKET FIXINGS, DRILL & FIX
BY LIFT INSTALLATION COMPANY

SECTIONAL PLAN VIEW



Doors on level 0,1

LIFT CONTROLLER
Doors on level 2

IMPORTANT : CLEAR DISTANCE IN FRONT

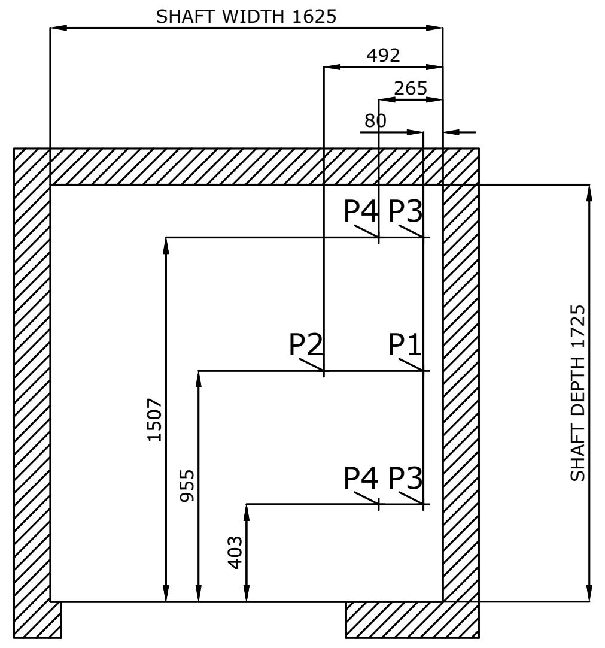
OF THE CONTROLLER BE 800mm

OR 1200mm WHERE PASSAGE IS REQUIRED

* * SHAFT LIGHTING & PIT SOCKET

BY LIFT INSTALLATION COMPANY

SECTIONAL PLAN VIEW
LOW LEVEL & LIFT PIT

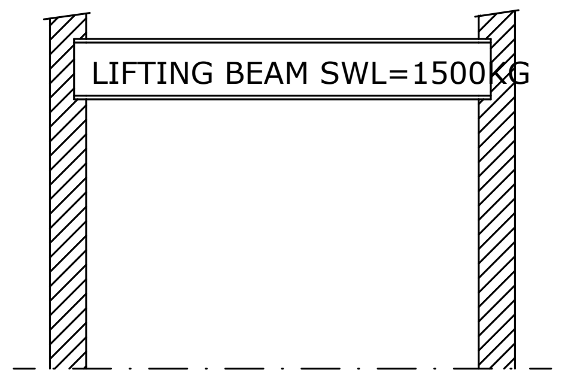


LOADS ON daN
P1: ±3600 daN
P2: ±4950 daN
P3: ±490 daN
P4: ±2090 daN

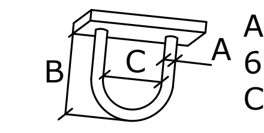
WHEN THERE ARE ACCESSIBLE SPACES BELOW THE LIFT WELL, THE BASE OF THE PIT SHALL BE DESIGNED FOR AN IMPOSED LOAD OF AT LEAST 5000 N/M2 FURTHER ACTIONS ARE REQUIRED AND ADVICE SHOULD BE SOUGHT

SHAFT TOP LOOP DETAIL

BEAM SIZE 152mm x 152mm x 30kg



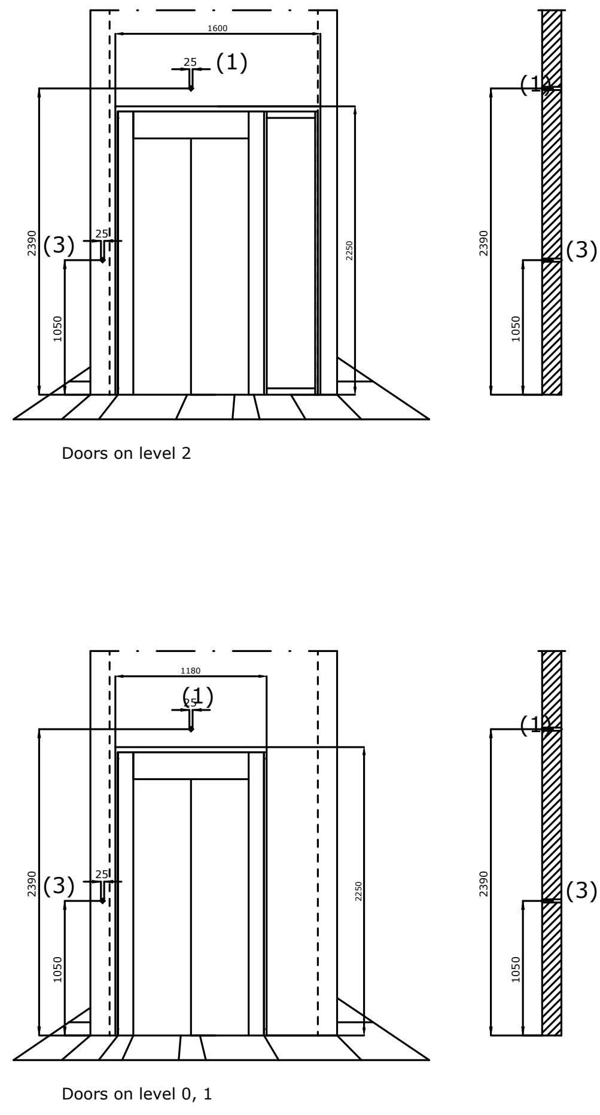
INSTALLATION LOOP DETAIL



A<=12mm
60mm<=B<=120mm
Cmin=60mm

LIFTING LOOPS / BEAMS TO BE SUPPLIED AND FIXED, TESTED, PAINTED AND MARKED WITH 'SWL' BY OTHERS

LANDING DETAIL



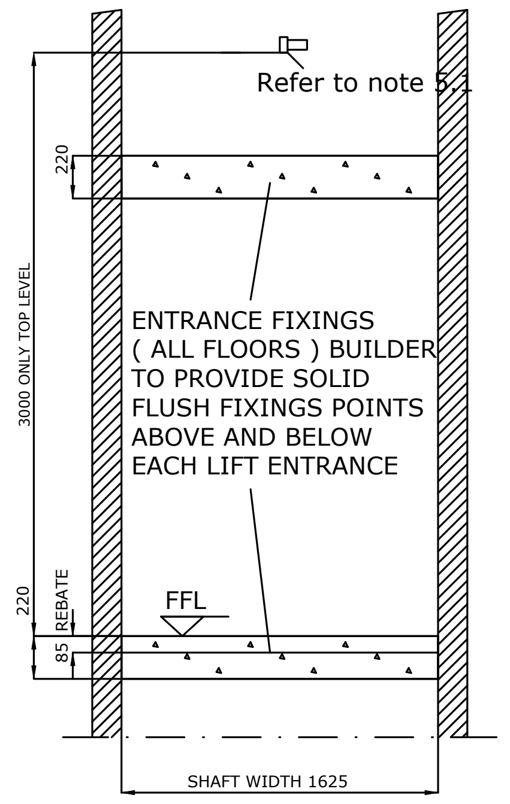
Doors on level 2

Doors on level 0, 1

(1) Indicator
(3) LOP

Access 1	Access 2	Indicator Position	PushButton Position
0		IN WALL	IN WALL
1		IN WALL	IN WALL
2		IN WALL	IN WALL

SHAFT LIFT ENTRANCE
DETAIL (VIEW INSIDE)

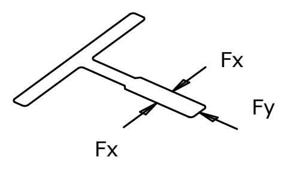


ENTRANCE FIXINGS
(ALL FLOORS) BUILDER
TO PROVIDE SOLID
FLUSH FIXINGS POINTS
ABOVE AND BELOW
EACH LIFT ENTRANCE

LOADINGS IMPOSED

ON THE GUIDE RAILS

Fx: 329,9 daN
Fy: 135,3 daN



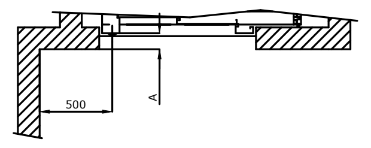
NOTE: THIS DRAWING IS FOR USE WITH COMPLETE CONCRETE/BLOCKWORK SHAFTS ONLY. FOR ALTERNATIVE CONSTRUCTION SHAFTS, ADVICE SHOULD BE SOUGHT.

BS EN81-70 Information
Location of Landing Controls

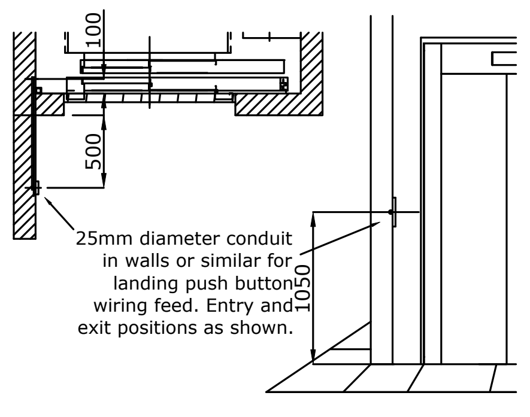
BSEN-81-70 requires that the minimum distance between the centreline of any button to any corner of an adjacent wall shall not be less than 500mm on the landing.

Orona design based on nib wall "A"
Dimension no greater than 250mm Depth

Typical Detail:-



Where the scheme does not meet this requirement, it is the building contractors responsibility to notify Orona to request wall mounted pushes. The walls need to be prepared similar to the detail as shown below:-



25mm diameter conduit in walls or similar for landing push button wiring feed. Entry and exit positions as shown.

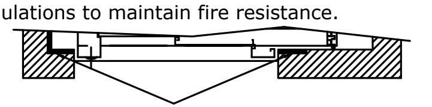
Landing Door Side
Wall (nibs) Fixings

Builder to provide suitable fixing areas to the left and right of the lift opening, within the lift shaft.

Recommended front wall (nibs) construction:-
- Blockwork
- Masonry
- Concrete

-With Steel: responsibility by others.

Builder to make good any gaps with concrete, or suitably fire stopped to the lift landing door frame after installation in accordance with building/fire regulations to maintain fire resistance.



Landing door brackets by Orona located.

Strength of Walls, Floors and Ceilings

The structure of the well, machinery spaces and pulley rooms shall conform to national building regulations and be able to support at least the loads which may be applied by the machine, by the guide rails at the moment of safety gear operation, in the case of eccentric load in the car, by the action of the buffers, by those which may be applied by the anti-rebound device, by loading and unloading the car, etc.. for further information see EN81-20:2014 E.1.

The walls of the well shall have a mechanical strength such that when a force of 1000 N, being evenly distributed over an area of 0,30 m x 0,30 m in round or square section, is applied at right angles to the wall at any point on either face they shall resist without:

a) Permanent deformation greater than 1 mm;
b) Elastic deformation greater than 15 mm.

Where applicable the internal face of the well should be smooth & flush and there should be provision for the wall panels to allow the fixing of cable, trunking, contactor/drive box, shaft lighting, etc.

Guide Access Note

Builder to confirm that access for 5M Guides is available during the lift installation.
Orona will not be responsible for access clearance in to the shaft.

	Tick
2.5M Length guide access	☑
5M Length guide access	☐

LIFTING EYE TESTING PLATFORM/ACCESS

NOTE: THE BUILDER IS TO PROVIDE A WORKING PLATFORM FOR TESTING THE LIFTING EYES 1800mm FROM THE SHAFT ROOF. WHERE A LIFTING BEAM WITH EYES ARE PROVIDED THE PLATFORM MUST BE 1800mm FROM THE UNDERSIDE OF BEAM.

Shaft Material Note

Please check that this drawings shaft construction is consistant with the site build i.e. concrete/steel beams. If the details are incorrect please issue the orona designers with the correct layout information to revise the drawing.
Orona will not be responsible for the shaft design and its build requirements.

	Tick
Concrete shaft walls	☐
Block work shaft walls	☑
Brick shaft walls	☐
Steel beams/inserts	☐

Shaft Fascia Requirements

If the dimension from car sill line to inside shaft wall exceeds 150mm then builder is to supply & fit fascia panels between each landing door.

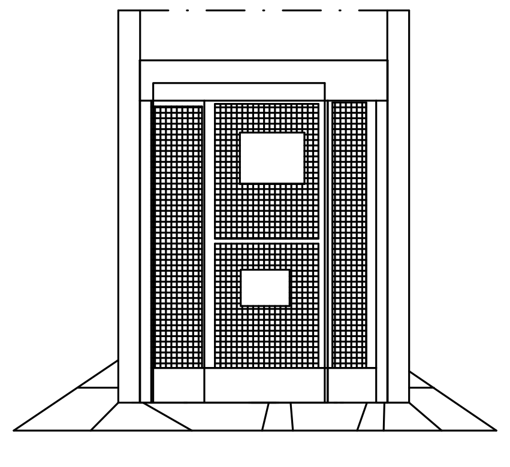
ELECTRICAL INSTALLATION

1. - In compliance with local electrical regulations of the country where the lift is installed.
2.- Should the permanent power point not be available, a temporary power point with protection panel is required to be within 5m of the location of the lift controller.
3. - Adequate temporary safety lighting is required within the lift shaft / lift landings / storage area / access routes.
4. - Lighting at all floors to provide a minimum of 50 Lux. Lightning measurements taken at floor level.

Lighting Voltage: 230 V
Power voltage: 415 V
Phase: 3 Phase with ground and neutral
Frequency: 50Hz
Motor Power: 4,5 kW
Running Current: 9,83 A
Starting Current: 11,2 A

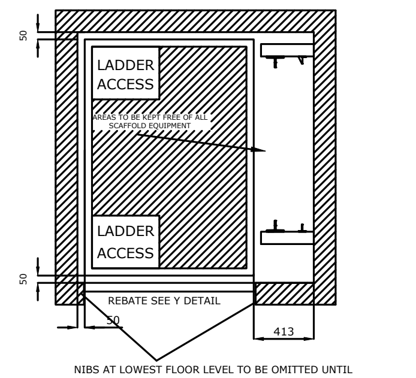
BASIC PREREQUISITES TO CARRY OUT
THE INSTALLATION METHOD AS SPECIFIED

BARRIER DETAIL



BUILDER TO PROVIDE ENTRANCE PROTECTION BARRIER. SAFETY-GATE METHOD IS ORONA PREFERRED SOLUTION. WHERE THIS SOLUTION IS NOT ADOPTED, TO BE PROVIDED AS A MINIMUN IS A HANDRAIL, MID RAIL & TOE BOARD, ACOORDING TO WORKING AT HEIGHT REGS. IN ADDITION & TO PREVENT OBJECTS ENTERING/EXITING THE LIFT WELL, SAFETY NETTING SHALL BE PROVIDED TO COVER THE WHOLE ENTRANCE OPENING. BARRIERS TO BE EASILY REMOVABLE TO ALLOW SAFE ACCESS TO THE LIFT WELL FOR INSTALLATION/EQUIPMENT/PERSONNEL/MATERIALS.

SECTIONAL PLAN VIEW
SCAFFOLD by others



NIBS AT LOWEST FLOOR LEVEL TO BE OMITTED UNTIL AFTER LIFT EQUIPMENT HAS BEEN INSTALLED

BUILDER TO PROVIDE SCAFFOLD AS DETAILED. LADDER ACCESS TO EACH BOARDED LEVEL FROM PIT FLOOR TO TOP BOARDED LEVEL. SEE 'SHAFT VERTICAL SECTION' FOR THE VERTICAL BOARDED LEVELS. NOTE: SCAFFOLD ADAPTATION WILL BE REQUIRED AT THE GROUND FLOOR LEVEL.

Builders work notes

The information set out below gives general details of builders work. However all works must be in accordance with national standards, ec standards, health & safety at work act & all other relevant regulations & bye laws. Lift installation company does not accept any responsibility for the failure of the buildings structure to withstand the loads imposed by the lift installation. Failure to comply with the following could result in the installation not being commenced/commissioned.

1. LIFT WELL CHARACTERISTICS

1.1 LIFT WELL

1.1.1. - It is important that the well is constructed in accordance with the dimensions shown & the tolerances stated. Although all dimensions are important we particularly refer to:
I. Minimum plumb well sizes.
II. Pit depth.
III. The lifts travel.
IV. Headroom between the top ffl & the top of the shaft or the underside of the lifting beam, as appropriate.
The above dimensions are to be checked by the builder/ customer upon contract commencement & during construction works. Any deviations should be advised to lift installation company without delay.
1.1.2.- Dimensional accuracy to be checked at pit level. Thereafter a plumb accuracy of +25mm, -0mm is to be maintained over the entire well height.
1.1.3.- Within the machine area & lift well, there shall not be any electrical ductwork, electrical wiring, water pipes or any other items, other than those necessary for the operation and safety of the lift.
1.1.4.- There should be no combustible materials in the lift well.
1.1.5.- Lift well to be constructed of brick, blockwork or concrete to the nett plan sizes shown & to withstand the loadings stated. If lift well construction is blockwork then a minimum of 10n blocks to be used in its construction.
1.1.6.- Supply & fit lifting beam and/or loops at the top of the well as detailed. Load test & mark with s.w.l
1.1.7.- Ambient temperature around the uppermost landing to be maintained between 5 & 40 deg centigrade.
1.1.8.- Lift well ventilation: building design team to carry out design risk assessment to ascertain the ventilation requirements. Assessment should include the heat output of the lift equipment, ambient temperatures of the building, solar gains, construction materials, dust, humidity, gases, fumes, etc. In the absence of the design risk assessment, ventilation must be provided to atmosphere with an opening at least 1% of the plan area of the lift well.
1.1.9.- Lift well not to be used for ventilating areas that are not part of the lift installation.
1.1.10.- Lift well construction should ensure sufficient acoustic insulation to comply with current legislation.
1.1.11.- Whole lift well to be cleaned down, inserts cleaned out (if req'd), all loose mortar removed & whole lift well painted white prior to installation commencement.
1.1.12.- All equipment drill & fix by the lift installation company.
1.1.13.- Lift shaft to be fully weather protected prior to works commencing.

1.2 LIFT PIT

1.2.1- Pit floor to withstand the loadings stated & level maintained +/- 5 mm. The pit must be fully & permanently watertight. Any pit waterproofing required should be carried out externally allowing for any possible installation drill fixings up to a depth of 200mm.

2. LANDING ENTRANCES

2.1. - Where there is a shaft enclosure a thickness of 20mm should be borne in mind when creating rebates.
2.2.- Lift accessibility is subject to regulations regarding the elimination of physical barriers. I.e.: in Europe compliance with the terms of EN81-70 can be demanded.
2.3.- Structural entrance opening sizes shown allow for door positioning. Builder to make good to landing entrances after installation.

3. ANALOGUE TELEPHONE LINE (UNLESS GSM)

3.1.- To ensure compliance with the requirements contained in standard EN 81-28, provide permanent two way voice communication from lift car to rescue service. The supply for this device must not be mains dependent. Exclusive individual public telephone line with 3000mm length of cable, to be in place prior to commissioning
3.2.- The connection point is located beside the controller cabinet.

4. EQUIPMENT DURING WORKS.

4.1.- Provide adequate weatherproof, dry secure working/storage area for lift equipment from delivery to installation completion (approx 3m x 5m per lift). Area to be within 15m of the lowest level served by the lift
4.2.- Provide adequate under lock and key location for storing tools & to be used as a changing room by assembly personnel.
4.3.- Provide safe & level access from the delivery point to the lift well & storage area for lift materials. Provide assistance with off-load by means of fork truck (or similar). Access into the building to be level & suitable for palleted goods via standard pallet truck. Provide assistance with vertical hoisting of heavy lift materials to the uppermost level of the building, by means ofcranage/site hoist.
4.4.- Provide suitable safety barriers at each landing entrance. Barriers to consist of a minimum handrail, mid rail & toe board, according to working at height regs. In addition & to prevent objects entering/exiting the lift well, safety netting shall be provided to cover the whole entrance opening. Barriers to be easily removable to allow safe access to the lift well - refer to drawing for more detail
4.5.- It is the responsibility of the builder / customer to prevent the ingress of moisture, dust & other substances contaminating the lift equipment during & on completion of the installation & to protect the lift equipment against damage & deterioration due to any other cause.
4.6.- It is the responsibility of the builder / customer to liaise with the local fire officer, building control & any other controlling authorities to ensure that the whole installation meets with all local requirements.

5. ELECTRICAL INSTALLATION

5.1.- Prior to commencement provide a 400 volt 3 phase 5 wire permanent mains supply fed from a suitable mains isolating switch (external to the lift well and easily accessible) terminating in a 32 amp. Five-pole surface socket/plug (ie. RS 111-5541 and 724-9209) & 4000mm length of mains cable. Socket to be mounted in position to be agreed. An earth connector (frying pan) must be fitted between the gland and socket to allow for earth continuity when unplugged.
5.2.- A temporary 110v ac supply is required for power tools, etc, in close proximity to the lift well.
5.3.- Emergency lighting is required at the top floor above the lift controller.
5.4.- 200 lux minimum lighting at floor level in front of the lift controller.
6. Fire Alarm contact
6.1.- Fire alarm contact: to be wired to lift control panel by others to enable fire return to ground feature.

7. EVACUATION LIFTS (IF APPLICABLE)

Evacuation lifts require the following items to be provided by the principal contractor.
7.1- A secondary power source is necessary complete with automatic switching external to the lift well and located within a fire protected area.
7.2- The fire strategy should be provided by others to include the safe evacuation of the building using the evacuation lift(s).
7.3- A master communication panel and evacuation switch shall be fitted at the fire service access level (fsal) complete with slave communication panels at all landing refuge areas and in the lift car. Unless specifically confirmed as part of supply by Orona then the communication panels/evacuation switch should be provided free issue by others.
7.4- Apertures for the communication panels and making good as necessary.

For Approval

CAPACITY			SPEED
630 kg / 8 Passengers			1 m/s
REV.	DESCRIPTION.	INIT	DATE.
P01	FIRST ISSUE	JJPP	24.11.25

DRAWING NUMBER:
N715855_BUILDER

REF: XGB05595LRV
PAGE: 1/1

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DIMENSIONS ARE IN MM, UNLESS STATED.
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DATE: 03/11/2025
CHECKED BY: JJPP
DATE: 24.11.25
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TITLE: BUILDERS WORK DETAILS_CAERLEON CAMPUS, NEWPORT
CUSTOMER : ACORN GROUP CARDIFF
ADDRESS : UNIVERSITY OF WALES
CITY: NEWPORT
LIFT 2