

Specification:
New Chantry Centre - Lift
Job no: 600682 - Date: February 2019



Lift Particular Specification

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PARTICULAR SPECIFICATION – LIFT WORKS

1.00 General

A new lift is to be installed as part of the New Chantry Centre and is to consist of a new constructed lift shaft and installing a 635kg lift DDA compliant installation for access from the ground floor to the first floor. The building is a new development for the local council. The lift specialist will be working for the main contractor for the development.

The lift specialist is to be LEIA registered company.

- Unified Standard BS-EN-81-70 and other relevant sections
- British Standard BS5655
- Building Regulations Part M 2004
- CIBSE Guide D
- British Standard BS7671 – IEE wiring regulations

The site address is:

New Chantry Centre
 Billericay
 Essex
 CM11 2BB

1.01 Drawings

These are to be supplied by the specialist contractor for approval prior to construction. A complete set of drawings, including wiring diagrams are to be incorporated in the operating and maintenance manuals required on completion of the works. There are to be three complete manuals in a hard copy format and three in electronic format. There is also to be one copy of the drawings in A3 format and encapsulated for the lift which are to be left on site in the lift motor room on completion of the works.

1.02 The Works

The proposals are for the supply and installation of a new 8 - person 630kg hydraulic lift to operate from the ground floor to first floor. The builder will construct the prepared lift shaft and carry out all of the builder’s works in association with the lift installation. The lift motor room is to be located on the first floor to the side of the lift shaft.

An electrical contractor is to carry out the works associated with a dedicated lift supply from the main electrical switch room to the dedicated lift distribution board. All electrical works within the lift motor room and lift shaft will be the responsibility of the lift installation contractor under the LEIA electrical works dispensation notice.

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1.03 SCHEDULE OF WORKS General

The works shall be compliant with the lift regulations and all regulations as listed in section 1.00.

The new lift shall generally include the following, details of specialist equipment required for the installation is listed in sections 1.08 onwards.

In addition to the lift works the lift contractor will be required to fit earth cables to the lift guide rails for the lightning protection system. The electrical contractor will install the earth cables as far as the lift pit, leaving the cable ends to be connected by the lift contractor.

1.04 Lift 1

General Data:

- Contract Load - 630 kg / 8 Person
- Contract speed - 0.60 m/s minimum
- Travel Distance - 3 meters (TBC)
- Number of stops - 2 floors
- Number of landing entrances - 2
- Car type - Open to front only lift car arrangement

Lift Shaft

- Construction - Heavy duty block
- Shaft width - 1800 mm
- Shaft depth - 2200 mm
- Pit Depth - 1200 mm
- Headroom - 4200 mm to the underside of the lifting beam (TBC)
- Emergency Stop buttons - Two to be fitted, one in the pit and one by the control panel
- Shaft Power - A twin RCD socket outlet in the lift pit
- Shaft Lighting - Lighting to be minimum 50 Lux and to include Emergency be LED fittings.
- Shaft vent grill - To be a minimum of 1% of the lift pit area.
- Pit Ladder - Steel pit ladder to be installed for access.

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Lift Drive Information

- Drive unit - Hydraulic traction by Bucher.
- Motor starts - 40 Starts per hour
- Rated Voltage - 400 v, 3ph 50 Hz
- Controller Voltage - 110 v, 1 phase 50Hz
- Controller type - Microprocessor
- Lift motor room position - First floor in lift motor room.
- Control Panel - First floor plant room.

Lift Car

- Size - 1100 mm wide x 1400 mm deep x 2200 mm high
- Wall finish - Sheet steel construction, patterned stainless steel (5WL) panels incorporating stainless steel. panelled car to sides, entrance and rear walls
- Front wall returns - Satin stainless steel
- Mirror - To be fitted on the back wall above hand rail and of toughened glass construction.
- Floor finish - Recessed 20 mm for floor finish to be installed. The floor finish to be black Altro flooring
- Ceiling finish - Satin Stainless steel panel
- Lighting - Four LED down lighters.
- Lighting - Emergency - LED Emergency fitting.
- Handrails - Yellow covered steel tubular section on side and rear walls of 50 mm Ø. Mounted at 900 mm, FFL
- Safety edge - Full height Memco "Panachrome 2D" LED colour c change - units
- Autodialler - 4 way with two way intercom and induction loop facility.
- Wall finishes - Patterned stainless steel panels to all non-glazed areas.
- Skirting - Satin stainless steel with ventilation grilles
- Car operating panel - Satin stainless steel with tactile floor, alarm, door open & close buttons lift overload buzzer and indicator. Also, induction loop pictogram, speaker and microphone. The buttons to be 400 mm from the doors and 900 mm high
- Induction loop - Induction loop is to be fitted to the car
- Car indicators - Digital indicator within panel with 40 mm high Indication display
- Voice synthesiser - In car unit

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1.05 Extent of Contract

The Contract shall comprise the supply, delivery to site, erection, testing, commissioning of the complete lift installation as detailed below and set out in section 1.04 and specialist supplier information in the following sections. The Contract Price is to cover all works necessary for the full installation as specifically set out in this specification including the builders works and electrical supply from the lift supply distribution panels.

Systems shall be proven-tested and witnessed by the client and contract administrator or his representative.

The lift installation shall be installed within the shaft and the lifts to be electric traction lifts. The installation shall be strictly in accordance and in compliance with BS – EN 81 – 70, BS 5655, requirements and Part M of the building regulations. The plant size shall be provided to the building contractor along with the shaft size to enable the construction to be undertaken.

Due allowance shall be made to liaise fully with all other trades to provide a fully commissioned lift installation compliant with all current regulations.

An electrical supply is to be provided for the lift on a dedicated supply for the main intake by the electrical contractor which will terminate in a distribution board ready for the lift contractor to connect to.

1.06 Control Panel

The Control panel cabinet shall be constructed in a totally enclosed ventilated case having hinged doors, designed to give full access from the front only. The doors shall be locked and shall carry a “DANGER” notice on the outside.

Spare fuses are to be supplied, bolted to the cabinet and clearly labelled with type and size, etc., to enable spares requirements to be identified.

A neon warning light shall be fitted to the outside of the panel to signify that the main power supply is feeding the panel. A sign under the light shall state “Control Panel LIVE when Light Is On, Switch Off Isolator Before Hand Lowering or Opening Panel”.

The insulation of the controller wiring shall be of the flame-retardant type.

Accessible terminals, suitably marked, shall be provided for the connection of incoming and outgoing cables. The main incoming supply for the lift is to terminate in a distribution board with separate ways for;

- a) Shaft lighting
- b) Car lighting
- c) RCD sockets in the lift pit and pump room
- d) RCD socket in the lift panel

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An isolator is to be provided for the lift motor that will isolate the motor leaving the lighting and socket outlets live and available for use.

Provide a key listing the meaning of the component abbreviations found in the panel in encapsulated plastic and fix the list to the inside of the door panel.

Any connection terminals remaining live after the opening of the main switch (car light. group operation circuits, etc.) shall be clearly separated, suitably marked and protected as required by BS7671, the 18th Edition of the IEE Wiring Regulations and amendments.

The panel unit must be designed to allow access to the fault indicating screen and operating buttons and still meet the requirements of non-access to live parts within the panel (two doors will probably be required). The door locking device is to include the main isolator for access to any live terminals/conductors.

1.07 Light Fittings

The light fittings for the lift car are to be LED type with one an emergency light as a non-maintained fitting. The lighting in the lift car to be designed to give an average lighting level of 200 Lux on the car floor as required. Any fitting that the contractor wishes to use will become their design responsibility and will need to be approved by the consultant prior to installing and will require light level calculations to be provided.

The lift shaft lights are to be bulkhead type fittings with integral emergency equipment at lift pit and at equal spacing up the shafts to give a minimum of 200 Lux average light levels. The light fittings to be an IP65 rated fitting and be LED type.

1.08 Car / Landing Equipment

The lift car COP and landing call buttons to be by Duhurst and are to have a special anti bacterial coating applied. The lift car hand rails are also to have the coating applied.

The lift car hand rails are to be powder coated Yellow Ral colour RAL 1018.

The autodialler unit is to be by Memco and be 4 way with two-way intercom and induction loop unit.

1.09 Electrical Works & Supplies – by Electrical Contractor

The electrical contractor is to supply and install the distribution board in the lift motor room on the first-floor lift motor room for lift and be a dedicated supply from the incoming distribution panel.

The electrical contractor shall allow to supply and install new MEM Exel range suitably sized 63A three phase switch fuse isolator for the lift and locate this within the lift motor room. The electrical contractor is to allow for connecting the lift isolators to the distribution board circuit breakers with suitably sized cables contained in galvanized steel conduit.

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The cabling to be in LSF single cables contained in galvanized steel conduit and connected to the lift distribution board on a 10A MCB. The tubular heater is to have a wire mesh cover provided.

The electrical contractor is to supply to the lift pit a suitably sized earth cables in connection with the lightning conductor installation from the main earth bar in the basement plant room to the lift pits. The lift contractor is to connect the earth cables to the lift guide rails.

1.10 Lifting Beams – Builders Works

A specialist contractor installer shall complete any lifting beam installation and safe working load (test) with a certificate for the beam issued on completion to the lift consultant and team. The safe working loads will need to be marked on any such beams.

Refer to associated builders works section 1.27 Item 17.

1.11 Lift Shafts

Supply and install within the lift shafts, lighting to a minimum of 50 lux. The light fittings are to be LED type emergency type fittings. The lift shaft Lighting is to incorporate emergency lighting of 3-hour duration to allow safe operation of the emergency hand lowering procedure in the event of power failure. Two-way switching of the light fittings is to be installed to enable the lights to be operated by either of the two light switches located in the lift pit or by the control panel. All cabling for the lighting and socket outlets is to be contained in the lift shaft in galvanised steel trunking and conduit. The cables shall be LSF insulated construction.

Fit a twin R.C.D. socket outlets in lift pits and a second by the control panels. The sockets to be a RCD switched twin socket outlet by Eaton Electric.

Fit suitable steel pit access ladders as necessary.

Fit emergency ‘stop’ switch in lift pit area and another by the control panel which are to be of the Mushroom Head type with push to operate and twist to re-set.

The contractor is to prove all cabling from the incoming telephone distribution point up to the telephone socket outlets mounted by the side of the control panels for the connection of the Windcrest or Memco unit. The client will arrange for the dedicated telephone lines for each of the lift installations.

1.12 Landings

Install scrolling LED digital indicator equipment at each level to show direction of lift travel and lift floor position. The characters are to be 50 mm in height.

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Install new push buttons manufactured by Duhurst with illumination to indicate call acceptance. Buttons to be tactile / Braille and repositioned where necessary to comply with the Building Regulations Part M 2004 and BS-EN-81-70 and associated sections.

Installation shall comply fully with the Building Regulations Part M 2004.

Fit spring door closers to all levels to enable the doors to close and lock in the event of the lift moving away from floor level with the landing doors open.

Landing entrances at each level and at each lift position allow wrapping with stainless steel architraves.

1.13 Lift Cars

Fit scrolling position and direction indicator into car. The characters are to be 30 mm high. Fit speech module and install push buttons by Duhurst to comply with Building Regulations M2. The lift car lighting is to be a minimum of 200 lux at floor level and will need to be demonstrated to the CA on completion.

1.14 Shaft Switches

Electro-mechanical type switches mounted within the lift shaft functions as follows:

- a) Top and bottom over travel limits
- b) Test limits complete with mounting brackets.

1.15 Trailing Flexes

Multi-core flexes complete with hangers and terminal boxes, flexes to be anchored to the car underside and terminated at the mid-point and at the control panel.

Trailing flexes shall be of the LSF fire retardant type.

1.16 Shaft Wiring

Complete all shaft wiring for transmission of input signals to the microprocessor and to be housed in a trunking throughout the lift shaft to the controller within the lift motor room. Cables will not have glands connected direct to the trunking but will be via suitable conduit boxes with approved outlet points.

1.17 Hands Free Emergency Communication System (Autodialers)

A 4-way Windcrest (UK) Ltd or Memco hands free autodialer unit system shall be installed to meet EU standard directives. Allow for programming the unit with the required contact telephone numbers, which are to be issued by the client when the unit is ready for programming. It will be the lift company's responsibility to request the telephone numbers at least 4 weeks before being required.

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A dedicated telephone line will be required for each lift which will be the responsibility of the main contractor / client to arrange. Without this item the lifts will not be able to be fully commissioned and will not be able to be used.

Refer to associated builders works section 1.27 item 19.

1.18 Testing and Commissioning

On completion the contractor must carry out inspection to provide evidence of meeting EN 81 (Pas 32 testing) to the satisfaction of the CA, Insurers, Lift Inspector, a full load test is to be included in the contract figure. Certificates shall be issued on completion of the testing and all works.

1.19 Removal of Redundant Equipment

The Contractor will be responsible for providing skips etc for redundant equipment etc. The position of the skip will be agreed at the pre-contract start meeting. Rubbish shall not be left lying around on the floors and is to be removed to the lockable skip at the end of each day. Special care is to be taken providing protection to all surfaces as well as preventing injury to staff, public and fellow operatives.

1.20 Guarding

Within the lift shaft supply and fit purpose made wire mesh guards as necessary to protect operatives, maintenance personnel etc.

1.21 Pit Ladders

Supply and fit purpose made pit ladder and grab rail within the lift pit.
 Refer to associated builders works section 1.30 item 18.

1.22 Painting

The lift contractor will protect all painted surfaces of bought in finished materials, any damage to such surface may require rejection of all or part of the material. The lift shaft is to be painted with two coats of white emulsion paint on completion. Unfinished surfaces will be painted on-site and will include three coats, primer, undercoat and finish coat. Pit floor shall be finished in red oil resistant paint.

1.23 Builders Work

The lift contractor is to employ a builder to carry out the builders works required to complete the project. The works to include forming of the landing walls, fire stopping the shaft and provision of the shaft vents as described in 1.03. The contractor is to make other trades fully aware of any, all such builders works required and co-ordinate with the main contractor.

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1.24 Programme and Approvals

The Sub Contractor shall, within two weeks of award of Sub contract, submit his programme of works for approval.

Along with the programme the Contractor will submit details (technical not glossy sales leaflets) of all the equipment he intends using on the Contract.

1.25 Short Term Maintenance Contract

A 12-month lift maintenance contract is to be included as part of the tender cost. A lifts call book to be provided and maintained by the lift installer for the full 12 months defects liability period and those costs where applicable shall be reflected within the tender submitted. A separate price shall be clearly identified for this work.

1.26 Delivery of Equipment

Contractor shall advise of any extended delivery dates for components or items of plant and equipment that will extend contract period.

1.27 Associated Builders Works - Main Contractor

The General builder's works are to be confirmed by the successful lift contractor in conjunction with detail drawings to the main contractor/building contractor for execution of any works.

General & special attendance and the like to be provided by the main contractor

1. Provide, fix and maintain all necessary scaffolding, guarding to openings and protection of equipment during lift installation, all to lift engineer's instructions. A sketch plan of the scaffold details will be provided.
2. Provide clear access into and through the building for passage of lift equipment and make provision for this to be manoeuvred into the lift well and motor room. It is anticipated that items will be up to but not exceed 5 metres in length. During the installation period a minimum of 2900 mm from the front wall at the main access floor (normally ground) is required and a minimum of 1200 mm is required at all other floors.
3. Provide a suitably dry and secure location for the storage of the lift equipment, preferably adjacent to or within the site area and allow for a storage/construction area of approximately 7m x 7m. To be agreed on site with the main contractor.
4. Provide all Labour required to help unload the lift equipment on delivery and to help place heavy components into position as requested by the lift engineer.
5. As and when required, carry out any sundry cutting away and making good to the lift engineers' instructions.

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