

1. GENERAL

1.1 Scope

Furnish all labour, materials and equipment required to install an home lift for residential application model **GT-PERLA HDR (hydraulic and cables (2:1))** , manufactured by Global Tardif Elevator Manufacturing Group inc. (here after called the Manufacturer) as shown on the drawings and specifications.

The Manufacturer will supply shop drawings, materials and equipment to the installer company. Elevator construction works shall not start before drawings have been approved by owner or general contractor.

The Manufacturer is located at 120 de Naples, St-Augustin de Desmaures, Québec, Canada (T. 418 878 4116 or le 1.800.661.6316 ; Fax 418.878.1595).

1.2 Preparatory work by others

To complete the elevator installation, others works have to be done by others :

1. All masonry works, gyproc and paint.
2. A steel girder installed at hoistway ceiling to lift elevator equipment during installation.
3. Hoistway have to be built as per elevator shop drawings, (structural reinforcing, ventilation etc...) and follow all applicable codes and standards.
4. The standard minimum pit depth is **8'' (203 mm)** from first floor. The pit shall be clean and built as per code regulations. Provide pit waterproofing or sump pump if required. Provide adequate support for guide rail fastenings.
5. Provide level concrete pit floor to support loads impact. To be able to know the support load impact, do the following calculation:

Gross load (capacity + cab weight) x 2,5 = Support load impact (as per chapter 1 of construction code).

Support Load Impact = _____ lbs (Please Complete)

N.B.: See at: <http://www.gtaccessibility.com/CabWeightChart.pdf> the Cabin weight Chart for each model.

6. Hoistway walls, to be built square and plumb all over height with a maximum tolerance within ¼'' (6mm). Hoistway walls, with smooth interior surfaces without any bumps.

7. Provide a lockable room to store elevator parts and equipment before and during installation.
8. Machine room to meet or exceed Canadian **C.E.C. and CAN-CSA-B44-04 section 5.3** codes and others standards. Provide light and light switch 110 VAC with a minimum of 100 LUX luminosity at floor level as per regulations. A lockable, exterior opening fire rated door equipped with an automatic door closer, will secure the access of the machine room
9. Appropriate overhead from upper landing floor up to the hoistway ceiling or under the steel girder as per elevation drawing from Global/Tardif.
10. During installation, hoistway landings access, to be fully open at least 8 feet high.
11. Cab floor finishing and installation by others. Maximum load: 2 lbs/square foot.
12. Rough openings for landing floor call stations and signage, as per drawings.
13. Electric power for setting and test on first installation day by electrical contractor.
14. As per National U.S. electric code or Canadian electric code, a fuse disconnect switch for each elevator connected on a 30 amps circuit equipped with a normally open type contact.
15. As per the same codes, a 15 amps 110 volts, 60 hertz disconnect switch for the cab light is install as indicated on shop drawings. Install 2 wires and one ground from disconnect box to controller connections.
16. Following section 38 of electric Canadian codes, install an auxiliary contact in the principal disconnect switch.
17. The disconnect switch is install 20 feet (6 meters) away minimum from the controller and is visible from there. If not, a second disconnect switch shall be install near the controller.
18. From the building electric power, the appropriate current (to be determine) will be connected to a principal fuses disconnect switch that could be locked in ON or OFF position and situated as per arrangement drawings. If one phase current is used, install 2 wires + 1 neutral + 1ground from disconnect switch to controller connections. If three (3) phases is used, 3wires + 1 ground should be used.
19. Only elevator equipment and elevator electric pipes are allowed in machine room.
20. A temperature between 15 and 32 Celsius is necessary in the machine room.
21. Light, light switch and electric outlet in hoistway and machine room are required before starting elevator installation.

❖ IMPORTANT

1. The elevator drawings are made in accordance of CAN-CSA B44-04 section 5.3 codes.
2. These drawings are not done for the building construction. It is to illustrate the relation between the elevator and the structure.
3. This drawing is only for installation. The landing doors details and cab details will be on separates pages.
4. Global/Tardif is not responsible for the exact details and dimensions of the hoistway structure and the machine room.
5. The owner/buyer/buildler will provide suitable lintels over and under landing entrances.
6. The doorframes are not built to support the weight of the walls. The general contractor is responsible for any damages caused by masonry and finishing works around the landing doors.
7. The total distance between the lower and the upper floor as per elevation drawing have to be maintain within ¼" (6 mm).
8. Provide adequate support for guide rail fastenings or for towers supports as per shop drawings.
9. Provide finish grouting and masonry around doorframes only after the end of their installation.

1.3 Warranty

The Manufacturer's acceptance is conditional on the understanding that their warranty covers defective material. The guarantee period shall not extend longer than **one (1) year** from the date of completion or acceptance thereof by beneficial user whichever is earlier of each elevator. The guarantee excludes ordinary wear and tear of improper use, vandalism, abuse, misuse, or neglect or any other causes beyond the control of the Manufacturer and this express warranty is in lieu of all other warranties, express or implied, including any warranty of merchantability or fitness for a particular purpose.

Labour is guaranteed for one year by the installer.

1.4 Maintenance

Elevator installation company will provide a quality maintenance contract including verifications, adjustment and lubrication of the equipment regularly every 3 months after the elevator delivery day. The maintenance shall be done by skilled mechanicals during day work time. Urgent calls will be carried out during normal day time. Maintenance contract will not cover service calls caused by negligence, abusive use or accident due by others than elevator installer. Only originals elevator parts can be used for reparations.

1.5 'Corrostop-2000' Paint finish

The elevator manufacturer will paint all exposed parts without finish with GT-CorroStop-2000 process..

1.6 Permit/ Inspections

The elevator installer will attend to all inspections and verifications required by authorities. The owner will be responsible for the cost of any license issue by government inspectors.

1.7 Codes

All works have to be done in accordance with Canadian Electrical Code, Provincial Elevator code and **CAN/C.S.A B44-04 section 5.3** standard as well as any local code applicable. The manufacturer is not responsible for any changes in regulations or codes.

2. PRODUCTS

2.1 Description

Furnish and install	One (1) GT PERLA hydraulic & cables 2:1 elevator model manufactured by Global Tardif inc.
Operation push button	Automatic (momentary pressure) In compliance with Code B44-04 section 5.3)
Control type	Simple relay controller model GT-EZPERLA with tape reader
Standard Capacity:	_____ lbs <i>(Please Complete)</i> 750 lbs (340 kg) Maximum: 1000 lbs (454 kg)
Nominal speed:	36 fpm (0,19m/s)
Travel:	_____ ft _____ in. <i>(Please Complete)</i> Code B44-04 sect. 5.3 allows a Max. of: 50 feet (15,24 m)
Pit :	_____ in. <i>(Please Complete)</i>

Global Tardif Elevator Manufacturing Group inc. reserves the right to discontinue models or options at any time or change the specifications, warranty terms, materials, equipment or others without notice and without incurring obligation.

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	Standard Minimum: 8'' (203 mm) Absolute Minimum : 6''(152 mm)						
Minimum overhead under hoistway steel beam:	Standard Minimum: 108'' (2743mm)						
Hoistway net dimensions:	Width : _____ ft _____ in. <i>(Please Complete)</i> Depth : _____ ft _____ in. <i>(Please Complete)</i> (Look for standard dimensions at www.gtaccessibility.com)						
Platform dimensions :	Look for standard dimensions at www.gtaccessibility.com						
Net cab dimensions :	Width : _____ ft _____ in. <i>(Please Complete)</i> Depth : _____ ft _____ in. <i>(Please Complete)</i> (Look for standard dimensions at www.gtaccessibility.com) Code B44-04 sect. 5.3 allows a Max. surface of 15 sq.ft						
Nbr. Of stops	_____ Stops <i>(Please Complete)</i>						
Opening type for each Stops	<i>(Please enter the stop number for each opening types ex.: Front Only: Stops #1-2-3, Front/Rear: Stop #4)</i> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr style="background-color: #ffffcc;"> <th style="text-align: center;">Opening</th> <th style="text-align: center;">Stops (ex.: #1-2-3)</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">Front Only</td> <td></td> </tr> <tr> <td style="text-align: center;">Front & Rear</td> <td></td> </tr> </tbody> </table>	Opening	Stops (ex.: #1-2-3)	Front Only		Front & Rear	
Opening	Stops (ex.: #1-2-3)						
Front Only							
Front & Rear							
Door opening dimensions	32'' (813mm) width'' 80'' (2032'') height						
Cab door type	Three speeds horizontal sliding doors						
Doors operation:	Automatic operation						
Cab height :	80'' (2032mm)						
Car operating panel:	Stainless steel plate (1/8'') Thickness						
Landing call stations :	Dupar US20 stainless steel raised push button						
Power supply:	220 Volts, 1 Phase, 60 Hz						

2.2 Mechanical Structure and hydraulic system

The one side cantilever hydraulic cables structure shall include : a mechanical system of 38 ½'' (978mm) width x 9 3/8'' (238 mm) deep x necessary height according to the elevator travel, primes with the GT-Corro-Stop 2000 process. The hydraulic system is situated in that structure.

1. The mechanical system shall include the guide rails, rails supports, guide shoes and the car sling.
2. The guide shoes shall easily slide along the 5,78 lbs/feet "T" steel guide rails. These rails shall be installed plumb all over the elevator hoistway height.
3. Adjustable "C" rails brackets will ensure rail plumb and stability in case of any bumps on the supporting wall.

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4. Provide guide shoes with TIVAR inserts type UHMW.
5. The car sling shall be fabricated from paint steel members with adequate bracing to support the platform, the traction cables and the cab.

The hydraulic system shall include a cylinder, plunger, hydraulic hoses, motor, pump, valve and traction cables.

1. The cylinder shall be manufactured from steel pipe of a sufficient thickness and suitable safety margin. The top of the cylinder shall be equipped with a cylinder head with an internal guide-ring and self-adjusting packing.
2. Provide a plunger, manufactured from a steel shaft of a proper diameter machined true and smooth. The plunger shall be provided with a stop electrically welded to the bottom to prevent it to leave the cylinder.
3. Provide a ¾'' (19mm) hydraulic rubber hoses with all equipments and fittings for good elevator operation.
4. Provide a 3 HP minimum submersible type motor and install it inside the oil tank in the machine room.
5. Provide a GT-100SBPower submersible type pump allowing enough oil flow to move the cab in UP direction easily and install it in the oil reservoir in the machine room. Use flexible fittings only.
6. Be sure to provide a valve good enough to ensure exact oil pressure to move the elevator up. Install it in the oil reservoir.
7. Provide a minimum of two (2) aviation type 1/4'' (6mm) diameter 7x19 galvanized steel cables. They shall be fixed at cylinder base and at the car sling passing by a 10 ¾'' (273 mm) diameter pulley attached at the top of the cylinder.

2.3 Pump unit

1. Pump unit shall include : the oil reservoir, the submersible motor and pump and the valve.
2. Provide a steel paint reservoir mounted on four (4) solid steel legs strong enough to support the weight of the oil, the motor, the pump and the valve.
3. The valve shall be equipped with an adjustable pressure relief system, a manually operating down system to lower elevator if emergency and a system to isolate the cylinder from the pump unit plus a check valve for down control operation.

4. Provide a negative pressure switch that will be activated when negative pressure is sensed in the hydraulic system. The check valve will close and stop the hydraulic jack from descending immediately on sensing negative pressure.

2.4 Pipe Rupture Valve

Provide a pipe rupture valve system in case of hydraulic hoses rupture. The pipe rupture valve will stop the car.

2.5 Controller

Controller shall consist of a micro-processor type GT-EZPERLA from Global/Tardif. The controller shall include a UPS system to lower the elevator in case of power failure.

2.6 Floor selection system

The platform have to be equipped with a magnetic reader that include a 2'' (50mm) magnetic tape and magnets for floor selection.

2.7 Levelling Device

1. The elevator shall be provided within 2 way-levelling device, which will maintain the car within ½'' (13mm) of the landing, by magnetic sensor.
2. Levelling device switches shall be located in a position to be inaccessible to unauthorized persons.

2.8 Platform

The platform shall be built on a steel frame with 2 plywood sheeting (1 x ¾'' (19 mm) and 1 x ½'' (13 mm)). It shall be install on the car sling where the floor finish and the cab walls will be mounted.

2.9 Cab

1. Walls : MCP melamine panels 5/8'' (16mm) choice of two (2) standard colours.

2. One of the wall section installed on the car sling side shall be detachable to have easy access for maintenance.
3. Handrail: a single #4 stainless steel with both ends returned to the wall shall be located on the detachable panel in front of the control station.
4. Floor finish: rubber flooring (diamond plate mat black) supply by the manufacturer or supply by others according to the architect choice.
5. Ceiling solid melamine (5/8''(16mm)) panels section with two (2) incandescent pot lights.
6. Install an emergency buzzer on the top of the cab

N.B. A large variety of finish and accessories are available in option.

2.10 Re-opening door system

The door shall be equipped with an infrared horizontal self-contained light curtain that will stop and reverse the door should it detect any obstacle. Manufacturer to provide anti-reflect and dustproof system model GT-WECO 128 LED.

2.11 Telephone cabinet or hand-free phone

Install a stainless steel outside finish telephone cabinet in the cab.
Note: Telephone to be provide by owner.

Or option

Provide a hand-free phone mounted in the car operating panel.

The travelling cable between the cab and the controller shall include necessary wires for telephone connection. Allow a minimum of 10 % extra wires.

The owner should provide connection from a telephonic central or assistance headquarter to the machine room near the controller.

2.12 Car operating panel

Car operating panel shall be #4 stainless steel finish flush mounted with automatic single push button operation (**Code B-44 section 5.3**). Emergency alarm, emergency light and a key operation switch. The key shall be removable when it's in OFF position only.

2.13 Hall stations

Each hall station shall include automatic (code B-44-04 sect. 5.3) illuminated single push buttons Dupar US20 in stainless steel.

2.14 Three speed Horizontal sliding landing doors and frames

1. Provide steel landing door-frames : primer finish or stainless steel finish.
2. Car doorsill shall be strong extruded aluminium GTA2SP.
3. Provide automatic three speed horizontal sliding doors.
4. The elevator installer will take on full responsibility of the doors and door frames installation.
5. The door assembly shall be codes appliances UL/ULC labelled.
6. Landing doors shall be built from smooth steel panels of 16 gage minimum, sandwich type reinforced with steel members.

The floor side of the landing door shall be #4 stainless steel finish or primer finish.

2.15 Fascias

Provide galvanized or steel fascias covering total width landing access.

2.16 Door suspension and door closer

1. Provide all door equipment for good and durable door operation.
2. Provide ECO-GT integral system type.
3. Provide and install all electrical contact for each door system
4. Provide and install a door suspension system that would prevent door from falling in elevator pit in case of upper guide rails pull away.

3. INSTALLATION

3.1 Coordination

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Execute all works in accordance with others sub-contractors.

3.2 Finish

1. Remove all rust on elevator structure and coat with CorroStop-2000 paint finish process.
2. Also coat with steel enamel paint all other equipments like cylinder, rails supports, etc...
3. It is forbidden to use points welding assembly proceed because it could cause visible imperfections or damages on stainless steel finish.
4. Cover finish materials with plastic protection covering.

3.3 Touch up

1. If any damages appears on materials at the end of installation, please make any touch up if necessary.
2. Remove all plastic protection covering and clean all surfaces to leave the job impeccable.

3.4 Field test

1. Make all the test following CAN/C.S.A. B44-04 section 5.3
2. Provide all equipments and instrumentations to do such tests.
3. Provide all certifications and test certifications for legal authorities.
4. Please advise one (1) week in advance for the date and time of field tests.
5. Keep one copy of job specifications on field for the chief elevator installer.

3.5 Welding

Any field bridge welding should be identify with the name of the welder.

3.6 Blowtorch use

Global Tardif Elevator Manufacturing Group inc. reserves the right to discontinue models or options at any time or change the specifications, warranty terms, materials, equipment or others without notice and without incurring obligation.

It is important to not using cutting blowtorch for any reasons. If any burned piece of work is detected, the job will be reject.

THE END