

1. GENERAL

1.1 Scope

Furnish all labour, materials and equipment required to install a luxury home lift for residential application, model **GT-PERLA GEARLESS MRL (permanent magnet synchronized motor gearless without machine room)**. This unit is 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 of:

(Gross load (capacity +cab weight) + Counterweight (Cab weight + 50% capacity)) 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, 3 wires + 1 ground should be used.
19. Only elevator equipment and elevator electric pipes are allowed in the controller room.
20. A temperature between 15 and 32 Celsius have to be constantly kept in the controller 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 code**.
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/builder 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

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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 MRL elevator model (without machine room) manufactured by Global Tardif inc.
Operation push button	- Automatic (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: 950 lbs (432 Kg)
Nominal speed:	50 fpm (0,25m/s)
Travel:	_____ ft _____ in. (<i>Please Complete</i>) If Code B44-04 sect. 5.3: Max.: 50 feet (15,24 m)
Pit :	_____ in. (<i>Please Complete</i>) Standard Minimum: 8'' (203 mm) Absolute Minimum : 6''(152 mm)
Minimum overhead under hoistway steel beam:	Standard Minimum: 108'' (2743mm)

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SPECIFICATION Projet ABC Québec, Québec	HOME LIFT GT PERLA – GLS (GEARLESS MRL)	Section 14 000 Page 5 sur 10 2011-05-18
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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) If Code : B44-04 section 5.3: Max. surface: 15 sq.ft						
Nbr. Of stops	_____ Stops <i>(Please Complete)</i>						
Opening type for each Stops	(Please enter the stop number for each opening types ex.: Front Only: Stops #1-2-3, Front/Rear: Stop #4) <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th style="background-color: yellow;">Opening</th> <th style="background-color: yellow;">Stops (ex.: #1-2-3)</th> </tr> </thead> <tbody> <tr> <td style="background-color: yellow;">Front Only</td> <td style="background-color: yellow;"></td> </tr> <tr> <td style="background-color: yellow;">Front & Rear</td> <td style="background-color: yellow;"></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'')						
Cab door type	Three speeds horizontal sliding doors						
Doors operation:	Automatic operation						
Cab height :	80'' (2032mm)						
Car operating panel:	Stainless steel plate (1/8'')						
Landing call stations :	Dupar US20 stainless steel raised push button						
Power supply:	220 Volts, 1 Phase, 60 Hz						

2.2 Mechanical Structure & traction drive system

The one side cantilever mechanical structure shall include a steel corrosive proof mechanical system fabricated with high-tech machinery using numeric and laser technology.

The system shall include the following components:

1. **System.** Provide a (2:1) cable system using two (2) solid core steel cables, a gearless traction drive equipped with an independent brake.
2. **Motor.** Provide a GT-MRL GRLSS-MG01E permanent magnet synchronized motor with 90% output for ¾ HP.
3. **Guide rails.** The guide shoes shall easily slide along the 5,78 lbs/feet "T" steel guide rails. These rails shall be install plumb all over the elevator hoistway height.
4. **Rail brackets.** Adjustable "C" rail brackets will ensure rail plumb and stability in case of any bumps on the supporting wall. These brackets should be strong enough to support the side load of the mechanical system on the wall.
5. **Rubber bumper.** Provide rubber bumper under cab floor and counterweight.
6. **Counterweight.** Provide a bolted silk finish corrosive proof counterweight system including a deflective steel pulley and the steel counterweight weighing. The counterweight shall be equalled of finish cab weight plus 50% of total nominal lifting capacity.

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7. **Car sling & platform.** Provide and install a robust car sling compound of a corrosive proof galvanized or silk finish bended steel girder bolted and pre-assembled in manufacture with precisions.
 - . Provide guide shoes with TIVAR renewable inserts type UHMW.
 - . Provide in addition, roller guide shoes that should take off weight on sliding guide shoes. A minimum of four (4) roller guide shoes is required.
 - . Provide a deflective steel pulley.
 - . Provide the platform with one (1) plywood sheeting.
 - . Provide a platform galvanized or silk finish toe guard.
 - . Provide an extrudes aluminium door sill.
8. **Parachute safety device.** Provide and install an engineer tested and certify parachute safety device fabricated very strongly. Adjust the system that a full load elevator, stop in normal breaking distance, if the over speed regulator is activated.
9. **Traction cables.** Provide 3/8'' diameter 8x19 steel traction cables with attachment. Provide a minimum of two (2) solid core cables.

2.3 Speed regulator

1. Provide a speed regulator for parachute safety device operation with an over speed switch.
2. Provide a 6 mm diameter regulator cable.
3. At pit level provide a regulator tensor.

2.4 Controller

Controller shall consist of a micro-processor type GT-EZPERLA from the Manufacturer.

The controller shall include an UPS system to lower the elevator in case of power failure.

2.5 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.

2.6 Levelling Device

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

2.7 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.

2.8 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 white melamine panel (5/8'' (16mm)) with two (2) recessed pot light and two (2) egg crate sections.
6. Install an emergency buzzer on the top of the cab

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

2.9 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.

2.10 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.

2.11 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.

2.12 Hall stations

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

2.13 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.

2.14 Fascias

Provide galvanized or steel fascias covering total width landing access.

2.15 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

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

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