

1.1 Scope

Furnish all labour, materials and equipment required to install a **GT Master Waiter Commercial dumbwaiter**, manufactured by Global-Tardif Inc. 120 de Naples, St-Augustin de Desmaures, Québec, Canada (T. 418 878 4116 or le 1.800.661.6316 ; Fax 418.878.1595) as shown on the drawings and specifications.

The elevator manufacturer will supply shop drawings to the installer company. Elevator construction works shall not start before drawings have been approved by owner or general contractor.

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. Hoistway have to be built as per elevator shop drawings, (structural reinforcing, ventilation etc...) and follow all applicable codes and standards.
3. The pit as per plan) if necessary) from first floor. The pit shall be clean and built as per code regulations. (Provide pit waterproofing or sumps pump if required). Provide adequate support for guide rail fastenings.
4. Provide level concrete pit floor to support loads impact of 8500 lbs (3864kg) as per chapter 1 of construction code.
5. 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.
6. Provide a lockable room to store elevator parts and equipment before and during installation.
7. Machine room to meet or exceed Canadian **C.E.C. and CAN-CSA-B44-07** 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
8. Appropriate overhead from upper landing floor up to the hoistway ceiling or under the steel girder as per elevation drawing from Global/Tardif.
9. During installation, hoistway landings access, to be fully open at least 8 feet high.
10. Rough openings for landing floor call stations and signage, as per drawings.
11. *Electric power for setting and test on first installation day by electrical contractor.*
12. *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.*

13. *As per the same codes, 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.*
14. *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.*
15. *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.*
16. *Only elevator equipment and elevator electric pipes are allowed in machine room.*
17. *A temperature between 15 and 32 Celsius has to be constantly kept in the machine room.*
18. *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-B44-07 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/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'' (6mm).
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 elevator contractor'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 elevator contractor 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. Parts and labour are guarantee for one year by the installer.

1.4 Maintenance

1. Elevator Installation Company will provide a quality maintenance contract including verifications, adjustment and lubrication of the equipment regularly for the period indicated at 2.1 after the elevator delivery day. The maintenance shall be done by skilled mechanicals during day work time. Urgent calls will be effectuated 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

1. 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.-B44-07 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-MASTER WAITER manufactured by Global-Tardif inc.,
Drive system :	Drum : Motor and winding drum machine install at the bottom of hoistway under the cab or at the top of the hoistway Traction : Motor and machine install at the top of the hoistway with counterweight
Structure :	Cantilever OR rails on each side of the cab.
Power supply :	208, 480, 600 / 3 / 60, or 220 / 1 / 60 ;
Operation (buttons)	Automatic, with call & send buttons.
Loading:	Floor level OR counter level
Standard Capacity :	Up to 595 lbs (270 kg)
Nominal speed :	50 FPM (0,25 m/sec)
Travel :	To be confirm (see plan)
Overhead at. upper floor :	To be confirm See plan
Hoistway net dimensions:	<i>To be confirm (check www.gtaccessibility.com)</i>
Number of stops :	<i>To be confirm</i>
Number of front access :	<i>To be confirm</i>
Number of rear access:	<i>To be confirm</i>
Number of side entry :	<i>To be confirm</i>
Cab light	Standard 1 (one) on ceiling Heating lamp on side cab wall (optional)
Type of landing door :	Guillotine type, single part OR two balancing parts
Door finish :	Primer coating, painted OR Brush #4 stainless steel.
Cab size :	<i>Look for standard dimensions at www.gtaccessibility.com</i>
Cab finish :	Primer coating, painted OR Brush #4 stainless steel.
Safety brake (under cab) :	Standard with cantilever model Optional with side/side model
Levelling device :	Floor loading: optional Counter loading : optional
Removable shelf :	Counter loading : Standard one (1) Floor loading : standard 0
Maintenance :	Twelve (12) months (1 visit per month).

2.2 OPERATION

1. Each landing operation station shall included a stainless steel plate with one call button and one send button for each landing that it is possible to send the car to. They should be stainless steel DUPAR type.

Or in option

An auto spring type key switch will control each button.

2. To be able to answer to the call and send from each floor, the user shall simply push the suitable landing button, only if all the doors are carefully closed.
3. Two warning lights will be install at each landing station. One will be mark 'ARRIVED' and the other with the worlds 'IN USE'.
4. While the car is moving, the operation of the call or send buttons shall be neutralized as well as few second after the user had open the doors.

2.3 LEVELLING DEVICE (optional)

1. For a floor loading type, the dumbwaiter shall be provided within 2 way-levelling devices, which will maintain the car within 1/2" (13mm) of the landing, by magnetic sensor while the door is open or close.

2.4 COMPONENTS

1. All principals' parts of the dumbwaiter shall come from the same manufacturer.
2. Use only principal's parts that have been use together in 2 installations within one year and had work properly in normal use.
2. If required by consultant, give a list of persons who had use similar dumbwaiter with similar utilisation.

2.5 ÉLECTRICITY : WIRING, CONDUCTS AND FITTINGS

1. If steel pipe are require (EMT), use pressurize type fittings. Block screw type fittings are not allowed.
2. It is forbidden to plug many wires in parallel to have more power.
3. It is forbidden to use soft steel conduct to replace ground wire.

2.6 LUBRIFICATION

- 1 The installation should be equipped with a system allowing lubricating ball bearings each time it's necessary.
2. The lubricant join if necessary should be all the same kind to be able to use one type of grease gun.
3. If the installation is equipped with grease gun, use automatic pressure type.
- 4 Lubricant spots should be easy to locate and easy accessible.

2.7 GUIDE RAILS

The guide rails for the cab should be steel guide rail weight at least 11.9 kg/m (8.0 lb/feet) with manufactured sliding surface and have to be mounted and anchor to the building structure at each 4.2 m (14'-0") minimum.

2.8 SUSPENSION CABLES

The cab should be attached with 6mm steel core cables that could support the weight of the cab plus the capacity of lifting and should answer to any local codes or regulations with manufacturer recommendations.

2.9 PARACHUTE SAFETY DEVICE (optional with rails side/side model)

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

2.10 WINCH, BRAKE & MOTOR

1. The winch should be a drum reducer type, with gear, deflecting sheave, brake and motor, mounted on a cast iron base or welded steel base and equipped with friction free pad.
2. The acme screw, the rack and pinion should be manufactured in one single part. The rack section should be in cast iron and the pinion in bronze.
3. The gear box is manufactured with check-up windows to verify the operation.

4. The control sheave should be manufactured for possible grooving.
5. The interior surfaces of the control sheave grooves and deflecting sheave grooves should be smooth out.
7. The winches should be equipped with a low voltage electromagnetic brake system, mechanically activated by a spring releaser and rearmed electrically.
8. The motor should be equipped with: High start couple, a low voltage starter, a high resistance squirrel cage rotor.
9. The motor layers should be warm insulated layers, oil proof and resistant to humidity.
10. The insulating resistance between the motor layers should be one (1) mega ohm.
11. The motor specs should answer to the IEE regulations and be tested at nominal speed at 50 degree Celsius during 15 minutes without any overheat.
12. Provide a reversed relay phase protector and a phase failure system.
13. The motor should be equipped with an overheat protection system that could be reengage manually.

2.11 CAB

1. The cab should be manufactured as per these specifications:
The bottom, the walls and the ceiling should be 1, 25 mm (0.0625 inches) minimum steel plate (Primer coat paint **OR** # 4 stainless steel finish).
2. Provide one (1) removable shelve (standard for counter loading and optional for floor loading) with the same finish than the other parts
3. Frame: The cab frame should be manufactured strong enough to support the nominal weight and capacity.
4. The guide shoes should slide easily on the rails.
5. Provide a flush fluorescent light system in the top of the cab.

2.12 LANDING DOORS

1. At each floor, provide and install a landing door including a vertical 2 speeds or 1 speed door leaf, door frame, door sill, installation parts and hardware.
2. Provide one 2 speeds counterbalance vertical door to be installed inside the hoistway.
Or
Provide a one speed counterbalance vertical door to be installed inside the hoistway.
3. Door frame should be manufactured in one welded steel piece assembly or steel bolted assembly (primer coat paint finish or # 4 stainless steel) including framing, moulding and upright.
4. Door frame dimensions should fit the cab door dimensions. At one of the landing, install a detachable holding ring to remove the cab if necessary.
5. The door sill should be in steel with primer coat paint **OR** # 4 stainless steel finish with a lip over the corridor side floor.
6. For smoother operation, provide steel sliding tracks, adjustable cables, ball bearings, door rubber bumpers and door handles matching door finish.

2.13 FIRE RATED CLASSIFICATION

The cab should be fire rated, should answer to CNB-1995 and be ULC labelled or from any other fire organism recognised by the fire federal superintendent.
A ULC or any other recognised fire organism sticker with the fire classification is required.

2.14 CAB DOOR

1. The cab should be equipped with 1 or 2 steel door(s) (finish: Primer paint coat or # 4 stainless steel) center opening sliding vertically or one section door, sliding upward provided with an approved door lock.

2.15 ACCESS DOOR

1. Provide and install a swing access door at first floor level, with the same cab and landing door finish.
2. Provide a rectangular door sill of 60mm (2 1/2 inch) high, manufactured in one steel section of 1, 5 mm (0.0598 inch) thick. To be install at floor level, flush with the exterior of the access door, and to be welded on to the upright section.
3. Use the same material for all the parts (uprights, sill, and lintel) with the same finish.
4. The door should be hanged up with two hinges of 90 mm X 90 mm (3 1/2 inches x 3 1/2 inches) equipped with a latch cylinder lock install in the shaft.
5. Provide a bolt lock similar to the key system specified by the architect

2.16 CONTROLLER

1. Install all the controls in enamel ventilate steel cabinet with hinged door that facilitate access to the controls.
2. Provide and install D.C. power (direct current) relays and contacts.
3. Always install same mark of relay switches, identify clearly each element of the control network according to the wiring schematic.

2.17 "IN USE" SIGN

Near each push button, supply a 12mm (1/2 ") round or square warning light red colour marked "IN USE" and engraved **0, 25 mm (0.01 inch)** in the plate.
The light should be illuminated while the cab is in movement.

2.18 FLOOR PARKING SIGN

Near each push button, supply a 12mm (1/2 ") round or square warning light red colour marked "ARRIVED" and engraved **0, 25 mm (0.01 inch)** in the plate.
The light should be illuminated while the cab is arrived.

2.19 OPEN DOOR WARNING BELL SIGNAL

1. On the cab, install a 75 mm (3 inches) diameter bell that will ring to notify the last user that a door has been left open by pushing on a button.

2.20 INSTRUCTION PANELS

All signs and control panels should be engraved in French: all operation instructions should be engraved also in French on all plate except where they're no need because the operation is so simple that no instruction is necessary. The architect should approve all signs.

3. INSTALLATION

3.1 Coordination

1. 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, car sling etc...
3. It is forbidden to use points welding assembly proceed because it could cause visible imperfections or damages on stainless steel finish.
4. Recover finish materials with plastic protection covering.

3.3 Touch up

1. If any damage 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. B44-07*
2. Provide all equipments and instrumentations to do such tests.
3. Provide all certifications and test certifications for legal authorities.
4. Please advice 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

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

3.6 Blowtorch use

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

DEVIS
Project ABC
Québec, Québec

Dumbwaiter
GT-MASTER WAITER
COMMERCIAL TYPE

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THE END