



MASSIF CEILING

INSTALLATION INSTRUCTIONS



TOOLS REQUIRED

- Measuring Tape
- Drill
- Ladder
- 3" Paint Brush and latex paint for painting the canopy (If required)

SECTION 1: UNPACKING

1.1. When your new Framed Ceiling arrives, transport it near to the cab you will be renovating and organize the crates so that they will be easily accessible.

The crates contents are itemized on its surface.

- 1.2. Carefully un-crate the ceiling package, making sure that none of the components are damaged.
- 1.3. Check the colours, features, and dimensions of the components against your order before you begin removing the existing elevator interior.

If you have any questions at this point, contact ECR before going ahead with any part of the installation.

For technical support on the Framed Ceiling installation, please contact us at:

Elevator Cab Renovations

Office: (613) 745-4870

Toll Free: 1-877-745-4870

ecr@elevatorcabs.ca

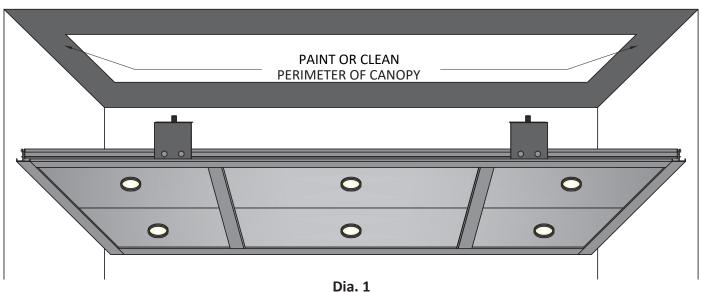
Office Hours: 6:30 AM to 3:30 PM Eastern Standard Time

SECTION 2: PREPARE FOR THE CEILING INSTALLATION

- 2.1. Unless specified otherwise, your new Framed Ceiling will be inset from the shell walls by 2" on all sides. Please consult drawings accompanying ceiling.
- 2.2. Prepare canopy surface to accept new Framed Ceiling by completing one of the following options
 - a) Sand, clean & re-paint the perimeter of the canopy with a desired color. Black or white are typical for this type of application
 - b) If the canopy is in good condition, a simple cleaning may be all that is required.

A

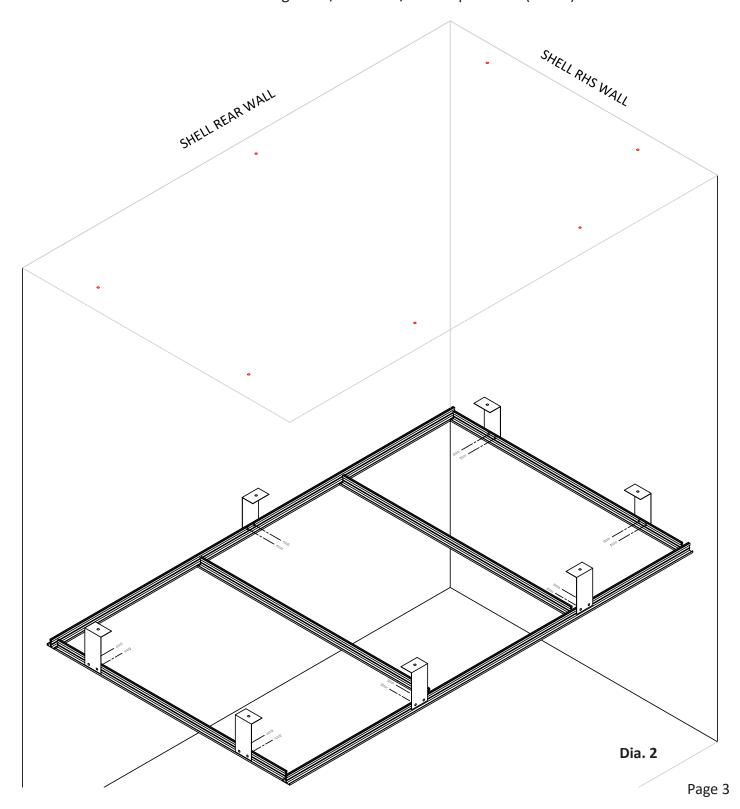
Note: It is suggested that for both options a or b, a minimum of 6" of the perimeter of the canopy should be addressed by the process chosen.



Massif ceiling preparations.

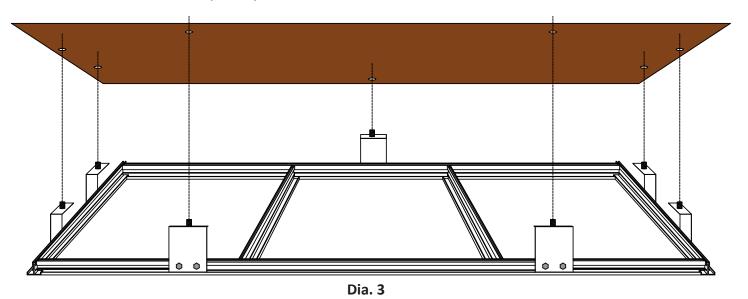
SECTION 3: INSTALL THE CEILING FRAME

- 3.1. Unless requested your framed ceiling will be shipped assembled with panels in place. Light kits are packed separately to be installed when ready. Support brackets are also packed separately.
- 3.2. The "T" frame comes with predrilled holes to attach the support brackets. The brackets can be attached to the frame using the $1/4 20 \times 3/4$ bolts provided (Dia. 2).



SECTION 3: INSTALL THE CEILING FRAME (CONTINUED)

- 3.3. Your ceiling includes a mounting template. This will be used to transfer hole locations from the Framed Ceiling brackets to the canopy of the cab. Determine safe locations on the car top where ceiling brackets can be installed so that fasteners are not obstructed by ribs, car top equipment, etc.
- 3.4. Place the template on top of the ceiling brackets and align it with the edge of the ceiling support frame. Once positioned, mark the mounting holes on the template and drill them out to at least 1/8" (Dia. 3).



Framed Ceiling with mounting template.

- 3.5. Position the template against the canopy of the cab in the desired location (typically centered side to side verify drawings accompanying ceiling) and temporarily secure into place with screws or tape. Copy the mounting holes to the canopy by marking through the template holes. Remove the template from the canopy.
- 3.6. Before drilling in the canopy, check the top of the car for any obstructions (i.e. ducts, cable, conduit etc). Progressively drill holes up to ½" diameter in the canopy.



Protect any exposed wall finishes prior to raising the framed ceiling into position.

3.7. Remove the panels and center the frame onto the canopy to locate the attachment holes.



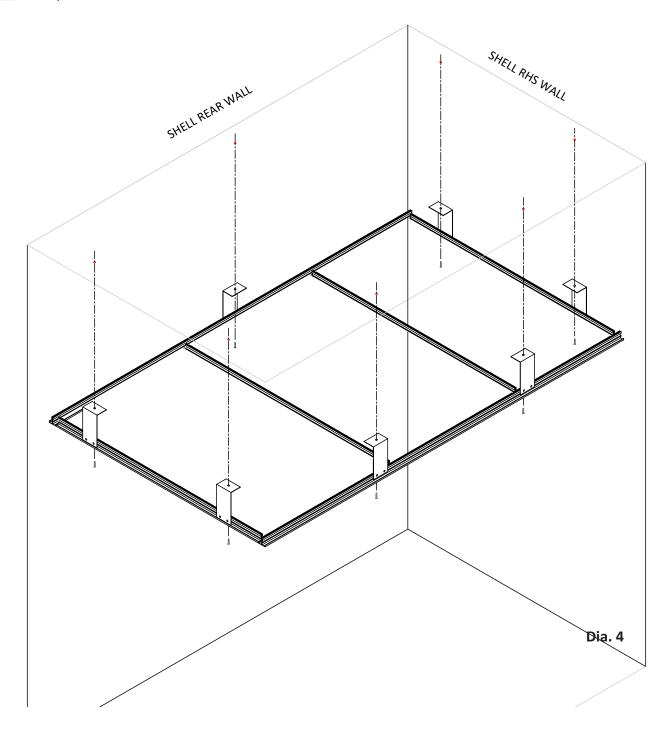
Note: Be sure to retain all the panel safety clips for re-installation if applicable.

SECTION 3: INSTALL THE CEILING FRAME (CONTINUED)

3.8. Attach the ceiling frame to the canopy using the 1/4-20 x 3" bolts provided (Dia. 4). Trim any excess bolts protruding from the canopy. Loctite can be applied to the nut/bolt assembly (Loctite is not included).

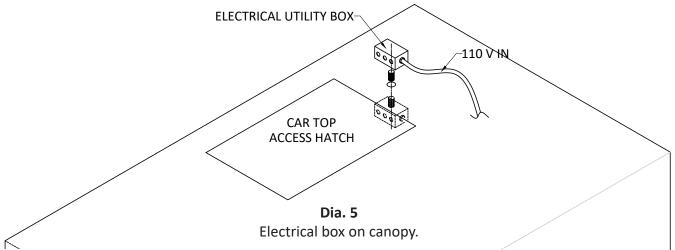


Note: Before drilling through the canopy, ensure that there are no encumbrances. If required, the brackets can be moved and re-installed to suit the site conditions.



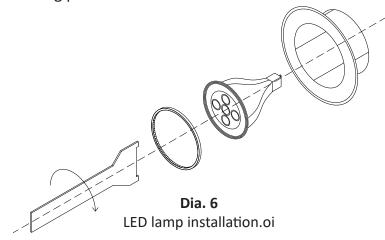
SECTION 4: INSTALL "MASSIF" CEILING PANS

- 4.1. The stainless steel panels are pre-punched to accommodate the low voltage pot lights. A 110 V receptacle is required for the power supplies (a receptacle, utility box and connectors are provided).
- 4.2. Locate the receptacle inside the limits of the ceiling frame but not directly above the location of a light fixture or on the hatch.
- 4.3. Mount the electrical box (provided) to the canopy. It is most convenient to have the receptacle facing down. Again, ensure there are no obstructions above the canopy before mounting the electrical box.



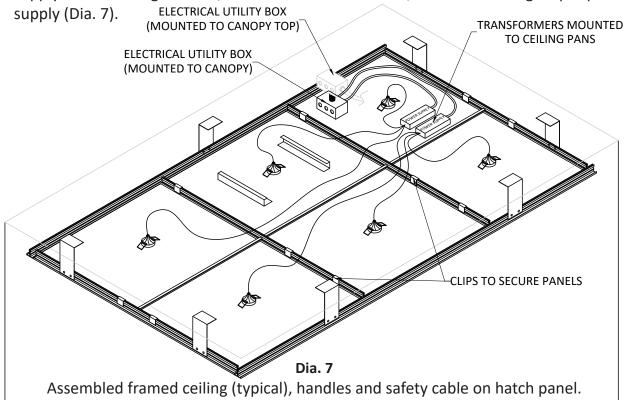
NOTE: The low voltage pot lights included with the ceiling are equipped with a 48 -watt LED power supply and wiring harness to power three 5 to 7 watt LED lamps. Do not exceed the 5 - 7 watt requirement or the power supply may shut down.

- 4.4. The power supplies can be two-way taped to the ceiling panels or mounted to the canopy.
- 4.5. The lamps are held in place by a serrated trim ring; a key has been provided to facilitate installation of the lamps (Dia. 6). Insert the LED lamps into the housing and insert the housing into the ceiling panel.

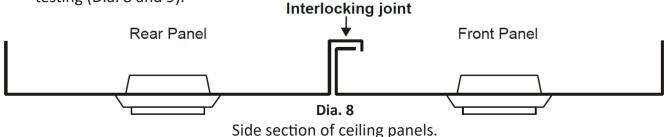


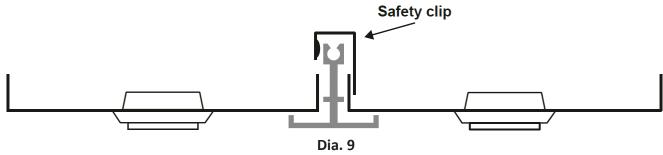
SECTION 4: INSTALL "MASSIF" CEILING PANS (CONTINUED)

- 4.6. Remove any protective plastic from the ceiling panel.
- 4.7. Place ceiling pans as labeled. Install the front ceiling pans first. The pan with handles and safety chain is to be installed below the escape hatch. Plug each fixture into its power supply via the wiring harness; unless directed otherwise, connect three lights per power



4.8. Retainer clips are supplied with the framed ceiling. These clips provide added security while holding the S.S. pans firmly in place. Ensure these clips are in place during full speed buffer testing (Dia. 8 and 9).





Side section of ceiling panels showing installed safety clip.

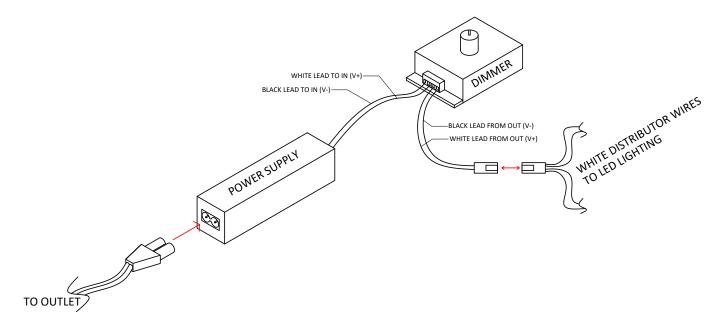
SECTION 5: OPTIONAL DIMMER

- 5.1. The optional dimmer is designed to work with LED bulbs and associated power supplies. You will require one dimmer per power supply.
- 5.2 Cut the low voltage output wire from the power supply and splice into the dimmer inputs.



ENSURE THE POLARITIES IN AND OUT ARE RESPECTED. In other words, if you choose the white wire as the negative input, the white wire must also be used as the negative output.

5.3. Attach the low voltage output wire clip to the white distributor wire clip; subsequently run the distributor wires to their respective lights.





Dia. 10Dimmer installation.

GLOSSARY

Canopy:

The roof of the cab.

The top structural component of the shell.

The canopy houses the emergency hatch.

The canopy may have various electrical and mechanical components attached to its surfaces, both interior and exterior.

"T" Frame:

Extruded aluminum ceiling frame shaped in a "T".

Ceiling Brackets:

Ceiling brackets are "L-shaped" constructed of 1/16" thick steel. Brackets are manufactured with mounting holes for 1/4-20 bolts for fast and easy installation.

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