

Vuelift Mini

RESIDENTIAL ELEVATOR

Planning Guide

Applicable Codes:

ASME A17.1/CSA-B44
Safety Code for Elevators and Escalators
Section 5.3 – Private Residential Elevators

Part No. 001255 21-m07-2020

IMPORTANT NOTICE

This Planning Guide provides nominal dimensions and specifications useful for the initial planning of a project. Before beginning actual construction, make sure you have the installation (shop) drawings customized with specifications and dimensions for your specific project.

Lift configurations and dimensions are in accordance with our interpretation of the standards set forth by the codes listed on the next page. Please consult Savaria or the authorized Savaria dealer in your area for more specific information pertaining to your project, including any discrepancy between referenced standards and those of any local codes or laws.

The dimensions and specifications in this Planning Guide are subject to change (without notice) due to product enhancements and continually evolving codes and product applications.

Visit our website **www.savaria.com** for the most current drawings and dimensions.

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Purpose of This Guide

This guide assists architects, contractors, and lift professionals to incorporate the Vuelift Mini Residential Elevator into a residential design. The design and manufacture of the Vuelift Mini Elevator meets the requirements of the following codes and standards:

- ASME A17.1/CSA B44 2000, Section 5.3
- ASME A17.1/CSA B44 2004, Section 5.3
- ASME A17.1 2004, Addendum 2005, Section 5.3
- ASME A17.1/CSA B44 2007, Section 5.3
- ASME A17.1/CSA B44, Addendum 2008, Section 5.3
- ASME A17.1/CSA B44 2010, Section 5.3
- ASME A17.1/CSA B44 2013, Section 5.3
- ASME A17.1/CSA B44 2016, Section 5.3
- ASME A17.1/CSA B44 2019, Section 5.3
- ASME A17.1 1996, Part 5

We recommend that you contact your local authority having jurisdiction to ensure that you adhere to all local rules and regulations pertaining to residential elevators.

IMPORTANT: This Planning Guide provides nominal dimensions and specifications useful for the initial planning of a vertical platform lift project. Dimensions and specifications are subject to change without notice due to continually evolving code and product applications.

Before beginning actual construction, please consult Savaria or the authorized Savaria dealer in your area to ensure you receive your site-specific installation drawings with the dimensions and specifications for your project.

Visit our website for the most recent drawings and dimensions.

How to Use This Guide

- 1 Determine your client's intended use of the lift.
- **2** Determine the local code requirements.
- **3** Determine the site installation parameters.
- **4** Determine the cab type and hoistway size requirements.
- **5** Plan for electrical requirements.

Revision History of This Guide

May 22, 2020 - Initial release

June 9, 2020 - Added new drawing for corner installation view on page 36

June 17, 2020 - Added 2019 code to list above

July 21, 2020 - Revisions to specs table on page 5; Revised drawings throughout

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Specifications

Specification	Specification Data
Load capacity	500 lb (227 kg)
Maximum travel	55 ft (16.76 m)
Travel speed	30 ft/min (0.15 m/s)
Daily cycle	Normal: 40 Heavy: 80 Excessive: 150 Maximum starts in 1 hour on standard installation: 20 NOTE: Please consult your Sales Representative if there's a chance you may exceed these amounts.
Maximum levels serviced	6
Minimum overhead	96 in (2.44 m)
Cab	Cab walls: Full clear acrylic or silica glass Cab interior height: 77.75 in (1.97 m) Cab weight (acrylic models): 550 lb (250 kg) Cab weight (glass models): 1000 lb (455 kg) Cab floor area: 8.25 sq ft (0.76 sq m)
Floor by others (in cab)	1/2" (12.7 mm) maximum
Footprint	49.75 in (1.26 m) diameter
Acrylic and glass diameter	42.8 in (1.08 m)
Hoistway ring diameter	43.75 in (1.11 m)
Power supply	30A, 230V, single-phase, 50/60 Hz
Cab lighting	15A, 115V, single-phase, 50/60 Hz
Suspension	Type: Galvanized aircraft cable (2 x 1/4" diameter) Construction: IWRC 7 x 19 RHRL Nominal strength: 7000 lb (3175 kg) Weight of ropes: 0.243 lb/ft (3.616 g/cm) Travel cable weight: 0.228 lb/ft (3.393 g/cm)
Drive train	Type: Winding drum Motor: 1.77 HP (1.32 kW)@ 60 Hz with integrated brake Motor control: Preprogrammed variable frequency drive
Pit/floor load	Refer to the section "Load Calculations"
Distance between 2 landings	93" (2362 mm) minimum
Pit depth	Minimum: 3" (76 mm); 4" (102 mm) with buffer springs (required if habitable space below) Maximum: 12" (305 mm)
Temperature operating range (environment)	- 10°C to + 40°C / 14°F to 104°F NOTE : For optimal running conditions, each landing of the unit should be in a climate-controlled environment.

Specification	Specification Data
Safety features	Pit run/stop switch and car top run/stop switch
	Emergency stop switch
	Safety brakes
	Overspeed
	Manual lowering
	Emergency battery back-up for cab lighting and lowering
Options	Optional configurations: Type 2 cab
	Optional colors:
	White (Texture White PX521W859)
	Silver (Texture Silver PX521S343)
	Custom powder-coat frame
	Note that Black is the standard color (Texture Black PX622N365)
	Savaria Link remote monitoring
	Pitless option with ramp
	Sabbath service
	Flood switch
	Buffer springs for habitable space below
	Buck boost transformer
	Up to 6 stops; balcony attachment or thru-floor configuration
	Cab shipped disassembled
	Landing door handle painted to match unit
	Top header ring in sheet metal painted to match unit

Safety First

3/4 & 4 Rule (Code 2016 and After)

The ASME A17.1-2016/CSA B44-16 Safety Code for Elevators and Escalators (2016 AND AFTER) mandates the following maximum hoistway door clearances.

- Clearance between the hoistway door and the hoistway edge of the landing sill shall not exceed 0.75" (19 mm).
- Distance between the hoistway face of the landing door and the car door shall not exceed 4" (102 mm).
- Vuelift Mini Residential Elevator design is with a maximum 1.25" (32 mm) running clearance.

Electrical Requirements

Your electrician and phone installer must supply the following connections:

- Main Disconnect One 230V single-phase, 30 Amp fused disconnect box with 20 Amp fuse/breaker. If voltage is not 230V minimum, a buck-boost transformer is required.
- Lighting Disconnect One 120V, 15 Amp fused disconnect or circuit breaker for cab lighting.
- Telephone Line One telephone line jack in close proximity to the controller.
- Electrical Outlet One 15A GFCI outlet shall be installed near the pit or base ring.

NOTE: Savaria does not provide power cable to main disconnect.

Provisions By Others

General

Construction Site

The owner/agent is required to provide all masonry, carpentry, and drywall work as required. Floors shall be in a finished state prior to installation of the unit. Refer to the section, Site Preparation on the next page.

Dimensions

The contractor/customer must verify all clearance dimensions prior to delivery of the unit.

Structural Floor Loads

A structural engineer is required to ensure that the building will safely support all loads imposed by the lift equipment. Refer to the tables on the installation drawings (shop drawings) for pit/floor loads imposed by the equipment. Refer to the section, Load Calculations.

Electrical Power Supply

See the following table. Lockable fused disconnects must be installed in compliance with electrical code and are to be provided prior to installation of the unit. Roughed in power to the lift must be provided to the head assembly location prior to installation of the unit.

Power Supply Specifications	Disconnect Size	Time Delay Fuse Size	Volts	Phase
Motor and equipment	30 Amps	20 Amps	230 Volts	Single
Cab lights	15 Amps	15 Amps	115 Volts	Single
Pit light (if required)	15 Amps	15 Amps	115 Volts	Single

Telephone

If a telephone circuit is required, the jack is to be provided and installed by others. This circuit shall be brought to a location next to the controller and be available to connect and test upon elevator installation.

Electrical Outlet

One 15-Amp GFCI outlet shall be installed near the pit or base ring (if required).

Permanent Power

Before installation can begin, permanent power must be supplied.

Entrances Handrails

All balcony levels require handrails to be installed per local codes after installation is completed. The handrail and installation is to be provided by the contractor/customer. Savaria Concord Lifts Inc. and/or local installer are not responsible for handrail installation or materials.

Site Preparation

The following items MUST be completed prior to installation of the elevator.

Finished Floors

Finished floors be installed at all landing levels.

230V Power (with Switched Disconnect)

- Permanent 230V, single-phase, 30-Ampere dedicated power to a lockable fused (cartridge type) disconnect switch.
- Disconnect switch must be mounted in a location within line of sight of the elevator or controller.
- 230V source must be run from the disconnect switch to a junction box in a discrete location at the top of the elevator hoistway location.
- Disconnect must be installed according to all applicable local codes.

110V Power (with Switched Disconnect) - 2 are required

- Permanent 110V, single-phase, 15-Ampere dedicated power to a lockable, fused (cartridge type) disconnect switch.
- Disconnect switch must be mounted near the 230V disconnect switch.

Telephone Works

• Telephone jack must be provided next to the electrical disconnects. This can be the common house line in most jurisdictions. Please check with your local installer or building contractor for code requirements.

Electrical Outlet

• One 15-Amp GFCI outlet shall be installed near the pit or base ring.

Floor Built for Load

• Smooth level surface for installing the elevator, with floor load bearing capacity for the elevator plus rated load. An exact specification can be provided by contacting Savaria.

Floor and Pit Cutouts Complete

- If a pit is to be used, a smooth, level surface of at least 3" must be provided (4" if buffer springs are used). For pit depths greater than 12", contact Savaria to ensure proper equipment will be provided.
- It is recommended that any pit floor and walls be finished prior to installation. Pit floor and walls are visible after elevator installation is completed.
- Hole in floor, or modified balcony rail as directed by drawings.

Check Floor to Floor Maximum and Minimum Distances

• 96" (2438 mm) minimum overhead distance from upper floor level to the underside of the finished ceiling for standard cab configuration.

Drywall and Painting

All drywall and painting must be complete.

Load Calculations

- Primary loads are carried by the four support columns that run from top to bottom on the elevator.
- The load (represented below as Lower Floor Total Load) is supported on 4"x4" plates at the bottom of each of the four columns.
- Vuelift Mini elevators are designed such that the dead load and impact load are transferred to the lowest level through the rail base plates and rings when installed properly in a building with structural integrity including consistent floor to floor heights.

NOTE: Vuelift Mini elevators are designed for applications in buildings that maintain consistent floor to floor height as the building ages.

If floor to floor height changes after installation, the elevator MUST be taken out of service pending inspection and correction by a trained installation technician.

- All mid floors including the bottom floor may be subjected to a maximum lateral load of 200 lb.
- Walls of bricks, terra-cotta, hollow blocks, and similar materials shall not be used for attachment of column (guide rail) brackets unless adequately reinforced.
- Where necessary, the building construction shall be reinforced to provide adequate support for the columns (guide rails).
- Shipping weight is estimated actual including crating materials, etc.
- Floor load figures include elevator structure weight when loaded with full test capacity.
- Floor load figures shown here are actual loads; your building engineer must add a proper factor of safety to the floor design.
- Many jurisdictions require floor designs to include at least a safety factor of 4, doubling the loads shown here.
- To reiterate, these figures DO NOT include your factor of safety for floor loads. Engineer your floor to include (add) an appropriate safety factor and comply with local building codes.

Pit Floor to Support Load of:

GLASS:

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Lbs = (Ft of HW * 76.5) + (# of landing * 120) + 1795
Kg = (M of HW * 34.8) + (# of landing * 54.5) + 816
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ACRYLIC:

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Lbs = (Ft of HW * 35) + (# of landing * 120) + 1480
Kg = (M of HW * 15.9) + (# of landing * 54.5) + 673
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Drawings

- Plan view (acrylic/glass), type 1
- Plan view (acrylic/glass), type 2
- Pit view (acrylic/glass), type 1 or 2
- Base ring details (acrylic/glass), type 1 or 2
- Thru floor view (acrylic/glass), type 1 or 2
- Balcony view (acrylic/glass), type 1 or 2
- Thru floor details (acrylic/glass), type 1 or 2
- Balcony details (acrylic/glass), type 1 or 2
- Pit cutout details (acrylic/glass), type 1 or 2
- Elevation view (acrylic/glass), type 1 or 2
- Machine room layout and wire routing (acrylic/glass), type 1 or 2
- Corner installation view (acrylic/glass), type
- Datasheet (acrylic), type 1 or 2
- Datasheet (glass), type 1 or 2
- Controller box dimensions (acrylic/glass)

Figure 1: Plan view (acrylic/glass) - type 1

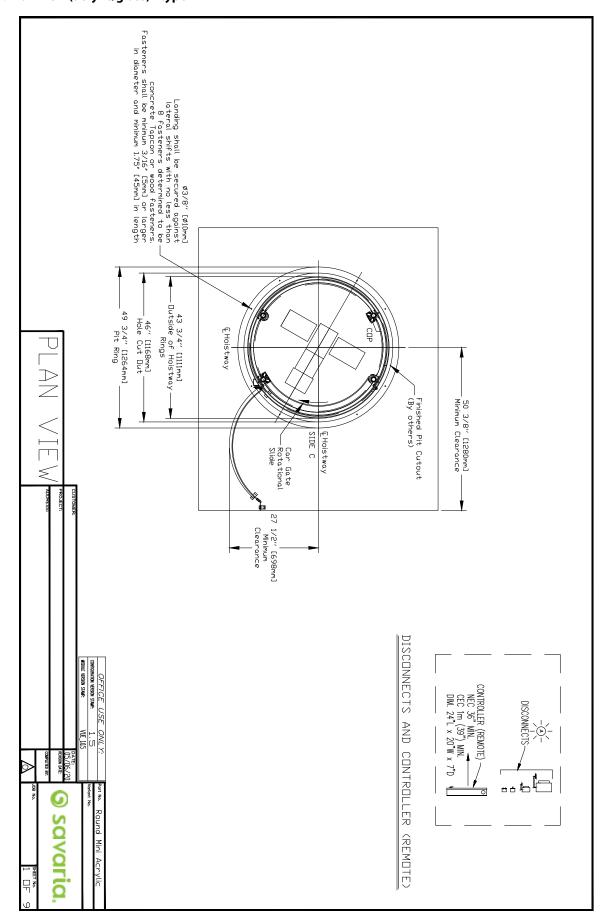


Figure 2: Plan view (acrylic/glass) - type 2

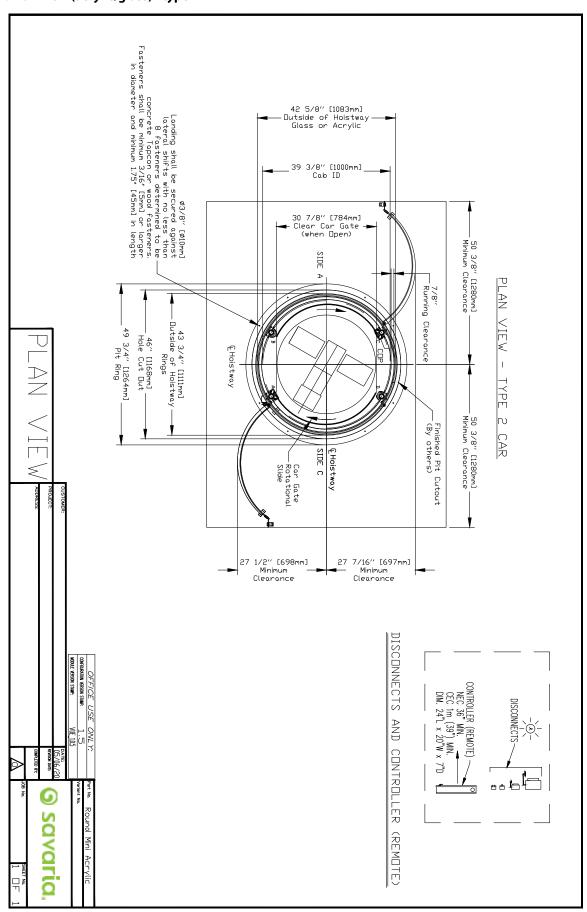


Figure 3: Pit view (acrylic/glass) - type 1 or 2

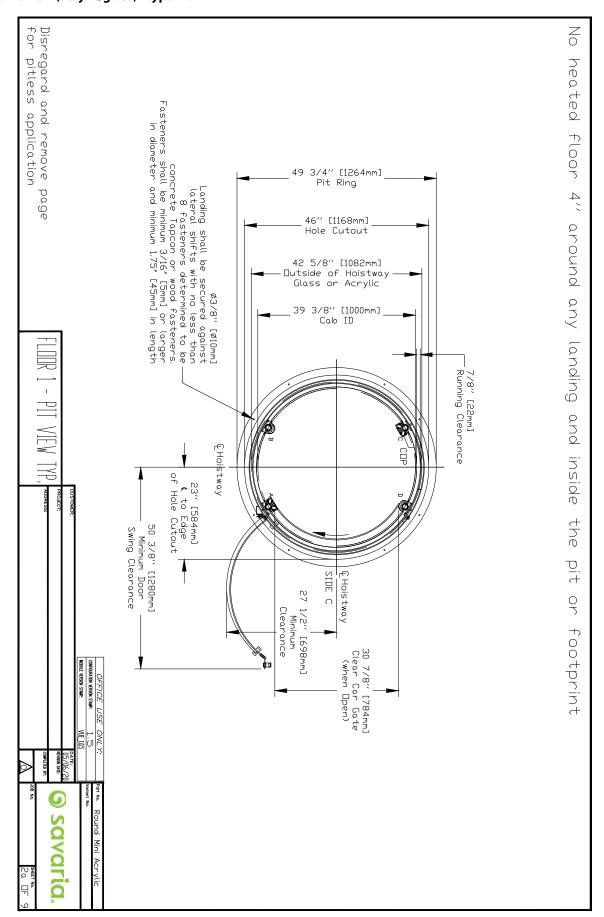


Figure 4: Base ring details (acrylic/glass) - type 1 or 2

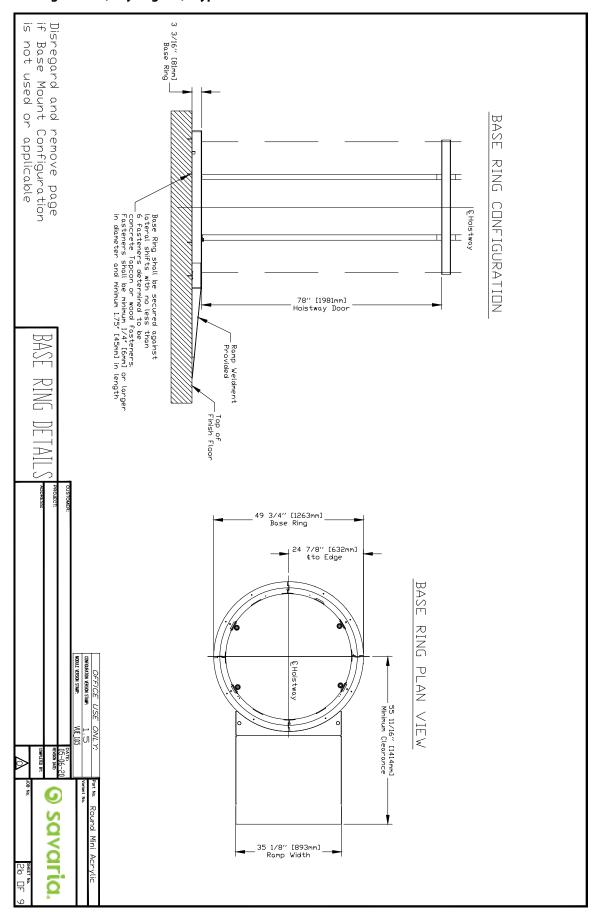


Figure 5: Thru floor view (acrylic/glass) - type 1 or 2

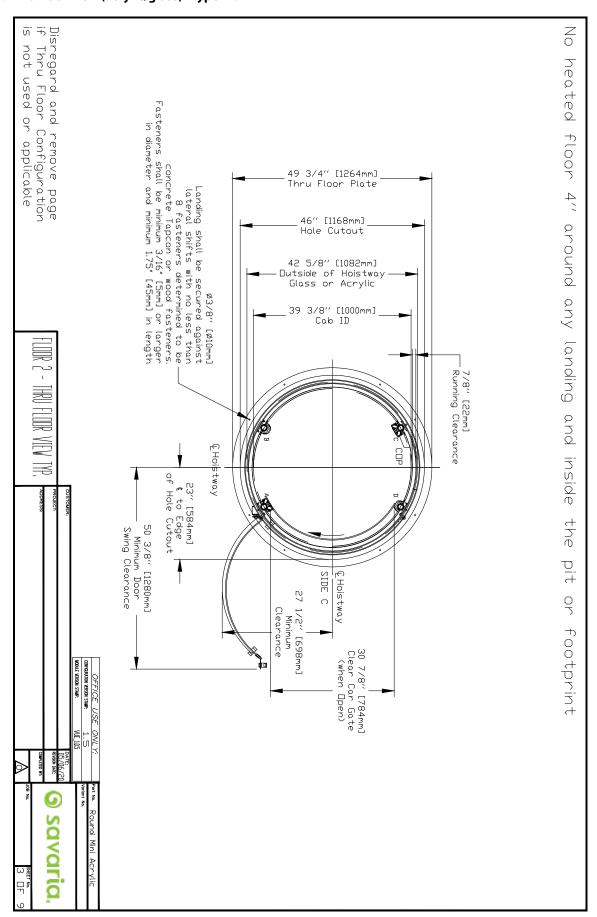


Figure 6: Balcony view (acrylic/glass) - type 1 or 2

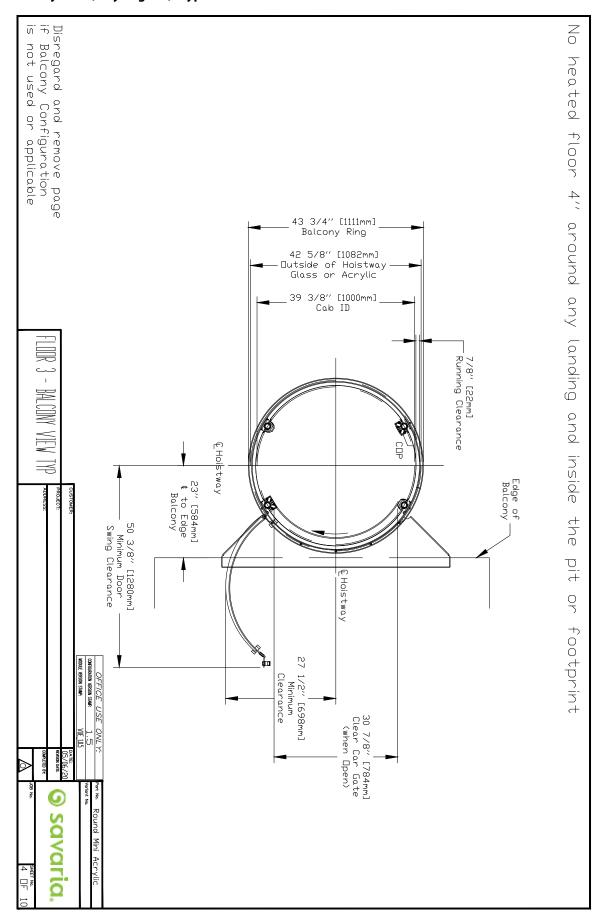


Figure 7: Thru floor details (acrylic/glass) - type 1 or 2

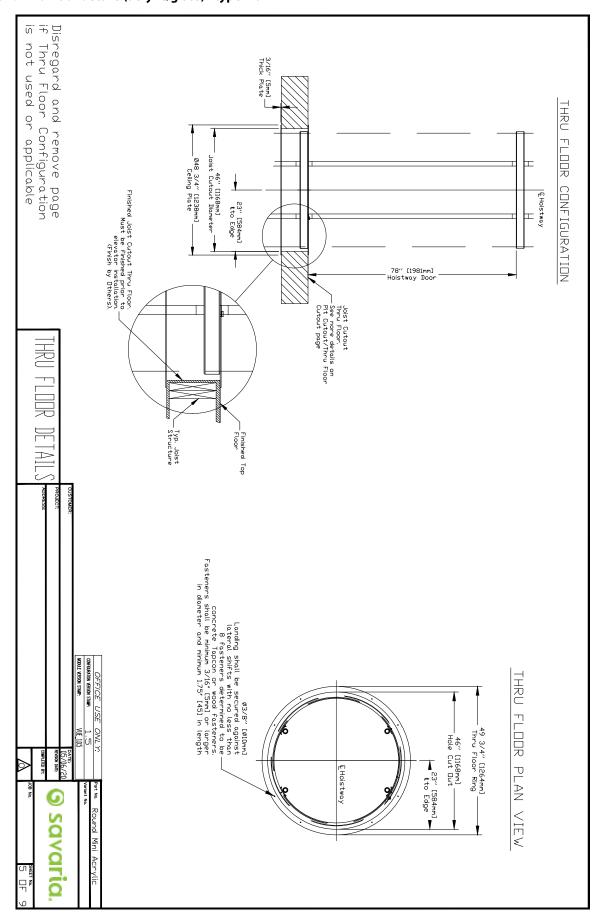


Figure 8: Balcony details (acrylic/glass) - type 1 or 2

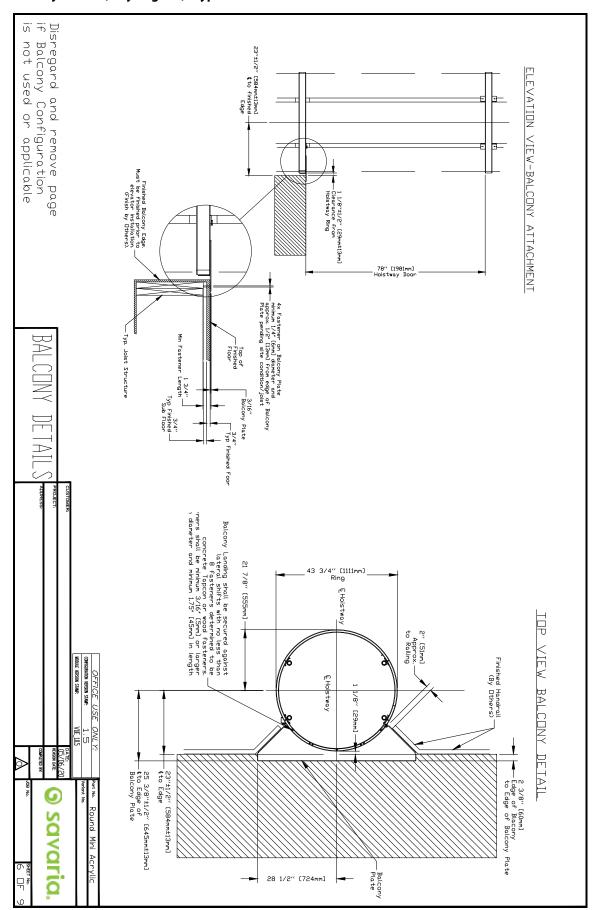


Figure 9: Pit cutout details (acrylic/glass) - type 1 or 2

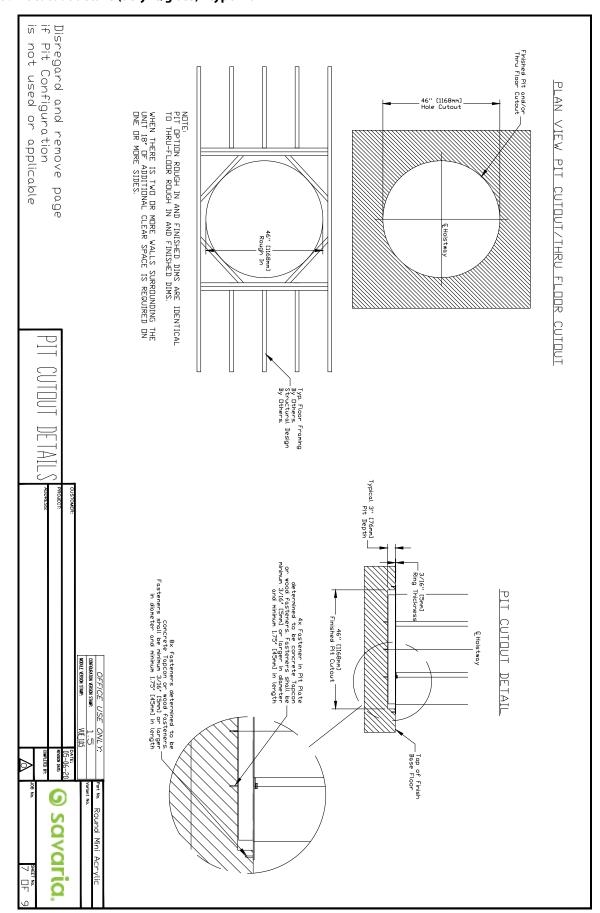


Figure 10: Elevation view (acrylic/glass) - type 1 or 2

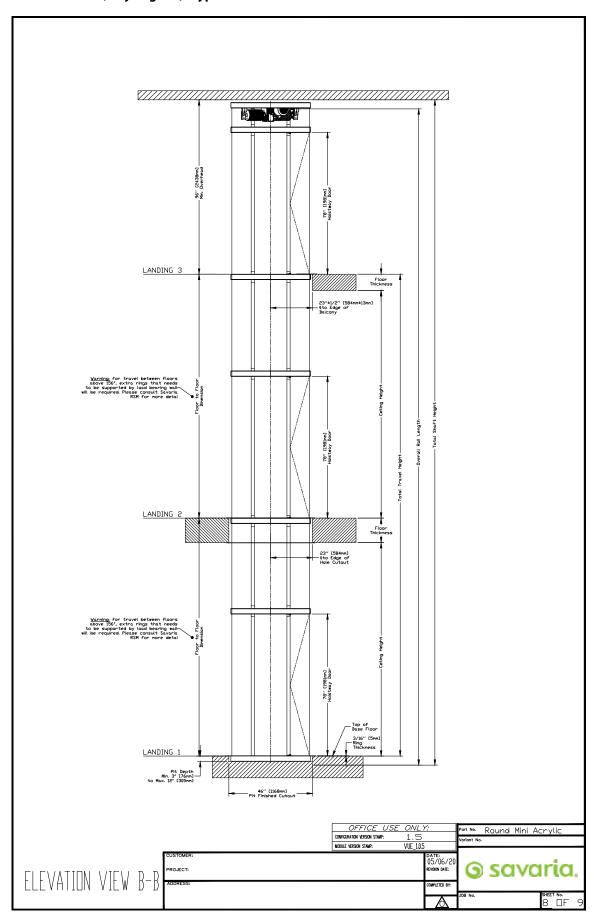


Figure 11: Corner installation view (acrylic/glass) - type 1

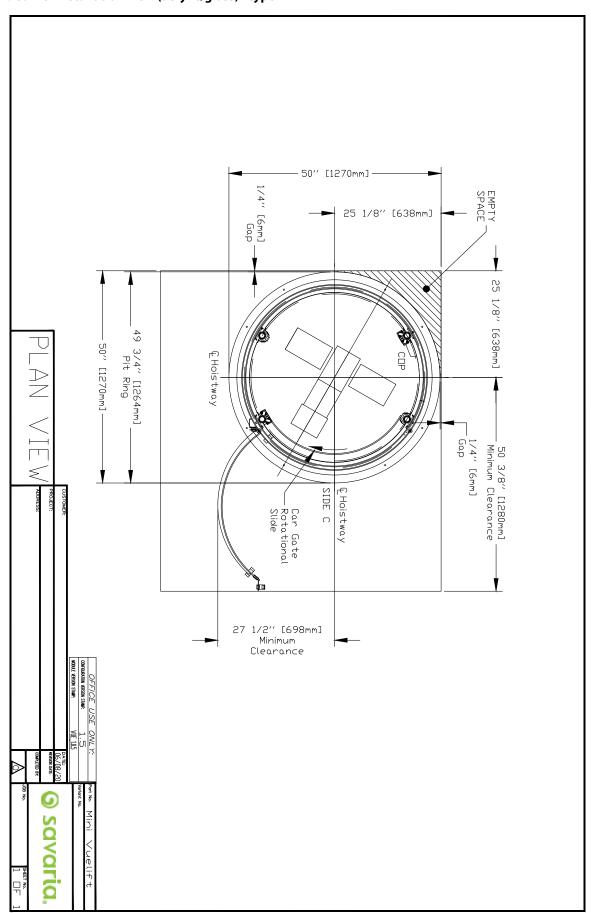
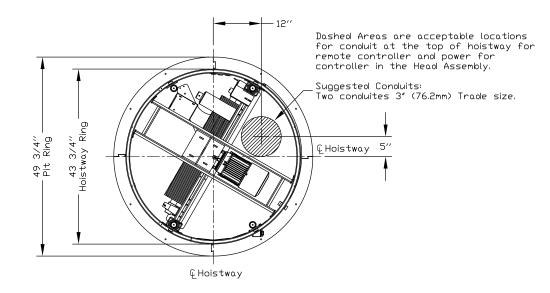


Figure 12: Machine room layout and wire routing (acrylic/glass) - type 1 or 2

MACHINE ROOM LAYOUT & WIRE ROUTING



MACHINE ROOM LAYOUT & WIRE ROUTING

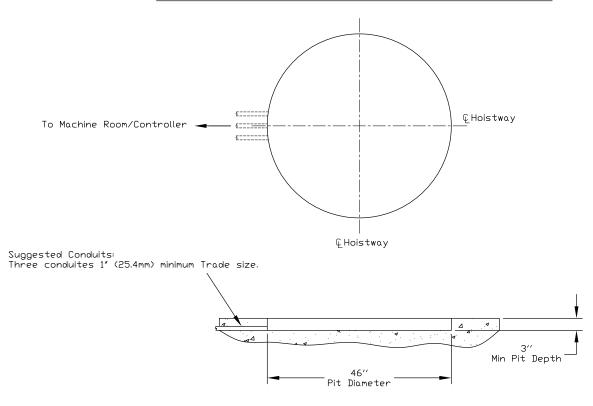


Figure 13: Datasheet (acrylic) - type 1 or 2

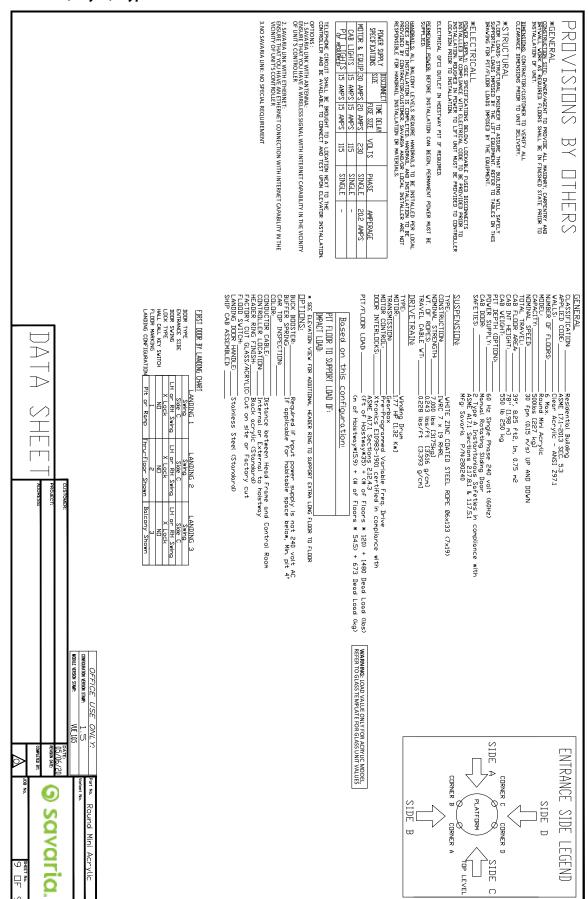


Figure 14: Datasheet (glass) - type 1 or 2

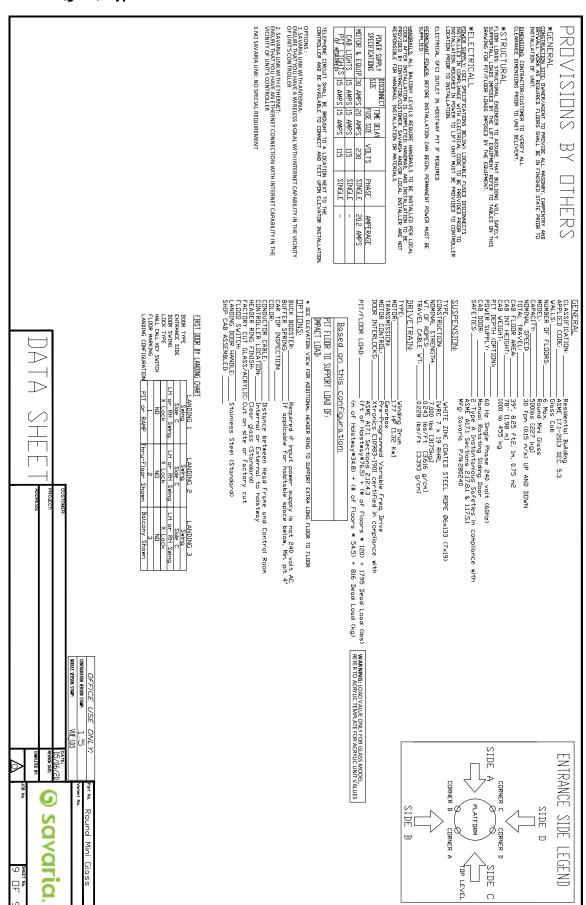
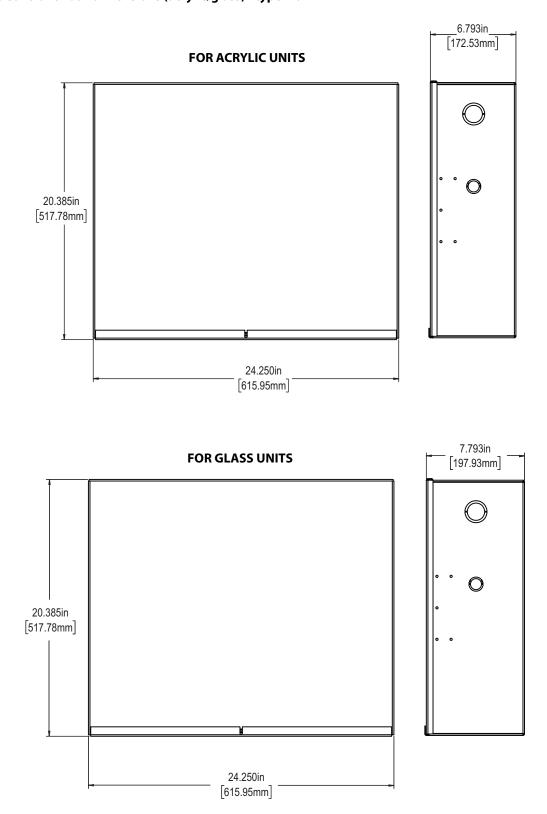


Figure 15: Controller box dimensions (acrylic/glass) - type 1 or 2



NOTE: A remote controller cannot be more than 100 ft (30.48 m) from the top of the unit for the cable to reach.

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Savaria Concord Lifts, Inc. www.savaria.com

Sales 2 Walker Drive Brampton, Ontario L6T 5E1 Canada

Tel: (905) 791-5555 Fax: (905) 791-2222 Toll Free: 1-800-661-5112

