

Home Elevator Design Ideas and Planning Dimensions for Architects

Cab finishes, glass and panoramic lifts, gates and landing doors, and where to put the shaft, with the typical pit, overhead, footprint and machine room sizes that makers publish.

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Plan the lift at the same time as the stairs. A lift that is in the first drawings costs less and looks better than one fitted later. The numbers below come from makers' planning guides. Always use the planning guide for the exact model you choose.

Typical planning dimensions

| Item | Typical figure | Source | |---|---|---| | Hoistway footprint, traditional elevator | About 25 sq ft (5 ft x 5 ft); 4 ft x 4 ft with a small cab | Savaria | | Cab size | 36 x 48 in to 40 x 54 in | Savaria | | Cab floor area limit | 15 sq ft by code; up to 18 sq ft in some US states | Savaria | | Cab ceiling height | 80 or 84 in standard; 96 in option | Savaria | | Pit depth | 8–10 in on average, on a poured concrete slab | Savaria | | Overhead at top floor | At least 92–96 in, floor to ceiling | Savaria | | Machine room (hydraulic Infinity) | 4 ft x 5 ft closet | Savaria | | Power | Dedicated 240 V circuit for the drive and a 120 V circuit for lights | Savaria | | Through-floor lift (Stiltz Duo) | 0.55 m² footprint | Stiltz UK | | Screw-drive platform lift (Cibes A4000) | 1 m² | Cibes | | Vacuum lift, one person (PVE30) | 30 in (750 mm) diameter | PVE | | Vacuum lift, wheelchair (PVE52) | 52-11/16 in (1,316 mm) diameter | PVE | | Panoramic lift (Savaria Vuelift Mini) | 50 in footprint | Savaria |

Where to put the shaft

- **Stack it.** A shafted elevator needs the same footprint on every floor. In a retrofit, Savaria says owners often use stacked closets or basement utility space.
- **Think about the garage.** Savaria suggests a stop at garage level, so you can carry bags in without stairs. The garage door to the lift may need weather seals and a fire rating under local code.
- **Plan the machine.** A machine-roomless drive, such as the Savaria Eclipse, needs only a closet or mechanical room for the controller. A hydraulic drive needs its own small room.
- **Keep it inside.** Savaria says a home elevator must run in a fully enclosed hoistway. It cannot stand outdoors.
- **Use the stair void.** A round or clear lift can sit inside a wrap-around or spiral stair. Savaria says the Vuelift Mini fits this space.
- **Through-floor option.** A through-floor lift needs no shaft or pit. Stiltz says about 80% of its installs need only a hole cut in the floor. It serves two floors only.

Glass and panoramic lifts

A glass lift becomes a feature of the room. It also costs more. HomeGuide puts a US glass elevator at \$50,000 to \$100,000 or more installed. Savaria makes the Vuelift in mini, octagonal and round shapes, with a clear acrylic or glass hoistway. PVE vacuum lifts use a clear tube and need no pit.

If any part of a normal shaft shows through glass doors, finish the inside of the shaft. Savaria suggests adding lights to a visible hoistway.

Cab finishes

Savaria lists these factory cab finishes:

- Durable melamine (the standard finish)
- Luxury MDF in gloss or matte
- Precision paint, in five colours or a custom match
- Unfinished wood veneer
- Solid hardwood

A general contractor can also finish the cab walls. Savaria warns that factory finishes keep the cab within its weight limit and keep it easy to service. Aritco offers a backlit "DesignWall" with art from Scandinavian designers. It also has an online configurator called LiftGuide.

Gates and landing doors

A shafted home elevator has two parts at each entrance:

1. **The car gate.** It moves with the cab. The lift will not move when the gate is open.
2. **The landing door.** It is fixed at each floor. An interlock keeps it shut unless the cab is there.

Savaria offers these gate types:

| Gate | Operation | Look | |---|---|---| | Accordion | Manual or motorised | Clear, bronze, white or perforated panels | | Bi-fold | Automatic only | Stainless steel or white | | Scissor | Manual only | Black, vintage | | Auto slim | Automatic | Steel, brass, colours or framed glass |

Savaria says most clients choose motorised gates. For the landing door, you can use a door that matches the rest of the house. It must still meet the 3/4 in and 4 in gap rule.

Safety note. In 2019 the US Consumer Product Safety Commission warned that children can be trapped in a deep gap between the landing door and the cab gate. It says the gap must be no more than four inches deep. Ask your installer to measure it.

Doors, stops and access

Savaria names its entrance layouts Type 1 to Type 5. Type 1 has one door. You can add a second door straight through the cab or at 90 degrees. This helps in split-level homes.

Checklist for the design team

1. Pick the model early and get its planning guide or CAD drawing.
2. Reserve the pit, overhead and footprint on every floor.

3. Put the load-bearing rail wall on the drawings. Savaria says one hoistway wall must be reinforced for the rails.
 4. Show the electrical circuits and controller space.
 5. Check local code. In the US, ASME A17.1 sets the base standard, and states may add more.
- You can find elevator dealers and installers who work with architects in this directory.

Sources

- [Ultimate Guide to Home Elevators](#), Savaria, updated 2026-10-20.
- [Home Elevator Doors and Gates](#), Savaria, published 2025-12-15.
- [CPSC Alert: Protect Children from a Deadly Gap between Doors of Home Elevators](#), US Consumer Product Safety Commission, 2019-08-08.
- [Domestic Lifts for the Home](#), Stiltz UK, accessed 2026-10-29.
- [Stiltz Lifts USA](#), Stiltz, accessed 2026-10-29.
- [Cibes Lifts](#), Cibes, accessed 2026-10-29.
- [PVE30](#) and [PVE52](#), Pneumatic Vacuum Elevators, accessed 2026-10-29.
- [Aritco](#) and [Aritco HomeLift](#), Aritco, accessed 2026-10-29.
- [How Much Does a Home Elevator Cost? \(2026\)](#), HomeGuide, accessed 2026-10-29.

Frequently asked questions

How much floor space does a home elevator need?

Savaria says a traditional elevator needs about 25 sq ft (5 ft by 5 ft) on each level, or 4 ft by 4 ft with a small cab. A through-floor lift such as the Stiltz Duo needs 0.55 m², and the smallest PVE vacuum lift is 30 in across.

Can a home elevator go outside the house?

Savaria says a home elevator cannot run outdoors. You can build the hoistway against the house inside an insulated outer wall. Some platform lifts, such as Aritco models, are sold for outdoor use.

What is the 3/4 and 4 inch rule?

It limits two gaps at the landing. The gap between the landing door and the sill must not exceed 3/4 in, and the gap between the landing door and the cab gate must not exceed 4 in. The US CPSC warns that a deeper gap can trap a child.