

## Universal Housing Design

### *Stair-Lifts: So many choices*

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**Q.** We have a child with a physical impairment and she uses a wheelchair. We have a 2 level home. The garage is below on the first level with an entry. We have existing 4'-0" wide stairs that go up to the main level living spaces that are actually on the second floor. Our main entry front door is entered after climbing a switchback set of old wooden stairs.

What are the options available so that our child may more easily get around the entire home? Should we build a ramp up to that entry level or look into the stair lift option.? Our child can walk with guidance but has problems with the stairs. What types of lifts are available and what do we need to consider in choosing one?

**A.** Since you have 4'-0" wide stairs you are fortunate in that they are wide enough to install a seated stair lift and still use them for walking for the rest of the family. This is usually not the case as most stairs may be 3'-6" wide at most.

First you need to consider your child's physical size and characteristics. What is the weight of the child? Stair lifts have weight restrictions and will vary with manufacturer and brand name. The minimum is usually around #250 and they top out at around 400# capacity.

If the user has difficulty transferring to the stair lift chair then its height will be an issue. This is also important for a short child or person. If the user has lower back pain and a soft start and stop are important then a DC powered stair lift may be more appropriate. A battery powered stair lift is a good idea as it will work in the case of a power outage and can be recharged with a common 110- volt household outlet.

Does the child have adequate hand strength to operate the controls or will a caregiver need to operate the lift? Most stair lifts have a hand operated toggle device but this may be painful for someone with arthritis

or limited hand use. Some units have wireless wall switches at both the top and bottom.

Does your child need help from a caregiver to make a seat transfer? In this case, if the answer is yes a stair lift may not be a good idea as it can be dangerous for both the user and the caregiver at the top of the steps as the user pulls up from the caregiver. The risk of falling down the steps is great and this use should be avoided. In this case the use of a through ceiling lift or a full platform lift may be best. These are also numerous in type and diversity and may a topic for another article.

It is best to choose a lift for the long term potential physical needs. There is however a company that specializes in selling used equipment so when the time comes that you may need to trade in the old equipment for another unit or different type of lift you can get credit for the old one and install another type. This is a great service if your child has declining physical abilities. Go to [www.silvercross.com](http://www.silvercross.com) to see a list of used lifts of all types and a comparison chart of their specifications.

Make sure you have adequate room at the top and bottom of the stair and that the stairs are well lighted at both areas. If you were designing a new home the ideal space to allow for a stair lift is a 8' x 5' space at the bottom and a 5' x 5' space at the top of the stair. If a wheelchair is used you would need to keep a chair at both the top and the bottom of the stairs.

Many stair lifts have swivel seats to aid in making the transfer off the chair manual or electric swivel seats are available. The swivel chair swivels you away from the stairs so you are facing the landing away from the stairs. This is designed as a safety feature but may be difficult for some to use. Stair lifts also have retractable seat belts and some have a footplate safety sensor. Two remote wireless call controls is a nice feature allowing you to bring it to the needed location.

If the child uses a cane or a walker, make sure there is one stored at both locations. Never bring the unit up the steps while sitting in the stair lift. These devices can get stuck in the lift or on the stairs creating a hazardous situation.

Make sure your unit is UL listed and meets ANSI-A18 requirements. Always consult with your local building dept. and any other manufacturer requirements. Some can even be ordered with audible alarms that let a blind person know if the chair is at the top or the bottom of the stairs.

Sometimes there can be a conflict with doors at the top of the steps or other structural members that can interrupt travel of a stair lift. The unit must extend fully from bottom to top and not stop short, which would cause a dangerous transfer situation.

Some units have rails that can fold up and down so as not to obstruct a door at the top. Make sure your user can operate this manually or that it has a power operated control. Units with an adjustable seat height are a good idea allowing for easier entry /exit at the bottom of the stair.

Stair lifts are also available that can make a curve but these will impede more over the stair so verify the width of the steps remaining.

As I said, you are lucky with your situation that your stairs are 4'-0" wide. A min 3'-8" stair will also work. It is also very important to remember and take into account the other users of the stairs and their safety as well. For this reason stair lifts have fold up seats and arms and should have all the mechanical workings self contained. The distance of the rail from the wall and the width of the unit itself when folded is important. Many now on the market only measure 8" when folded up. Folding and unfolding of a unit and footplate can be tricky and even dangerous, especially at the top of the stairs. Make sure the user can safely manage these operations.

Remember each users needs will vary so make sure you try the unit before you purchase it. Funding sources may also be available. The web site mentioned above also has a state-by- state link to funding sources. Check with your local Independent Living Center for local opportunities.

Don't forget your stair lift may also be partially tax deductible if needed for medical reasons. The cost of the lift can be deducted against the

increased appraised value of the home with the stair lift install. Ask your Accountant about section 502 of the IRS tax law.

Many accidents can and do occur daily at stairs. A stair lift can be a safe way to limit the danger of falling at the stairway. Make sure the stair lift you choose works for you and does not become in itself another safety concern.

Some stair lift companies are:

Access Industries [www.accessind.com](http://www.accessind.com)

Acorn [www.acorn.com](http://www.acorn.com)

Ascension stairlifts

Bruno [www.bruno.com](http://www.bruno.com)

Savaria

Stannah Stairlifts [www.stannah.com](http://www.stannah.com)

Garaventa [www.garaventa.com](http://www.garaventa.com)

Inclinator [www.inclinator.com](http://www.inclinator.com)

A good website to compare different units and specifications as well as helpful funding information is [www.silvercross.com](http://www.silvercross.com)

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For more information and room-by-room information on accessible housing please visit [www.UniversalSmartHomes.com](http://www.UniversalSmartHomes.com) You may also order the home plan book titled book:

***Universal designed Smart Homes for the 21<sup>st</sup> Century***

The world's first fully accessible and Energy efficient home plans book of 102 homes plans you can order and build. It also has an informative 20 page room-by-room features and benefits section for home remodels and home-modifications. The book also includes an extensive 4 page resources and references section with complete contact data.