



Aqua Creek Products

THE LEADERS IN RECREATION, FITNESS, AND ABILITY!

Pool Lift Training Manual

A Guide to Aqua Creek Pool & Spa Lifts



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Pools 101 - Swimming Pool Basics

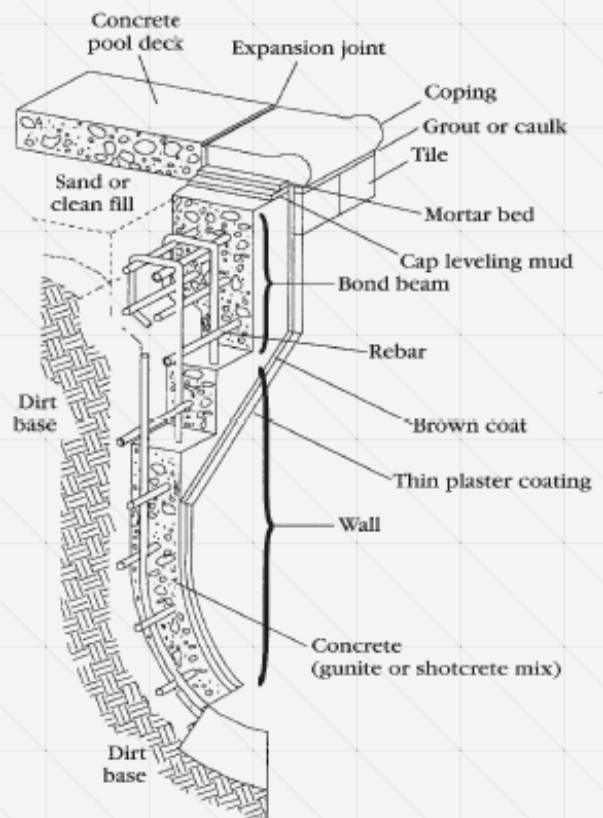
Swimming Pool Classifications: Swimming pools can be divided into three basic categories, residential and two classes of commercial pools; 'A' Market and 'B' Market. While residential pools are pretty self-explanatory, commercial 'A' refers to larger competition and recreational pools like those found at universities, YMCA's, municipalities, aquatic centers and natatoriums. The pool is usually the main focus of these facilities. This market deals with a much larger range and style of pool which may limit the choices as it relates to the type of lift that will work. The 'B' market commercial pools are usually found in hotels, motels, resorts, fitness centers, and other similar facilities where the pool is not the main focus. These pools will often be of a much simpler design similar to residential and can usually accommodate a wider range of lift styles.

Construction Basics: Not all pools are created equal but there are similar features that can be found in just about every pool. You will need to be aware of these in order to choose the right lift and installation.

A typical concrete pool; often referred to as "gunite" or "shotcrete", is a lot more complicated than it looks. In simple terms, we can say that a typical pool has 6 basic components; the pool shell which is separated from the pool deck by an expansion joint, the bond beam, coping or coping stone, bonding grid, and either a perimeter gutter system or in wall skimmer system to pull water from the pool in order to filter and heat it.

The Bond Beam: The purpose of the bond beam is to provide structural integrity to the pool. This 'beam' is typically thicker than the rest of the pool structure (usually 10" to 12") and has additional rebar reinforcements, often thicker in diameter than the rebar in the rest of the shell. The bond beam is usually capped with a coping stone. It is generally not a good idea to cut into or otherwise compromise the integrity of the bond beam.

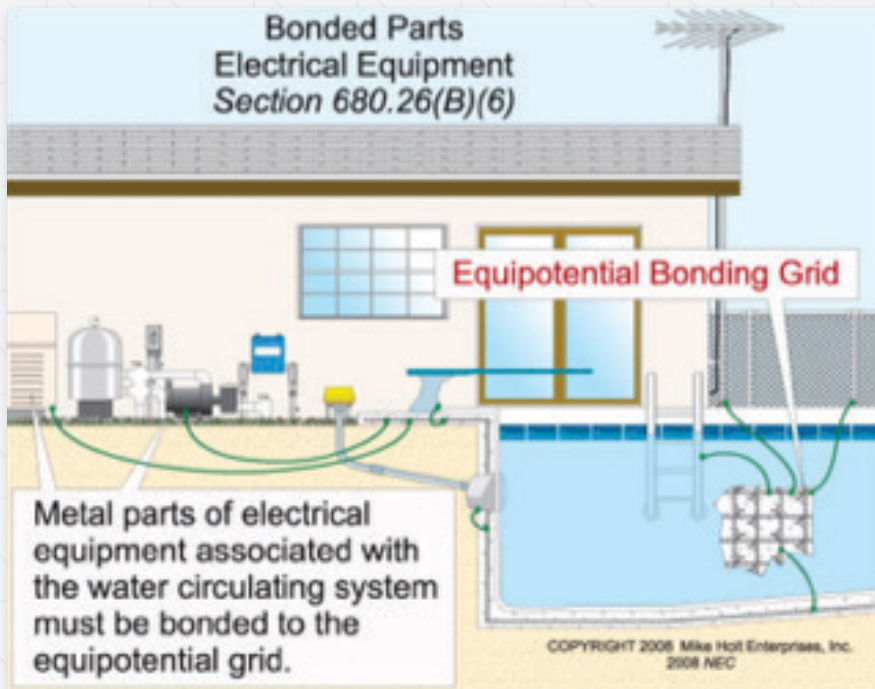
The Pool Deck: The pool deck usually butts up against the bond beam and is separated by an expansion joint. This keeps the pool shell and the pool deck as separate structures and eliminates certain forces that could otherwise crack the pool walls. The pool shell and the pool deck employ what is referred to as an equipotential bonding grid typically made of rebar or steel mesh. The purpose of this grid is to tie all metallic and/or electrical components in and around the pool together so that any stray electrical charge, either by the equipment or naturally, is equally dispersed between all fixtures and/or components tied to the grid.



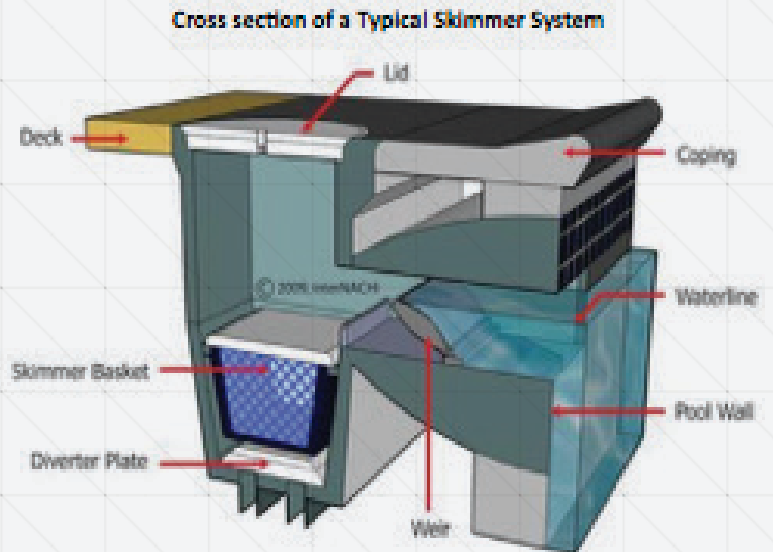
You will typically need to bond the anchor system of your lift to this grid. It is important to note that bonding is **NOT** the same as grounding. When you ground something you are 'earth' grounding. This means that any electrical currents are dispersed directly into the ground. Bonding is the act of physical-

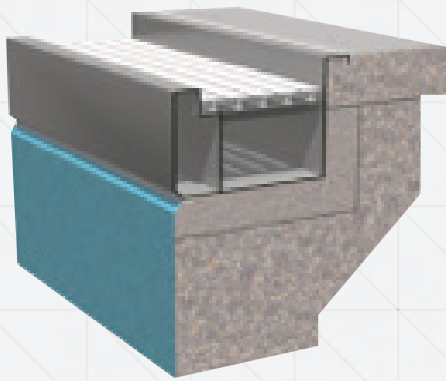
ly joining all metallic and/or electrical components together to reduce the risk of electrocution by dispersing the charge throughout all bonded components. This is required by the National Electric Code (NEC) in Section 680.26.

Some cities, counties, or states require bonding be done by an electrician, which means an electrical permit may be required. However, code requirements vary greatly so be sure to check your local code and permitting requirements before installing any pool or spa lift.



Filtration Systems: Many smaller 'B' market and residential pools employ a skimmer system. This system will have a certain number of openings in the wall where the water is drawn through a weir and strainer basket system and eventually through the filter and heater. The heated and filtered water is then returned to the pool through jets in the pool walls and/or floor. These pool types can accommodate almost any style of pool lift.





Perimeter Gutter System

A perimeter gutter system is usually found on larger 'A' market commercial pools. There are many different styles of gutter systems so it is important to consider this when trying to determine the type of lift you are going to need. Some are wide (10" to 12" or more in front of or on top of the bond beam). Some are recessed under the coping. It is important to use our pool profile guide to obtain measurements in order to make sure the lift will be able to reach past the end of the gutter and coping stone when secured to the pool deck.

Another important thing to consider is the distance from the pool deck or top of coping stone to the surface of the water. This is often called the 'water draft' or 'freeboard' in some cases. Excessive distances here (generally over 10 or 11 inches) may require a lift with a greater stroke so that the seat of the lift is submersed in the water adequately.

Not all pools are square, in fact many pools are free form and may not have any long lengths of straight pool edge. This is often overlooked but is important in determining the right lift and the correct placement of the anchors. It is always best to install a lift on a straight pool wall. If there is not a straight pool wall available, consult with Aqua Creek for proper lift selection and anchor placement.

ADA Q&A – Basic Americans With Disabilities Act (ADA) Information

What is the ADA? The ADA stands for Americans with Disabilities Act. It is a civil rights law that was passed in 1990 that prohibits discrimination against people with disabilities in all aspects of life including employment, public access, and communication. Part of the law includes construction design standards for commercial facilities that outline how existing and new construction should be made readily accessible for people with disabilities.

What does the law require? The ADA requires modification of policies and practices that discriminate against persons with disabilities. It requires new construction and remodel construction to meet the design standards outlined by the law. Also it requires the removal of barriers to provide equal access to commercial facilities when it is readily achievable to do so.

What types of pools and spas must comply? Any pool or spa that is open to the public at any time, receives government funding, or receives revenue (e.g. membership dues and rental or usage fees.)

Do all existing pools at a facility need to be compliant? Typically, yes. Each body of water is looked at independently and made compliant should the modifications be readily achievable.

Do all spas have to be made compliant? Typically yes. However, if spas are in groups or clusters, no more than 5% and no less than one of the spas in the group needs to be made compliant. Those made compliant also need to be on an accessible route.

Do water slides need to be accessible? No. Water slides are exempt and do not need to be on an accessible route.

Do catch pools at the end of water slides have to be made compliant? No. As long as one side of the catch pool is on an accessible route; the catch pool itself does not need to be made accessible.

Do raised diving boards and diving platforms need to be accessible? No. Raised diving boards and platforms are exempt and do not need to be on an accessible route.

Is there a 'grandfathering' clause that I can qualify for? The 'Safe Harbor' clause referenced in the ADA does not apply to swimming pools and spas because the accessibility standards for swimming pools and spas were not included in the original standards released in 1991.

How does the ADA affect local code requirements? Codes that provide the same or greater protection will take precedence.

Who enforces the ADA? For new construction, the plans should be drawn up according to the requirements and the local codes enforced by review and inspection. Existing construction enforcement will be done through individuals who file claims with the Department of Justice, who will ultimately enforce whatever is found to be required.

When is the deadline for meeting the new ADA standards? The new laws took effect on March 15th 2011 and are mandatory by March 15th of 2012.

What if I can't afford to make any modifications to make my pool or spa compliant? The law is reasonable in that it requires you to make your pool or spa accessible when readily achievable. This means when it can be done without much difficulty or expense. However, affordability does not relinquish you from your responsibility. You may be required to make changes that have minimal to no cost such as updating policies and procedures but you still need to have plans for long term modifications.

Providing accessibility to pools and spas is more affordable than you may think. The average cost of a pool lift can be as little as \$5,000 and the US Government provides tax incentives up to \$15,000 annually to help pay for barrier removal in existing facilities. Affordability may not be a very effective argument to try and get out of your responsibilities in these cases.

Do I have to make sure the equipment I buy to make my facility more accessible is ALWAYS working? The Revised Title II and Title III sections require equipment to be maintained but it does not prohibit isolated or temporary interruption in service due to maintenance or repairs. (Ref: Title II 35.133 & Title III 36.211)

If I am leasing a facility from someone am I responsible for making it more accessible? Both the landlord and tenant are subject to the ADA requirements. Allocation of responsibilities can be assigned through contract or lease agreements. (Ref: Revised Title III Section 36.201)

What are the benefits of making my pool or spa ADA compliant? By making your facility more accessible you may increase your revenue by reaching a larger demographic. For example, the disabled population is the largest minority group in America at over 55 million with a spending power of over 200 billion dollars. Additionally, between 2000 and 2030 the number of Americans age 65+ will more than double to over 70 million. Add to that, the 2000 Census indicates that 42% of adults in this age bracket have one or more disabilities.

You can also benefit from tax incentives. As indicated earlier, the federal government offers up to \$15,000 in ANNUAL tax incentives for removal of barriers in existing facilities.

Of course, minimizing your liability as it relates to the law is a big reason to make your facility more accessible. Since the ADA is a Federal Civil Rights Law, people with disabilities that cannot gain access to your pool or spa have a right to file a complaint with the Department of Justice which may require you to make modifications or in some cases even levy fines of up to \$150,000.00

Can I use a portable lift to service multiple bodies of water? Possibly. A portable lift is allowed if installation of a 'fixed' lift is not readily achievable. The facility must make sure there are adequate resources available to make sure all bodies of water are accessible at all times the pool(s) are open. This also does not relinquish the facility from improving access over time.

When deciding on making your pool(s) more accessible, we recommend contacting an ADA consultant that can evaluate the entire facility for ADA improvements. Then develop a short and long term plan to make the facility more accessible.

So what are my access choices? There are 5 acceptable forms of access for pools and spas outlined in the ADA. Sloped entry, pool lift, transfer walls, transfer systems and stairs. Two of the five are considered primary (sloped entry and pool lift) while the others are considered secondary and only necessary for pools over 300 liner feet. This chart provides a summary.

PERMITTED MEANS OF POOL ACCESS					
POOL TYPE	SLOPED ENTRY	LIFT	TRANSFER WALLS	TRANSFER SYSTEMS	STAIRS
Swimming (less than 300 linear feet of pool wall)	✓	✓			
Swimming (300 or more linear feet of pool wall) - two means of entry required	✓*	✓*	✓	✓	✓
Wave action, leisure river, and other pools where user entry is limited to one area	✓	✓		✓	
Wading Pools	✓				
Spas		✓	✓	✓	

*Primary means must be by sloped entry or lift, secondary means can be any of the permitted types

Are the rules for ADA technical requirements for products inflexible? Contrary to popular belief, the ADA is very accommodating in cases of facility modifications and requirements. **Section 103** covers “**Equivalent Facilitation**” and states, “Nothing in these requirements prevents the use of designs, products, or technologies as alternatives to those prescribed, provided they result in substantially equivalent or greater accessibility and usability.” The responsibility for demonstrating equivalent facilitation in the event of a challenge rests with the covered entity. It is important to note that there is no process for certifying that an alternative design provides equivalent facilitation.

ADA Pool Lift Technical Requirements

So what are the technical requirements for pool lifts? A pool lift should have a rigid, firm seat design. Additional options, such as headrests and seat belts, improve the usability of the lift.

Location: The lift should be located where water level does not exceed 48 inches. Exceptions: where entire pool depth is greater than 48 inches or where multiple lifts are used, only one needs to be at 48 inches.

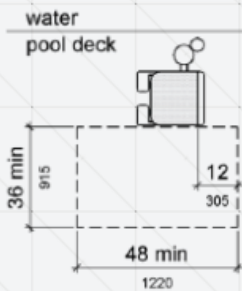


Figure 1009.2.3 Clear Deck Space at Pool Lifts

Seat design: The seat shall be a minimum of 16 inches wide. The center line of the seat shall not be closer than 16 inches to edge of pool. The deck surface between the centerline and the pool edge shall not slope steeper than 1:48 (1/4” per foot).

Transfer Area: A transfer area to the side of seat measuring 3’ wide by 4’ long, must be provided. The 4’ length measurement will be measured from 12” behind seat. Slope of the deck in the clear deck space shall slope no more than 1:48 (1/4” per foot). **Figure 1009.2.3**

Seat Height: The lift should be designed to allow the seat to stop at 16” to 19” when at deck level.

Figure 1009.2.4

Footrests: Footrests are to be provided on all pool lifts and shall move with the seat. They are not required on lifts used with spas.

Armrests: Armrests, if provided, shall fold clear or be removable.

Lift Operation: The lift should be capable of unassisted operation from both the deck and water levels. This does not preclude assistance from being provided.



Figure 1009.2.2 Pool Lift Seat Location

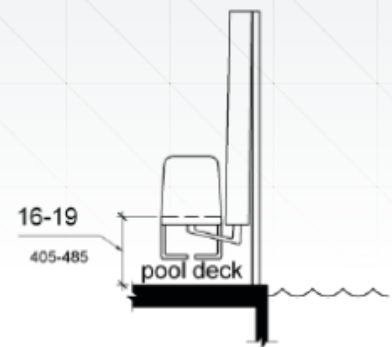


Figure 1009.2.4 Pool Lift Seat Height

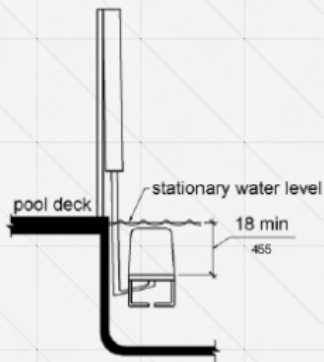


Figure 1009.2.8 Pool Lift Submerged Depth

Controls and operating mechanisms must be unobstructed when in use and do not require tight grasping, pinching, or twisting of the wrist. Actual operation of the controls should require no more than 5 pounds (22.2N) of force to operate. The seat of the lift should be able to submerge a minimum of 18" below water level. **Figure 1009.2.8**

Weight Capacity: An ADA compliant lift should have a minimum weight capacity of 300 pounds with static load capacity of 1.5x rated load. Heavier capacities are recommended but not required.

Power: Water vs. Battery and Now Solar?

The ADA does not specify how a lift should be powered. Most first generation lifts were water powered, however, the water powered lifts had a lot of drawbacks and most manufacturers switched to battery power.

Aqua Creek does not manufacturer water powered lifts. The main reasons for the switch were that water powered lifts are harder to install and service. Simply running a hose to the lift is not an acceptable solution, as this would present a tripping hazard on the pool deck. For commercial facilities, you would need to install a water source (Hydrant) next to the lift that could accommodate at least 55psi to adequately operate the lift. This would often require additional plumbing and in some cases a booster pump system to achieve the proper pressure. This would often add thousands of dollars to a typical install.

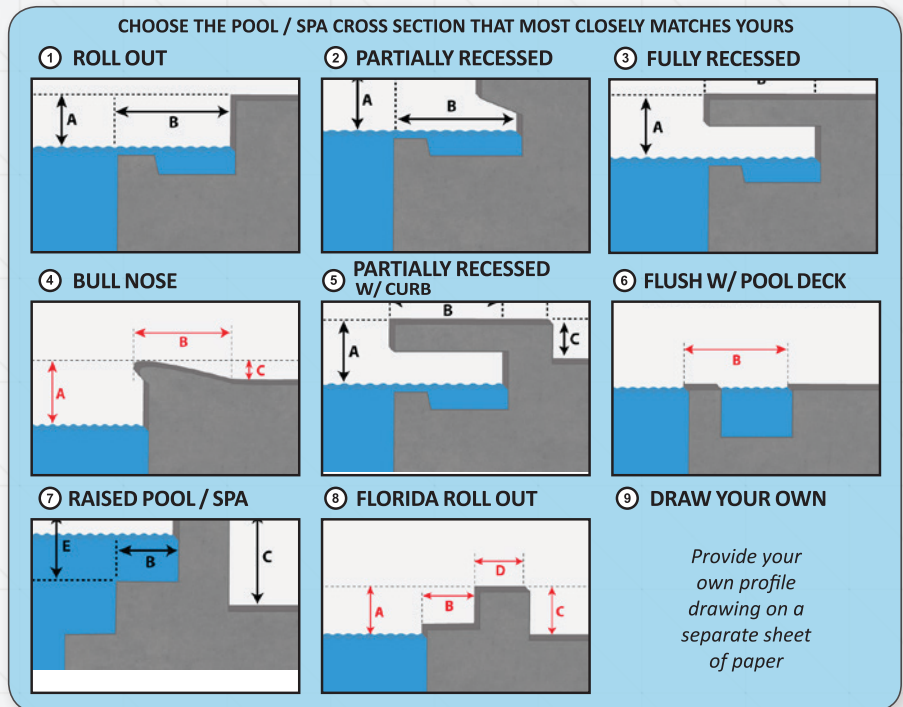
The water powered systems were also much harder to service. Pistons and piston seals would often deteriorate due to chemical issues and simple everyday use. Replacement of these items required a complete tear down of the lift. Battery operated lifts provide a much less expensive installation, and easy plug and replace service capabilities. Aqua Creek has also become a pioneer in the battery powered realm by providing the first ever solar powered option for pool lifts.



Profiling - Choosing The Right Lift for Your Project!

Identify your pool! The first step in choosing the right lift for your pool is to identify your pool type! We provide a pool profile guide as well as an online pool lift selector to help with your choice. There are a group of basic pool cross-section profiles to choose from.

Each profile pictured will have certain lift models associated with them. Then, based on the measurements you provide, it narrows down your choices as it compares each lift's minimum and maximum measurements to the measurements provided by you. These should provide you with some basic lift choices.



Charting a New Course!

Our new graph charts are a version of our spec sheet that has a graph area where the pool profile should be. This graph area consists of 1" squares and represents the operating range of the lift. If you can draw your pool profile within the graph area, the lift should work for your application! The following pages represent each model we offer along with a graph chart, ordering numbers and accessories. Use these pages to help you talk with your customer and chart the right lift, options, and accessories.

Use our online Lift Selector App or the Aqua Creek App for more info

Go to our website for the pool lift selector, found at www.aquacreekproducts.com/selector, or get easy access to all of our helpful information using the Aqua Creek App, available in the Apple App Store and the Google Play Store.



Ranger 2 Lift Ordering Numbers

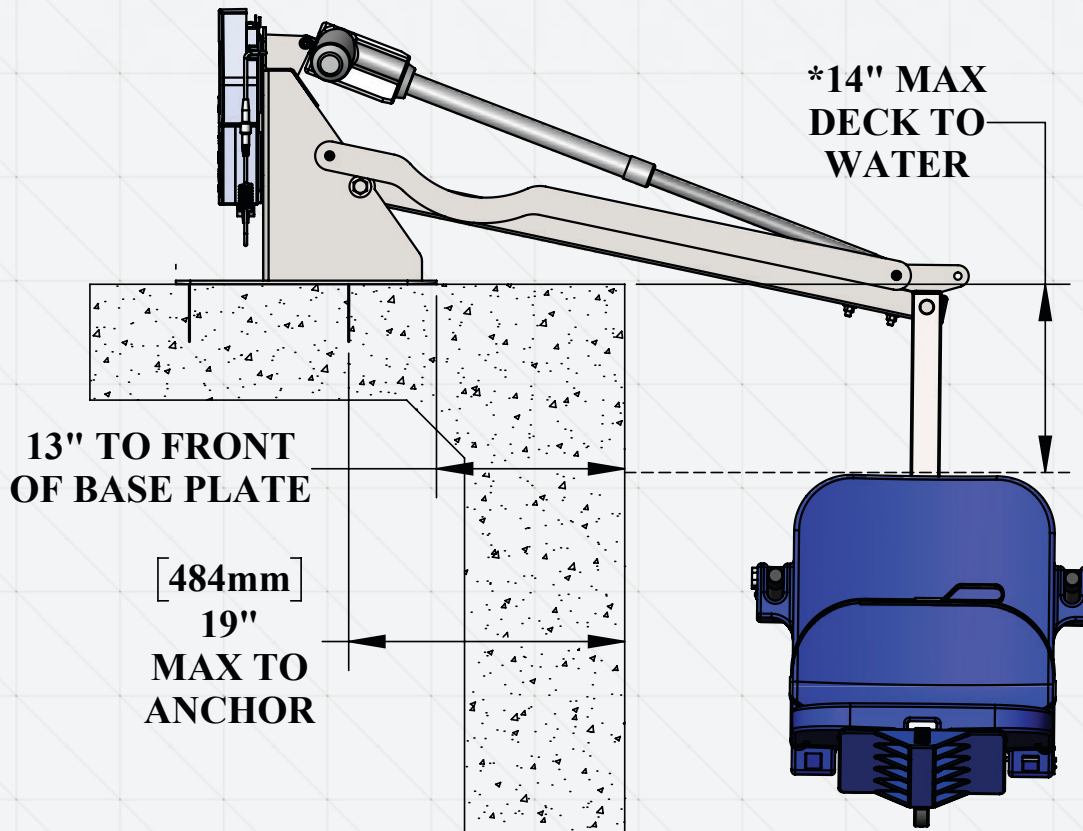
Part Number	Description
F-RNGR2	Ranger 2 Lift, Standard, no anchor (350 lbs)

ACCENT COLORS

Available in a variety of accent and powder coat colors



*Blue seat standard (not a powder coat option)



Part Number	Description
F-AACA	Adjustable height seat pole (adds up to 5" of seat height)
F-04CAJP	Anchor, Standard Concrete
F-08CAJP	Anchor, 8" for Pavers
F-046QAB-AT1	Anchor, Standard Anchor w/Quick Attach Kit (F-04CAJP with 4ea F-JCL-114)
F-40220-AT1	Anchor, Wood Deck
F-120PPC	Lift Cover, Standard Lockable, blue, tan or gray
F-044SCH	Solar Charging Kit
F-428HT	Transport Cart
F-423CS	Chest Strap
F-019CA	Cycle Attachment
F-422PLH-2	Headrest
F-105LAR	Pull Out Leg Rest

Lift Installation

Due to permitting and footing requirements of individual lifts, we recommend having a qualified professional contractor install your pool lift for best results. Pool decks are often not thick enough and may require saw cutting a portion of the deck out and replacing it. Each lift may require a different size and depth of concrete pad and if the install has to do with pavers, it can add a whole new level of difficulty to the project.

Our manuals and our website offer a wealth of information on the installation process and we recommend reviewing the first part of this packet that refers to pool construction and bonding requirements so you are familiar with the construction of the pool and surrounding deck.

If you are going to install a lift yourself, here are a few recommendations:

1. Read through the entire product manual before beginning any installation. Determine if you are capable to do what is required before attempting the installation.
2. Make sure the lift you purchase is adequate for your application. Curved pool walls can affect the lifts set back distances. Check with Aqua Creek in these cases.
3. Determine what your local permit requirements are and obtain any necessary permits.
4. In commercial applications, it is important to achieve the minimum clear deck space requirements of the ADA. This is also helpful in residential applications but is not required by law.
5. Installation may require special tools; verify you have or can obtain those tools and that you know how to operate them.

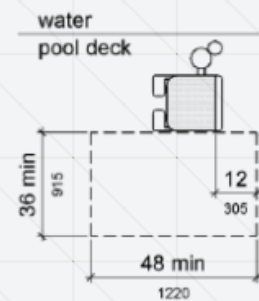


Figure 1009.2.3 Clear Deck Space at Pool Lifts



Aqua Creek is available for assistance in your installation process but ultimately a proper installation is the responsibility of the owner and/or installer. They need to follow the installation instructions and make sure they call Aqua Creek with any questions, clarifications or concerns.

← Example of a Scout lift installed in a paver deck

Lift Operation

Our main lifts will have a variation of the pictograph below that easily shows how to use the lift. These are also available in print ready format if you wish to have some made for your customer! In addition, we have several videos on our website that show the lifts in operation. Check out our website often for updates!



Lift Maintenance Schedule

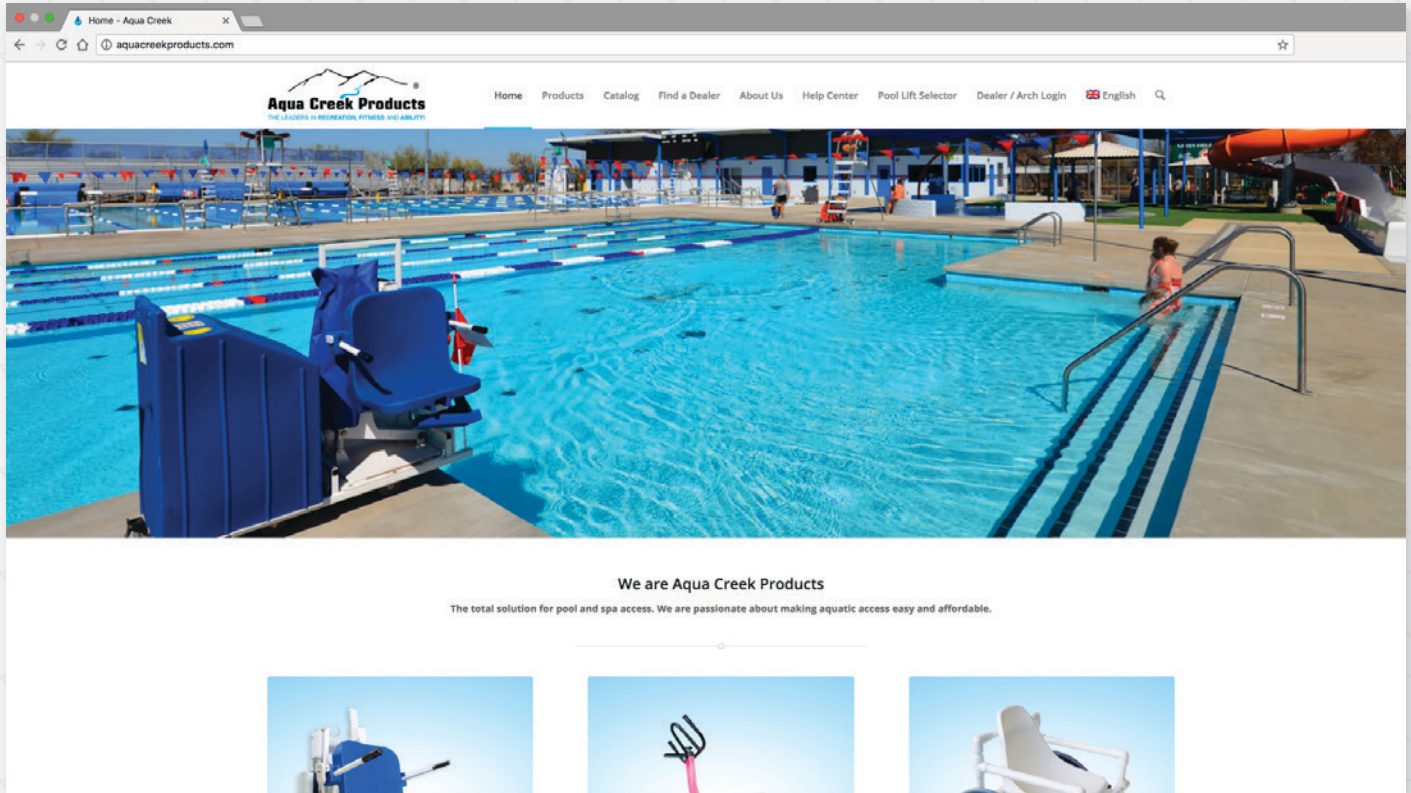
Our product manuals are a great source for finding installation, operation and maintenance schedules. In addition, each lift ships with a laminated care card like the one below, zip-tied to the chair arms.

Proper Care of Aqua Creek Pool & Spa Lifts

PROCEDURE	BEFORE EACH USE	DAILY	WEEKLY	MONTHLY
Check battery level indicator on control box	✓			
Run the lift through a complete test cycle (fully extend actuator) to verify it is functioning properly	✓			
Wash lift w/ fresh water & dry w/ clean, non-abrasive cloth		✓		
Recharge battery (for frequent use, we recommend a second battery)		✓		
Complete test cycle to verify it is functioning properly		✓		
Visually inspect lift for damage, corrosion, & loose or missing hardware		✓		
Check all contact points for damage and/or corrosion			✓	
Repair, clean, & apply dielectric grease to all battery contact points			✓	
Thoroughly clean lift frame and apply a liberal coat of car wax to maintain the lift's finish				✓
Check all Warning and Cautionary labels to make sure they are not faded or worn. Replace as needed.				✓

Troubleshooting

Our website provides a plethora of helpful tips, advice, and videos that can help troubleshoot your customer's issues. Simply click on "Help Center" and find the information you need. If you still can't resolve your issue, call our friendly customer service department for help. We always pick up the phone.



Review our website often and sign up to receive the AquaGram Newsletter and our E-Updates to stay informed!

