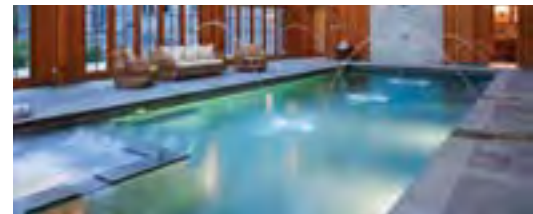


# POOL COVER

SPECIALISTS®

AUTO COVERS MADE SIMPLE



**AUTOMATIC SWIMMING POOL & SPA COVERS**  
FOR NEW AND EXISTING POOLS

**BEAUTIFUL, SAFE, AND GREEN™**

THE MOST BEAUTIFUL POOLS DESERVE A POOL COVER FROM POOL COVER SPECIALISTS



[poolcovers.com](http://poolcovers.com)

## POOL COVER SPECIALISTS® AUTOMATIC SWIMMING POOL COVERS

Having a swimming pool at your home turns your backyard into an inviting and comfortable destination, an oasis away from the world or an exciting family fun center.

Pool Cover Specialists understands this and for over three decades has been your behind the scenes partner in helping you keep your little slice of heaven beautiful, safe, and green. Simply put, a Pool Cover Specialists automatic swimming pool cover reduces your worry and the time and money you spend maintaining your pool so you have more time to enjoy it.



PAGE 3



PAGE 4



PAGE 5

**INFINITY 4000™**  
AUTOMATIC SWIMMING POOL COVER

PAGE 8

**mini-INFINITY™**  
AUTOMATIC SWIMMING POOL COVER

PAGE 12

**POWERTRAK™**  
SEMI-AUTOMATIC SAFETY COVER

PAGE 13

**MANUALTRAK™**  
MANUAL SAFETY COVER

PAGE 14

**COVERLOGIX®**  
SOLID & MESH SAFETY COVERS

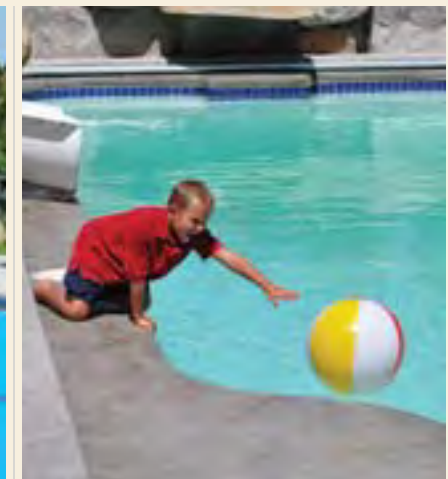
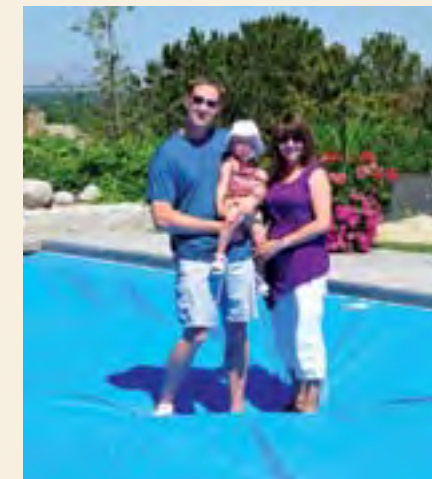
PAGE 15



### SAFETY WITHOUT SACRIFICE

A Pool Cover Specialists ASTM Certified automatic swimming pool cover brings you the safety and peace of mind that only an isolation barrier can provide, all without sacrificing the aesthetics of your pool area.

Why is an isolation barrier for your pool a great idea...because an isolation barrier, unlike other safety devices, isolates the pool water completely from the deck and its surroundings so the inviting pool water cannot be seen or reached by inquisitive children or pets.



**FACT:** As per the Consumer Product Safety Commission (CPSC): No Barriers are completely child proof and nothing takes the place of adult supervision. However, certain types of barriers and the use of multiple barriers have been found to provide layers of protection for a child who strays from supervision. Barriers give parents additional time to locate a child before the unexpected becomes a reality.



## IT'S ALL ABOUT THE GREEN

Heating your swimming pool without a cover is like heating your house without a roof! The Department of Energy studied Automatic Swimming Pool Covers and found that by adding a pool cover to your pool, you could stop up to 90% of evaporation and up to 70% of the energy used to heat the pool. This is significant because the average swimming pool can evaporate up to 25,000 gallons of water per year, and evaporation is the greatest cause of heat, chemical and water loss in a backyard pool. Green also means money, and the Department of Energy also found that by reducing the evaporation on a heated pool, the average pool owner could save as much as \$4,330 per year in energy, water, and chemical costs.

### SAVE ON HEATING AND CHEMICALS\*

LOCATION	MONTHS USED	GAS HEATING COST WITHOUT A COVER (\$)	GAS HEATING COST WITH A COVER (\$)	CHEMICALS COST WITHOUT A COVER (\$)	CHEMICALS COST WITH A COVER (\$)	POTENTIAL ANNUAL SAVINGS
Miami	12	\$5,760	\$1,280	\$301	\$150	\$4,330
Atlanta	7	\$4,608	\$947	\$287	\$143	\$3,518
New York	5	\$3,814	\$640	\$225	\$112	\$3,062
San Francisco	6	\$3,468	\$755	\$215	\$107	\$2,606
Denver	6	\$3,996	\$832	\$235	\$117	\$3,047
Los Angeles	10	\$4,759	\$1,096	\$301	\$150	\$3,813
Dallas	7	\$2,348	\$433	\$301	\$150	\$2,065

\*Figures based on a 1,000 square-foot, outdoor pool heated with an 80% efficient natural gas heater at \$.80 per therm and uncovered for eight hours per day.



## CONVENIENCE

## A BEAUTIFUL POOL, WITH THE TIME TO ENJOY IT

We know you have a beautiful pool. That is why Pool Cover Specialists® automatic swimming pool cover systems are designed to help keep your swimming pool and backyard environment the focal point... not the pool cover. The Pool Cover Specialists® Infinity 4000™ automatic swimming pool cover helps you maximize the time you have to enjoy your pool while minimizing the time you spend maintaining it. With eleven fade and chemical resistant colors to choose from, a Pool Cover Specialists® automatic swimming pool cover is never a distraction as it seamlessly blends into your backyard environment. When it's time to use your pool, your Pool Cover Specialists® pool cover effortlessly retracts completely out of the way, leaving your beautiful clean pool open for all to enjoy.



**FACT:** Simply turn the key and your pool is quickly and safely covered or uncovered in just seconds with no effort from you. Convenience and ease of use is the simple reason more people put their trust in a Pool Cover Specialists® automatic swimming pool cover over any other cover.

## THINKING OF BUILDING YOUR DREAM POOL?

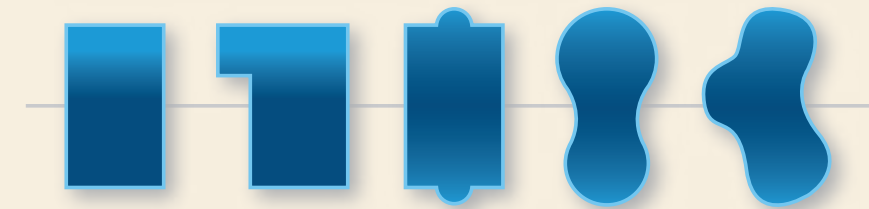
Exotic water features, beautiful waterfalls, custom raised walls, incredible negative and/or vanishing edges, custom pool shapes, extreme cantilever decks, intriguing deck on deck applications and more!

With a Pool Cover Specialists® Infinity 4000™ or mini-Infinity™ automatic swimming pool cover system, you can say “Yes” to all the custom features that turn an ordinary pool into an extraordinary pool.



## OUR POOL COVERS FIT ALMOST ANY POOL, ANY SIZE, ANY SHAPE, ANYWHERE!

If you can dream it...we can figure out how to cover it, so your dream pool is safe, beautiful and green. We can cover almost any shape, size, or type of pool including Swim Spas, Vinyl Liner, Gunite, and Fiberglass, and we have the widest variety of mounting and housing options to get that perfect look you want. Having flexibility and almost unlimited options are just some of the reasons why Pool Cover Specialists® remains the brand of choice of many sports celebrities, movie stars, the Vice Presidential mansion of the United States, and tens of thousands of happy pool owners worldwide.



**INFINITY 4000™**  
AUTOMATIC SWIMMING POOL COVER

NEW POOLS

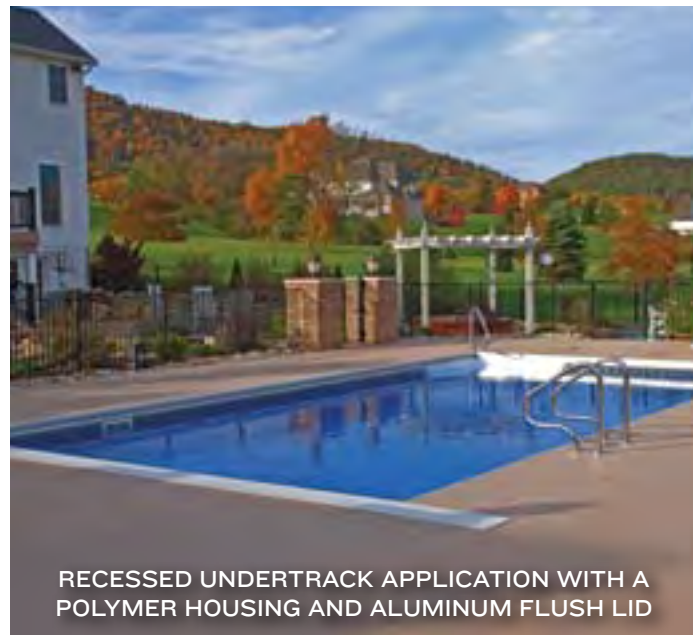
The Pool Cover Specialists® Infinity 4000 is a masterpiece of worry free engineering. Simply turn a key, and your Pool Cover Specialists pool cover will effortlessly open and close in seconds. Specifically designed to be the most maintenance free cover system on the market, the Infinity 4000 also includes the most powerful, waterproof motor in the industry with patented smart technology, which calculates and dials in the precise amount of power needed for any size pool. The Infinity 4000 is available in electric or hydraulic to meet your specific needs.



RECESSED HORIZONTAL FLUSHMOUNT  
TOPTRACK APPLICATION



RECESSED UNDERTRACK APPLICATION



RECESSED UNDERTRACK APPLICATION WITH A  
POLYMER HOUSING AND ALUMINUM FLUSH LID



FREEFORM POOL WITH RECESSED UNDERTRACK  
EXTREME CANTILEVER APPLICATION

**INFINITY 4000™**  
AUTOMATIC SWIMMING POOL COVER

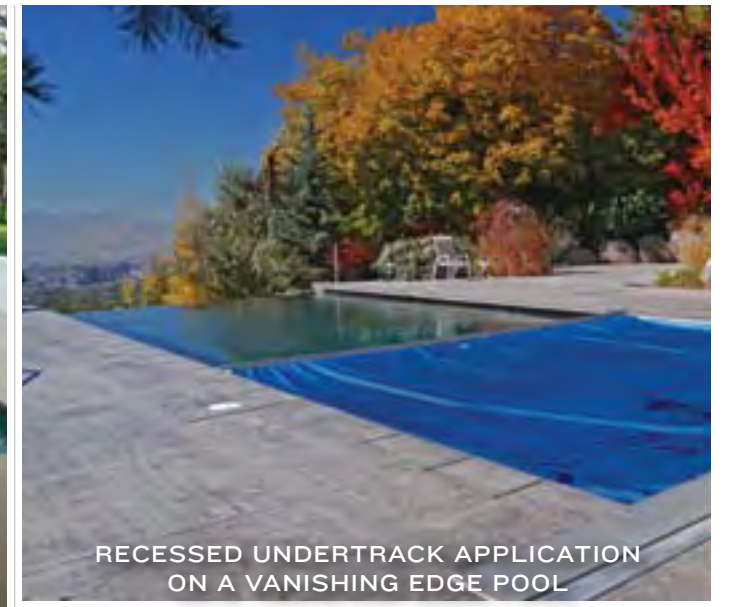
NEW POOLS

The Infinity 4000 has been called the best automatic swimming pool cover on the market today by customers, installers, and service technicians. Why do they say this? It's simple really, the Infinity 4000 is the easiest system to operate and maintain and easily blends into your backyard environment. It helps keep your family, friends, and pets safe. It saves you money. The Infinity 4000 system and the pool cover material are BOTH manufactured to the highest quality standards. We are a manufacturer that stands behind our products and warranties—and the Infinity 4000 has a reputation of “always” working...and it works easily on both New and Existing Pools.

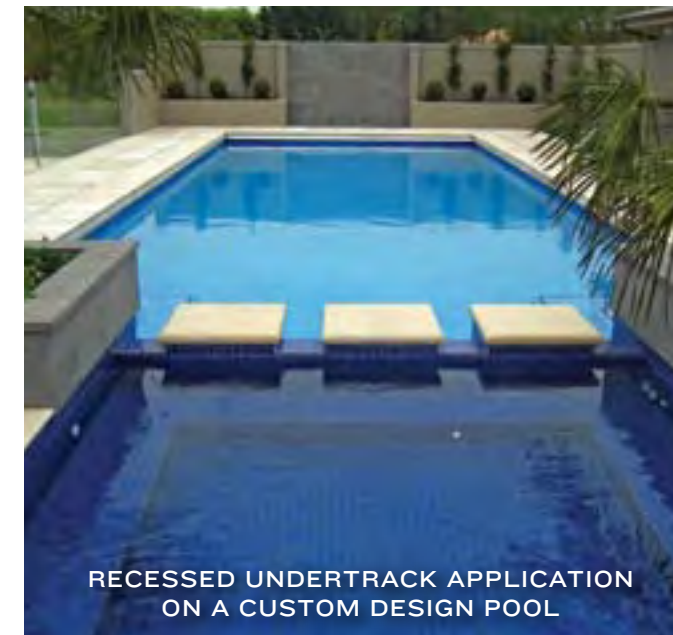
The Infinity 4000 is Safety Certified and code compliant with ISPSC 305.1 & 303.4, IAPMO 415.1.3 & 415.0, ASHRAE7.4.1 and ASTM I346-9I (2010)...and it works easily on both New and Existing Pools.



RECESSED UNDERTRACK APPLICATION  
ON AN INDOOR POOL



RECESSED UNDERTRACK APPLICATION  
ON A VANISHING EDGE POOL



RECESSED UNDERTRACK APPLICATION  
ON A CUSTOM DESIGN POOL



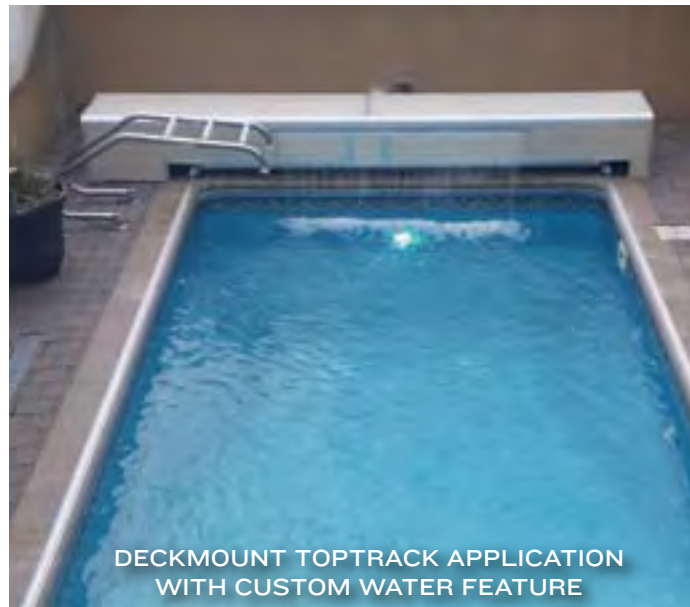
RECESSED UNDERTRACK APPLICATION

**INFINITY 4000™**  
AUTOMATIC SWIMMING POOL COVER

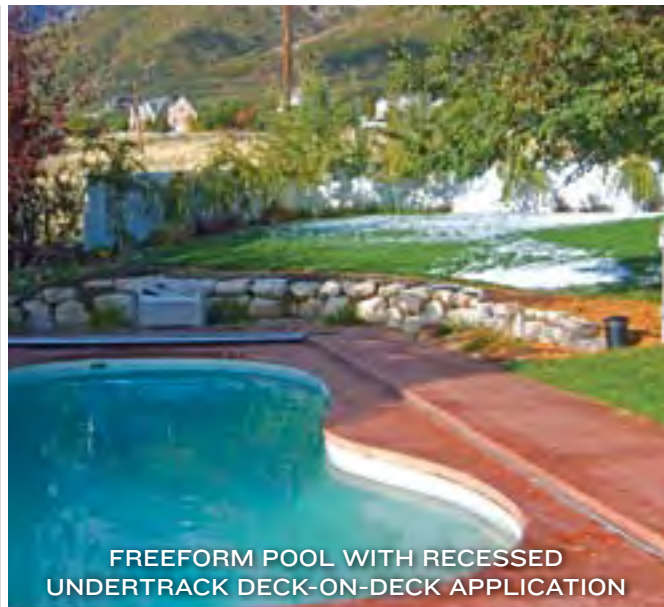
EXISTING POOLS

Already have a swimming pool? That's not a problem with a Pool Cover Specialists® Infinity 4000 automatic swimming pool cover system.

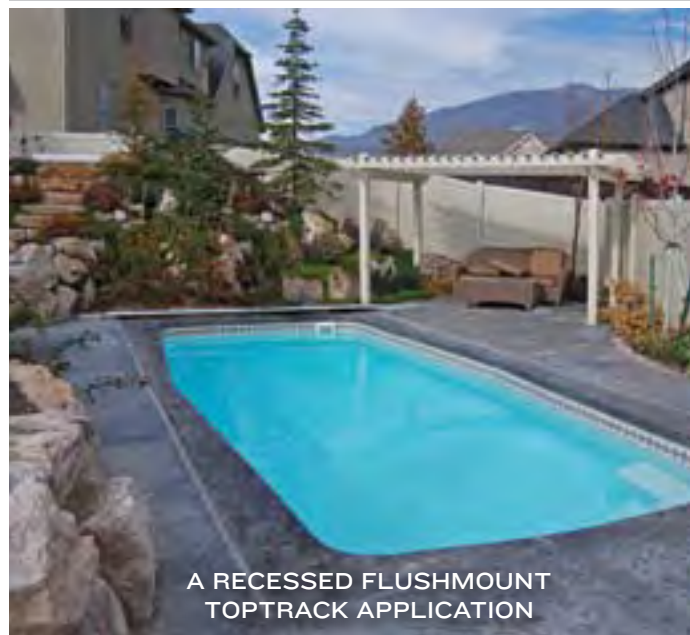
With over 30 years experience in manufacturing automatic swimming pool covers for existing pools, we have designed specific track and system options that work perfectly with just about every type, shape, or style of existing swimming pool and can be easily retrofitted onto your classic rectangle and many custom shapes.



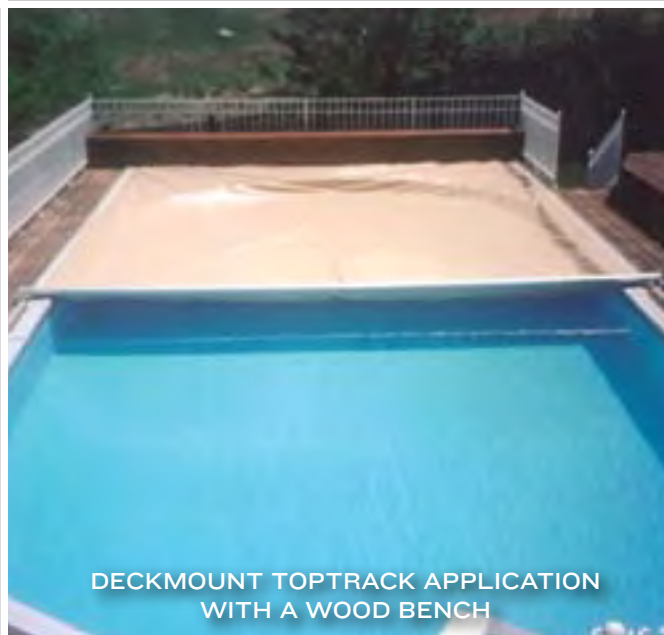
DECKMOUNT TOPTRACK APPLICATION WITH CUSTOM WATER FEATURE



FREEFORM POOL WITH RECESSED UNDERTRACK DECK-ON-DECK APPLICATION



A RECESSED FLUSHMOUNT TOPTRACK APPLICATION



DECKMOUNT TOPTRACK APPLICATION WITH A WOOD BENCH

**mini-INFINITY™**  
AUTOMATIC POOL & SPA COVER

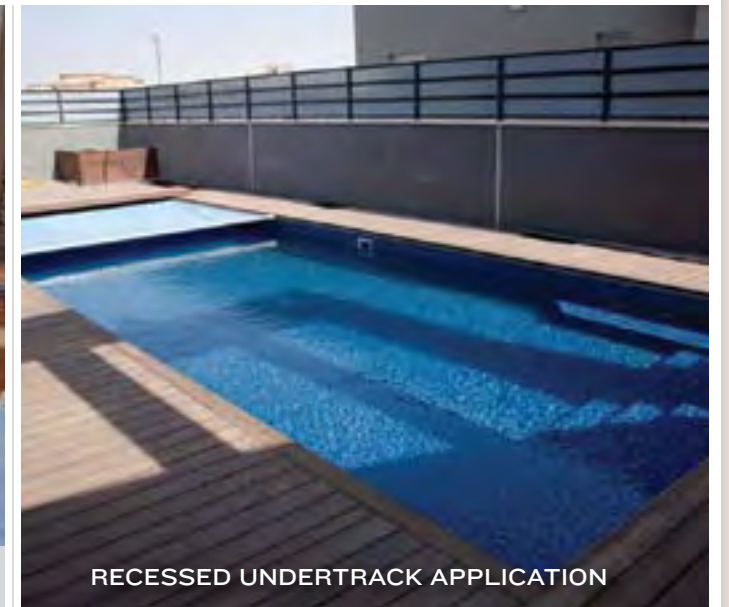
NEW POOLS & SPAS

Don't let the name fool you...there is nothing "mini" about this incredible automatic pool cover system when it comes to power, convenience, and workload.

The mini-Infinity automatic swimming pool cover system is designed for both New Construction and for Existing Pools and is just as powerful as the Infinity 4000. The reason it's called a mini-Infinity is because of its unique patented "profile" which allows a wider range of installation options and uses.



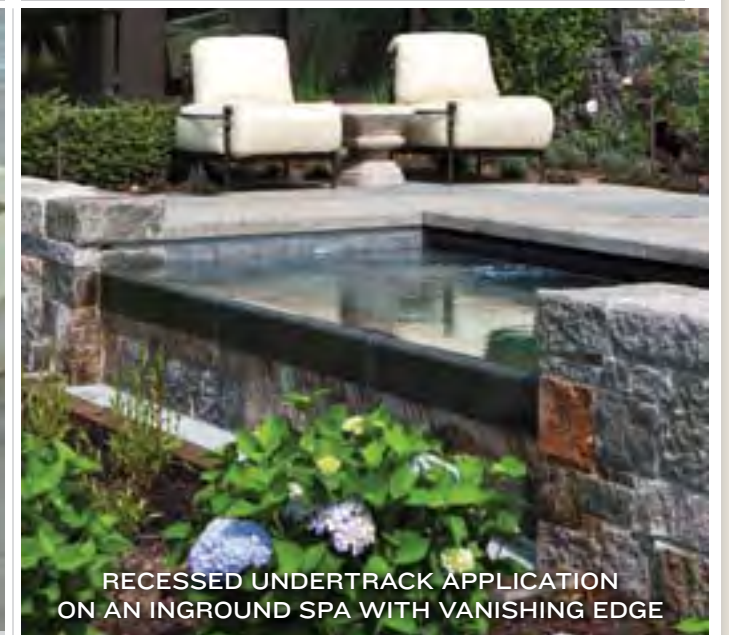
RECESSED UNDERTRACK APPLICATION



RECESSED UNDERTRACK APPLICATION



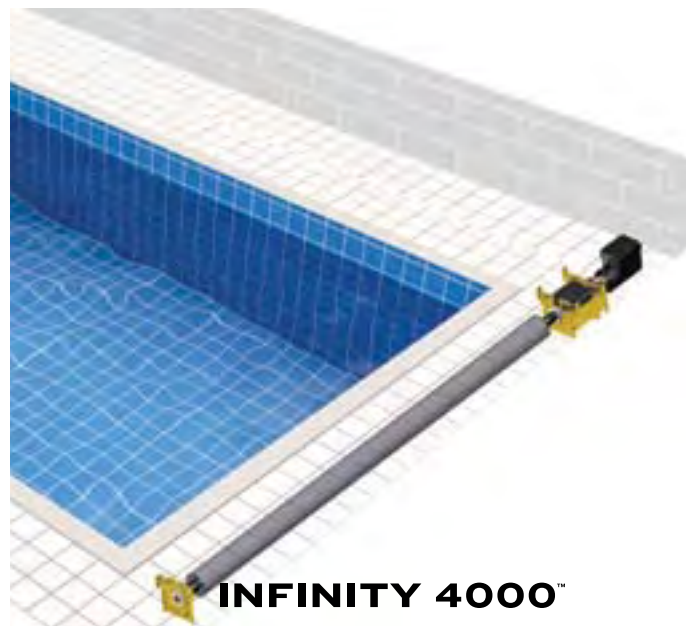
RECESSED UNDERTRACK APPLICATION ON AN INGROUND SPA



RECESSED UNDERTRACK APPLICATION ON AN INGROUND SPA WITH VANISHING EDGE

NEW/EXISTING POOLS

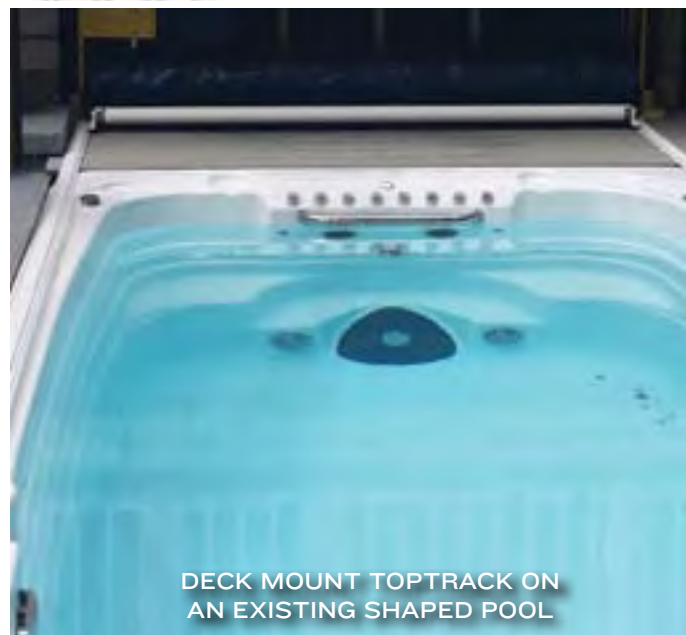
The mini-Infinity™ comes with all the premium components of the Infinity 4000™, but has the motor and drive components mounted underneath, which takes up less horizontal space and allows installation where an Infinity 4000 is not as practical, space is limited, or aesthetics are a concern. Below is a comparison of the Infinity 4000 and the mini-Infinity, you can see how the motor and mechanism of the mini-Infinity is mounted below the roll-up tube, allowing it to be installed in more confined spaces.



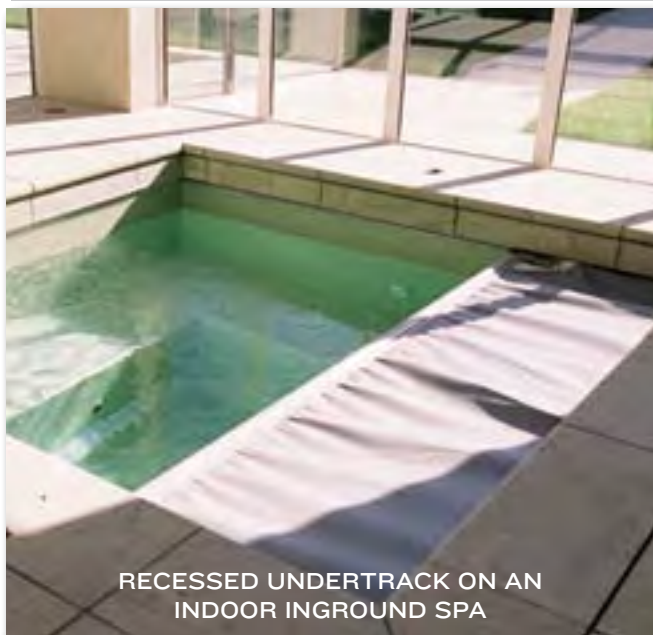
**INFINITY 4000™**



**mini-INFINITY™**



DECK MOUNT TOPTRACK ON AN EXISTING SHAPED POOL

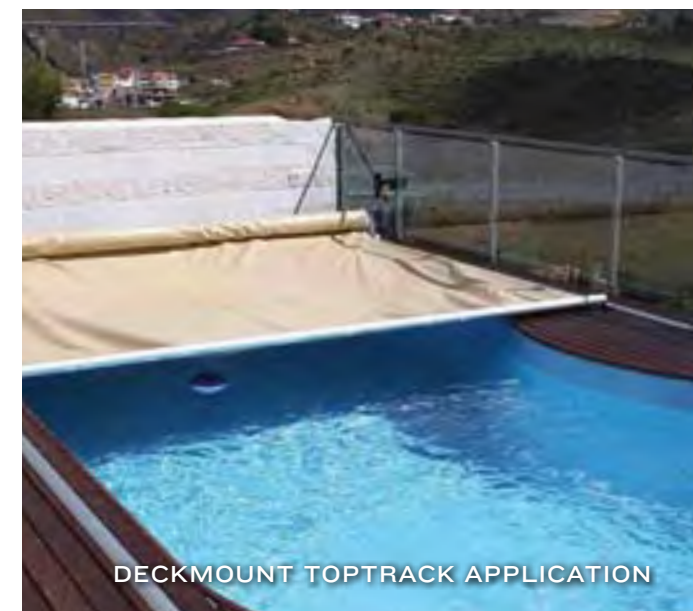


RECESSED UNDERTRACK ON AN INDOOR INGROUND SPA

The Patented PowerTRAK™ Semi-Automatic Swimming Pool Cover System is an engineering masterpiece and the ONLY Semi-Automatic pool cover on the market.

The PowerTRAK was designed for smaller pools where getting power to the swimming pool is not practical, or a mid-range auto cover is desired.

The PowerTRAK is built for medium to small size pools and spas and operates using a powerful rechargeable drill (included), instead of 110 or 220 Volt power. This means it can be added to almost any existing pool or new construction and no added electrical, conduit, or electrical permits are required. It is extremely convenient, easy to run, and very low maintenance.



DECKMOUNT TOPTRACK APPLICATION



DECKMOUNT TOPTRACK APPLICATION



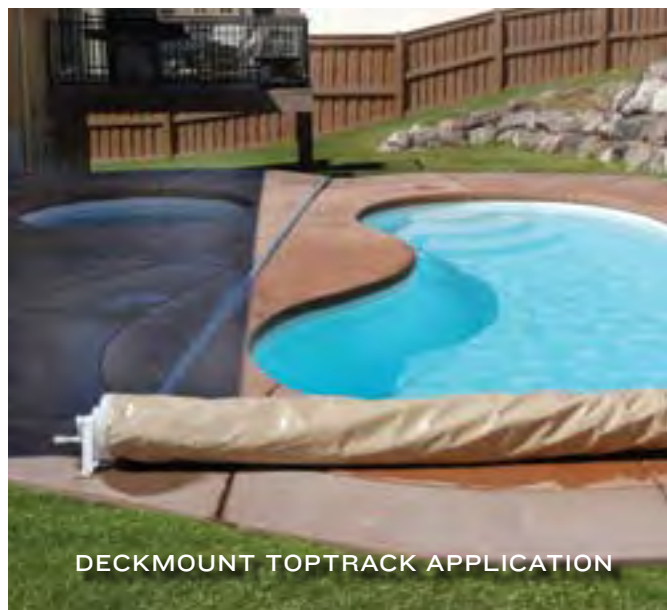
DECKMOUNT TOPTRACK APPLICATION WITH ADDED 'DOG HOUSE' BENCH



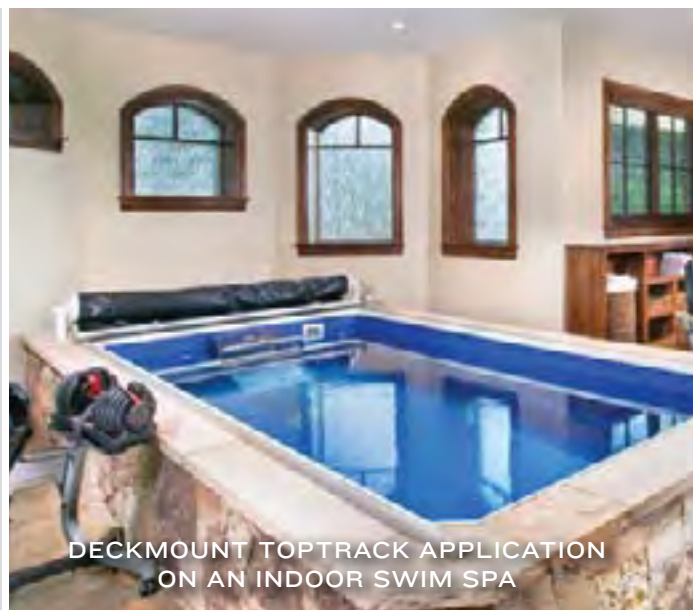
DECKMOUNT TOPTRACK APPLICATION WITH ADDED FULL BENCH

The ManualTRAK™ is the perfect affordable solution for small to mid-size pools and swim spas where a larger more robust system like our Infinity 4000™ and mini-Infinity are not practical, but you still want and need all the benefits of a swimming pool safety cover. Although it uses a hand crank to remove the cover from the pool, the system utilizes many of the same components used in our Infinity 4000 automatic swimming pool cover system, making it possible to upgrade to a fully automatic system at a later date.

Our unique design does not require the use of anchors, water bags, or tie down straps to hold it in place and features a low-profile track mounted to the deck on each side of the pool. This allows one person to easily crank the pool cover open, and only one person is needed to crank the cover closed.



DECKMOUNT TOPTRACK APPLICATION



DECKMOUNT TOPTRACK APPLICATION ON AN INDOOR SWIM SPA



DECKMOUNT TOPTRACK APPLICATION



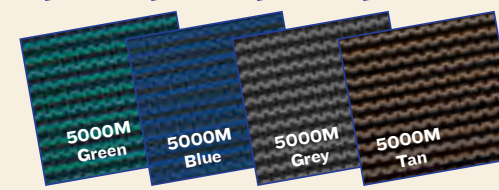
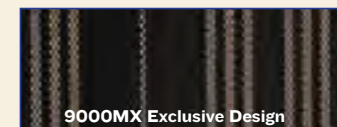
DECKMOUNT TOPTRACK APPLICATION

**SOLID & MESH SAFETY COVERS**  
AN ALTERNATIVE TO AN AUTOMATIC COVER

Our CoverLogix® Solid and Mesh Safety Covers are the perfect solution for swimming pools where an **AUTOMATIC** cover just isn't the right option. Solid and mesh covers take a little more time to put on and take off, but offer fantastic safety benefits.

**CoverLogix® Solid and Mesh Safety Covers:**  
The Right Safety Cover to Meet Your Needs

CoverLogix offers mesh covers for maximum drainage, and solid covers that block 100% of sunlight, in a variety of material weights and colors. All of our fabrics can be custom designed to fit any size or shape of pool precisely, including special features, such as raised walls, diving boards, stairs, and handrails.



**9000MX™ Max Shade Mesh**  
25 Year Warranty

The 9000MX is engineered for a new level of protection. Built with reinforced mesh, box stitched thread at critical webbing joints and equipped with heavy-duty suspension, this cover is designed to exceed expectations and is appropriate for demanding applications.

**7000MS™ High Shade Mesh**  
20 Year Warranty

A light-weight, ultra-fine weave mesh blocks 99% of sunlight and filters fine dirt particles down to 40 microns. Rain and melting snow simple drain through the mesh. Excellent all-climate performance in a low maintenance, easy care cover.

**5000M™ Standard Shade Mesh**  
15 Year Warranty

This durable micro weave fabric has the highest abrasion resis-

tance and tear strength in its class. It filters debris and dirt while allowing water to freely drain through the mesh. A good choice for a combination of protection and value.

**1000V™ Heavy Duty Solid Vinyl**  
15 Year Warranty

Our solid polyester vinyl cover is a complete barrier to sunlight, dirt, debris, and water. Heavy-duty construction provides protection from the elements and prevents algae growth, which helps for faster spring pool openings.

**500P™ Lite Duty Solid Vinyl**  
12 Year Warranty

Our lite weight 7 oz. solid polyester vinyl cover will provide a 100% barrier from the sun. The light weight material is easy to handle, and is UV and mildew resistant. Available in blue and green.



# AUTOMATIC POOL COVER SELECTION

## FABRIC AND COLOR CHOICES

Pool Cover Specialists® engineers have custom formulated a proprietary pool cover fabric which resists fading, chemical damage, abrasion and algae growth. In addition, this unique fabric has been designed to provide unmatched structural integrity and the longest fabric life in the industry. Available in a variety of colors to compliment the aesthetics of your backyard and pool area, this incredible fabric is also protected with a seven year limited warranty.

## AUTOMATIC POOL COVER FABRIC AND COLORS



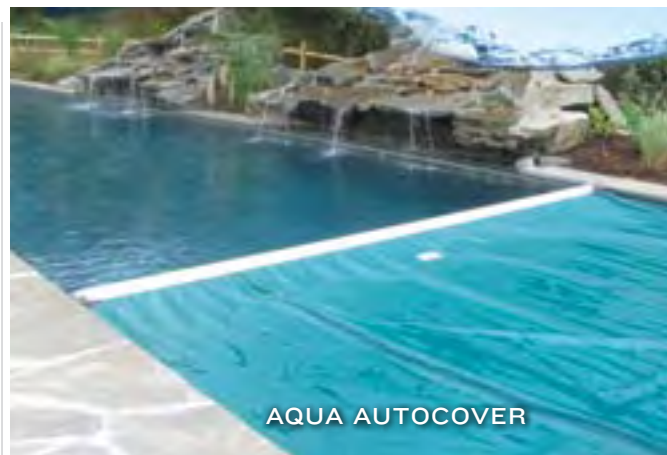
TAN AUTOCOVER



ROYAL BLUE AUTOCOVER

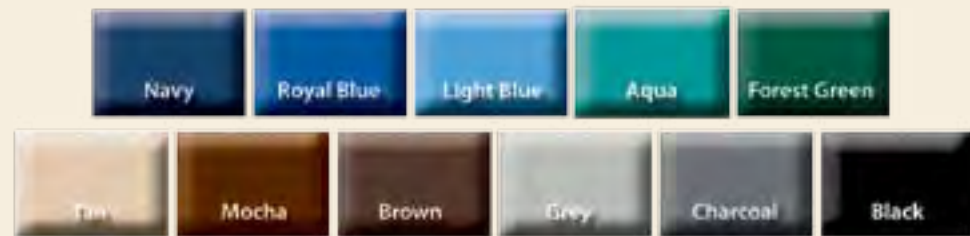


CHARCOAL GREY AUTOCOVER



AQUA AUTOCOVER

POOL COVER SPECIALISTS® DURALIFE 4™ POOL COVER FABRIC is available in:

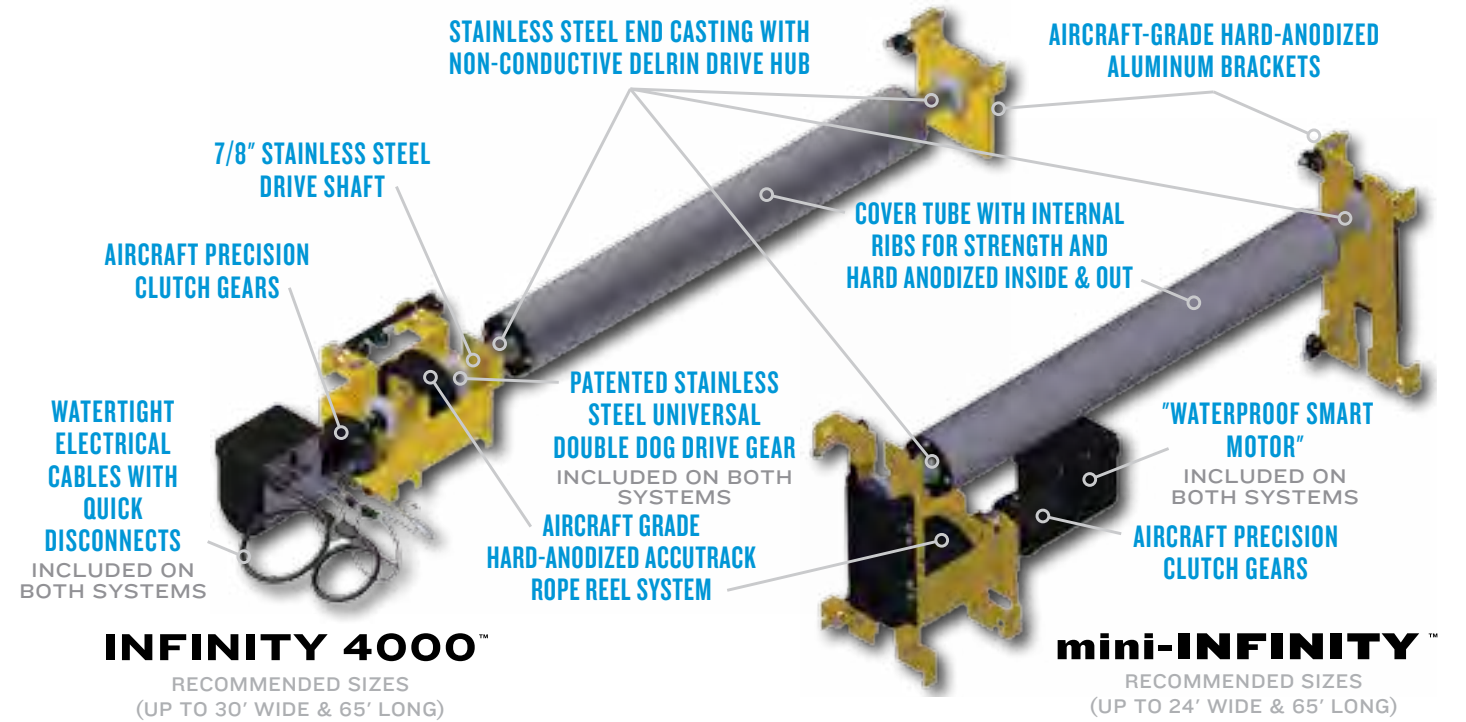


Custom colors available by request for an additional fee—call for a quote.

## AUTOMATIC SWIMMING POOL & SPA COVERS FOR NEW AND EXISTING POOLS

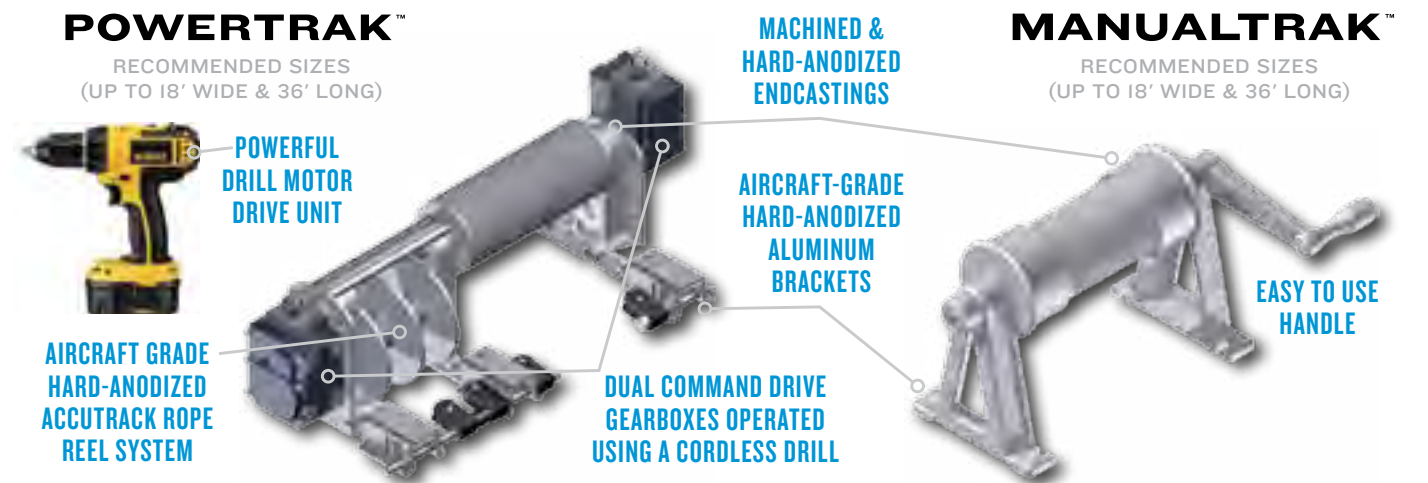
# ADVANCED TECHNOLOGY FOR EASE OF USE AND LONGER LIFE

With over 3 decades of advanced engineering and industry innovation, Pool Cover Specialists® is a name that represents quality and customer satisfaction worldwide. The proprietary and patented technology in our fully automatic Infinity 4000™ and mini-Infinity™ pool cover systems, our PowerTRAK™ semi-automatic pool cover system, and our ManualTRAK™ & Serenity manual pool and spa cover systems make them simple to use and require less maintenance...allowing more time to enjoy your pool.



## POWERTRAK™

RECOMMENDED SIZES (UP TO 18' WIDE & 36' LONG)



## MANUALTRAK™

RECOMMENDED SIZES (UP TO 18' WIDE & 36' LONG)

**UNDERTRACK: TRACK, COPING AND LID OPTIONS**

<p>52001 Vinyl Liner Retainer 55024 Coping Form (Use Track 55031) (Total Package Vinyl Liner Kit Available)</p> 	<p>52001 Vinyl Liner Retainer 55030 Coping Form (Also available: 55024 Aluminum Bullnose Coping) (Use Track 55031)</p> 	<p>55044 Retainer 55051 Coping Form (Use Track 55031)</p> 	<p>55049 Retainer 55030 Coping Form (55049 also used for Extreme Cantilever) (Use Track 55031)</p> 	<p>55050 Retainer (Use Track 55031)</p> 	<p>55050 Retainer (with tail removed) Raised Wall Application (Use Track 55031)</p> 	<p>55063 and Brick or Stone Coping (Use Track 55063) No Retainer for Brick and Stone Coping)</p> 
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**FLUSH RECESSED WALK-ON LID**  
(USED WITH POLYMER HOUSING)



**STANDARD ALUMINUM LID**  
LID PART #54809 · LID HINGE PART #54807 (CANNOT WALK ON)



**CUSTOM WALK-ON TRAY LID**  
PART #22434 - 22868

**TOP TRACK: TRACK AND BENCH OPTIONS**

Protect your family with our selection of locking options for your new pool cover.

<p>Snap-Down Toptrack Part #54817 (Snap Down Kit #SNI000)</p> 	<p>Universal Toptrack Part #54817</p> 	<p>Vertical Flush Toptrack Part #54814 (Retainer Part #54816)</p> 	<p>Horizontal Flush Toptrack Part #55053 (No Retainer)</p> 	<p>Horizontal Flush Toptrack w/ Retainer (Retainer Part #55005)</p> 
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**Advantage™ Vinyl Bench in Tan**



**Advantage™ Vinyl Bench in White**

**SWITCH OPTIONS**

Part #: INI103  
Standard Key Switch



Part #: TP2450  
Touch Sensitive Touchpad  
(Upgrade Option)



**WHEEL ASSEMBLIES**



**MOLDED TOPTRACK WHEEL ASSEMBLY**  
Part #: TT2010



**STANDARD TOPTRACK WHEEL ASSEMBLY**  
Part #: TT1003

**LADDER HINGES**



Part #: LH2001 or LH2002



**WATERFALL/WATER FEATURE SHUTOFF**

With Pool Cover Specialists standard sensor and smart board technology, water features are no problem. Our Water Feature Shutoff controller will work on any pool, or you can also use our Hayward/PCS Logic Control Interface with Hayward automated controls.



**POOL COVER SPECIALISTS**  
**Pool Watchdog™**  
Swimming Pool Safety Cam™

Part #I7001



Protect your family and pool with the camera that notifies you by email or text when someone is around the pool.

PATENT PENDING

 Free App	 Text Alerts	 Email Alerts	 Wireless	 Full Color	 Night Vision	 Motion Detection	 Weather Proof
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Pool Cover Specialists® is one of the largest manufacturers of automatic swimming pool cover systems. We have been turning backyards into destinations and have led the industry with innovation for over 30 years. Our technology keeps your swimming pool beautiful, safe, and green.

*When it comes to creating  
luxury, saving money, and  
keeping your pool safe...  
we've got you covered!*

For video demonstrations, color options, full product line, and our photo galleries visit us online at:

**[POOLCOVERS.COM](http://POOLCOVERS.COM)**

Call for a FREE consultation from the authorized Pool Cover Specialists® dealer nearest you to find out how a Pool Cover Specialists automatic pool cover system can be incorporated into your pool and deck design during construction, or how to retrofit your existing pool.

**800.369.5152**

The Authorized Pool Cover Specialists Professional for Your Area is Listed Below:



787 Watervliet Shaker Road, Latham, New York 12110  
800-833-3800 | [lathampool.com](http://lathampool.com)

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SP-PCS-0005.16 02/16 cf



## UL / ASTM standard F1346-91

The American Society for Testing Materials established recommendations for Powered and Manual Safety Pool Covers in 1991. These recommendations were reviewed and updated in 2010 and is now referred to as the ASTM F1346-91(10) standard. All Pool Cover Specialists® pool and spa covers have been tested in accordance with this standard and meet or exceed all requirements when installed and maintained according to Pool Cover Specialists® instructions.

If more information is required about ASTM and its standards, you can go to their website at [www.astm.org](http://www.astm.org).

If you wish to verify the UL certifications, take the following steps:

- Go to [www.ul.com](http://www.ul.com) and do a search for E164833, which takes you to a list of certified models.

Shown below is the UL authorized label that is attached to the automatic cover system that we ship which shows both UL certification and compliance with ASTM F 1346-91. A label is also placed on the front of every cover stating that we meet the ASTM safety standards.





# Standard Performance Specification for Safety Covers and Labeling Requirements for All Covers for Swimming Pools, Spas and Hot Tubs<sup>1</sup>

This standard is issued under the fixed designation F 1346; the number immediately following the designation indicates the year of original adoption or, in the case of revision, the year of last revision. A number in parentheses indicates the year of last reapproval. A superscript epsilon ( $\epsilon$ ) indicates an editorial change since the last revision or reapproval.

## 1. Scope

1.1 This specification establishes requirements for safety covers for swimming pools, spas, hot tubs, and wading pools (hereinafter referred to as pools, unless otherwise specified). When correctly installed and used in accordance with the manufacturer's instructions, this specification is intended to reduce the risk of drowning by inhibiting the access of children under five years of age to the water.

1.2 This specification includes performance tests to demonstrate the compliance or noncompliance to requirements herein stated for safety covers. It also includes marking requirements for all covers.

1.3 The values stated in inch-pound units are to be regarded as the standard. The values in parentheses are given for information only.

1.4 The following safety hazards caveat pertains only to the test methods section, Section 9, of this specification: *This standard does not purport to address all of the safety concerns, if any, associated with its use. It is the responsibility of the user of this standard to establish appropriate safety and health practices and determine the applicability of regulatory limitations prior to use.*

## 2. Referenced Documents

### 2.1 NFPA Document:

National Electrical Code, Article 680-26<sup>2</sup>

## 3. Terminology

### 3.1 Definitions of Terms Specific to This Standard:

3.1.1 *appurtenances*—subordinate parts or adjunct accessory components to the cover such as hardware including buckles, straps, ties, springs, anchors, tracks, rollers, lifting arms, and the like.

3.1.2 *automatic cover*—a cover which can be placed over the water area and removed with a motorized mechanism actuated by a suitable control mechanism. See also *power safety cover (PSC)*, *other cover (OC)*.

3.1.3 *barrier*—something that restrains or obstructs access to the body of water.

3.1.4 *blanket*—a material used for thermal insulation. See also *solar energy blanket*.

3.1.5 *cover*—something that covers, protects or shelters, or a combination thereof, a swimming pool, spa, or hot tub.

3.1.6 *debris cover*—a cover with attendant appurtenances positioned over the pool area which permits the cover to prevent debris, such as foliage, dirt, windblown trash, and the like from entering the pool. It is intended to be completely removed before the entry of bathers. See also *other covers (OC)*.

3.1.7 *decks*—those areas abutting a pool, spa, or hot tub that are specifically constructed or installed (for example, of wood, concrete, brick, stone, and the like) for use by bathers for sitting, standing or walking and may also act as a base for supports for covers.

3.1.8 *dome*—a semipermanent enclosure supported by trusses, or positive air pressure erected over the pool area to provide temperature and atmospheric control over the pool environment.

3.1.9 *energy conservation*—the reduction of heat loss from pool water through air convection or evaporative cooling, or both.

3.1.10 *hot tub*—a spa constructed of wood with sides and bottoms formed separately; and the whole shape joined together by pressure from surrounding hoops, bands or rods; as distinct from spa units formed of plastic, concrete, metal, or other materials.

3.1.11 *inaccessible locations*—a location at least 5 ft (1.5 m) above the ground with no other access such as hand or footholds which would permit a child to reach the location.

3.1.12 *manual cover*—a cover which requires it to be placed over the water area by hand. See also *manual safety cover (MSC)*, and *other covers (OC)*.

<sup>1</sup> This specification is under the jurisdiction of ASTM Committee F15 on Consumer Products and is the direct responsibility of Subcommittee F15.28 on Covers for Pools, Spas, and Hot Tubs.

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<sup>2</sup> Available from National Fire Protection Assoc., Batterymarch Park, Quincy, MA 02269.

3.1.13 *markings*—the application of numbers, letters, labels, tags, symbols or colors to provide identification and safety information and to expedite handling during shipment and storage.

3.1.14 *manual safety cover (MSC)*—a barrier which requires it to be placed over the water manually. Provides a high level of safety for children under the age of five by inhibiting their access to the water.

3.1.15 *other covers (OC)*—includes any cover type not incorporated in the other two classifications; PSC, MSC. They are not intended to serve as a barrier for children under the age of five.

3.1.16 *power safety cover (PSC)*—a barrier which can be placed over the water area and removed with a motorized mechanism actuated by a suitable control mechanism. Provides a high level of safety for children under the age of five by inhibiting their access to the water.

3.1.17 *safety cover*—a barrier (intended to be completely removed before entry of bathers), for swimming pools, spas, hot tubs or wading pools, attendant appurtenances and/or anchoring mechanisms which reduces—when properly labeled, installed, used and maintained in accordance with the manufacturers' published instructions—the risk of drowning of children under five years of age, by inhibiting their access to the contained body of water, and by providing for the removal of any substantially hazardous level of collected surface water. See also *power safety cover (PSC)*, and *manual safety cover (MSC)*.

3.1.18 *solar energy blankets*—a cover which is a floating translucent (not transparent) heat insulating sheet incorporating, for example, encapsulated air bubbles or similar low heat transfer (floating) sheet material whose purpose is to inhibit heat dissipation from the pool water surface through air convection or evaporative cooling. The sheet material, customarily translucent (not transparent) to permit the transfer of solar radiation energy directly to the pool water at all depths and intended for day and night use, is cut to the shape of the pool and is not affixed to the pool structure. It is intended to be completely removed before the entry of bathers.

3.1.19 *energy conservation blanket*—a cover which is a floating heat insulating sheet material incorporating, for example, a cellular foam or similar low-heat transfer material whose purpose is to inhibit heat loss from the covered water, through air convection or evaporative cooling, or both. Such materials are customarily cut to the shape of the pool and are intended for a night covering. The blanket is not affixed to the pool structure. It is intended to be completely removed before the entry of bathers.

3.1.20 *wading pool*—a shallow pool intended for wading, not swimming.

3.1.21 *waterline*—the waterline shall be defined in one of the following ways:

3.1.22 *skimmer system*—the water line shall be at the mid-point of the operating range of the skimmers.

3.1.23 *overflow system*—the waterline shall be at the top of the overflow outlet.

#### 4. Cover Classifications and Minimum Qualification Criteria

4.1 *Power Safety Cover (PSC)*—Provides a high level of safety for children under the age of five by inhibiting their access to the water.

4.1.1 Must satisfy 5.1-5.3, 6.1-6.5, 7.1-7.4, 8.1, 8.2, 8.4-8.12, 9.1-9.4, 10.1-10.4, and all subsections.

4.2 *Manual Safety Cover (MSC)*—Provides a high level of safety for children under the age of five by inhibiting their access to the water. May require a longer period of time to be fully secured.

4.2.1 Must satisfy 5.1-5.3, 6.1-6.5, 7.1-7.4, 8.1, 8.2, 8.4-8.12, 9.1-9.4, and all subsections.

4.3 *Other Covers (OC)*—Includes any cover type not incorporated in the other two categories MSC, PSC. They are not intended to serve as a barrier for children under the age of five. Design characteristics may be hazardous when used in the presence of children under the age of five.

4.3.1 Shall satisfy 5.1-5.3, 8.1-8.3, 8.5-8.12, and all subsections.

#### 5. Materials and Manufacture

5.1 Only materials not known to be harmful to health, within the intended application, shall be used.

5.2 All materials and components shall be durable and satisfactory for the intended purpose under the conditions normally prevailing at the site.

5.3 The cover shall be manufactured or fabricated, or both, in accordance with generally accepted, good manufacturing practices.

#### 6. General Requirements for Safety Covers

6.1 *Installation/Use of safety covers*—Unless installed by the manufacturer, or responsible parties, or both, detailed instructions for installation shall be given in a form included in the packaging or a label, or both, attached to the cover.

6.2 Labels attached to the cover shall meet the general requirements described in 8.5.1 and 8.8-8.8.2.

6.3 *Markings for safety covers shall include:*

6.3.1 the manufacturer's name,

6.3.2 date manufactured or installed, and

6.3.3 instructions to consumers to inspect the cover for premature wear or deterioration.

6.3.4 Labels attached to covers shall meet the general requirements described in 8.4.1, 8.7-8.8.1, and 8.9.

6.4 *Fastening mechanisms or devices*—Ties, attachment points, anchors, anchorage, and controls for automatic covers or other means of fastening a cover shall include provisions such as keys, combination locks, special tools, devices, or inaccessible locations, and the like, to inhibit children under five years of age from removing or operating the cover. When subjected to the load and perimeter deflection tests described in 9.1 and 9.2, all fastening devices shall remain in their intended, secured or closed, or both, position. After the test, the intended performance of the device should not be impaired.

6.5 *Openings*—The cover shall be designed in such a way that, when it is tested by the test method described in 9.4, any opening in the major component or between the edge of the

cover and the deck surface or coping wall, or both, and the top surface of the spa or pool does not allow the test object to pass through. The test object shall not gain access to the water, or be subject to entrapment.

6.6 Seams, ties or welds in the cover shall show no signs of damage, which will impair intended performance of the device when the cover is tested by the methods described in 9.1-9.4.

**7. Performance Requirements for Safety Covers**

7.1 *Static Load*—In the case of a pool with a width or diameter greater than 8 ft (2.4 m) from the periphery, the cover shall be able to hold a weight of 485 lb (220.0 kg) (2 adults and 1 child) to permit a rescue operation.

7.1.1 In the case of a pool with a width or diameter not greater than 8 ft (2.4 m) the cover shall withstand the weight of 275 lb (125 kg) (weight of a child and an adult). Compliance shall be determined by the test method described in 9.1.

7.2 *Perimeter Deflection*—The cover shall be designed in such a way that, when it is tested by the test method described in 9.2, deflection of the cover does not allow the test object to pass between the cover and the side of the pool, or to gain access to the water.

7.3 *Surface Drainage*—The cover shall be so constructed, or incorporate a system, or have an auxiliary system provided, that when used in accordance with the manufacturer’s instructions, shall drain substantially all standing water from the cover within a period of 30 min after cessation of normal rainfall. Compliance shall be determined by the test in 9.3.

7.4 *Opening Tests*—The tests shall be conducted by the test method described in 9.4 to demonstrate that any opening in the major component or between the edge of the cover and the deck surface or coping wall, or both, and the top surface of the pool or the top surface of the spa is sufficiently small and strong to prevent the opening from being forced to a size that will allow the test object to pass through.

**8. Minimum Label Requirements for All Covers for Swimming Pools, Spas, and Hot Tubs**

8.1 *Product Label*—All covers shall be labeled/marked to identify manufacturers or other responsible parties (such as

private label distributors), or both. Labels attached to covers shall meet the general requirements described in 8.5.1 and 8.8-8.8.2.

8.2 *Warning Labels*—All covers shall be required to have attached the following warning label:

8.2.1 *Signal Word*—**WARNING**.

8.2.2 *Safety Alert Symbol*—Preceding the signal word there shall be triangle with an exclamation point inside the triangle.

8.2.2.1 *Word Message*—The standard word message shall be **AVOID DROWNING RISK** which shall be the first message to appear directly under the signal word.

8.2.2.2 *Additional Word Message Statement*—Covers with any of the outlined hazards in Fig. 1 shall list all applicable warning statements on the label.

8.3 *Color*—Non-safety cover warning label.

8.3.1 *Signal Word*—Black letters with orange background.

8.3.2 *Safety Alert Symbol*—Black triangle with orange exclamation point.

8.3.3 *Word Message*—Black lettering on white background or white letters on black background.

8.4 *Color*—Safety cover warning label.

8.4.1 Colors assigned to the signal word panel may also be used for the message word panel provided the panel colors contrast with the lettering of the label. This is applicable to covers conforming with the PSC and MSC classifications only.

8.5 *Warning Label*—Letter size.

8.5.1 Lettering shall be of a size that enables a person with normal vision, including corrected vision, to read the safety sign or label at a safe viewing distance from the hazard. Considerations should be given to environmental variables that will affect readability.

8.5.2 *Signal Word*—Letter height shall be at least 50 % greater than the selected height of the message panel wording.

8.5.3 *Safety Alert Symbol*—Safety alert symbol, when used with the signal word shall precede the signal word. The base of the safety alert symbol shall be on the same horizontal line as the base of the letters of the signal word. The height of the safety alert symbol shall equal or exceed the signal word letter height.

"HAZARD/WARNING STATEMENT CHART"	
If This Hazard Exists:	Add This Warning Statement:
*Will not support weight (as defined in this specification) Nonsecured or improperly secured covers	*Stay off cover—will not support weight.
*Concealment by slipping under cover	*Keep children away. Children or objects cannot be seen under cover.
*Drowning on top of cover in accumulated surface water (as defined in this specification)	*Remove Standing Water—child can drown on top of cover.
*Concealment, Entrapment—Drowning under cover	*Remove cover(s) completely before entry of bathers—entrapment possible.
*General requirement for all covers	*Non-secured or improperly secured covers are a hazard.
*Option to above for Safety Covers	*Failure to follow all instructions may result in injury or drowning.
*Cover does not meet all requirements of this specification for PSC, MSC.	*This is not a Safety Cover.

**FIG. 1 Hazard/Warning Statement Chart**

8.5.4 Word message letter height shall be as defined in Table 1.

8.6 Letter style:

8.6.1 Signal Word shall be in sans serif letters in upper case only.

8.6.2 Message Panel shall be in sans serif letters. Letters may be in upper case only.

8.6.3 Examples of acceptable lettering styles are: medium or bold helvetica, or news gothic bold.

8.7 Placement—Location shall be such that the message will:

8.7.1 Be readily visible to the intended viewer, taking into consideration all possible viewing angles, and

8.7.2 Alert the viewer to the potential hazard in time to take appropriate action.

8.7.3 Label must be located so as not to be removed in the fitting process.

8.8 Life Expectancy—The label shall have a reasonable expected life with good color stability and word message legibility when viewed as stated in 8.5.1. Reasonable expectancy shall be taken into consideration in accordance with the expected life of the product.

8.8.1 Protection—When possible, placement of label should provide protection from foreseeable damage, fading, or visual obstruction caused by abrasion, ultraviolet light or substances such as chemicals or dirt.

8.8.2 Attachment—The label shall be attached permanently to the product or so that it cannot be easily removed.

8.9 Replacement—Product/Warning labels should be replaced by the product user when they no longer meet legibility requirements for safe viewing distance described in 8.5.1 and 8.7.1. In cases where products have an extensive expected life or where exposed to extreme conditions, the product user should be able to obtain replacement labels from the manufacturer or responsible party.

8.10 Instruction/Use Label—Any product instructions or use label not attached to the product, intended to be viewed by the consumer/user shall contain in its contents the same applicable warning label as set forth in 8.2-8.6.3.

8.10.1 When special circumstances limit use of label colors to two colors, the colors assigned to the message word panel may also be used for the signal word panel provided that the panel colors contrast with background color of instruction/use label.

8.11 Packaging Label—If packaging is intended for product display to the consumer/user, applicable warning label as

described in 8.2-8.6.3 shall be placed on the printed side of the package intended for display and/or consumer information. The label shall be printed on or affixed to the package and not easily removable.

8.11.1 When special circumstances limit use of label colors to two colors, the colors assigned to the signal word panel may also be used for the message word panel provided that the panel colors contrast with background color of packaging.

8.12 Compliance Labeling—All labels shall note the specific cover classification.

9. Test Methods For Safety Covers

9.1 Static Load Test:

9.1.1 This test shall be conducted to demonstrate that the cover is capable of supporting a weight of (a) 485 lbs (composed of one 210-lb, one 225-lb or one 50-lb weight) for pools or spas within a width or diameter greater than 8 ft or (b) 275 lbs (composed of one 225-lb and one 50-lb weight) for a pool or a spa with a width or diameter equal to or less than 8 ft distributed over 1 ft<sup>2</sup> each, all of which are within a 3-ft radius without the test objects causing damage which would allow any of the test objects to pass through the cover. During this test there shall be no requirement for the absence of water appearing on the surface of the cover.

9.1.2 Procedure—The pool shall be filled to its waterline and the cover fitted in accordance with the cover manufacturer’s instructions. The test objects shall be placed on the surface of the cover at the following critical points:

9.1.2.1 The center point of the cover.

9.1.2.2 Between attachment points and a distance of at least 4 ft (1.2 m) but not to exceed 6 ft from the side of the pool.

9.1.2.3 The test objects shall remain in each test position for a period of 5 min.

9.2 Perimeter Deflection Test:

9.2.1 This test shall be conducted to demonstrate the following: if a child under the age of five were to fall onto the cover neither that child nor another child could slip through any openings that may occur between the cover and the side of the pool.

9.2.2 Perimeter Deflection Test Object—Test object shall be 3.7 in. (0.09 m) by 5.7 in. (0.14 m) by a minimum 12 in. length and a weight of 36.6 lbs in an ellipsoidal shape. See Fig. 2.

9.2.3 Procedure—With 50 lbs (22.7 kg) on the cover at a distance of at least 4 ft, but not exceeding 6 ft from the side of the pool, the same cover shall not deflect to allow a perimeter test object to pass through, gain access to the water or be subject to entrapment between the cover and the side of the pool.

9.3 Surface Drainage Test:

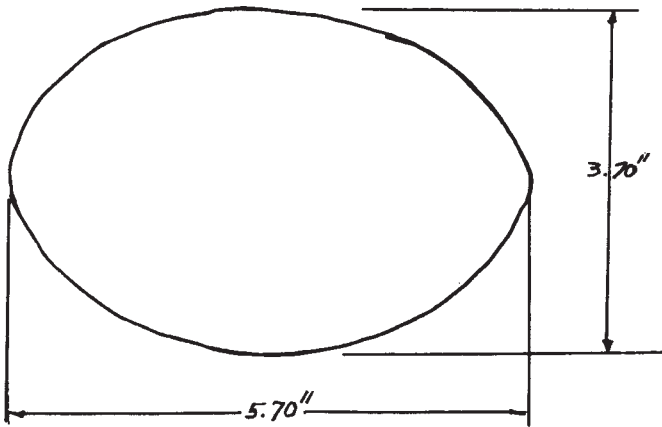
9.3.1 Surface Drainage Test Object—Timmy<sup>3</sup> or equivalent (32 in. length by 9 in. width by 5 in. deep by 36.6 lbs torso-shaped object) shall be placed on the pool cover in a supine position, faceup, within two to three feet of and parallel with the pool’s edge. Three minutes later there shall not be an unsafe amount of water. An unsafe amount of water is defined

TABLE 1 Word Message Letter Height Sizes

Safe Viewing Distance	Minimum Letter Height for FAVORABLE Reading Conditions	Minimum Letter Height for UNFAVORABLE Reading Conditions
less than 24 in.	Height (in.) = $\frac{\text{View Distance}}{150}$	Height (in.) = $\frac{\text{View Dist.}}{75}$
24 to 96 in.	Height (in.) = $\frac{\text{View Distance}}{300}$	Height (in.) = $\frac{\text{View Dist.}}{150}$
greater than 96 in.	Height (in.) = $\frac{\text{View Distance}}{400}$	Height (in.) = $\frac{\text{View Dist.}}{300}$

<sup>3</sup> “Timmy” is a CPR mannequin, three year old boy; available from Simulaid Inc., P.O. Box 807, Dixon Avenue, Woodstock, NY 12489.





NOTE 1—Area = 16.6 in.<sup>2</sup>

NOTE 2—Perimeter = 15.0 in.

FIG. 2 Template for Swimming Pool Cover Standard

as any quantity of water which completely covers the torso of the surface drainage test object.

9.3.2 *Procedure*—Test the cover by spraying water evenly over the area at an application rate of 10 gal/min per 1000 ft<sup>2</sup> (9.29 m<sup>2</sup>) of pool area for a period of 30 min. During this test, all equipment shall operate in accordance with cover manufacturer’s instructions. Thirty minutes after completion of this procedure, the cover shall pass the test method in 9.3. At all times during the procedure, maintain the pool level at the waterline.

9.4 *Openings Test:*

9.4.1 These tests shall be conducted to demonstrate that any openings remain small enough to prevent a small child’s head from gaining access to the water.

9.4.2 *Openings test object*—A solid faced sphere test object with a maximum breadth of 4.5 in.

9.4.3 *Procedure*—The cover shall be fitted in accordance with the cover manufacturer’s instructions. The test object shall be placed at or into any existing opening and apply a force of 40 lbs (plus or minus 1 pound) steadily to ensure the test object cannot pass through at the following critical openings:

9.4.3.1 Any opening between the edge of the cover and the deck surface and coping wall, or both, or the top surface of the spa or pool.

9.4.3.2 Any opening in the major component of the cover.

10. Operating Controls, Safety Covers

10.1 The open-close switch shall be spring-loaded or of the momentary contact type, so that when released, the cover stops operation immediately at any point in the open or closed cycle period.

10.2 The cover shall be reversible in direction from a full stop at any point in its travel without having to complete the full open or closed cycle.

10.3 Electrically operated control switches and motors shall be installed in accordance with the National Electrical Code Article 680-26.

10.4 The type of pool covering operating controls shall be such that:

10.4.1 Its fixed location is in the line of sight of the complete pool cover, or by its operating process. This ensures that the operator shall be in complete view of the cover at all times during the closing or pool covering process.

10.4.2 Switching devices shall be key-operated or locked away or able to be de-activated or otherwise located in an inaccessible location. An inaccessible location shall be at a height of at least five feet above the deck.

ANNEX

(Mandatory Information)

A1. RATIONALE

A1.1 Scope

A1.1.1 Although the majority of child-drowning and near-drowning which were reported did not involve safety covers, those who purport to provide a level of safety should be held to a higher level of reliability. Injury reports made available from CPSC indicate that male children, one and two years of age, living in a home with an in-ground pool are at the highest risk of being involved in a submersion incident that requires medical care.

A1.2 Referenced Documents

A1.2.1 Allows document reviewers the necessary information to validate the text of the standard.

A1.3 Terminology

A1.3.1 Consumers and new manufacturers may not be familiar with the technological language used within the text. This section also provides definitions for new terms created for this standard.

A1.4 Cover Classifications and Minimum Qualification Criteria

A1.4.1 By defining both the level of safety afforded and standard requirements to be satisfied, manufacturer and consumer will be able to define their needs and properly interpret

the standard. This section also allows manufacturers to research and develop new technology which when applied could change their designation.

### **A1.5 Materials and Manufacture**

A1.5.1 Varying lead times for material availability restrict or delay immediate compliance with this standard.

### **A1.6 Performance Requirements For Safety Covers**

A1.6.1 Specified load factors represent the 95th percentile for a child under the age of five as well as one male adult and one female adult.

A1.6.2 If one child should gain access to the surface of the cover, another child in the area of the pool should not face increased risk.

A1.6.3 Recognizing that some residual water will remain after the surface water is removed, the test has been devised to ensure that the level can be maintained below that deemed substantially hazardous to a child of three based on data received from the Consumer Product Safety Commission.

A1.6.4 Openings in the major component or horizontal openings between the cover and solid structure of the pool area should remain small enough to prevent the head of a small child from gaining entrance. The head breadth for a 5th percentile of a 7 month old is about 4.5 in. The smallest mobile child would be about 7 months old since at this age 50 % of children can creep on hands and knees.

### **A1.7 Minimum Label Requirements For All Covers For Swimming Pools, Spas, and Hot Tubs**

A1.7.1 Labeling on the product allows for transfer of the information to second owners and temporary users.

A1.7.2 The combination of Signal Word, Safety Alert Symbol and Word Message provides a higher level of warning than any single effort.

A1.7.3 An effort is being made nationally to make consistent the colors used to alert consumers to potential hazards.

A1.7.4 Contrast of colors between letter colors and labels are necessary in order to attract users' attention to label and enable readability.

A1.7.5 Letter size is an important factor in warning legibility so the consumer can recognize and avoid the hazard.

A1.7.6 Style of lettering affects the readability of the warning message.

A1.7.7 Warning labels can be more effective if they allow for reaction time on the part of the consumer.

A1.7.8 Damaged labels would not provide as strong a message as necessary.

A1.7.9 Due to extended life expectancy of cover products, labels cannot be expected to maintain their original appearance.

A1.7.10 Labeling messages and format should be consistent from point of purchase to use and/or application of cover.

A1.7.11 Packaging is, at times, the consumers first exposure to product information. Information contained on the warning label is necessary for making informed choices.

A1.7.12 All labels shall note that the product meets the requirements described in Specification F 1346.

### **A1.8 General Requirements For Safety Covers**

A1.8.1 Installation can be a key factor in the effectiveness of a safety cover whether it is manually or power installed.

A1.8.2 Manufacturer's markings are necessary to allow a continuity for second owners and consumer/manufacturer contact.

A1.8.3 The mechanisms which secure the cover are an integral component that help to defeat a child's entry to the water.

A1.8.4 Openings shall not be so large that the purpose of the cover is defeated.

A1.8.5 Structural integrity is necessary to provide safety.

### **A1.9 Test Methods For Safety Covers**

A1.9.1 The rescue operation may require two adults and the cover shall support the total combined weight to avoid possible injury to those in the rescue attempt. The 95th percentile is represented by the 225-lb male, 210-lb female and 50-lb child.

A1.9.2 This test was devised to avoid an opening large enough for one child or another child to fall between the edge of the cover and the edge of the pool when one child of 50 lb is already on the cover.

A1.9.3 Recognizing that some residual water remains after the surface water is removed, this test is devised to ensure that the level is maintained below a level deemed substantially hazardous to a child under three years of age.

A1.9.4 No opening shall exist in the cover or at any point that the cover joins the surface of the pool structure or deck area (which would allow a small child's head to gain access to the water or become entrapped). The head breadth for a 5th percentile 7 month old is about 4.5 in.


### **A1.10 Operating Control, Safety Covers**

A1.10.1 Operator controlled momentary contact type switches afford greater control in the event of an emergency.

A1.10.2 Should a child enter the water during the closure process, the cover shall be able to reverse without total closure.

A1.10.3 It is important in the case of an electrical installation to protect children and all swimmers from the possibility of electrocution, which is the purpose of Article 680-26 of the National Electrical Code.

A1.10.4 Operator observation of the pool during the closing process is necessary to ensure that another person does not enter the water during the process. Additionally, the location of the activating device or the ability to render it inactive is necessary to avoid unauthorized opening of the cover.

 **F 1346 – 91 (2003)**

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# Certificate of Compliance

Certificate Number **20110728 – E211895**  
Report Reference **E211895 – 2000 December 18**  
Issue Date **2011 July 28**

Page 1 of 1



*Issued to:* **POOL COVER SPECIALISTS NATIONAL INC**  
**8553 S 2940 W**  
**WEST JORDAN, UT 84088 USA**


*This is to certify that representative samples of* **Swimming Pool and Spa Cover Operators, Electric**  
**Motorized Swimming Pool Cover Operator and Safety Cover,**  
**Model Infinity 4000.**

*Have been investigated by Underwriters Laboratories in accordance with the Standard(s) indicated on this Certificate.*

*Standard(s) for Safety:* **UL Subject 2452, "Outline of Investigation for Electric Swimming Pool and Spa Cover Operators." CAN/CSA-C22.2 No. 218.1-M89, "Spas, Hot Tubs, and Associated Equipment."**

*Additional Information:* See UL On-line Certification Directory at [WWW.UL.COM](http://WWW.UL.COM) for additional information.

Only those products bearing the UL Listing Mark for the US and Canada should be considered as being covered by UL's Listing and Follow-Up Service meeting the appropriate requirements for US and Canada.

The UL Listing Mark for the US and Canada generally includes: the UL in a circle symbol with "C" and "US" identifiers:  the word "LISTED"; a control number (may be alphanumeric) assigned by UL; and the product category name (product identifier) as indicated in the appropriate UL Directory.

**Look for the UL Listing Mark on the product**

**William R. Carney**  
**Director, North American Certification Programs**

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*Issued to:* **POOL COVER SPECIALISTS NATIONAL INC**  
**8553 S 2940 W**  
**WEST JORDAN, UT 84088 USA**

*This is to certify that  
representative samples of*

**Covers for Swimming Pools and Spas**


**Manual Safety Cover, Model Life-Lock Dual-Pin Manual Safety Cover.**

*Have been investigated by Underwriters Laboratories in accordance with  
the Standard(s) indicated on this Certificate.*

*Standard(s) for Safety:* **ASTM F1346, "Standard Performance Specification for Safety Covers and Labeling Requirements for All Covers for Swimming Pools, Spas and Hot Tubs."**

*Additional Information:* See UL On-line Certification Directory at [WWW.UL.COM](http://WWW.UL.COM) for additional information.

Only those products bearing the UL Listing Mark for the US and Canada should be considered as being covered by UL's Listing and Follow-Up Service meeting the appropriate requirements for US and Canada.

The UL Listing Mark for the US and Canada generally includes: the UL in a circle symbol with "C" and "US" identifiers:  the word "LISTED"; a control number (may be alphanumeric) assigned by UL; and the product category name (product identifier) as indicated in the appropriate UL Directory.

**Look for the UL Listing Mark on the product**

**William R. Carney**  
**Director, North American Certification Programs**

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## WDDJ.E164833 Swimming Pool and Spa Cover Operators, Electric

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### Swimming Pool and Spa Cover Operators, Electric

See General Information for Swimming Pool and Spa Cover Operators, Electric

**LATHAM POOL PRODUCTS INC**

E164833

1795 W 200 N  
Lindon, UT 84042-1661 USA

**Pool cover operators**, Models CS 1800, CS 1800 CL, CS 1800 LO, CS 1800 SS, CS 1800 SW.

**Pool cover operator accessory, pool cover drain pump**, Model AD-1100.

**Pool cover operator and safety cover**, Model Infinity 4000. **Classified in Accordance with ASTM F 1346-91 (Reapproved 2010).**

Last Updated on 2015-01-09

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# Certificate of Compliance

Certificate Number **20110728 – E211895**  
Report Reference **E211895 – 2000 December 18**  
Issue Date **2011 July 28**

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*Issued to:* **POOL COVER SPECIALISTS NATIONAL INC**  
**8553 S 2940 W**  
**WEST JORDAN, UT 84088 USA**


*This is to certify that representative samples of* **Swimming Pool and Spa Cover Operators, Electric**  
**Motorized Swimming Pool Cover Operator and Safety Cover,**  
**Model Infinity 4000.**

*Have been investigated by Underwriters Laboratories in accordance with the Standard(s) indicated on this Certificate.*

*Standard(s) for Safety:* **UL Subject 2452, "Outline of Investigation for Electric Swimming Pool and Spa Cover Operators." CAN/CSA-C22.2 No. 218.1-M89, "Spas, Hot Tubs, and Associated Equipment."**

*Additional Information:* See UL On-line Certification Directory at [WWW.UL.COM](http://WWW.UL.COM) for additional information.

Only those products bearing the UL Listing Mark for the US and Canada should be considered as being covered by UL's Listing and Follow-Up Service meeting the appropriate requirements for US and Canada.

The UL Listing Mark for the US and Canada generally includes: the UL in a circle symbol with "C" and "US" identifiers:  the word "LISTED"; a control number (may be alphanumeric) assigned by UL; and the product category name (product identifier) as indicated in the appropriate UL Directory.

**Look for the UL Listing Mark on the product**

**William R. Carney**  
**Director, North American Certification Programs**

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# Certificate of Compliance

Certificate Number **20110728 – E211895**  
Report Reference **E211895 – 2002 September 04**  
Issue Date **2011 July 28**

Page 1 of 1



*Issued to:* **POOL COVER SPECIALISTS NATIONAL INC**  
**8553 S 2940 W**  
**WEST JORDAN, UT 84088 USA**

*This is to certify that  
representative samples of*

**Covers for Swimming Pools and Spas**


**Manual Safety Cover, Model Life-Lock Dual-Pin Manual Safety Cover.**

*Have been investigated by Underwriters Laboratories in accordance with  
the Standard(s) indicated on this Certificate.*

*Standard(s) for Safety:* **ASTM F1346, "Standard Performance Specification for Safety Covers and Labeling Requirements for All Covers for Swimming Pools, Spas and Hot Tubs."**

*Additional Information:* See UL On-line Certification Directory at [WWW.UL.COM](http://WWW.UL.COM) for additional information.

Only those products bearing the UL Listing Mark for the US and Canada should be considered as being covered by UL's Listing and Follow-Up Service meeting the appropriate requirements for US and Canada.

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**Look for the UL Listing Mark on the product**

**William R. Carney**  
**Director, North American Certification Programs**

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# SDX<sup>®</sup><sub>2</sub>

HIGH FLOW SAFETY DRAIN

## SDX2 HIGH FLOW SAFETY DRAIN

SUBMERGED SUCTION OUTLET  
FOR SINGLE OR MULTIPLE DRAIN USE  
FOR USE ON WALL OR FLOOR

## OWNER'S MANUAL

## MAINTENANCE & INSTALLATION GUIDE

NSF/ANSI 50



VGB 2008  
Compliant



### NOTICE

Read and follow these instructions. Give these instructions to the facility owner to keep for future reference. Follow all codes and regulations that apply to the design, installation, maintenance and use of suction outlet fittings.



### WARNING

SDX2 and SDX2 Retro must be installed in accordance with Paramount's written instruction & maintenance manual, and in conformity with applicable Federal, State, Local and Swimming pool industry building and safety codes.

295 East Corporate Place • Suite 100 • Chandler, AZ 85225

Toll Free: 1.800.621.5886 • Phone: 480.893.7607 • Fax: 480.753.3397

Paramount@1Paramount.com • www.1Paramount.com



**Paramount**  
Pool Life. Simplified.

## NOTICE

Read and follow these instructions. Give these instructions to the facility owner to keep for future reference. Follow all codes and regulations that apply to the design, installation, maintenance and use of suction outlet fittings.



## WARNING

SDX2 and SDX2 Retro must be installed in accordance with Paramount's written instruction & maintenance manual, and in conformity with applicable Federal, State, Local and Swimming pool industry building and safety codes.



## DANGER

**DEATH** or **SERIOUS INJURY** will result from pool or spa drain covers or grates that are improperly installed, missing, clogged, or broken.

- Inspect pool and spa before each use to ensure that drain covers and grates are properly in place and secured.

## MAINTENANCE INSTRUCTIONS & WARNINGS:



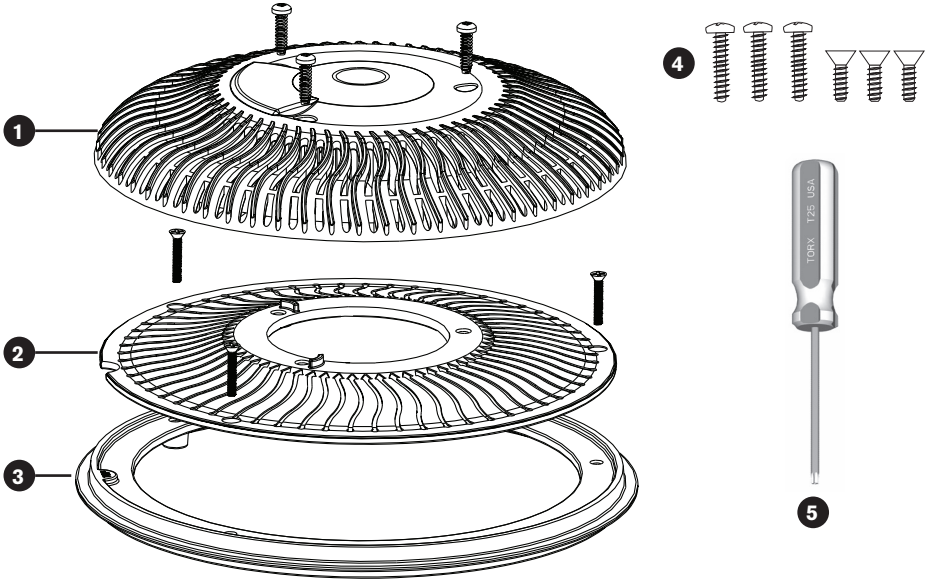
## WARNING

**DEATH** or **SERIOUS INJURY** can result from pool or spa drain covers or grates that are clogged by debris.

- All pool and spa drain covers may become obstructed by debris and should be cleaned periodically due to clogging from debris, such as pieces of plastic, hair, fabric, twigs, leaves, seeds, etc.
- The frequency of periodic cleaning will vary depending on the amount and type of debris introduced into the pool or spa
- Clogging of the drain cover will increase the suction effect and increase the likelihood of death or serious injury from those hazards listed above.
- A clogged drain can negatively affect the safety of the drain.
- It is advisable to have a qualified pool or spa professional perform this inspection and debris removal from the pool an spa drain covers.

# SDX2 CONCRETE PART NUMBERS

## Replace within 05 installed years



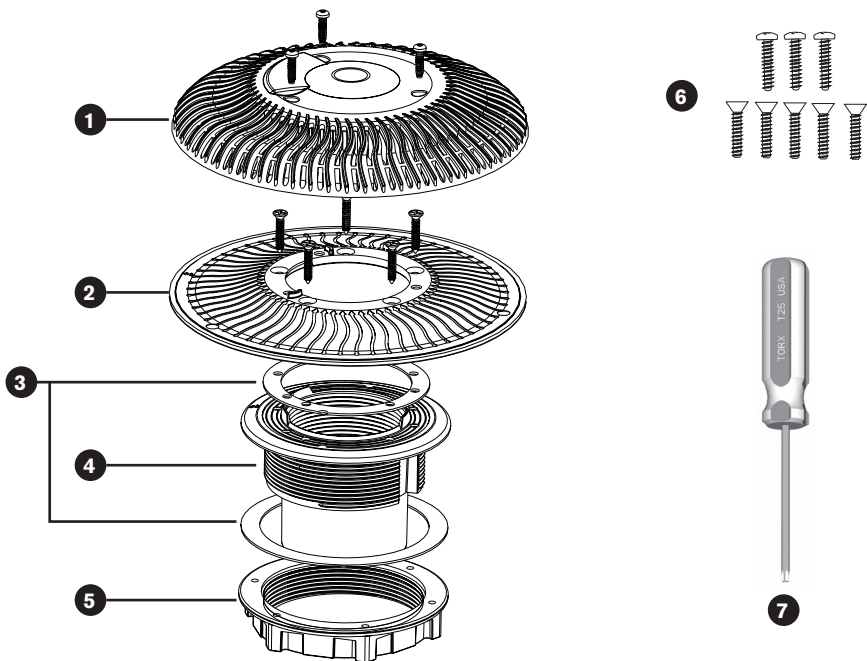
Item	Part Number	Description
1	005-252-2097-XX	SDX2 Cover w/ Screws Concrete
2	005-252-2066-00	SDX2 Support Concrete
3	005-252-2050-00	SDX2 Ring Concrete
4	005-252-0810-00	SDX2 Screw Pack Complete
5*	005-252-0895-00	T25 Security Screwdriver

XX = Color Code

\* Not Part of SDX2

# SDX2 VINYL/FIBERGLASS PART NUMBERS

**Replace within 05 installed years**



Item	Part Number	Description
1	005-252-2098-XX	SDX2 Cover w/ Screws Vinyl/Fiberglass
2	005-252-2061-00	SDX2 Support Vinyl/Fiberglass
3	005-252-0072-00	SDX2 Gasket Set Vinyl/Fiberglass
4	005-252-2035-00	SDX2 Bulkhead Vinyl/Fiberglass 2 1/2"/3"
5	005-252-2090-00	SDX2 Bulkhead Nut
6	005-252-0811-00	SDX2 Screw Pack Complete for Vinyl & Fiberglass
7*	005-252-0895-00	T25 Security Screwdriver

XX = Color Code

\* Not Part of SDX2



# 120 GPM POOL DRAIN 9"x9"

CMP# 25508-09X-000L\*



For Multiple Drain Use Only  
120 GPM - Submerged  
Life: 7 Years  
Floor or Wall  
25508-09XL

VGB-2008  
COMPLIANT

**Read and keep these instructions for future reference.**

**Always plumb and install all suction fittings according to all building codes that apply in your area.**

**WARNING:** When using two or more suction fittings on a common suction line, suction fittings must be separated by a minimum of 3 ft or they must be located on two different planes (i.e., one on floor and one on the wall).

**WARNING:** DO NOT locate suction outlets on seating areas or on backrests for such seating areas.

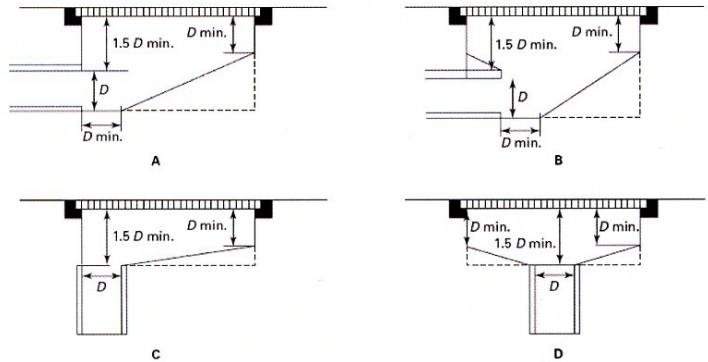
The maximum flow rating for this suction fitting is 120 GPM. This suction fitting is designed for installation in conjunction with at least one other suction fitting per pump. A minimum size of 3" SCH 40 PVC pipe is to be used. Field built sumps should be constructed per ANSI/APSP-16 Figure 2 (see below) found on page 5 of the Standard. Suction fitting and fasteners should be observed for damage or tampering before each use. Missing, broken, or cracked suction fittings shall be replaced before use. Loose suction fittings shall be reattached or replaced before use. Contact your local pool and spa professional for all winterizing instructions and recommendations. Open area is 38.90 in<sup>2</sup>.

**NOTE:** This drain is certified for FLOOR OR WALL USE.

**Tools Needed:** Phillips Head Screwdriver

## INSTALLATION INSTRUCTIONS

1. Construct sump per ANSI/APSP-16 Figure 2 (see below)
2. Secure mounting frame in concrete.
3. Use mounting screws to secure grate to frame.



### GENERAL NOTES:

- (a)  $D$  = inside diameter of pipe.
- (b) All dimensions shown are minimums.
- (c) A broken line (---) indicates suggested sump configuration.

**NOTE:** In the event that one suction outlet is completely blocked, the remaining suction outlet(s) serving that system MUST have a flow rating capable of the full flow of the pump(s) for the specific suction system.

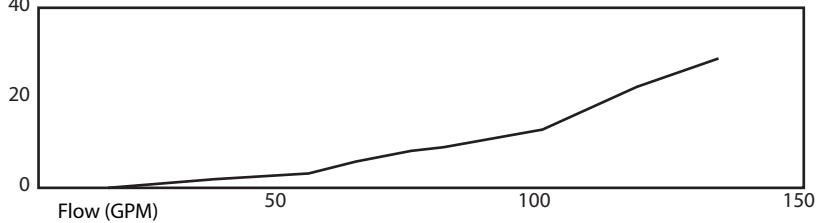
**NOTE:** Increasing size of the pump may increase flow rate of suction beyond rated safety limits causing entrapment or death.

**CAUTION:** Hair or body parts blocking the spa or pool suction may become trapped and held against the suction fitting. Entrapment against the suction fittings can result in drowning or other severe injury. Never sit on or lean up against suction fittings. Never exceed the maximum allowable flow rate stated on the suction fitting. The suction fitting and fasteners should be inspected for damage or tampering before each use of the facility. Missing, broken, or cracked suction fittings shall be replaced before using this facility. Loose suction fittings shall be reattached or replaced before use of this facility.

## Head Loss

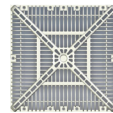
(Pa x 10<sup>3</sup>)

Results may vary - this data is provided for reference only.



## REPLACEMENT PARTS

Replace within 7 installed years or immediately upon evidence of degradation or damage.



**GRATE**  
25508-09X-010\*



**FRAME**  
25508-09X-020\*



**SCREW**  
61008-042-022

\* X CAN BE ANY DIGIT 0-9 TO DENOTE COLOR

**WARNING:** To reduce the risk of drowning from hair and body entrapment, install suction fittings with a marked flow rate in gallons per minute that exceeds the flow rate of your system by at least 25%. Always use multiple suction outlets. If the fitting/cover breaks, is damaged, or is missing, shut the system down immediately. Do not use the system until damaged parts have been replaced.

**WARNING:** Keep hair and clothing a minimum of 12 inches from all suction fittings and drains at all times. Persons with long hair should secure hair to a minimal length or wear swimming cap. Children should never be left unattended at any time in a swimming pool, spa, or bathtub. Be sure the temperature of the water never exceeds the manufacturer's recommendations.