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All of the materials in this catalog and more can be accessed through the PHTA Store at [www.phta.org/phta-store](http://www.phta.org/phta-store) or by scanning the QR code.
PHTA Standards

Codes, standards, and regulations vary between jurisdictions, which can make them complicated to navigate, but compliance is critical. Understanding and applying the rules and regulations which govern industry activities provides a valuable layer of protection for operators, technicians, and builders, as well as aquatic users.

PHTA is proud to be celebrating 40 years of being an American National Standards Institute (ANSI) Accredited Standards Developer. PHTA is the leading industry organization recognized by ANSI to develop and promote national consensus standards for residential and public swimming pools, hot tubs, and spas.
# List of Standards

## Swimming Pools

### Residential

- **ANSI/APSP/ICC-4 2012 (R2022)**
  American National Standard for Aboveground/Onground Residential Swimming Pools

- **ANSI/APSP/ICC-5 2011 (R2022)**
  American National Standard for Residential Inground Swimming Pools

- **ANSI/PHTA/ICC-7 2020**
  American National Standard for Suction Entrapment Avoidance In Swimming Pools, Wading Pools, Spas, Hot Tubs and Catch Basins

- **ANSI/APSP/ICC-7 2013**
  American National Standard for Suction Entrapment Avoidance In Swimming Pools, Wading Pools, Spas, Hot Tubs and Catch Basins

- **ANSI/APSP/ICC-8 2005 (R2013)**
  American National Standard for Model Barrier Code for Residential Swimming Pools, Spas, and Hot Tubs

- **ANSI/PHTA/ICC-10 2021**
  American National Standard for Elevated Pools, Spas and Other Aquatic Venues Integrated into a Building or Structure

- **ANSI/PHTA/ICC-11 2019**
  American National Standard for Water Quality in Public Pools and Spas

- **ANSI/APSP/ICC/NPC-12 2016**
  American National Standard for the Plastering of Swimming Pools and Spas

- **ANSI/PHTA/ICC-15 2021**
  American National Standard for Residential Swimming Pool and Spa Energy Efficiency

- **ANSI/APSP/ICC-15 2011**
  American National Standard for Residential Swimming Pool and Spa Energy Efficiency

- **ANSI/APSP/ICC-16 2017**
  American National Standard for Suction Outlet Fitting Assemblies (SOFA) for Use in Pools, Spas and Hot Tubs

## Hot Tubs and Spas

### Residential

- **ANSI/APSP/ICC-3 2014**
  American National Standard for Permanently Installed Residential Spas and Swim Spas

- **ANSI/APSP/ICC-6 2013 (R2023)**
  American National Standard for Residential Portable Spas and Swim Spas

- **ANSI/PHTA/ICC-7 2020**
  American National Standard for Suction Entrapment Avoidance In Swimming Pools, Wading Pools, Spas, Hot Tubs and Catch Basins

- **ANSI/APSP/ICC-7 2013**
  American National Standard for Suction Entrapment Avoidance In Swimming Pools, Wading Pools, Spas, Hot Tubs and Catch Basins

- **ANSI/PHTA/ICC-8 2005 (R2013)**
  American National Standard for Model Barrier Code for Residential Swimming Pools, Spas, and Hot Tubs

### Public

- **ANSI/APSP/ICC-1 2014**
  American National Standard for Public Swimming Pools

- **ANSI/PHTA/ICC-2 2023**
  American National Standard for Public Pool and Spa Operations and Maintenance

- **ANSI/PHTA/ICC-7 2020**
  American National Standard for Suction Entrapment Avoidance In Swimming Pools, Wading Pools, Spas, Hot Tubs and Catch Basins

- **ANSI/PHTA/ICC-7 2013**
  American National Standard for Suction Entrapment Avoidance In Swimming Pools, Wading Pools, Spas, Hot Tubs and Catch Basins

- **ANSI/APSP/ICC/NPC-12 2016**
  American National Standard for the Plastering of Swimming Pools and Spas

- **IAF-9 2005**
  Standard for Aquatic Recreation Facilities
ANSI/PHTA/ICC-10 2021
American National Standard for Elevated Pools, Spas and Other Aquatic Venues Integrated into a Building or Structure

ANSI/APS/P/ICC/NPC-12 2016
American National Standard for the Plastering of Swimming Pools and Spas

ANSI/PHTA/ICC-15 2021
American National Standard for Residential Swimming Pool and Spa Energy Efficiency

ANSI/APS/P/ICC-15 2011
American National Standard for Residential Swimming Pool and Spa Energy Efficiency

ANSI/APS/P/ICC-16 2017
American National Standard for Suction Outlet Fitting Assemblies (SOFA) for Use in Pools, Spas and Hot Tubs

Public

NSPI-2 1999
Standard for Public Spas

ANSI/PHTA/ICC-2 2023
American National Standard for Public Pool and Spa Operations and Maintenance

ANSI/PHTA/ICC-7 2020
American National Standard for Suction Entrapment Avoidance In Swimming Pools, Wading Pools, Spas, Hot Tubs and Catch Basins

ANSI/PHTA/ICC-7 2013
American National Standard for Suction Entrapment Avoidance In Swimming Pools, Wading Pools, Spas, Hot Tubs and Catch Basins

ANSI/PHTA/ICC-10 2021
American National Standard for Elevated Pools, Spas and Other Aquatic Venues Integrated into a Building or Structure

ANSI/APS/P/ICC-11 2019
American National Standard for Water Quality in Public Pools and Spas

ANSI/APS/P/ICC/NPC-12 2016
American National Standard for the Plastering of Swimming Pools and Spas

Conservation

ANSI/APS/P/ICC-13 2017
American National Standard for Water Conservation Efficiency in Pools, Spas, Portable Spas and Swim Spas

ANSI/APS/P/ICC-14 2019
American National Standard for Portable Electric Spa Energy Efficiency

ANSI/PHTA/ICC-15 2021
American National Standard for Residential Swimming Pool and Spa Energy Efficiency

ANSI/APS/P/ICC-15 2011
American National Standard for Residential Swimming Pool and Spa Energy Efficiency

Codes and Standards in Partnership with the International Code Council (ICC)

2020 ICC 902/PHTA 902/SRCC 400 Solar Pool and Spa Heating System Standard
Solar Pool and Spa Heating System Standard

International Swimming Pool and Spa Code (ISPSC)

2021 International Swimming Pool and Spa Code
2018 International Swimming Pool and Spa Code
2015 International Swimming Pool and Spa Code
2012 International Swimming Pool and Spa Code
Swimming Pools

Residential Swimming Pools

ANSI/APSP/ICC-4 2012 (R2022)
American National Standard for Aboveground/Onground Residential Swimming Pools

This standard describes certain criteria for the design, manufacturing, testing, care, and use of aboveground/onground residential (Type O) non-diving swimming pools and their components. This standard was reaffirmed on June 6, 2022, with approval of the original edition of this standard on July 16, 2012. Addenda A was approved April 4, 2013.

ANSI/APSP/ICC-5 2011 (R2022)
American National Standard for Residential Inground Swimming Pools

This standard applies to permanently installed residential inground swimming pools intended for noncommercial use as a swimming pool by not more than three owner families and their guests and exceeding 24 inches (61 cm) in water depth. This standard was reaffirmed on June 6, 2022, with approval of the original edition of this standard on April 22, 2011. Addenda A was approved on June 28, 2012.

ANSI/PHTA/ICC-7 2020

This standard is a revision of ANSI/APSP/ICC-7 2013. This is the only standard that protects against the three root causes of entrapments: suction, water velocity and mechanical binding. Based on the best science and practices, PHTA-7 offers technically sound solutions to prevent all forms of entrapment: hair, limb, body, mechanical and evisceration. The ANSI/PHTA/ICC-7 2020 standard addresses how to calculate maximum flow for both commercial and residential pools. This key safety standard provides a model code for national, state and local officials, which PHTA urges all states to adopt. PHTA-7 is consistent with the Virginia Graeme Baker Pool and Spa Safety Act (VGBA) and current U.S. Consumer Product Safety Commission (CPSC) interpretations.

ANSI/APSP/ICC-7 2013

The ANSI/APSP/ICC-7 standard is the first comprehensive systems approach to engineering swimming pools and spas to avoid suction entrapment hazards. It is the only standard that protects against the three root causes of entrapments: suction, water velocity and mechanical binding. Based on the best science and practices, APSP-7 offers technically sound solutions to prevent all forms of entrapment: hair, limb, body, mechanical entrapment and evisceration. This key PHTA safety standard provides a model code for national, state and local officials, which PHTA urges all states to adopt. ANSI/APSP/ICC-7 is consistent with the Virginia Graeme Baker Pool and Spa Safety Act (VGBA) and current U.S. Consumer Product Safety Commission (CPSC) interpretations. The International Code Council (ICC) first adopted this standard in 2008 for incorporation into the 2009 International Building Code (IBC) and International Residential Code (IRC), Appendix G.
Residential Swimming Pools

ANSI/APSP/ICC-8 2005 (R2013)
American National Standard for Model Barrier Code for Residential Swimming Pools, Spas, and Hot Tubs

This standard is designed to protect young children from accidental drowning by limiting or delaying a child’s access to swimming pools, spas and hot tubs. This standard is written to meet the needs for incorporation into national or regional building codes and for adoption by state and local jurisdictions. The federal Virginia Graeme Baker Pool and Spa Safety Act is consistent with the options and layers of protection approach in this standard. This is the newest version of ANSI/APSP-8 2005 (R2013) Model Barrier Code for Residential Swimming Pools, Spas, and Hot Tubs standard, updated in 2013.

ANSI/PHTA/ICC-10 2021
American National Standard for Elevated Pools, Spas and Other Aquatic Venues Integrated into a Building or Structure

This standard establishes recommended minimum guidelines for the construction, alteration, relocation, renovation, replacement, repair, and maintenance of aquatic recreation facilities, pools, and spas that are permanently installed as an integral part of an existing building or structure over a habitable, occupiable, or unoccupied space. The purpose is to provide a reasonable level of safety to the structure into which the elevated “pool”, as defined in the scope of the standard, is integrated. Safety and protection of health and public welfare are regulated by the applicable pool and spa codes and standards that control the design, construction, installation, quality of materials, location and maintenance or use of pools and spas. This standard was approved by ANSI on August 30, 2021.

ANSI/APSP/ICC/NPC-12 2016
American National Standard for the Plastering of Swimming Pools and Spas

This standard covers the material and application for the plastering of cementitious finish coatings for in-ground swimming pools or other cementitious water-containment vessels. This standard was approved by ANSI as a new standard on November 3, 2015. It now includes Supplement A approved by ANSI on May 10, 2019.

ANSI/PHTA/ICC-15 2021
American National Standard for Residential Swimming Pool and Spa Energy Efficiency

The PHTA-15 2021 Standard provides recommended minimum guidelines for the energy efficiency of permanently installed residential aboveground/onground and inground swimming pools and inground spas. It is intended to meet the new requirements of the U.S. Department of Energy’s Dedicated Purpose Pool Pump (DPPP) Rule. In the previous version of this standard, there was a focus on only the circulating pumps; the new federal rule now applies to all pumps, regardless of their use or purpose. This standard was approved by ANSI on August 2, 2021 and is a revision of ANSI/APSP/ICC-15 2011, consolidated with Addenda A.
Residential Swimming Pools

ANSI/APSP/ICC-15 2011
American National Standard for Residential Swimming Pool and Spa Energy Efficiency

The ANSI/APSP/ICC-15 2011 Standard reduces energy use through more efficient pumps and by limiting the size and performance of those pumps based on pool size. An Addenda A approved by ANSI in 2013 addresses unintended consequences associated with the pump performance limitations, specifically the 36 gpm limit for pools 13,000 gallons or less. In some instances, the actual flow of installed systems is below the minimum flow requirements of chlorine feeders and heaters. The addenda resolves this issue by eliminating the 36 gpm maximum flow rate requirement for single speed pumps. All other pump energy efficiency requirements remain in place. It also addresses confusion caused by the similarity between the term "Maximum Flow Rate" as defined in the ANSI/APSP/ICC-15 Standard and the term "Maximum System Flow Rate" as used in ANSI/APSP-7 American National Standard for Suction Entrapment Avoidance in Swimming Pools, Wading Pools, Spas, Hot Tubs, and Catch Basins addressing suction safety.

ANSI/APSP/ICC-16 2017
American National Standard for Suction Outlet Fitting Assemblies (SOFA) for Use in Pools, Spas and Hot Tubs

Member: $87.00
Non-Member: $165.00

This standard establishes new requirements for markings, instructions, material durability, physical testing and flow rate certification procedures for Suction Outlet Fitting Assemblies (SOFA). Products and components regulated by this standard are collectively referred to as Drain Covers under the federal law that regulates them. SOFAs are designed for use in any pool, hot tub, spa or other aquatic venue that is intended for swimming or recreational bathing. Under the federal Virginia Graeme Baker Pool and Spa Safety Act (VGBA), product components certified on or after May 24, 2021 are required to comply with this version of the standard. This version includes appendices to help designers, manufacturers, test laboratories, and Registered Design Professionals achieve consistent certification results in accordance with the revised standard and the VGBA. Appendix E provides guidance for testing and certification while Appendix F highlights portions of the Consumer Product Safety Commission’s Federal Register Notice detailing what sections of the standard are not within the federal government’s enforcement authority.
Public Swimming Pools

ANSI/APSP/ICC-1 2014
American National Standard for Public Swimming Pools

This standard covers public swimming pools to be used for swimming, bathing, competitive activities, or recreational activities that are operated by an owner, lessee, operator, licensee, or concessionaire, regardless of whether a fee is charged for use. Public swimming pools covered by this Standard include class A (Competition Pools), B (Any pool intended for public recreational use not otherwise classified), C, (Hotels, Motels and Condominiums) and F (Wading) pools. The ANSI/APSP/ICC-1 2014 is different from its 2003 predecessor in that the revised version addresses advanced technology, safety and an improved understanding of best practices for constructing and renovating public swimming pools. Several major changes include an updated Appendix A on the Chemical Operational Parameters; a new Appendix B, “Water Velocity Limits” that describes how to determine the water velocity requirements of a public pool to achieve maximum performance safety and energy efficiency; and an expanded section on wading pools.

ANSI/PHTA/ICC-2 2023
American National Standard for Public Pool and Spa Operations and Maintenance

ANSI/PHTA/ICC-2 2023 American National Standard for Public Pool and Spa Operations and Maintenance is a new PHTA standard. This landmark aquatics standard provides public health officials, industry professionals, and code officials an easily adoptable set of guidelines for the operation and maintenance of all types of public aquatic venues. The standard focuses on critical areas of operations and maintenance, including inspections, operating permits, recirculation, water treatment, hygiene facilities, indoor/outdoor environment, and other requirements. This standard was approved as an American National Standard by ANSI on February 10, 2023.

ANSI/PHTA/ICC-7 2020

This standard is a revision of ANSI/APSP/ICC-7 2013. This is the only standard that protects against the three root causes of entrapments: suction, water velocity and mechanical binding. Based on the best science and practices, PHTA-7 offers technically sound solutions to prevent all forms of entrapment: hair, limb, body, mechanical and evisceration. The ANSI/PHTA/ICC-7 2020 standard addresses how to calculate maximum flow for both commercial and residential pools. This key safety standard provides a model code for national, state and local officials, which PHTA urges all states to adopt. PHTA-7 is consistent with the Virginia Graeme Baker Pool and Spa Safety Act (VGBA) and current U.S. Consumer Product Safety Commission (CPSC) interpretations.

ANSI/APSP/ICC-7 2013

The ANSI/APSP/ICC-7 standard is the first comprehensive systems approach to engineering swimming pools and spas to avoid suction entrapment hazards. It is the only standard that protects against the three root causes of entrapments: suction, water velocity and mechanical binding. Based on the best science and practices, APSP-7 offers technically sound solutions to prevent all forms of entrapment: hair, limb, body, mechanical entrapment and evisceration. This key PHTA safety standard provides a model code for national, state and local officials, which PHTA urges all states to adopt. ANSI/APSP/ICC-7 is consistent with the Virginia Graeme Baker Pool and Spa Safety Act (VGBA) and current U.S. Consumer Product Safety Commission (CPSC) interpretations. The International Code Council (ICC) first adopted this standard in 2008 for incorporation into the 2009 International Building Code (IBC) and International Residential Code (IRC), Appendix G.
ANSI/PHTA/ICC-10 2021
American National Standard for Elevated Pools, Spas and Other Aquatic Venues Integrated into a Building or Structure

This standard establishes recommended minimum guidelines for the construction, alteration, relocation, renovation, replacement, repair, and maintenance of aquatic recreation facilities, pools, and spas that are permanently installed as an integral part of an existing building or structure over a habitable, occupiable, or unoccupied space. The purpose is to provide a reasonable level of safety to the structure into which the elevated "pool", as defined in the scope of the standard, is integrated. Safety and protection of health and public welfare are regulated by the applicable pool and spa codes and standards that control the design, construction, installation, quality of materials, location and maintenance or use of pools and spas. This standard was approved by ANSI on August 30, 2021.

ANSI/APSP/ICC-11 2019
American National Standard for Water Quality in Public Pools and Spas

This standard is a revision of ANSI/APSP-11 2009 and is based on the most recent health-related scientific information regarding recreational water quality. The objective of this voluntary standard is to provide recommended minimum guidelines for the specifications for water quality parameters in public pools and spas. It can be incorporated into national or regional health codes, and adopted by state and/or municipalities as a local code or ordinance.

ANSI/APSP/ICC/NPC-12 2016
American National Standard for the Plastering of Swimming Pools and Spas

This standard covers the material and application for the plastering of cementitious finish coatings for in-ground swimming pools or other cementitious water-containment vessels. This standard was approved by ANSI as a new standard on November 3, 2015. It now includes Supplement A approved by ANSI on May 10, 2019.

ANSI/APSP/ICC-16 2017
American National Standard for Suction Outlet Fitting Assemblies (SOFA) for Use in Pools, Spas and Hot Tubs

This standard establishes new requirements for markings, instructions, material durability, physical testing and flow rate certification procedures for Suction Outlet Fitting Assemblies (SOFA). Products and components regulated by this standard are collectively referred to as Drain Covers under the federal law that regulates them. SOFAs are designed for use in any pool, hot tub, spa or other aquatic venue that is intended for swimming or recreational bathing. Under the federal Virginia Graeme Baker Pool and Spa Safety Act (VGBA), products certified on or after May 24, 2021 are required to comply with this version of the standard. This version includes appendices to help designers, manufacturers, test laboratories, and Registered Design Professionals achieve consistent certification results in accordance with the revised standard and the VGBA. Appendix E provides guidance for testing and certification while Appendix F highlights portions of the Consumer Product Safety Commission’s Federal Register Notice detailing what sections of the standard are not within the federal government’s enforcement authority.

IAF-9 2005 Standard for Aquatic Recreation Facilities 2005
American National Standard for Aquatic Recreation Facilities

This standard provides minimum guidelines for the design, equipment, signs, installation, sanitation, new construction, and rehabilitation of public pools for aquatic play. It covers Class D pools such as, wave action pools, activity pools, catch pools, leisure rivers, vortex pools and interactive play attractions—water treatment and filtration only.
Hot Tubs and Spas

Residential Hot Tubs and Spas

ANSI/APSP/ICC-3 2014
American National Standard for Permanently Installed Residential Spas and Swim Spas

This standard is for the design, equipment and installation of permanently installed residential spas and swim spas and does not cover public spas or factory built residential portable spas. Major changes from the previous version from 1999 include the addition of permanent inground “swim spas”. The revised standard also includes safety and energy requirements by referencing standards to ensure the highest degree of safety and operating efficiency. For example, Appendix B on Water Velocity Limits has been incorporated to assist pool designers and builders on how to determine the required design flow rates, essential to energy efficiency and bather safety.

ANSI/APSP/ICC-6 2013
American National Standard for Residential Portable Spas and Swim Spas

This standard is intended to cover factory built residential portable (self contained) spas or swim spas that are used for bathing and are operated by an owner. This standard does not cover Non-Self-Contained Spas, public spas, public swim spas, or permanently installed residential spas, or swim spas. Residential Portable Spa, Self-Contained: A factory-built spa in which all control, water heating and water circulating equipment is an integral part of the product. Self-contained spas may be permanently wired or cord connected. Residential Portable Spa, Non-Self-Contained (Not covered by this standard): A factory built spa in which the water heating and circulating equipment is not an integral part of the product. Non-self-contained spas may employ separate components such as an individual filter, pump, heater, and controls, or they may employ assembled combinations of various components that are to be installed in accordance with manufacturer’s specifications.

ANSI/PHTA/ICC-7 2020

This standard is a revision of ANSI/APSP/ICC-7 2013. This is the only standard that protects against the three root causes of entrapments: suction, water velocity and mechanical binding. Based on the best science and practices, PHTA-7 offers technically sound solutions to prevent all forms of entrapment: hair, limb, body, mechanical and evisceration. The ANSI/PHTA/ICC-7 2020 standard addresses how to calculate maximum flow for both commercial and residential pools. This key safety standard provides a model code for national, state and local officials, which PHTA urges all states to adopt. PHTA-7 is consistent with the Virginia Graeme Baker Pool and Spa Safety Act (VGBA) and current U.S. Consumer Product Safety Commission (CPSC) interpretations.
Residential Hot Tubs and Spas

ANSI/APSP/ICC-7 2013

This standard is the first comprehensive systems approach to engineering swimming pools and spas to avoid suction entrapment hazards. It is the only standard that protects against the three root causes of entrapments: suction, water velocity and mechanical binding. Based on the best science and practices, APSP-7 offers technically sound solutions to prevent all forms of entrapment: hair, limb, body, mechanical entrapment and evisceration. This key PHTA safety standard provides a model code for national, state and local officials, which PHTA urges all states to adopt. ANSI/APSP/ICC-7 is consistent with the Virginia Graeme Baker Pool and Spa Safety Act (VGBA) and current U.S. Consumer Product Safety Commission (CPSC) interpretations. The International Code Council (ICC) first adopted this standard in 2008 for incorporation into the 2009 International Building Code (IBC) and International Residential Code (IRC), Appendix G.

ANSI/APSP/ICC-8 2005 (R2013)
American National Standard for Model Barrier Code for Residential Swimming Pools, Spas, and Hot Tubs

This standard is designed to protect young children from accidental drowning by limiting or delaying a child’s access to swimming pools, spas and hot tubs. This standard is written to meet the needs for incorporation into national or regional building codes and for adoption by state and local jurisdictions. The federal Virginia Graeme Baker Pool and Spa Safety Act is consistent with the options and layers of protection approach in this standard.

ANSI/PTA/ICC-10 2021
American National Standard for Elevated Pools, Spas and Other Aquatic Venues Integrated into a Building or Structure

This standard establishes recommended minimum guidelines for the construction, alteration, relocation, renovation, replacement, repair, and maintenance of aquatic recreation facilities, pools, and spas that are permanently installed as an integral part of an existing building or structure over a habitable, occupiable, or unoccupied space. The purpose is to provide a reasonable level of safety to the structure into which the elevated “pool”, as defined in the scope of the standard, is integrated. Safety and protection of health and public welfare are regulated by the applicable pool and spa codes and standards that control the design, construction, installation, quality of materials, location and maintenance or use of pools and spas. This standard was approved by ANSI on August 30, 2021.

ANSI/APSP/ICC/NPC-12 2016
American National Standard for the Plastering of Swimming Pools and Spas

This standard covers the material and application for the plastering of cementitious finish coatings for inground swimming pools or other cementitious water-containment vessels. This standard was approved by ANSI as a new standard on November 3, 2015. It now includes Supplement A approved by ANSI on May 10, 2019.
Residential Hot Tubs and Spas

ANSI/PHTA/ICC-15 2021
American National Standard for Residential Swimming Pool and Spa Energy Efficiency

The PHTA-15 2021 Standard provides recommended minimum guidelines for the energy efficiency of permanently installed residential aboveground/onground and inground swimming pools and inground spas. It is intended to meet the new requirements of the U.S. Department of Energy's Dedicated Purpose Pool Pump (DPPP) Rule. In the previous version of this standard, there was a focus on only the circulating pumps; the new federal rule now applies to all pumps, regardless of their use or purpose. This standard was approved by ANSI on August 2, 2021 and is a revision of ANSI/APSP/ICC-15 2011, consolidated with Addenda A.

ANSI/APSP/ICC-15 2011
American National Standard for Residential Swimming Pool and Spa Energy Efficiency

The ANSI/APSP/ICC-15 2011 Standard reduces energy use through more efficient pumps and by limiting the size and performance of those pumps based on pool size. An Addenda A approved by ANSI in 2013 addresses unintended consequences associated with the pump performance limitations, specifically the 36 gpm limit for pools 13,000 gallons or less. In some instances, the actual flow of installed systems is below the minimum flow requirements of chlorine feeders and heaters. The addenda resolves this issue by eliminating the 36 gpm maximum flow rate requirement for single speed pumps. All other pump energy efficiency requirements remain in place. It also addresses confusion caused by the similarity between the term “Maximum Flow Rate” as defined in the ANSI/APSP/ICC-15 Standard and the term “Maximum System Flow Rate” as used in ANSI/APSP-7 American National Standard for Suction Entrapment Avoidance in Swimming Pools, Wading Pools, Spas, Hot Tubs, andCatch Basins addressing suction safety.

ANSI/APSP/ICC-16 2017
American National Standard for Suction Outlet Fitting Assemblies (SOFA) for Use in Pools, Spas and Hot Tubs

This standard establishes new requirements for markings, instructions, material durability, physical testing and flow rate certification procedures for Suction Outlet Fitting Assemblies (SOFA). Products and components regulated by this standard are collectively referred to as Drain Covers under the federal law that regulates them. SOFAs are designed for use in any pool, hot tub, spa or other aquatic venue that is intended for swimming or recreational bathing. Under the federal Virginia Graeme Baker Pool and Spa Safety Act (VGBA), product components certified on or after May 24, 2021 are required to comply with this version of the standard. This version includes appendices to help designers, manufacturers, test laboratories, and Registered Design Professionals achieve consistent certification results in accordance with the revised standard and the VGBA. Appendix E provides guidance for testing and certification while Appendix F highlights portions of the Consumer Product Safety Commission’s Federal Register Notice detailing what sections of the standard are not within the federal government’s enforcement authority.
Public Hot Tubs and Spas

NSPI-2 1999
American National Standard for Public Spas

This standard is intended to cover public spas that are used for bathing and are operated by an owner, licensee, or concessionaire, regardless of whether a fee is charged for use. The provisions of this specification are not intended to prevent the use of other designs provided that any variation from the specifications in this standard provide the required quality, strength, durability and safety for the intended use and are approved by the authority having jurisdiction. This standard is not meant to cover portable spas, permanently installed residential spas, or other spas, such as those operated for medical treatment, physical therapy, or other purposes. Other standards are referenced in this standard for items not covered.

ANSI/PHTA/ICC-2 2023
American National Standard for Public Pool and Spa Operations and Maintenance

This is a new PHTA standard. This landmark aquatics standard provides public health officials, industry professionals, and code officials an easily adoptable set of guidelines for the operation and maintenance of all types of public aquatic venues. The standard focuses on critical areas of operations and maintenance including inspections, operating permits, water quality, hygiene facilities, indoor/outdoor environment, and other requirements. This standard was approved as an American National Standard by ANSI on February 10, 2023.

ANSI/PHTA/ICC-7 2020

This standard is a revision of ANSI/APSP/ICC-7 2013. This is the only standard that protects against the three root causes of entrapments: suction, water velocity and mechanical binding. Based on the best science and practices, PHTA-7 offers technically sound solutions to prevent all forms of entrapment: hair, limb, body, mechanical and evisceration. The ANSI/PHTA/ICC-7 2020 standard addresses how to calculate maximum flow for both commercial and residential pools. This key safety standard provides a model code for national, state and local officials, which PHTA urges all states to adopt. PHTA-7 is consistent with the Virginia Graeme Baker Pool and Spa Safety Act (VGBA) and current U.S. Consumer Product Safety Commission (CPSC) interpretations.

ANSI/APSP/ICC-7 2013

This standard is the first comprehensive systems approach to engineering swimming pools and spas to avoid suction entrapment hazards. It is the only standard that protects against the three root causes of entrapments: suction, water velocity and mechanical binding. Based on the best science and practices, APSP-7 offers technically sound solutions to prevent all forms of entrapment: hair, limb, body, mechanical entrapment and evisceration. This key PHTA safety standard provides a model code for national, state and local officials, which PHTA urges all states to adopt. ANSI/APSP/ICC-7 is consistent with the Virginia Graeme Baker Pool and Spa Safety Act (VGBA) and current U.S. Consumer Product Safety Commission (CPSC) interpretations. The International Code Council (ICC) first adopted this standard in 2008 for incorporation into the 2009 International Building Code (IBC) and International Residential Code (IRC), Appendix G.
Public Hot Tubs and Spas

ANSI/PHTA/ICC-10 2021
American National Standard for Elevated Pools, Spas and Other Aquatic Venues Integrated into a Building or Structure

This is a new PHTA standard. It establishes recommended minimum guidelines for the construction, alteration, relocation, renovation, replacement, repair, and maintenance of aquatic recreation facilities, pools, and spas that are permanently installed as an integral part of an existing building or structure over a habitable, occupiable, or unoccupied space. The purpose is to provide a reasonable level of safety to the structure into which the elevated “pool”, as defined in the scope of the standard, is integrated. Safety and protection of health and public welfare are regulated by the applicable pool and spa codes and standards that control the design, construction, installation, quality of materials, location and maintenance or use of pools and spas. This standard was approved by ANSI on August 30, 2021.

ANSI/APSP/ICC-11 2019
American National Standard for Water Quality in Public Pools and Spas

This standard is as a revision of ANSI/APSP-11 2009 and is based on the most recent health-related scientific information regarding recreational water quality. The objective of this voluntary standard is to provide recommended minimum guidelines for the specifications for water quality parameters in public pools and spas. It can be incorporated into national or regional health codes, and adopted by state and/or municipalities as a local code or ordinance.

ANSI/APSP/ICC/NPC-12 2016
American National Standard for the Plastering of Swimming Pools and Spas

This standard covers the material and application for the plastering of cementitious finish coatings for in-ground swimming pools or other cementitious water-containment vessels. This standard was approved by ANSI as a new standard on November 3, 2015. It now includes Supplement A approved by ANSI on May 10, 2019.
Conservation

ANSI/APSP/ICC-13 2017
American National Standard for Water Conservation Efficiency in Residential and Public Pools, Spas, Portable Spas and Swim Spas

This standard covers methods and technologies to increase the efficient use and conservation of water for residential and public recreational pools, spas, portable spas and swim spas equipped with a filtration circulation system. This standard applies to both new and existing facilities.

ANSI/APSP/ICC-14 2019
American National Standard for Portable Electric Spa Energy Efficiency

This standard is to cover the test procedures and methodology for determining the energy efficiency of self-contained portable electric spas and hot tubs. This standard has been updated as a result of input from the California Energy Commission (CEC) and members of the International Hot Tub Association (IHTA). The update includes new formulas to calculate Allowable Standby Power, including inflatable spas, and new labeling requirements.

ANSI/PHTA/ICC-15 2021
American National Standard for Residential Swimming Pool and Spa Energy Efficiency

The PHTA-15 2021 Standard provides recommended minimum guidelines for the energy efficiency of permanently installed residential aboveground/onground and inground swimming pools and inground spas. It is intended to meet the new requirements of the U.S. Department of Energy's Dedicated Purpose Pool Pump (DPPP) Rule. In the previous version of this standard, there was a focus on only the circulating pumps; the new federal rule now applies to all pumps, regardless of their use or purpose. This standard was approved by ANSI on August 2, 2021 and is a revision of ANSI/APSP/ICC-15 2011, consolidated with Addenda A.

ANSI/APSP/ICC-15 2011
American National Standard for Residential Swimming Pool and Spa Energy Efficiency

While the ANSI/APSP/ICC-15 2011 Standard reduces energy use through more efficient pumps and by limiting the size and performance of those pumps based on pool size, the ANSI/APSP/ICC-15 a 2013 edition (that includes Addenda A) addresses unintended consequences associated with the pump performance limitations, specifically the 36 gpm limit for pools 13,000 gallons or less. In some instances, the actual flow of installed systems is below the minimum flow requirements of chlorine feeders and heaters. ANSI/APSP/ICC-15 a 2013 resolves this issue by eliminating the 36 gpm maximum flow rate requirement for single speed pumps. All other pump energy efficiency requirements remain in place. Also, the 2013 edition addresses confusion caused by the similarity between the term "Maximum Flow Rate" as defined in the ANSI/APSP/ICC-15 Standard and the term “Maximum System Flow Rate” as used in ANSI/APSP-7 Standard for Suction Entrapment Avoidance in Swimming Pools, Wading Pools, Spas, Hot Tubs, and Catch Basins addressing suction safety.

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**Standards in Partnership with the International Code Council (ICC)**

**2020 ICC 902/PHTA 902/SRCC 400 Solar Pool and Spa Heating System Standard**

This standard, developed in partnership with the International Code Council (ICC), establishes minimum criteria for the design and installation of solar water heating systems for pool and spa applications. It allows pools and spas to benefit from sustainable heating technologies without sacrificing safety or performance. It addresses both residential and commercial pools and spas, consistent with the requirements of ICC's *International Swimming Pool and Spa Code® (ISPSC®)* and other relevant ICC/APSP/PHTA standards.
Codes in Partnership with the International Code Council (ICC)

The International Swimming Pool and Spa Code (ISPSC) integrates seamlessly with the family of I-Codes (including the International Building Code and the International Residential Code), and is coordinated with APSP/PHTA standards. The ISPSC contains requirements that meet or exceed the Virginia Graeme Bake Pool & Spa Safety Act. Consult with your local code official to determine which version is enforced.
All of the materials in this catalog and more can be accessed through the PHTA Store at

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