

## CERTIFICATE OF ACCREDITATION

## The ANSI National Accreditation Board

Hereby attests that

# IAPMO R&T Lab & IAPMO Institute of Building Technology (IBT)

5001 E. Philadelphia Street Ontario, CA 91761

Fulfills the requirements of

**ISO/IEC 17025:2017** 

In the field of

### **TESTING**

This certificate is valid only when accompanied by a current scope of accreditation document. The current scope of accreditation can be verified at <a href="www.anab.org">www.anab.org</a>.

Jason Stine, Vice President

Expiry Date: 30 August 2026 Certificate Number: AT-1479









#### SCOPE OF ACCREDITATION TO ISO/IEC 17025:2017

## IAPMO R&T Lab & IAPMO Institute of Building Technology (IBT) 5001 E. Philadelphia Street

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#### **TESTING**

Valid to: **August 30, 2026** Certificate Number: **AT-1479** 

#### **Mechanical and Construction Materials**

| Specific Tests and/or   | Specification, Standard,  | Items, Materials or                                  | Key Equipment or   |
|---|---|--|--|
| Properties Measured   | Method, or Test Technique   | Product Tested                                       | Technology   |
| Material, Hydraulic<br>Performance, Dimensions,<br>Load Tests | ASME A112.19.2 / CSAB45.1, AS 1172.1, AS 1172.6, AS/NZS 6400 ASME A112.4.2  EPA WaterSense High Efficiency Flushing Urinal Specification, Version 1.0  EPA WaterSense Specification for Tank-Type Toilets, Version 1.2  EPA WaterSense Specification for Flushometer-Valve Water closets, Version 1.0 | Water Closets, Urinals,<br>Lavatories, Sinks, Bidets | Flow meter, Pressure and temperature gauges, Torque meter, Scale |

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| Specific Tests and/or   | Specification, Standard,   | Items, Materials or  | Key Equipment or   |
|---|--|--|--|
| Properties Measured   | Method, or Test Technique  | Product Tested   | Technology   |
| Material Identification Load Tests Hair Entrapment Test Water Retention Test  | ASME A112.19.15,<br>ASME A112.19.7 /<br>CSA B45.10   | Hydromassage Bathtub<br>Appliances   | Flow Meter, Dial Gauge,<br>Force Gauge, Weight Scale   |
| UV Testing Material Identification Impact Test Deflection Test Load Test Vacuum Test Hair and Body Entrapment Test Finger Entrapment Test   | APSP-16  | Suction Fittings for Use in<br>Swimming Pools, Wading<br>Pools, Spas, Hot Tubs | UV Chamber,<br>Flow Meter, Pressure Gauges,<br>Finger Probe, Load Cell   |
| Backflow Prevention Test Mechanical Measurements Material Identification Crossflow Temperature Control Test Coatings Test Pressure and Temperature Test Flow Rate Test Force and Torque Tests Mechanical Cycle Test Bend Test | ASME A112.18.1/<br>CSA B125.1,<br>ASME A112.18.1M-1996,<br>ASME A112.18.3<br>ASSE 1016, ASSE 1017,<br>ASSE 1066, ASTM B456,<br>ASTM B571, ASTM G85,<br>ASTM B368, ASTM B604,<br>ASTM D3359, ASTM B117,<br>AS/NZS 3662, AS 3718 | Plumbing Supply Fittings   | Life cycle tester, Flow meter, Pressure and temperature gauges, XRF analyzer, Corrosion chamber, Torque Wrench, Force Gage, Calipers |
| Flow Rate Test  | EPA WaterSense High<br>Efficiency Lavatory Faucet<br>Specification, Version 1.0  | Lavatory Faucets   | Flow meter, Pressure and temperature gauges  |
| Flow Rate Test<br>Spray Force Test<br>Spray Coverage Test   | EPA WaterSense<br>Specification for<br>Showerheads, Version 1.1  | Shower Heads   | Flow meter, Pressure and temperature gauges, Force Gage, Scale   |
| Pressure Test Life Cycle Test Corrosion/Coatings Test Flow Rate Test Materials Identification Test Dimensional Measurements Load Test   | ASME A112.18.2/CSA<br>B125.2   | Plumbing Waste Fittings  | Life cycle tester,Flow Meter,<br>Pressure and Temperature<br>Gauges, XRF Analyzer,<br>Corrosion Chamber, Tensile<br>Frame            |

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| Specific Tests and/or   | Specification, Standard,  | Ite <mark>ms</mark> , Materials or  | Key Equipment or   |
|---|---------------------------|---|--|
| Properties Measured   | Method, or Test Technique | Product Tested  | Technology   |
| HydrostaticTest Reduced Flowing Pressure Test Deviation Test Minimum Reduced Pressure Test Reduced Pressure Adjustment Range Test Capacity Test By- Pass Relief Valve Test Opening Pressure Differential Test Materials Identification Test   | ASSE 1003                 | Water Pressure Reducing<br>Valves   | Vacuum Tank, XRF<br>Analyzer, Flow Meter,<br>Pressure and Temperature<br>Gauges                          |
| Hydrostatic Pressure Test Water Flow Capacity and Pressure Loss Test Deterioration Test Resistance to Bending Test Life Cycle Test Self-draining Capabilities Test Low Head BackPressure Test Atmospheric Vent Opening Test Backflow Prevention Test Leakage from Vent Ports Test Backsiphonage Test Materials Identification | ASSE 1019                 | Vacuum Breaker Wall<br>Hydrants, Freeze Resistant,<br>Automatic Draining Type | Vacuum tank,<br>XRF analyzer,<br>Life cycle tester,<br>Flow meter,<br>Pressure and temperature<br>gauges |
| Flow Test Evaporation TestTrap Seal Interference Test Dirt and Debris Test Floor Wax Test Grease Test Life Cycle Testing  Physical Tests of Membrane Material Test (Subcontracted)  | ASSE 1072                 | Barrier Type Floor Drains   | Life cycle tester,<br>Flow meter,<br>Pressure and temperature<br>gauges                                  |

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| Specific Tests and/or<br>Properties Measured  | Specification, Standard,<br>Method, or Test Technique            | Ite <mark>m</mark> s, Materials or<br>ProductTested  | Key Equipment or<br>Technology  |
|---|--|--|---|
| Water Flow Passage, Discharge Capacity, CriticalLevel, Deterioration, Resistance to Detergents, Materials | ASSE 1021  | Drain Air Gaps for<br>Residential<br>Dishwasher<br>Applications  | Vacuum tank, XRF analyzer, Life cycle tester, Flow meter, Pressure and temperature gauges |
| Pressure Test Air Tightness Test Rating Test Endurance Test Frost Closure Test Materials Identification   | ASSE 1050, ASSE 1051   | Stack Air Admittance Valvesfor Sanitary Drainage Systems   | Life cycle tester, CO2 meter, Pressure and temperature gauges                             |
| Structural Integrity Test Physical Test Characteristics and Materials Tests                               | ANSI Z124.5  | Plastic Toilet (Water<br>ClosetSeats)  | Toilet seat<br>tester,<br>Corrosion<br>chamber  |
| Dimensional Measurements<br>Load Test   | ICC A117.1 Sections 604.4, 604.6, 605, 606, 607, 608 609 and 610 | Buildings and Facilities Providing Accessibility and Usability for Physically Handicapped People               | Dimensiona<br>1 Gauges,<br>Force<br>Gauge   |
| Load Test<br>Dimensional Measurements   | ASTM F446  | Grab Bars and AccessoriesInstalled in Bathing Area   | Dimensiona<br>1 Gauges,<br>Force<br>Gauge   |
| Tensile Tests   | ASTM C297/C297M  | Flatwise Tensile Strength of Sandwich Construction   | Universal<br>Testing<br>Machine   |
| Impact Resistance Test  | ASTM D2444   | Determination of Impact<br>Resistance Thermoplastic<br>Pipe and Fittings by Means of<br>a Tup (falling weight) | Impact<br>Tester  |





| Specific Tests and/or<br>Properties Measured   | Specification, Standard,<br>Method, or Test Technique   | Ite <mark>m</mark> s, Materials or<br>ProductTested            | Key Equipment or<br>Technology  |
|--|---|--|---|
| Toxicity Test Chemical Resistance Test Ring Tensile Test Hydrostatic Sustained Pressure Test Impact Resistance Test Dimensional Measurements Thread Check Test Resistance to Rapid Crack Propagation Test  | CSA B137<br>(except Oxidative<br>Resistance)  | Thermoplastic Pressure Piping Compendium                       | Pressure and temperature gauges, XRF analyzer   |
| Hydrostatic Pressure Test Back Siphonage Test Back Pressure Test Check Valve Sealing Pressure Test Flow Rate Test Corrosion Test Hot Water Deterioration Test Life Cycle Test Air Flow Test Thread Check Verification of Overflow Opening Test Critical Level Verification Test Tilt Test Resistance to Bending Test Backflow Preventer Attachment Requirement Test Water Hammer Test Reseating Tightness Test | CSA B64 Series (Sections 64.0, 6.3, 6.4, 6.5, 6.6, 6.7, 6.8, 6.9, 6.10 (except 6.11) ASSE 1001 sect, 3, ASSE 1098 sect. 3, ASSE 1011 sect. 3, ASSE 1012 sect. 3, ASSE 1014, sect. 3 | Test Methods for Vacuum<br>Breakers and Backflow<br>Preventers | Vacuum tank, XRF analyzer, Life cycle tester, Flow meter, Pressure and temperature gauges |

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| Specific Tests and/or  | Specification, Standard,  | Items, Materials or Product   | Key Equipment or  |
|--|---|---|---|
| Flow Test Temperature Test Pressure Test Shear Test Load Test Adhesion Test Dimensional Measurements Color Fastness Stain Resistance Test Cleanability and Wear Test Ignition Test Cigarette Burn Test Chemical Resistance Test Thermal Shock Test Hot Water Resistance Test Pressure Seal Test Knife Drop Test Skillet Drop Test Vibration Test Heated Pan Test Hot Wax Test Bonding Test Water Absorption Test | CSA B45.5/IAPMO Z124,<br>CSA B45.8/IAPMO Z403<br>ANSI Z124.7, ANSI Z124.8<br>ASME A112.19.1/CSA<br>B45.2,<br>ASME A119.19.3/CSA<br>B45.4,<br>PS 106 | Testing requirements for Plumbing Fixtures                                      | Flow Meter, Pressure and Temperature Gauges, UV Chamber, Spectrophotometer, Abrasion Tester, Weight Scale |
| Materials Testing Coating Test Dimensional Measurements Pressure Test Load Test  | ASME A112.6.1M, ASME<br>A112.6.2  | Floor-Affixed Supports for<br>Off-the-Floor Plumbing<br>Fixtures for Public Use | Dimensional Gauges, Scale,<br>Pressure Gauge, XRF, Dial<br>Gauge, Tensile Frame                           |
| Tensile Strength Test<br>Dimensional Measurements  | ASTM A74, ASTM A888,<br>CISPI 301   | Cast Iron Soil Pipe and Fittings  | Universal Testing Machine   |





| Specific Tests and/or<br>Properties Measured   | Specification, Standard,<br>Method, or Test Technique   | Items, Materials or Product Tested                   | Key Equipment or<br>Technology  |
|--|---|--|---|
| Elevated Temperature and Pressure Test Cycle Test Critical Level Test Total Flow Test Refill Capacity Test Materials Identification Dimensional Measurements   | CSA B125.3,<br>ASSE 1002,<br>ASSE 1037, ASME<br>A112.19.5, ASME<br>A112.19.10   | Anti-siphon Fill and Flush<br>Valves for Water Tanks | Vacuum tank, XRF analyzer, Life cycle tester, Flow meter, Pressure and temperature gauges       |
| Mechanical Measurements Material Identification Impulse Test Burst Pressure Test Pressure Drop Test Coatings Test  | ASME 112.18.6/CSA B125.6  | Flexible Water Connector                             | Life cycle tester, Flow meter, Corrosion chamber, XRF analyzer, Pressure and temperature gauges |
| Hydrostatic Sustained Pressure Test Mechanical Separation Test Burst Test Bending Test Water Hammer Test Materials Analysis Static Torsion Test Vacuum Test Vibration Test Thermal Cycling Test Dynamic Torsion Test | ASSE 1061,<br>IAPMO/ANSI/CAN Z1117,<br>ASTMF1807,<br>ASTM F877,<br>ASTM F1974,<br>ASTM F1960,<br>ASTM D1598-2002,<br>ASTM D2122 | Fittings with Copper / PEX/CPVC Pipe                 | Hydrostatic Test Structural Integrity, Physical Characteristics and Materials Tests             |
| Flow Rate Test Pressure Test Dimensional Measurements Time Test  | ANSI Z358.1   | Emergency Eyewash and Shower Equipment               | Flow Rate Meter, Pressure<br>Meter, Dimensional<br>Measurements Equipment,<br>Stopwatch         |
| Hydrostatic Pressure Test  | WMTS-105, Section 9.3   | Beverage Dispensers and Icemakers                    | Pressure Gauges and Pumps   |





#### **Mechanical and Chemical – Filtered Water Analysis**

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| Specific Tests and/or<br>Properties Measured   | Specification, Standard,<br>Method, or Test Technique                           | Items, Materials or<br>Product Tested                                     | Key Equipment or<br>Technology   |
|--|---|---|--|
| Drinking Water System<br>Components-Health Effects   | NSF/ANSI/CAN 61   | Drinking Water Treatment<br>Systems and General Potable<br>Water Plumbing | ICP/MS, GC/MS,<br>XRF analyzer, pH meter                                       |
| Drinking Water System<br>Components – Lead Content   | NSF/ANSI/CAN 372  | Drinking Water Treatment Systems and General Potable Water Plumbing       | XRF Analyzer   |
| Drinking Water Treatment<br>Units- Aesthetic Effects   | NSF / ANSI 42<br>Excluding section 7.2  | Drinking Water Treatment Systems  | Pressure Gauge, Flow Meter.<br>Spectrophotometer                               |
| Drinking Water Treatment<br>Units- Health Effects  | NSF / ANSI 53 Excluding Section 7.5   | Drinking Water Treatment<br>Systems                                       | Flow Meter, Pressure Gauge,<br>GC/MS, ICP/MS,<br>pH Meter                      |
| Reverse Osmosis Drinking<br>Water Treatment Systems  | NSF/ ANSI 58  | Drinking Water Treatment<br>Systems                                       | Flow Meter, Pressure Gauge,<br>GC/MS, ICP/MS,<br>pH Meter                      |
| Drinking Water Treatment Systems- Design and Performance   | AS 3497<br>Sections 5.1, 5.2, 5.3, 5.4<br>,5.5, 5.6                             | Drinking Water Treatment Systems  | Pressure Station   |
| Swimming Pools Spas, Hot<br>Tubs<br>Recreational Water Facilities                                  | NSF/ANSI/CAN 50<br>Excluding Sections:<br>14.20 and 15.18 (Reference<br>Note 2) | Swimming Pool and SPA<br>Equipment  | Turbidity Meter, pH Meter,<br>Spectrophotometer, Pressure<br>Gauge, Flow Meter |
| Standard Safety Specification for Residential Pool Alarms  | ASTM F2208  | Swimming Pool Alarms  | Swimming Pool, Rescue<br>Timmy, Sound Meter, Air<br>Flow meter                 |
| Drinking Water Treatment<br>Systems  | CAN/CSA B483.1  | Drinking Water Treatment Systems  | Pressure Station, Thread<br>Gauge, Flow Meter                                  |
| Scale Reduction Devices  | IAPMO Z601  | Scale Reduction Devices   | Scale Rig, Pressure Gauge,<br>Flow Meter, ICP/MS                               |
| Microbiological Water<br>Purifiers   | NSF P231 Excluding Section 4.3 (Reference Note 2)                               | Microbiological Water<br>Purifiers  | Pressure Station   |
| Shower Filtration Systems-<br>Aesthetic Effects  | NSF/ANSI 177  | Shower Filtration Systems-<br>Aesthetic Effects                           | Pressure Gauge, Flow Meter,<br>Spectrophotometer                               |
| Drinking Water Treatment Units - Supplemental Microbiological Water Treatment Systems - Filtration | NSF/ANSI 244 Excluding Section 7 (Reference Note 2)                             | Drinking Water Treatment<br>Systems                                       | Flow Meter, Pressure Station   |
| Residential Cation Exchange<br>Water Softeners   | NSF/ANSI 44   | Water Softeners   | Pressure Station, Flow Meter   |
| Ultraviolet Microbiological<br>Water Treatment Systems   | NSF/ANSI 55<br>Excluding Section 7<br>(Reference Note 2)                        | UV Systems  | Pressure Station   |

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#### Mechanical and Chemical – Filtered Water Analysis

| Specific Tests and/or<br>Properties Measured  | Specification, Standard,<br>Method, or Test Technique                 | Items, Materials or<br>Pr <mark>o</mark> duct Tested                                      | Key Equipment or<br>Technology                                      |
|---|---|---|---|
| Drinking water treatment<br>Chemicals-Health Effects                                      | NSF/ANSI/CAN 60   | Water Treatment Chemicals   | ICP/MS, GC/MS,<br>XRF analyzer, pH meter                            |
| Drinking Water Distillation<br>Systems  | NSF/ANSI 62   | Dis <mark>tillati</mark> on Systems   | Pressure Station, Flow Meter, TDS Meter, GC/MS, ICP/MS              |
| Backflow Preventer for<br>Beverage Dispensing<br>Equipment                                | ASSE 1022   | Backflow Preventer for Beverage Dispensing Equipment                                      | Vacuum Gauge, Pressure<br>Gauge                                     |
| Performance Requirements for<br>Electrically Heated or Cooled<br>Water Dispensers         | ASSE 1023   | Electrically Heated or Cooled<br>Water Dispensers   | Pressure Gauge, Flow Meter,<br>Temperature Gauge                    |
| Performance Requirements for<br>Reverse Osmosis Water<br>Efficiency – Drinking Water      | ASSE 1086   | Reverse Osmosis Water<br>Efficiency Drinking Water  | Pressure Gauge, Flow Meter,<br>TDS Meter                            |
| Commercial and Food Service<br>Water Treatment Equipment<br>Utilizing Drinking Water      | ASSE 1087   | Commercial and Food Service Water Treatment Equipment Utilizing Drinking Water            | Pressure Station, Flow Meter  |
| Drinking Water Atmospheric<br>Water Generators  | ASSE 1090   | Drinking Water Atmospheric<br>Water Generators  | Environmental Chamber,<br>Power Analyzer,<br>Temperature Datalogger |
| Onsite residential and commercial water reuse treatment systems                           | NSF/ANSI 350<br>Excluding Microbiological<br>Tests (Reference Note 2) | Onsite residential and commercial water reuse treatment systems                           | Pressure Gauge, Flow Meter,<br>Turbidity Meter                      |
| Alternate Water Source<br>Systems for Multi-Family,<br>Residential, and Commercial<br>Use | IAPMO IGC 324 Excluding Microbiological Tests (Reference Note 2)      | Alternate Water Source<br>Systems for Multi-Family,<br>Residential, and Commercial<br>Use | Pressure Gauge, Flow Meter,<br>Turbidity Meter                      |
| Hydrostatic Pressure Test<br>Endurance Test<br>Burst Pressure Test                        | WMTS-103, Sections 9.2,<br>9.3, 9.4                                   | Drinking Water Treatment<br>Systems   | Pressure Gauge, Temperature<br>Gauge                                |

#### **Building Products, Materials, and Assemblies Testing**

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| Items, Materials orProduct<br>Tested | Specification, Standard, Method, or Test Technique  |
|--------------------------------------|---|
| Concrete, Mortar & AAC               | ASTM C39, C67 (Freeze thaw only), C109, C140, C157 C190, C348, C482, C567, C947, C1354/1354M, C1660       |
| EIFS & Stucco                        | ASTM B117, D2247, E2098, E2134, E2273, E2485, E2486, E331   |
| Fabrics & Geotextiles                | AAMA 711, AAMA 714, ASTM C794, D4533, D4632, D4869<br>(Liquid Water Transmission only), D5034, E96, E2556 |

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#### **Building Products, Materials, and Assemblies Testing**

| Items, Materials orProduct<br>Tested | Specification, Standard, Method, or Test Technique   |  |
|--------------------------------------|--|--|
| Fasteners                            | AISI S9 <mark>04</mark> , ASTM D1761, F1575  |  |
| Joist Hangers                        | ASTM D7147   |  |
| Gypsum Panels                        | ASTM C473, C1658   |  |
| Insulation & Core Materials          | ASTM C203, C271, C272, C273, C297, C303, C365, C393, C518, D2126, D3746  |  |
| Lumber and Wood Products             | ASTM D1037, D2395, D4442 (Methods A and B)   |  |
| Paper & Paperboard                   | ASTM D779, D828, AATCC 127   |  |
| Plastics                             | ASTM D412, D570, D618, D635, D638, D790, D882, D1621, D1622, D1623, D1970, D2794, D2842, D3330, D4226, D5420, G151, G154, G155 |  |
| Miscellaneous Materials              | ASTM D7091   |  |
| Structural                           | ASTM D5206, E72 (Transverse Load), E73 (limited to maximum 12 ft. long truss), E330, E661, E1592                               |  |
| Waterproofing                        | ANSI A118.10 [except section 4.1], ASTM D751, D1204, D4068   |  |

**Building Products, Materials, and Assemblies Testing** 

| Items, Materials or Product |  |
|-----------------------------|--|
| Tested                      | Specification, Standard, Method, or Test Technique                 |
|                             | AC11 – Cementitious Exterior Wall                                  |
|                             | Coatings, Section 4.0  |
|                             |  |
|                             | AC38 – Water Resistive Barriers                                    |
|                             | Section 3.0, except 3.5 Air Permeance, Section 4.0                 |
|                             |  |
|                             | AC48 – Self-adhered Roof Underlayment                              |
| T. 1                        | Section 4.0  |
| Industry Standards Testing  |  |
| Acceptance and Evaluation   | AC51 – Adhered Manufactured Stone Masonry Veneer                   |
| Criteria                    | Section 3.0 & Section 4.0, except Optional Fire Related Tests      |
|                             |  |
|                             | AC90 - Fiber Cement Siding Used As Exterior Wall Siding            |
|                             | Except Section 4.2 Racking Shear                                   |
|                             | Except Section 7.2 Rucking blicul                                  |
|                             | AC120 – Wood-Frame Horizontal Diaphragms, Vertical Shear Walls and |
|                             | BracedWalls with Alternative Fasteners                             |
|                             | Section 4.3, 4.4, 4.5, 4.6, 4.9                                    |





#### **Building Products, Materials, and Assemblies Testing**

| Items, Materials or Product Tested                   | Specification, Standard, Method, or Test Technique                                   |
|--|--|
| Industry Standards Testing Acceptance and Evaluation | AC188 – Roof Underlayment<br>Section 3.1, 3.2  |
| Criteria   | AC377 – Spray-Applied Foam Plastic Insulation Section 3.1.6 and Table 1 [except E84] |

#### Notes:

- 1. This scope is formatted as part of a single document including Certificate of Accreditation No. AT-1479.
- 2. The microbiological analysis is performed by an ISO/IEC 17025 accredited laboratory. The data is analyzed, and reduction calculations are proved by IAPMO R&T LAB

Jason Stine, Vice President

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