Section 22 67 00

**Drug Lab Testing Water Control System**

***(Note to specifying engineer: When specifying systems utilizing this 3-Part CSI formatted specification, please remove any areas indicated in “Red” where not applicable to system design.)***

1. **GENERAL**
   * + 1. **SUMMARY**

This document provides the minimum requirements for controlling water within a drug laboratory testing facility and/or specimen collection facility.

* + - 1. **SCOPE OF WORK AND MINIMUM REQUIREMENTS**
    1. Provide ISIMET Lab Water Controller as means to prevent operation of Hot and Cold Water Supply and to drain supply lines during specimen collection. Each collection area shall be independently controlled by its own system. Install the control panel facing the public side of the wall.
    2. Each system shall include, at a minimum, the following:
* Water Control System Controller
  + UL Listed
  + Clear indicator of water control/restriction
  + Ability to output a notification signal when water flow is restricted
  + Metal cover to prevent tampering/unauthorized access
* Water solenoid(s), as specified
  + UL Listed
    1. Contractor to provide installation labor, necessary supervision, materials and equipment for complete installation of the controller in each specimen collection area and to ensure proper and complete operation of all systems. (Miscellaneous appurtenances are not necessarily specified or indicated on the Drawings. Contractor shall provide all labor and materials not specifically indicated on the Drawings or specified in these Specifications.)
    2. Installation is to be completed per the Instructions.
       1. **MANUFACTURER QUALIFICATIONS**
    3. ISIMET DLA Package is basis of the design. Alternatives packages containing all components, as listed in Section 1.2.A are acceptable as long as the minimum requirements of Section 1.3.C. are met.
    4. Additional components may be provided to the specified system including solenoid valves, enclosures, notification beacon, piping, wiring, conduit, and any other material, as needed, to provide a complete and operational system that complies with this specification.
    5. Any alternative to ISIMET, of any component, shall be submitted for approval prior to installation.
    6. Minimum General Requirements of the Drug Lab Testing Water Control System are:

Except for electrical components, the Controller and other components are to be assembled and manufactured in the United States.

Water Control System shall be assembled and listed to the following:

NEMA 1 rating for enclosures

UL Listed.

Compliant with Underwriter’s Laboratory UL916 Standards.

All components referenced in section 1.2.A must be procured from the same manufacturer of the Controller.

Access to the internal components of the Controller must be secured by tamper-resistant screws.

Activation of water within the space requires a

*(Designer must choose one and delete the other)*

* push button switch
* keyed switch.

Controller must indicate concentrically to the enabling switch Water On with a green indicator LED and Water Off with a red indicator LED.

* + - 1. **CODES AND REGULATIONS REFERENCES**
         1. Code of Federal Regulations (CFR)

Title 49: Transportation

Part 40 – Procedures for Transportation Workplace Drug and Alcohol Testing Programs

§40.43 (b) (1) Secure any water sources or otherwise make them unavailable to employee.

§40.63 (b) You must not give the employee any further access to water or other materials that could be used to adulterate or dilute a specimen.

* + - * 1. NFPA 70 National Electrical Code
        2. National Building Codes
        3. State and Local Building Codes
        4. All requirements of the local AHJ (Authority Having Jurisdiction)
      1. **QUALITY ASSURANCE**

1. General
   1. It is the intent of these Specifications and the Drawings, to secure the highest quality in all equipment and materials, and to require first-class workmanship, in order to facilitate trouble free operation and minimum maintenance of the electrical system.
   2. All work, including installation, connection, calibration, testing and adjustment, shall be performed by qualified, experienced personnel who are technically skilled in their trades, are thoroughly instructed, and are competently supervised by a certified electrician. The resulting complete installation shall reflect professional quality work, employing industrial standards and methods. Any and all defective material or inferior workmanship shall be corrected immediately at no additional cost.
   3. All equipment and materials shall be new, listed by UL and bearing the UL label, unless exception to this requirement is inherent to an individual item specified herein, or exception is otherwise specified, or approved, via a written allowance.
   4. Equipment and materials shall be the products of reputable, experienced manufacturers. Singular items in the project shall be the products of the same manufacturer. All equipment and materials shall be of industrial grade and heavy-duty construction, shall be of sturdy design and manufacture, and shall be capable of long, reliable, trouble-free service.
   5. Contractor shall furnish manufacturer's equipment of the types and sizes specified which has successfully operated for not less than the past five years, except where specific types are named by manufacturer and catalog number or designation under other Sections of the Contract Documents.
      * 1. **Warranty Requirements**
           1. Provide verification that the warranty of the Controller is at least 1 year.
           2. Once the contractor verifies the system is installed correctly, provide the acknowledgement that manufacturer of the system components, and has received the warranty card.
        2. **Submittals**
           1. General: Comply with Division 1 Submittals Procedure
           2. Equipment is not to be ordered without approved submittals.
           3. Product Data: (For each Component of the Water Control System Package.)
      1. Manufacturer,
      2. Model Number
      3. Detail all options and accessories
      4. Catalog Data Sheet
         * 1. All deviations from the Contract Documents shall be indicated within a submittal. Each deviation shall reference the corresponding drawing or specification number, show the contract document requirement text and/or illustration, and shall be accompanied by a detailed written justification for the deviation.
           2. Provide detail wiring diagram for power and wiring between all components and integration into the building system.
           3. Provide Manufacturer’s operation and maintenance information as well as Installation instructions.
           4. Provide specific Water Control System location.
2. **PRODUCTS**

The DLA Package includes the minimum components and devices to independently secure any water sources located within a drug laboratory testing facility and/or specimen collection facility. The following Package components shall be provided as shown on Drawings and as listed in the Equipment Schedule.

**CONTROLLER:**

At each specimen collection area and elsewhere as shown on Drawings, provide a Controller with panel mounted switches to activate remote solenoids for the control of domestic water as indicated by Drawings. The Controller shall be equipped with an enabling switch/key that deactivates output circuits. Activation of output circuits shall require engagement of enabling switch/key.

Model: *(Designer must choose one and delete the other)*

* DLA-HV: Normally Open (NO) 120VAC Solenoids, provided as necessary.
* DLA-LVL: 12VDC Latching Solenoids, provided,

**SOLENOID VALVE ASSEMBLY AND SOLENOIDS:**

At each specimen collection area and elsewhere as shown on Drawings, provide

*(Designer must choose one and delete the other)*

* Solenoid- Number of solenoids, intended use and pipe sizes are as noted in Equipment Schedule.
  + Shall be located and integrated with Controller as shown on Drawings.
  + Provide shock arrestor in flow stream at each domestic water service assembly.
* Solenoid Valve Assembly- Number of assemblies, intended use and pipe sizes are as noted in Equipment Schedule. Assemblies shall be:
  + Suitable for the medium for which it is intended.
  + Shall be located and integrated with Controller as shown on Drawings.
  + Shall be provided with “Factory Pressure Tested” ball valve, solenoid, integral in-line strainer and union for each domestic water service assembly.
  + Optionally:
    - Shock arrestor.

***OPTIONAL COMPONENT/DEVICES:***

**MONITORING BEACON/MESSEGE SIGN:**

Where shown on Drawings and in Equipment Schedule, furnish and install a wall mounted Indicator/Message. Location and mounting height shall be as directed by Architect. Make final wiring connection to Indicator.

**PART 3 – INTEGRATION AND CONFIGURATION**

**Utilities:**

Water supply and Drain to each specimen collection area(s) shall be controlled by an independent Controller. Control of services shall not be combined onto one output circuit unless indicated on Drawings. Services shall be activated by Controller key/switch.  Where systems include domestic hot and cold water, a single output circuit shall control those systems simultaneously. Activation of services shall be restricted to the collector by means of the enabling key switch.

**PART 4- EXECUTION**

INSTALLATION: Install in accordance with manufacturer’s recommendations and instructions and codes per 1.4.B

Furnish and install all devices as shown on Drawings and as specified herein. Where device is to be installed by other trades, furnish and then turn over to appropriate trade for installation.

PLUMBING: Contractor shall furnish necessary piping and fittings.

ELECTRICAL: Electrical Contractor shall furnish all conduit and wiring, making final wiring connections to all equipment as indicated by Drawings and specifications. Contractor shall be responsible for all system configurations, integration, test and start-up.

SPECIAL NOTE ON THE NEED FOR WIRING CONDUIT: Unless otherwise specified for wiring systems, provide conduits for control and integration wiring from point of connection to each device to accessible point above ceiling.