

**JOB TITLE: CONTROLS ENGINEER**

Reports To: Engineering Manager

Direct Reports: none

Compensation: Salary

Employment Status: Full time (45 Hours)

**COMPANY INFO**

M.W. Watermark is a leader, locally and globally, helping everyone protect our planet's natural resources.

M.W. Watermark constantly scans for ideas, opportunities or technologies that can help us advance toward our vision.

M.W. Watermark is a safe place to work, to inspire, to become inspired, and from where you go home fulfilled knowing that you helped not just "me" but also "us".

For us, and each generation that follows, M.W. Watermark's vision is to leave the world a cleaner and safer place than that in which we lived.

Join us. Together, we can make a difference.

**SUMMARY**

The Controls Engineer is an integral member of the M.W. Watermark engineering team, working to provide innovative, robust, and reliable electrical designs and programming to support both product development and project requirements. M.W. Watermark's equipment is sold to and installed in a wide variety of industrial applications that require a high degree of reliability both as stand-alone controls as well as controls that are integrated into site control systems.

**PRIMARY RESPONSIBILITIES**

The Controls Engineer designs, programs, and commissions automation systems, primarily related to recessed chamber filter presses using AutoCAD Electrical, Rockwell, Siemens and Keyence PLC software. This position will create schematics, develop PLC and HMI programming, and integrate components like light curtains, VFDs, transmitters, sensors, and switches. Key duties include ensuring compliance with customer specifications for both hardware and software, support of customer communication, shop programming and run-off, and occasional onsite startup as necessary.

- PLC Programming: Develop and troubleshoot PLC (typically Rockwell Allen-Bradley Studio 5000, Siemens TIA, Keyence) ladder logic, function block using Studio 5000/RSLogix.
- HMI Development: Create operator interfaces using Rockwell FactoryTalk View, Siemens WinCC, and Keyence VT Studio.
- Electrical Design: Design control panels and create electrical schematics (schematics, panel layouts, I/O diagrams) and bills of materials using AutoCAD Electrical and Autodesk Vault.
- Electrical within Skid Limits: Integrate Remote I/O (Allen Bradley and Emerson Aventics G3 Fieldbus), VFDs, safety light curtains & area scanners, pressure & level transmitters and proximity sensors.
- System Integration: Support the integration of machine control systems into customer distributed control systems, most often DeltaV or Rockwell PlantPAx.
- Service Support: Support service technicians remotely for troubleshooting of equipment in the field. Infrequent travel may be required for complex or highly integrated systems.
- Commissioning/Support: Occasionally perform onsite startup, debug, and validation of automated equipment at customer locations.
- Standards: Ensure compliance with UL508A, NEC, IEC 61131 and NFPA standards.
- Promote and contribute to a culture of continuous improvement.
- Other duties as assigned by the Engineering Manager.

**KNOWLEDGE AND SKILL REQUIREMENTS**

- Education: Bachelor's degree in related field or equivalent hands-on experience.
- Experience: 3+ years of experience in industrial automation, ideally with Allen-Bradley ControlLogix/CompactLogix systems.
- Software Proficiency: Knowledge of AutoCAD Electrical and Rockwell Automation suite, including Studio 5000, RSLogix 500/5000, and FactoryTalk View.



- Technical Skills: Ability to read/create electrical schematics, troubleshoot electrical hardware, and work with motors and sensors.
- Travel: Ability to travel occasionally is required. Travel is typically infrequent, but certain projects may require advanced programming skills for equipment commissioning and startup.

#### **WORKING CONDITIONS**

Working conditions are normal for an office environment. Business casual attire required. Occasionally work will be done on the production floor which requires the use of safety equipment to include but not limited to; safety glasses, hearing protection, steel toe work boots, and hardhats.

#### **REMOTE WORK**

This position is based in M.W. Watermark's Holland office, with approved remote work permitted for specific tasks or occasional flexibility as schedules permit. A high degree of collaboration and hands-on work is required which cannot be performed remotely.



**“ADA CHECKLIST”**  
**CHECKLIST FOR DETERMINING THE GENERAL PHYSICAL REQUIREMENTS,  
PHYSICAL ACTIVITIES, VISUAL ACUITY, AND WORKING CONDITIONS OF  
SPA STAFF POSITIONS**

Position: Controls Engineer

*Circle the letters that correspond with the physical aspects of the essential functions of the position. Essential functions are the fundamental job duties, meaning the position exists to perform the function; there is a limited number of employees among whom the performance of the function can be distributed; and/or the incumbent is hired for expertise or ability to perform the function due to its high specialization. The Americans With Disabilities Act of 1990 (ADA) and associated Federal regulations protect qualified individuals with disabilities from discrimination in all areas of employment. To be considered qualified, an individual must be able to perform the essential functions of a position, with or without reasonable accommodation. It is important that the physical tasks associated with the essential functions be identified appropriately so that persons with disabilities can determine if any accommodation is necessary.*

I certify that I have read the physical requirements as set forth below and am physically able to perform the necessary duties as indicated herein.

Employee Signature: \_\_\_\_\_ Date: \_\_\_\_\_

**1. GENERAL PHYSICAL REQUIREMENTS**

**Please check the ONE description of general physical requirements that best describes the work requirements of the position:**

- A. Sedentary work:** Exerting up to 10 pounds of force occasionally and/or a negligible amount of force frequently or constantly to lift, carry, push, pull or otherwise move objects, including the human body. Sedentary work involves sitting most of the time. Jobs are sedentary if walking and standing are required only occasionally and all other sedentary criteria are met.
- B. Light work:** Exerting up to 20 pounds of force occasionally and/or a negligible amount of force constantly to move objects. If the use of arm and/or leg controls requires exertion of force greater than that for Sedentary Work and the worker sits most of the time, the job is rated for light work.
- C. Medium work:** Exerting up to 50 pounds of force occasionally and/or up to 20 pounds of force frequently, and/or up to 10 pounds of force constantly to move objects.
- D. Heavy work:** Exerting up to 100 pounds of force occasionally and/or up to 50 pounds of force frequently, and/or up to 20 pounds of force constantly to move objects.
- E. Very heavy work:** Exerting in excess of 100 pounds of force occasionally, and/or in excess of 50 pounds of force constantly to move objects.

**2. PHYSICAL ACTIVITIES**

**Please check ALL physical activities that apply to the essential functions of the position:**

- A. Climbing:** Ascending or descending ladders, stairs, scaffolding, ramps, poles and the like, using feet and legs and/or hands and arms. Body agility is emphasized. This factor is important if the amount and kind of climbing required exceeds that required for ordinary locomotion.
- B. Balancing:** Maintaining body equilibrium to prevent falling when walking, standing or crouching on narrow, slippery or erratically moving surfaces. This factor is important if the amount and kind of balancing exceeds that needed for ordinary locomotion and maintenance of body equilibrium.



- C. Stooping:** Bending body downward and forward by bending spine at the waist. This factor is important if it occurs to a considerable degree and requires full use of the lower extremities and back muscles.
- D. Kneeling:** Bending legs at knee to come to a rest on knee or knees.
- E. Crouching:** Bending the body downward and forward by bending leg and spine.
- F. Crawling:** Moving about on hands and knees or hands and feet.
- G. Reaching:** Extending hand(s) and arm(s) in any direction.
- H. Standing:** Particularly for sustained periods of time.
- I. Walking:** Moving about on foot to accomplish tasks, particularly for long distances or moving from one work site to another.
- J. Pushing:** Using upper extremities to press against something with steady force in order to thrust forward, downward or outward.
- K. Pulling:** Using upper extremities to exert force in order to draw, drag, haul or tug objects in a sustained motion.
- L. Lifting:** Raising objects from a lower to a higher position or moving objects horizontally from position-to-position. This factor is important if it occurs to a considerable degree and requires the substantial use of the upper extremities and back muscles.
- M. Fingering:** Picking, pinching, typing or otherwise working, primarily with fingers rather than with the whole hand or arm as in handling.
- N. Grasping:** Applying pressure to an object with the fingers and palm.
- O. Feeling:** Perceiving attributes of objects, such as size, shape, temperature or texture by touching with skin, particularly that of fingertips.
- P. Talking:** Expressing or exchanging ideas by means of the spoken word. Those activities in which they must convey detailed or important spoken instructions to other workers accurately, loudly, or quickly.
- Q. Hearing:** Perceiving the nature of sounds at normal speaking levels or without correction. Ability to receive detailed information through oral communication, and make fine discriminations in sound.
- R. Repetitive Motions:** Substantial movements (motions) of the wrists, hands, and/or fingers.

### 3. VISUAL ACUITY

**Please check the ONE description of visual acuity requirements (including color, depth perception, and field of vision), that best describes the requirements of the position:**

- A.** The worker is required to have close visual acuity to perform an activity such as: preparing and analyzing data and figures; transcribing; viewing a computer terminal; expansive reading; visual inspection involving small defects, small parts and/or operation of machines (including inspection); using measurement devices; and/or assembly of fabrication of parts at distances close to the eyes.



- B. The worker is required to have visual acuity to perform an activity such as: operating machines such as lathes, drill presses, power saws and mills where the seeing job is at or within arm's reach; performing mechanical or skilled trades tasks of a non-repetitive nature such as carpenters, technicians, service people, plumbers, painters, mechanics, etc.
- C. The worker is required to have visual acuity to operate motor vehicles or heavy equipment.
- D. The worker is required to have visual acuity to determine the accuracy, neatness, thoroughness of work assigned (i.e., custodial, food services, general labor, etc.) or to make general observations of facilities or structures (i.e., security guard, inspection, etc.)

**4. WORKING CONDITIONS**

*Please circle ALL conditions the worker is subject to in performing the essential functions of the position:*

- A. The worker is subject to inside environmental conditions: Protection from weather conditions but not necessarily from temperature changes.
- B. The worker is subject to outside environmental conditions: No effective protection from weather.
- C. The worker is subject to both environmental conditions: Activities occur inside and outside.
- D. The worker is subject to extreme cold: Temperatures typically below 32 degrees for periods of more than one hour. Consideration should be given to the effect of other environmental conditions such as wind and humidity.
- E. The worker is subject to extreme heat: Temperatures above 100 degrees for periods of more than hour. Consideration should be given to the effect of other environmental conditions such as wind and humidity.
- F. The worker is subject to noise: There is sufficient noise to cause worker to shout in order to be heard above the ambient noise level.
- G. The worker is subject to vibration: Exposure to oscillating movements of extremities or whole body.
- H. The worker is subject to hazards: Includes a variety of physical conditions, such as proximity to moving mechanical parts, moving vehicles, electrical current, working on scaffolding and high places, exposure to high heat or exposure to chemicals.
- I. The worker is subject to atmospheric conditions: One or more of the following conditions that affect the respiratory system of the skin: Fumes, odors, dusts, mists, gases or poor ventilation.
- J. The worker is subject to oils: There is air and/or skin exposure to oils and other cutting fluids.
- K. The worker is required to wear a respirator.
- L. The worker frequently is in close quarters, crawl space, shafts, manholes, small, enclosed rooms, small sewage and water line pipes, and other areas which could cause claustrophobia.
- M. The worker is required to function in narrow aisles or passageways.



- N. The worker is exposed to infectious diseases.
- O. The worker is required to function around prisoners or mental patients.
- P. None: The worker is not substantially exposed to adverse environmental conditions (such as in typical office or administrative work).