

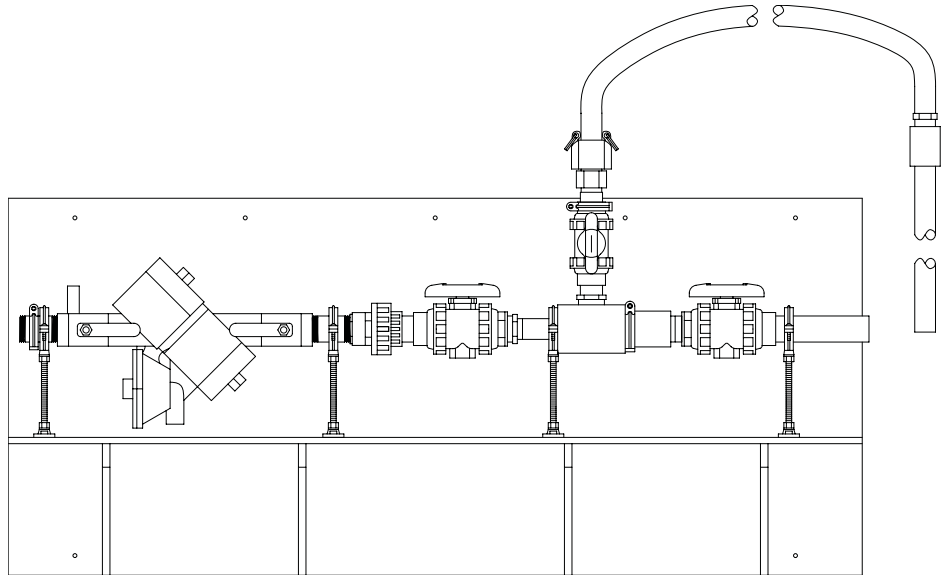
KM_nO₄ Educator

Engineering Specifications

POTASSIUM PERMANGANATE EDUCATION SYSTEM

The chemical solution blending system shall be an eductor-based sub-system using make-up water flow to create suction for chemical powder entraining. The system shall be controlled by the Chemical Feed Control Panel and shall be equipped with a programmable batch controller and flow sensor powered by plant control system along with pressure reducing and backflow prevention valves as detailed below.

- 1. Blending Performance:** sub-system shall be capable of blending 22 lbs. per minute of free-flowing technical grade KM_nO₄ powder with the incoming water stream.
- 2. Materials of Construction:** all chemical-contacting components shall be made of PVC or other materials compatible with KM_nO₄.
- 3. Make-up Water Source:** plant water (no booster pump required). Booster pump required if plant water pressure is below 85 psig.
- 4. Make-up Water Pressure Regulation:** system shall be equipped with a pressure reducing valve with an adjustable set point for fine-tuning flow and operation. Valve must have internal strainer for separating any solids from make-up water. Pressure reducing valve input pressure max = 200 psig. Output pressure range = 85-170 psig.
- 5. Make-up Water Source Protection (Anti-Siphon Protection):** system shall be equipped with an AWWA certified backflow prevention device. Unit shall have internal "Y" strainer to protect internal parts from solids. Material: Bronze body & Buna-N seals. Maximum water Input pressure: 200 psig.
- 6. Automatic Flow Control:** System shall be capable of automatic shut off using a solenoid valve powered from plant control panel and programmable batch controller and flow sensor.
- 7. Fluid Connections:** 1-1/4" NPT male input connection with 1" barbed fitting outlet connection (for 1" ID tubing) after ball valve. Eductor, solenoid valve, and discharge end check valves shall be union-mounted for easy removal. Chemical pick up hose shall be 1" ID clear, flexible PVC. Hose length 6' with 2' long (additional) PVC (gray) Pick up wand with wall mount sheath.
- 8. Flow Sensor:** The flow sensor shall be model FT520, manufactured by Seametrics or approved equal.
- 9. Solenoid Valve:** Solenoid valve shall be Asco Services 8210 (normally closed) or approved equal.
- 10. System Dimensions:** the entire subsystem shall fit within the following: Length 48", Height 24", Depth 12".
- 11. Mounting:** system shall be skid or wall mountable.
- 12. Manufacturer:** System shall be by Northeast Pump & Instrument Company, Acton, MA.



800-378-1500

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