



Akiki Engineering Est.

Water & Steam Experts



4.1. Closed System Catalogue

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Contents

Chemical Products for Closed Systems	3
Equipment For Closed Systems (1)	4
Chemical Dosing Pots	5
Equipment For Closed Systems (2)	7

Chemical Products for Closed Systems

Treatment Benefit Features:

- Eliminates leakage caused by corroded pipes, joints, etc.
- Prolong the life of your equipment.
- Reduce maintenance cost.
- Maintain cooling and heating efficiencies

Pipe Cleaner: CCH 4200

- Liquid used to clean and flush loop containing dirty water and large amounts of rust and scale
- Remakes soluble the mineral deposit and disperse the none soluble particles
- You don't have to stop the installation, and on metallic surfaces, it has a passive action
- After the curative treatment, it is necessary to make a preventive treatment by using CVA 4110 (soft water) and biocide for microbiological control CFR 2260
- Dosage rate: 1 % to 5 % of system volume
- Package: can of 20kg

Anticorrosion & Antiscale: CVA 4110

- Liquid used for the control of corrosion in closed systems, chilled and hot water heating systems (soft water)
- Combination of corrosion inhibitors, scale inhibitors and a buffer (caustic soda)
- Dosage Rate: 118 g / m³ / OTAC
- Storage: Keep away from freezing area
- Package: Can of 20 and 200 kg, container of 1000 kg

Microbiological Control: CFR 2260

- Used as preservative, bactericide, microbiocide, odour controller, and anti-fouling agent
- Used when there is a sterilisation
- Dosage is function of contamination state of the treated circuit, seasons, temperatures
- Sterilisation: 200 to 300 ppm, Maintenance: 100 to 150 ppm
- Storage: Keep away from freezing point
- Package: Can of 20, 25 and 230 kg

Equipment For Closed Systems (1)

Controller



Controller

- Digital readout display
- Control inhibitor feeding based on make-up volume
- Conductivity / pH function: Sensor, set point, high/low alarm
- Set points and alarms (Conductivity, pH)
- Control biocide-feeding program
- Furnish one microprocessor per independent closed system.

Cold Water Meter



Cold Water Meter

- Provide a make-up water meter sized the same as the make-up line
- A water meter is to be hard wired into the microprocessor controller, registering and accumulating total gallons of make-up water.
- Furnish a make-up water meter per each independent closed system

Chemical Dosing Pots



Correct water treatment is essential for the corrosion protection of heating system. AEE Thermal products chemical dosing pots offer a safe and convenient way to introduce water treatment chemicals to the system.

General

Guidelines for installation and use are given below. However, the equipment and water treatment in use in any individual system may dilate variations so please consult your water treatment supplier to ensure best results.

Installation

Choose a location near a main pipe run or system header. Fasten the chemical dosing pot securely in place using the brackets provided. Pipe the drain away to a safe disposal point. Connect the system connections to the pipe or system header. To ensure that there will be a flow through the chemical dosing pot leave sufficient gap between the connection points to give a difference in dynamic pressure between them (1 meter apart should be enough). This will admit the water treatment gradually to the system water. Alternatively, connect between flow and return headers, which will admit the water treatment more quickly.

Each dosing pot is supplied as standard complete with the following Operating Specifications:

- System isolation valves
- Dosing valve
- Drain valve
- Air vent
- Funnel
- Blue gloss paint finish
- For full technical details see drawing No.

Features:

- Furnish a chemical dosing pot with suitable capacity (Liters) per each independent closed system.
- Other sizes are available

Use Caution

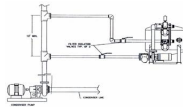
- The dosing pot contents may be hot. Take care, avoid scalding.
- On higher temperature systems the contents may be above atmospheric boiling point. Opening valves may cause a release of flash steam.
- Isolate the chemical dosing pot from the system by closing the two system ball valves.
- Slowly open the drain valve- caution-some water and flash steam may be emitted to the disposal point.
- Open the dosing valve, and the vent screw. The contents will now drain out.
- Close the drain valve
- Fill the chemical dosing pot the vent with the required amount of chemicals, diluted as necessary.
- Close the dosing valve and the vent screw.
- Open the system valves to allow system water through the unit.

Equipment For Closed Systems (2)

Chemical Feeding Equipment



Side Stream Filtration Unit



Chemical Feeding Equipment

- We provide positive displacement diaphragm chemical metering pump with the following properties:
- Fully adjustable speed and stroke settings over the entire operating range
- Furnish two chemical metering pumps per independent closed system. One pump for inhibitor feed and one pump for biocide.
- Polyethylene chemical feed tank is provided. Each tank shall have a drum level switch agitator, incorporated in it.
- Also locally made chemical tanks can be provided

Side Stream Filtration Unit

- Including sand filter, filter pump, strainer and controls, factory assembled, piped and wired mounted to steel skid.
- Complete with all accessories and electrical panel board.
- Other series are also available

Disinfection

- A new main after installation should be pressure tested, flushed to remove dirt or foreign matter, and disinfected with a minimum chlorine concentration of 50 mg/l.
- The chlorinated water should remain in the pipe for a minimum of 24 h then 200 mg at least 3 h.
- The chlorinated water should be flushed to waste by using potable water. Microbiological tests should then be conducted before placing the main in service.
- Tanks and reservoirs should be disinfected before being placed into service or following inspection and cleaning.