

A detailed technical line drawing of a Flocmix Flocculant Plant, showing various tanks, pipes, and mechanical components. The drawing is rendered in a light blue color and is set against a dark blue background with a red and white curved border at the top.

FLOCMIX FLOCCULANT PLANTS

PROCESS EQUIPMENT THAT WORKS

M C PROCESS FLOCCULANT SYSTEMS

M C PROCESS FLOCMIX PLANT

M C Process has rapidly gained recognition in the mining and minerals-processing industries for its design of flocculant systems that operate to maximum efficiency.

This is backed up by extensive knowledge and understanding regarding the handling of various phases of long-chain liquid polymers.

M C Process ensures that dry flocculant powder, being hygroscopic, is kept dry by gentle heat. High intensity mixing after initial wetting is followed by gentle handling of the polymer chains that are formed.

M C Process manufactures complete packaged flocculant-mixing plants to suit specific process conditions with storage capacity ranging from 3 000 litres to 75 000 litres, and make up concentrations from 1g/l to 5g/l.

The system has a small footprint both physically and electrically, thereby eliminating onerous site requirements like labour-intensive installation, lengthy start-up time and exorbitant commissioning costs.

The M C Process Flocmix plant is factory pre-assembled, wired and tested prior to shipment.

Standard systems are supplied on a compact skid frame, designed for ease of transport.

SUITABLE APPLICATIONS:

Thickening
CCD Circuits
Filtration plant
Reagent plants
Clarifiers
Water Treatment

FEATURES AND BENEFITS:

- Simple modular construction and efficient design ensures easy maintenance, fault finding, parts replacement and reliable operation.
- Automated control with minimal operational involvement, other than loading bulk bags into the storage hopper at pre-set frequencies.
- Remote monitoring of system is achieved by connecting to the output card of the PLC
- Safe and easy loading of dry flocculant is ensured by having adequate storage capacity and the step-by-step filling process for the application. This can be seen in our pneumatic and bulk bag dry flocculant hoppers.
- Layout designed for minimal splashing of slippery and potentially dangerous flocculant solution. Platform layouts enable an easy and safe wash-down for tank surfaces.
- Efficient spatial design of system ensures minimal plant room is taken up.
- All mechanical equipment is adequately rated for outdoor operation , and is sufficiently shielded from flocculant wash-down.
- Flocculant dosing pumps and control packages with dry run protection are also supplied if required.
- Main control box exists on the flocculant access platform as an integral part of the modular package, providing easy access and observation of system control.
- Simple external operator adjustments for equipment control exist on the main control panel as well as a fail-safe emergency stop facility.
- Installation requires a single power, instrument and process water inlet point.



PROCESSING EXCELLENCE

PLC CONTROL:

- Touch screen and simple to operate
- Facility is provided for manual adjustment of operational times for flocculant screw feeder and agitator
- Agitation time for solutions can be varied
- Testing and calibrating screw feeder capacity for specific flocculant. The screw feeder can be tested independently
- All-weather control panel and lockable door incorporates a touch screen display
- Operational support available from M C Process

FAIL SAFE SOLUTION CONTAMINATION PREVENTION:

- The logic of the system ensures that solution in the mixing tank does not contaminate aged solution in the storage tank. Interrupted batch cycle cannot re-commence if the operational mode remains in 'auto'.

MATERIALS OF CONSTRUCTION:

TANK:

- Standard systems are manufactured in 3Cr12 or epoxy-coated mild steel, offering prolonged protection against corrosion.

EASY LOADING OF BULK BAGS INTO STORAGE HOPPER:

- An integral part of the design is the feeding system. The bag hopper is positioned so that standard 25kg flocculant bags can be lifted manually onto the storage tank access platform with ease. It allows the operator to empty the bag into the assembly opening simply and safely.
- These unit can be adapted to suit bulk bags or pneumatic off loading facilities

ROTAMETERS AND STATIC MIXERS:

- The plant offers the ultimate level of dosage control with Rotameters for main water supply, dilution water, concentrated flocculant dosing rate and final diluted flocculant supply indication.
- The combination of a static, in-line mixer after measurement and a VSD on the flocculant injection pump provides for the ultimate dosing rate control.

