

# **EGM<sup>LLC</sup>**

PROCESS & CHEMICAL FEED EQUIPMENT

Oil & Gas • Power Generation • Chemical Processing • Mining • Pulp and Paper • Water Resources • Pharmaceutical

## ***DRY CHEMICAL EQUIPMENT***



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## Something New

### EGM TRACK RECORD OF INNOVATION REACHES DRY MATERIAL FEEDER

EGM Designed PLC Control Panel



EGM, with a decade of skid mounted, modular process equipment manufacturing experience, is now offering customers who need to slurry or dissolve dry products at precise concentrations a new option to consider when purchasing or renting a turn-key feed system.

This system was completely designed, from the ground up, questioning conventional approaches that are seen in iteration after iteration on these types of systems.

### DRY FEED UNIT MECHANICAL FEATURES



**EGM Dry Chemical Feed Unit**

- All stainless steel skid frame
- Bolt-On option for stainless bulk bag support with outriggers
- Automatic ball valve for water
- Multi-Stage water booster pump
- Variable speed water pump drive
- Pressure Transmitter Installed
- Magnetic Flow Meter
- Three levels of filtration / sifting
- EGM Designed Wetting Mechanism
- Easily adjustable educator effect
- Direct Mounted Tank Mixer
- On-board PLC Control Package
- Reputable, brand name components

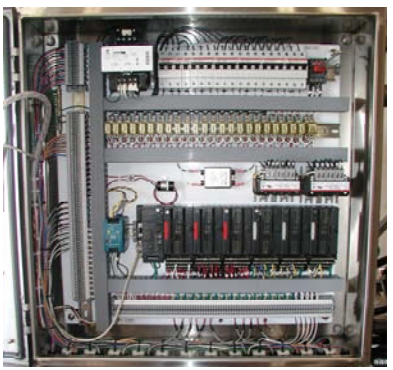
# Rugged, Durable, and Intuitive Construction

EGM Designed Dosing Funnel



## DRY FEED UNIT AUTOMATION FEATURES

- Pressure Loop Control For Motive Water
- Water Low and High Flow Rate and Pressure Alarms (fully user configurable in the PLC)
- PLC Accommodates any size Mix Tank
- PLC Accommodates any size Day Tank
- PLC can control product transfer pumps
- “Smart Batch” Feature automatically adjusts for batch to batch transfer variation
- PLC Setup Features “Inventory” based level maintenance for both Day and Mix tanks
- PLC Features 4 Point Linear Regression Auger calibration scheme
- Architecture allows for either volumetric or gravimetric dry product metering
- PLC pacing function insures adequate pre flush and post flush cycles for trouble free operations



**Control Panel with PLC & Color HMI**

- Dilution Water Runs on Pressure Loop
- Water Pressure & Flow is Monitored
- User Configurable Alarms for Water
- EGM Dry Chemical Wetting Unit generates 25 to 28 inches of Mercury Vacuum
- Basic platform is easily scalable in both wet and dry capacities
- System integrates with transfer pump unit
- System can operate mixer on Mix Tank
- System can operate mixer on Day Tank
- System can run on ratio control



Dilution Water Handling System

## Easy, Clean Handling of Bulk Bags

### RUGGED BULK BAG HANDLING

Stainless Steel Material Hopper



All dry material hoppers are custom fabricated at EGM, giving client companies the ability to specify design capacities, materials of construction and associated accessories.

To insure the system will work with your specific material, EGM can perform full scale, in house testing with customer supplied sample material to position proximity switches in the precise required location, and to properly calibrate the augers to run flawlessly with any dry materials.

### SIMPLE FEATURES PROMOTE SAFETY



- Simple, Dust Free “Bag Locking” Arrangement
- Hinged, “Window” door for hopper observation and easy access to untie bulk bags
- Simple, locking iris valve to regulate dry material discharge flow from bulk bags into hopper
- Hoppers available with or without bin vibrators to help persuade material flow
- Stainless Mesh Auger / Funnel Screens
- Multiple Proximity Switches for Alerts and Alarms regarding hopper and bulk bag issues

EGM Dry Chemical Feed Unit Hoppers



# Mixing Tanks Built to Perform

MIX TANKS, DAY TANKS, AND COMPLETE TANK PACKAGES WITH ACCESSORIES



- 1.9 SG, X-Link PE Tank Packages available
- Direct mounted mixers for rugged and stable use for both mixing tanks and product storage tanks
- Mixers can be configured with motor starters or variable frequency drives
- Mixers can be run based on level or time, direct from the dry unit PLC

- Tank package can be fully equipped with all necessary valves, fittings and piping
- Level transmitters can be pre-installed on Mix Tanks or Day Tanks either with or without transmitter isolation valves

**Get the entire, turn-key package from EGM, or utilize your own, on-site tank!**



**MODULAR SYSTEM DESIGN ALLOWS FOR OPTIONAL CONFIGURATIONS**

**DRY MATERIAL HANDLING OPTIONS**

- Hoppers / Loaders Designed for hand carried bags (50 lbs / 25 kg)
- Bulk Bag Frame for Fork Lift Mounting
- Bulk Bag Frame with Hoist and Trolley
- Flexible Hopper Capacities
- Multiple Hopper Sensors for Alarms

**WATER HANDLING OPTIONS**

- Multiple Capacities
- Pressure Loop Controlled
- Flow Loop Controlled
- Multiple Alarming Scenarios

**AUGER OPTIONS**

- Volumetric Based Metering
- Gravimetric Based Metering (Load Cells)
- Rigid Body Augers (free flowing material)
- Flexible Body Augers (clumping material)
- Multiple Capacity Augers fit in same frame

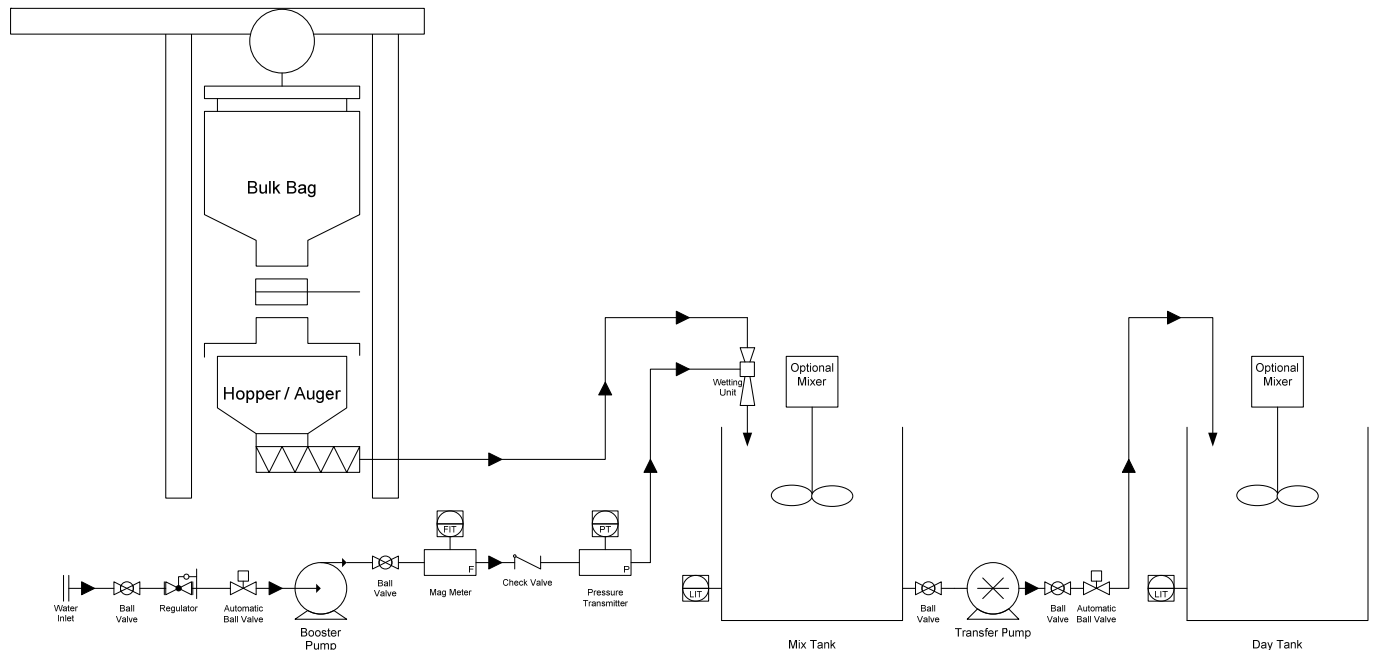
**TANK OPTIONS**

- Uses Separate Tanks for Flexibility
- PLC Automatically scales for tank size
- EGM can supply Mix Tanks
- EGM can supply Non-Mix Tanks
- Use existing or third party Tanks
- Main Control Panel can power mixers, monitor tank levels and control transfer pumps (if properly equipped)

**TYPES OF MATERIALS / CHEMICALS HANDLED**

- |                             |                                 |                            |
|-----------------------------|---------------------------------|----------------------------|
| • Dry Polymers              | • Carboxymethyl Cellulose (CMC) | • Pigments and Fillers     |
| • Bentonite                 | • Talc                          | • Powdery Minerals         |
| • Lime                      | • Silica                        | • Bakery and Confectionery |
| • Poly Vinyl Alcohol (PVOH) | • Starches                      | • Food and Pharmaceutical  |

**DRY CHEMICAL FEED SYSTEM THEORY OF OPERATION**



# Round Out The System

## EGM FEED SYSTEMS, TRANSFER PUMPS, FILTRATION UNITS



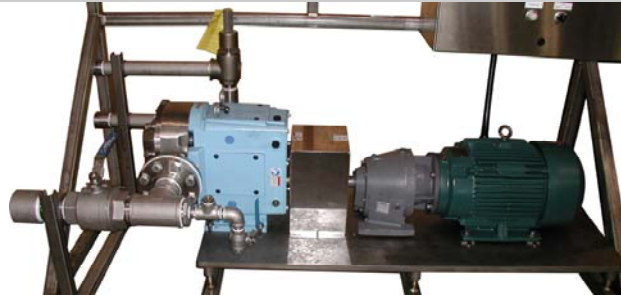
### FEED SYSTEMS

- Gear Pumps
- Progressive Cavity
- Lobe
- Diaphragm
- Centrifugal

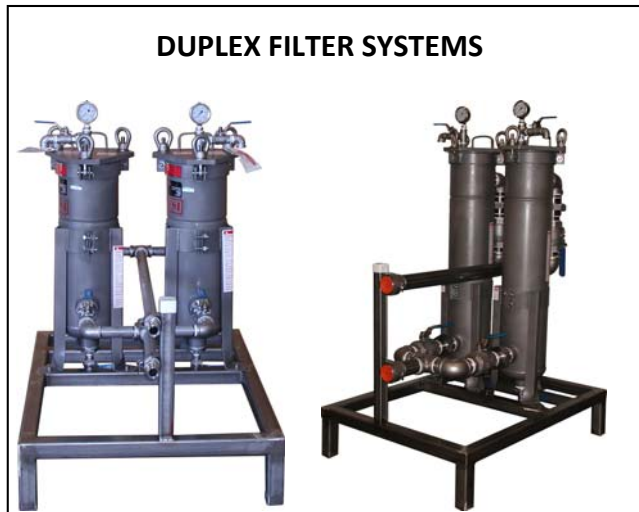


Make EGM your "one stop shop" to obtain all the equipment you need to make your dry system complete. The sample equipment shown here can be packaged with your dry dilution unit and either purchased or rented.

## TRANSFER PUMP SYSTEMS



### DUPLEX FILTER SYSTEMS





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