

EGM^{LLC}

PROCESS & CHEMICAL FEED EQUIPMENT

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

LOBE PUMP SYSTEMS



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For high flow rates applications, EGM offers lobe pump feed systems that serve as an economical means of achieving required capacity. Available in simplex, duplex, triplex or customized multi-plex configurations, the EGM series of Lobe Pump feed systems can be customized to meet client-specific requirements. Options include available post dilution loops (both manual and automated), local and / or remote control, materials of construction and various power compatibility.

Lobe Pump System Benefits

- Economical for high flow rates
- Rugged design
- Low Shear
- Tolerates solids / suspensions
- Non pulsing flow
- No metal-to-metal contact internally
- Positive suction



SIMPLEX UNIBLOC LOBE PUMPING UNIT

SPECIFICATIONS

Power Supply: 480 VAC, 575 VAC (CSA Certified), Customer Specified Power

Materials of Construction: 316 SS Plumbing, Customized upon request

Electrical Enclosure: NEMA 4X, 316 SS or FRP, Conduit to Electrical Components

Base & Frame: 1.5", 2", or 2.5" pending system size with 304 SS Square Tubing. Configured for Fork Lift Usage.

Standard Components:

- Baldor Washdown Duty Motor
- Endress+Hauser Flowmeter(s)
- Neptune Pressure Relief Valve
- Unibloc or Boerger Lobe Pump(s)
- WIKA / Winters SS Gauges
- Instaflo Calibration Column(s)
- AC Tech Drive(s)

Additional Specifications Available:

- Mechanical P&I Drawing
- Mechanical Materials List
- Electrical Drawing
- Electrical Materials List
- General Drive Parameter Settings

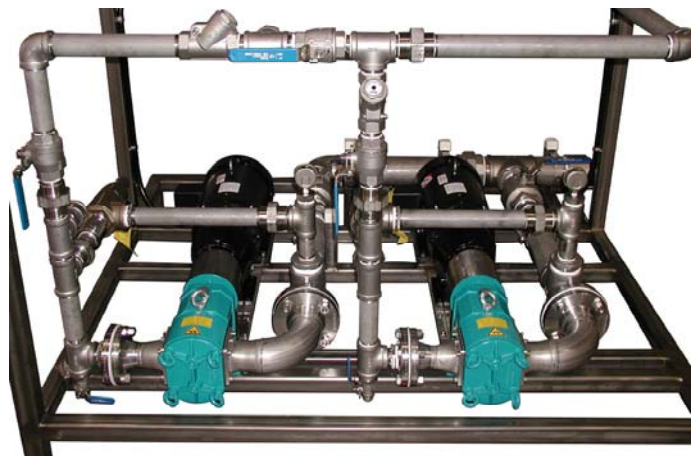
Equipment Options:

- Water Dilution Loop w/ Data Storage Unit
- Automation Packages
- Electrical Voltage Configurations

Shipping Point: Mobile, Alabama

Duplex Lobe System Configuration

- Available as Primary / Backup
- Available as Primary / Primary
- Optional post dilution water loops in either manual or automated configurations
- Local PID or remote DCS tie-in
- All stainless steel plumbing
- EGM designed mounting brackets for easy pump maintenance and alignment
- Gearboxes available



DUPLEX BOERGER LOBE PUMPING UNIT

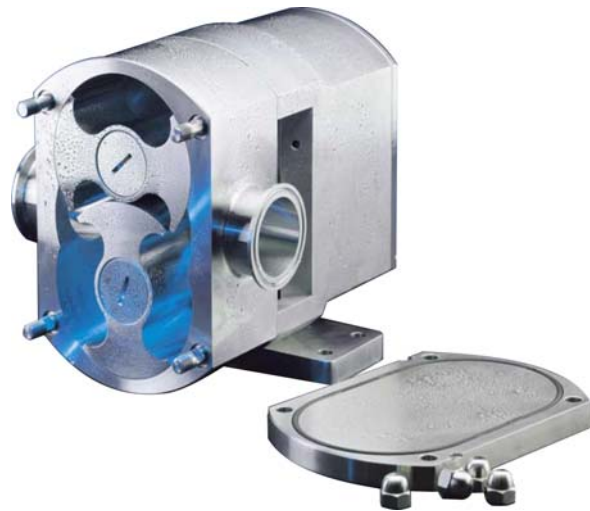
EGM LOBE PUMP CONSIDERATIONS

Lobe pumps are frequently used in applications where solids need to be handled. Because the internal components do not make metal to metal contact, these pump designs can handle contaminated fluids, slurries, particulates and solids without damaging the pump. There are several important factors that need to be taken into account when building feed systems with lobe designs. EGM has extensive experience with lobe feed systems and takes the following details into account when building systems:

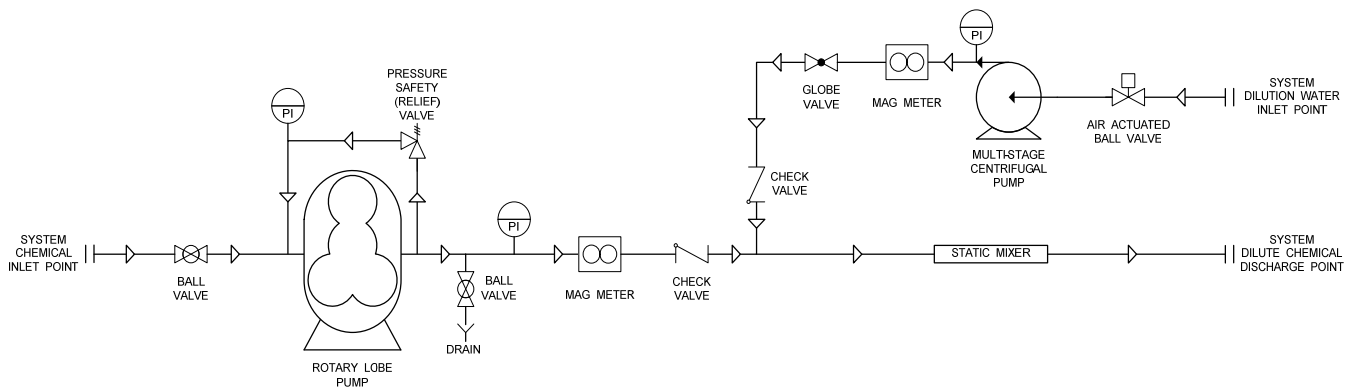
- Economic feasibility compare to other designs
- Shear tolerance / requirements
- Liquid solids loading
- Liquid viscosity to compensate for slip
- Proper pump sizing
- Solids plate mounting to prevent alignment issues
- Gearbox and motor speed to delivery proper RPM
- Suction plumbing sizing to prevent starving

LOBE PUMP APPLICATION CANDIDATES

- Higher Flow Services
- Precise Metering Required
- Clays and Pigments
- Paper Coating Applications
- Starch Applications
- Difficult Media
- Polymers
- Food Applications
- Sanitary Use

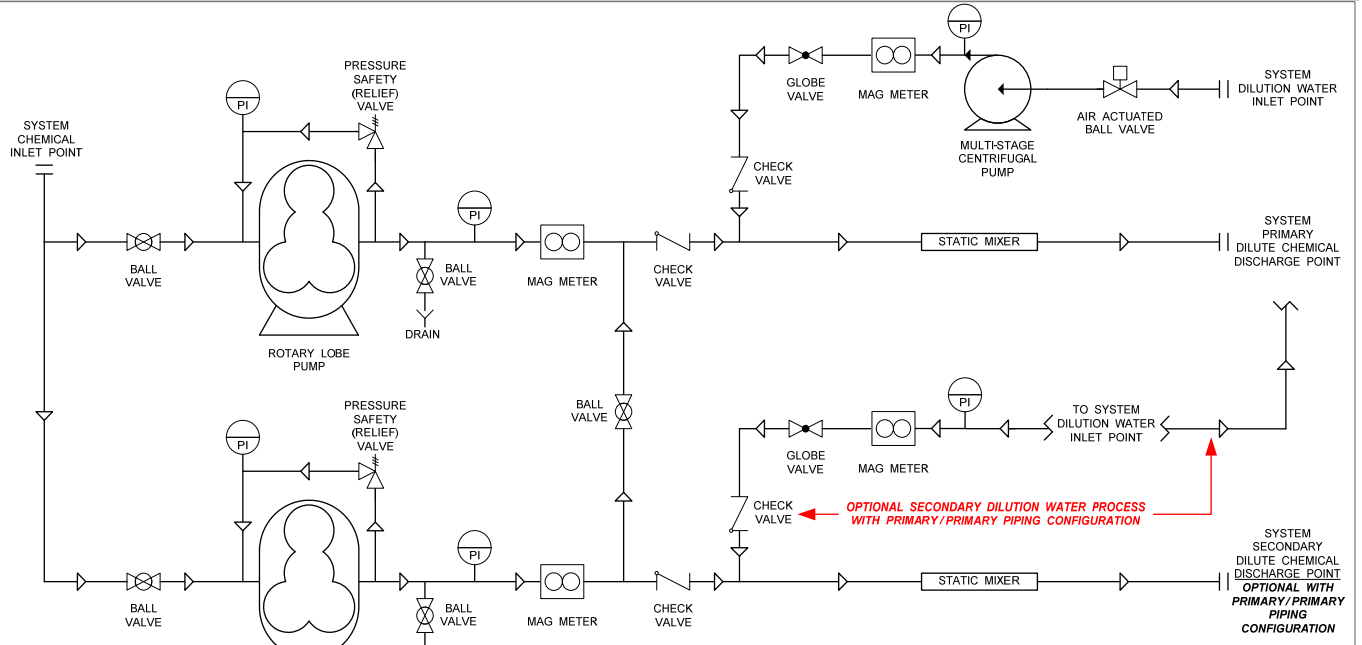


THEORY OF OPERATION

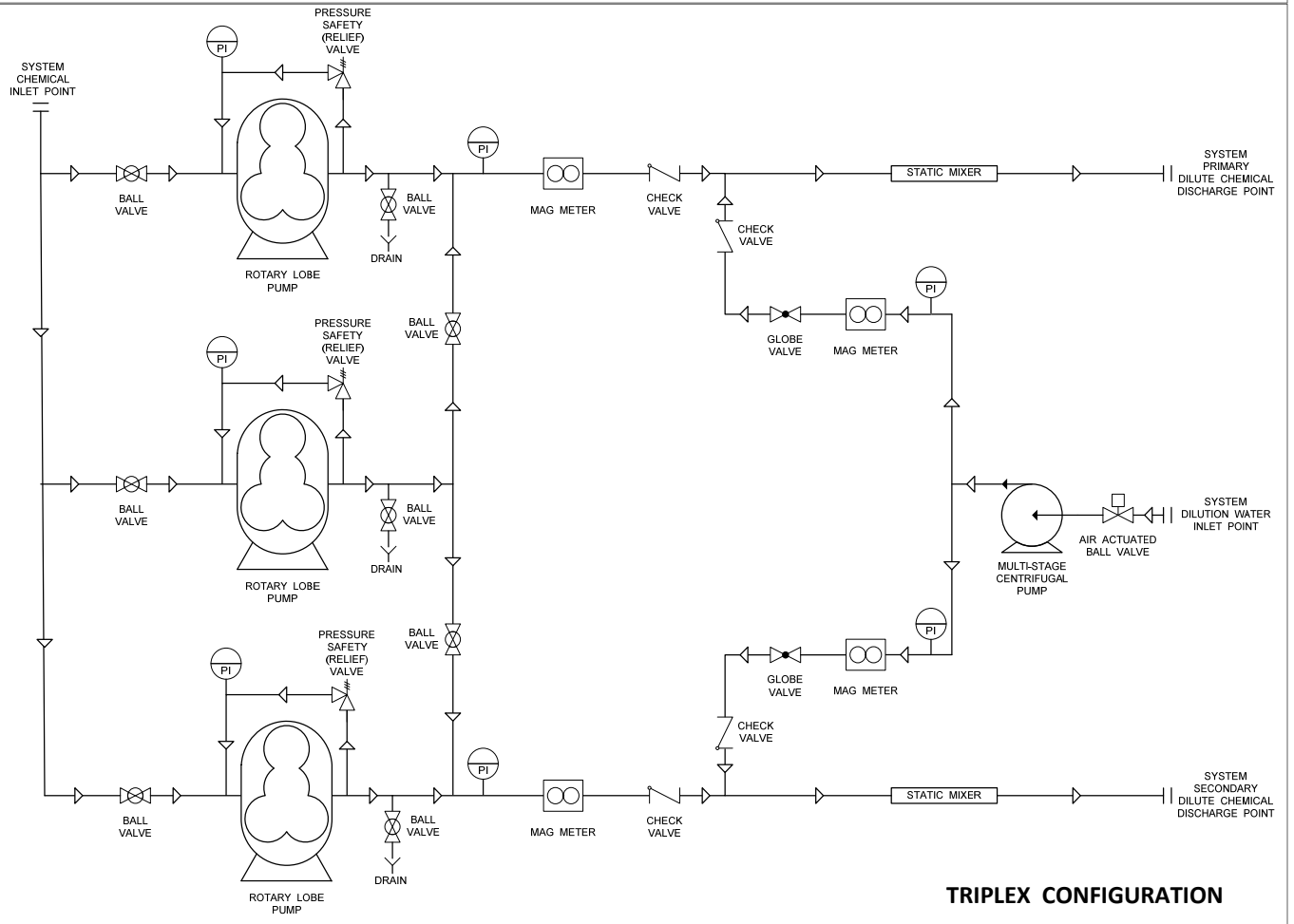


SIMPLEX CONFIGURATION

THEORIES OF OPERATION



DUPLEX CONFIGURATION



TRIPLEX CONFIGURATION

EGM LOBE PUMP FEED UNIT MODEL CODE EXAMPLE

EHF DLP- 30- UPD450 480- 2D20 X

Series:

EHF = High Flow Feed System (greater than 5 gpm)

Configuration:

SLP = Simplex Lobe Pump Unit
 DLP = Duplex Lobe Pump Unit
 TLP = Triplex Lobe Pump Unit
 #LP = Where # is number of Pumps on Unit

Capacity:

Indicated Designed System Capacity per Application Details
 9 = 9 gallons / minute
 15 = 15 gallons / minute
 30 = 30 gallons / minute
 For High Viscosity Systems, "HV" is added
 Example 9HV = 9 gallons / minute with high viscosity fluid

Pump Code:

Designates specific pump used
 UPD indicated Unibloc Lobe Pump
 BAL indicates Boerger Lobe Pump
 Example —UPD450 = Unibloc PD Series 450 Pump

Power:

480 = 480 VAC
 575 = CAS Certified 575 VAC

Option 1:

D20 = 20 gallon / minute manual dilution loop
 2D20 = twin 20 gallon / minute manual dilution loops
 3D20 = triplet 20 gallon / minute manual dilution loops
 AD20 = 20 gallon / minute automated dilution loop
 2AD20 = twin 20 gallon / minute automated dilution loops
 3AD20 = triplet 20 gallon / minute automated dilution loops
 D30 = 30 gallon / minute manual dilution loop
 2D30 = twin 30 gallon / minute manual dilution loops
 3D30 = triplet 30 gallon / minute manual dilution loops
 AD30 = 30 gallon / minute automated dilution loop
 2AD30 = twin 30 gallon / minute automated dilution loops
 3AD30 = triplet 30 gallon / minute automated dilution loops

Option 2:

X = None
 GB# = Gearbox, where # = specific gear ratio
 Q = Custom





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