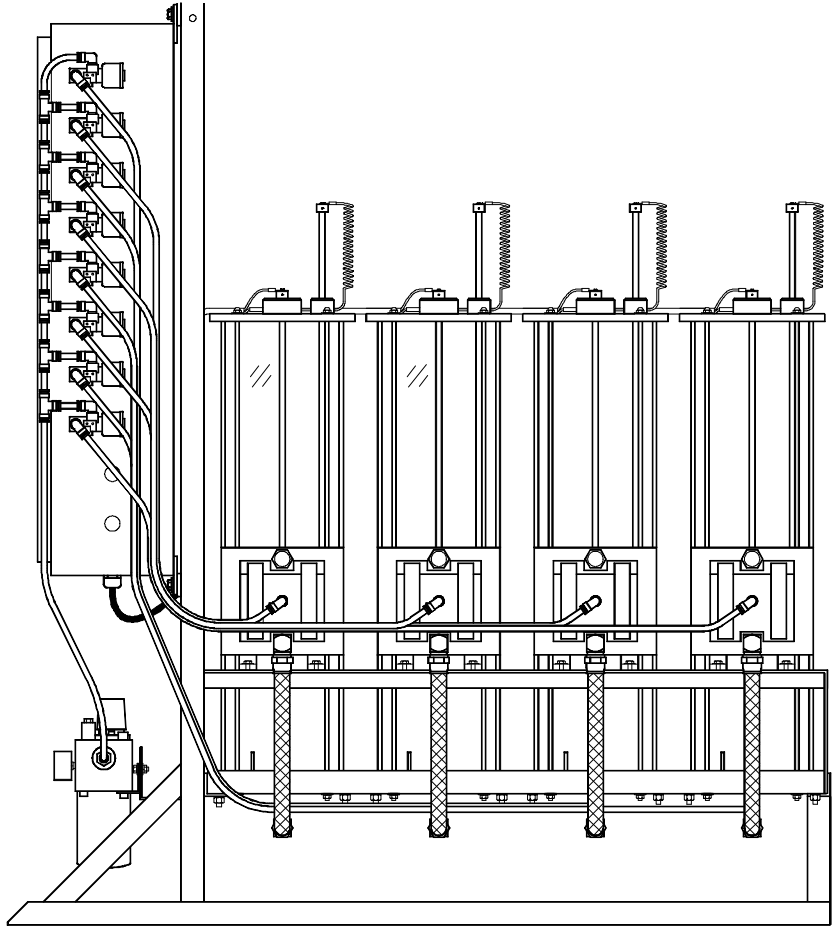


LIQUID COLOR SYSTEM



VCS-7™

Eagle Engineering & Supply Co.
Alpena, Michigan

VCS-7™



LIQUID COLOR DISPENSER

The *VCS-7™* provides reliable performance through long established volumetric liquid dispensing technology. Continuously redesigned through more than 25 years, the *VCS-7™* is a dispenser that maintains good accuracy and repeatability. Through a combination of relay controls and quality components, the *VCS-7™* provides accurate and dependable performance in a cost effective package. With a simplified operator interface, the *VCS-7™* is extremely easy to learn & use and provides flexibility and adaptability to a vast range of manufacturing operations. The *VCS-7™* has evolved to meet the current needs of the industry.

THEORY OF OPERATION

The host machine (batching system) normally controls all of the dispensing operations in the automatic mode. However, the dispenser can also be operated in the semiautomatic mode, or the operator can have complete manual control of all the dispenser functions.

FILL CYCLE

At the beginning of the batch cycle, the batching system sends either a contact closure or a 120 volt signal to the dispenser. This signal energizes a relay which illuminates the “Charge” pilot light on the control enclosure and starts the “charge” pumps. The liquid color then begins to enter the dispensing chamber from the bottom of the tube. The color continues to fill the tube until it reaches the “high” probe. Upon contact with the “high” probe, a low level electrical circuit is completed between the “high” probe and a “ground” probe in the bottom plate of the dispensing chamber. This circuit stops the pump and exhausts any compressed air still in the airline supply of the pump and extinguishes the “Charge” light. A check valve in the bottom of the chamber prevents the liquid color from being siphoned back out of the chamber.

DISCHARGE CYCLE

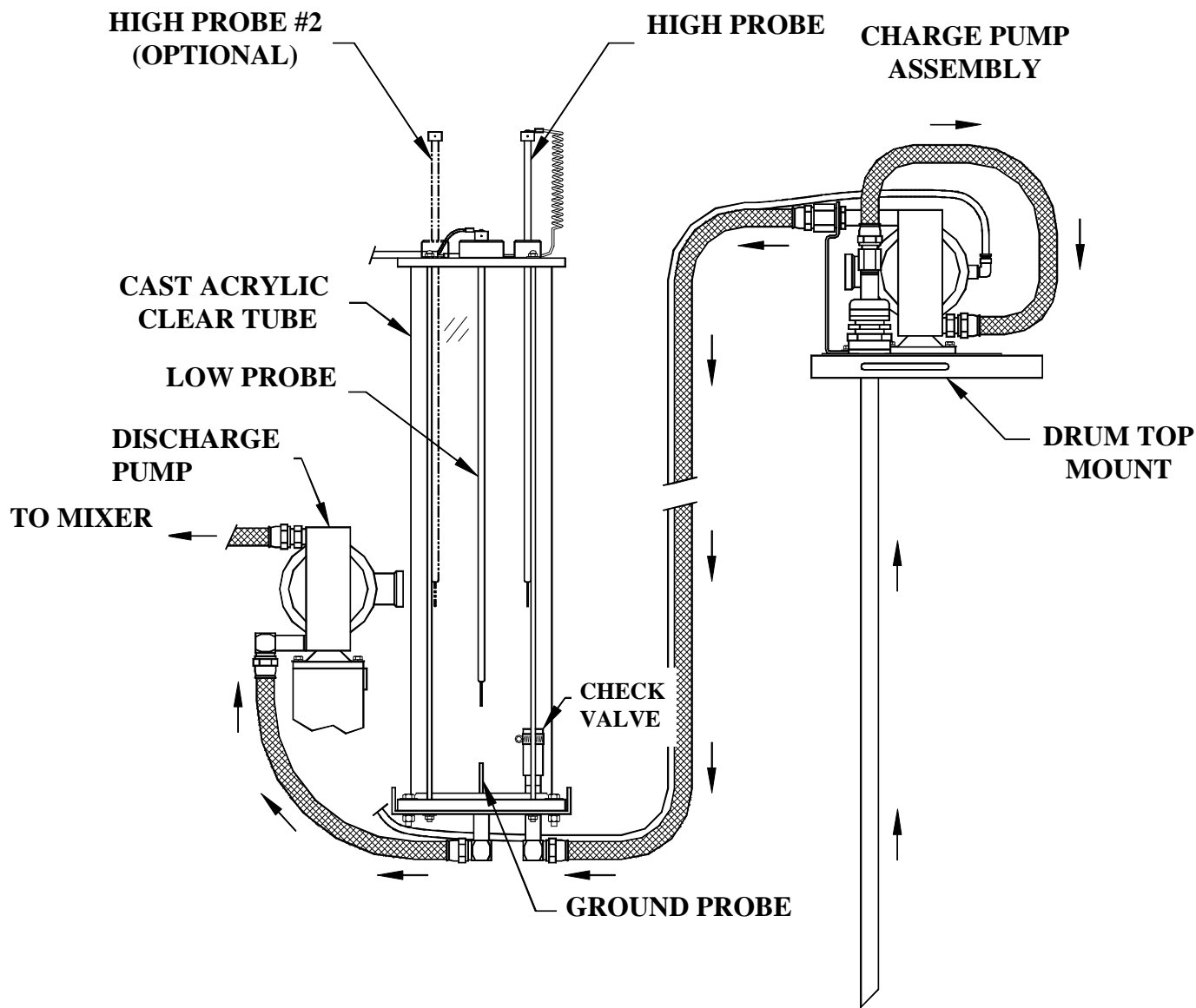
At the beginning of the discharge cycle, the batching system sends either a contact closure or a 120 volt signal to the dispenser. This signal energizes a relay which illuminates the “Discharge” and “Gate Interlock” pilot lights on the control enclosure, starts the “discharge” pumps and energizes the “gate interlock” relay. The liquid color begins to be pumped out of the dispensing chamber from the bottom of the tube, and the color level in the tube begins to fall. As the level falls, it descends below the “low” probe and a low level electrical circuit is broken between the “low” probe and a “ground” probe in the bottom plate of the dispensing chamber. This circuit stops the “discharge” pump and exhausts any compressed air still in the airline supply of the pump. When the “discharge” pump stops, the “Discharge” light is extinguished but the “gate interlock” relay remains energized. The “gate interlock” timer continues to the operator preset value to allow proper mixing of the color/aggregate mix. When the “gate timer” times out, the “gate interlock” relay releases, extinguishing the “Gate Interlock” light and allows the mixer gate to be opened as required.

ALARMS

An alarm alerts the operator to unusual conditions and other factors that can lead to bad batches. For example: if the mixer gate attempts to open before the color has been properly mixed with the aggregate, an alarm will sound. In addition, the dispenser will signal the host machine that the discharge cycle is complete.

MULTICOLOR OPTION

Multicolored or marbleized finished product can be accomplished through an optional third “high” probe. This option provides automatic alternating between two different sets of “high” probes with each successive charge signal or color batch. This allows every other color batch to be different the preceding batch.



8" TUBE ASSEMBLY

VCS-7™ CHARACTERISTICS

Accuracy (standard 8" tube) . . .	0.30 lb.
Accuracy (optional 4" tube) . . .	0.15 lb.
Number of stored formulas	1
Multiple blends	Optional
Operator inter	Push buttons
Control	Automatic/Manual
Volumetric chamber	Transparent Chamber
Color capacity (per 8" tube) . . .	35 lbs*
Color capacity (per 4" tube) . . .	15 lbs*
Typical cycle time 10 lb. batch .	50 seconds
Typical cycle time 60 lb. batch .	170 seconds
Alarms	Local, Remote (optional)
Pumps	Double Diaphragm
Number of colors	Up to seven
Electrical protection	Circuit breakers,
Operating voltage	120 volt, 50/60 Hz.

*Based on 15 lb. per gallon of liquid color

Application Support & Training

Eagle Engineering provides factory applications and technical assistance. Our Staff quickly responds to customer needs, troubleshooting problems, analyzing system operations, and coordinating component repair or replacement. Eagle Engineering provides on-site startup and training, worldwide, for our complete line of dispensing equipment.

For information on how you can get the **VCS-7™** installed in your manufacturing facility, call **1-800-824-1085**



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