

VSS Emultech®

Laboratory Emulsion Plant



VSS Emultech® offers a self-contained laboratory scale emulsion plant for developing and testing anionic and cationic emulsion formulations. With an available heat exchanger the Lab Plant is also capable of milling emulsion using modified asphalt.

The VSS Emultech Laboratory Asphalt (bitumen) Emulsion Plant features a Supraton Colloid mill and is designed to replicate the production scale milling process. Various emulsifiers and formulations can be tested quickly with minimal wasted material. Each plant is complete with tanks, pumps heating and instrumentation to accurately control the various combinations of asphalt, water and chemicals to produce the specific emulsion required. Emulsifier solution, additives, polymers and asphalts are metered into a specifically-designed manifold before being injected into the colloid mill.

The standard mixing method is by temperature sensing. The technician uses the bitumen and soap temperature and calculates an emulsion temperature based upon the desired final bitumen percentage required.

An available flow sensing option (shown in photo above) allows for greater manual control of bitumen and soap flows for more accurate emulsion production. The technician simply maintains the flows to reach the desired final bitumen percentage required.

In addition, there is an available flow control option which greatly simplifies the operation by automatically adjusting the flow of the soap to match the desired final bitumen percentage required. The formulation is controlled precisely based on the material flows, regardless of temperature fluctuation.

THE RIGHT SOLUTIONS, RIGHT NOW
slurry.com



a division of Reed International

VSS Emultech®

Laboratory Emulsion Plant

VSS Emultech's Laboratory Asphalt Emulsion Plants are capable of producing small batches of emulsion while accurately replicating the production scale milling process. Fully equipped for producing both Anionic and Cationic emulsions, with a modifier injection system suitable for latex or a variety of other additives. The plant package is fully plumbed, with all pumps, check valves and temperature gauges installed in the system. A 3-way valve on the mill outlet allows for directing the flow to waste tank or to a sample container. The plant package is completely wired and ready for immediate installation.

LABORATORY PLANT

CAPACITIES

• Mill Output	110 - 220 ltrs/hour	30 - 60 gals/hour
• Bitumen Tank	20 liters	5.25 gallons
• Bitumen Pump	0.8 - 2.3 ltrs/min	0.2 - 0.6 gals/min
• Soap Tank	20 liters	5.25 gallons
• Soap Pump	0.2 - 2.0 ltrs/min	0.05 - 0.5 gals/min

COLLOID MILLS

- Stainless steel rotor and stator
- Designed to match the tool tip speed of the production scale mill
- Very high shear

BITUMEN SYSTEM

- Pump capacity matched to mill production
- Pump includes relief valve
- Complete system valving for in-line circulation
- Piping is insulated and traced with electric heat tape

EMULSIFIER SYSTEM

- Flow display (liters or gallons)
- Peristaltic pump with Tygon tubing
- Digital pump controller maintains desired mix ratio
- Optional flow control versions:
 - Manual control of flow rates
 - PLC control to automatically maintain the mix ratio

LATEX SYSTEM

- Latex Tank 2.0 liters 0.5 gallons
- Latex Pump 0.005 - 0.48 ltrs/min 0.0001 - 0.13 gals/min
- Adjustable speed peristaltic pump
- Latex is optional on flow sensed systems

CONTROL PANEL

- Frame-mounted, fully enclosed
- All controls for mill, asphalt pump, water pump, modifier pump, and instruments
- Large format meters display all relevant flow and temperatures
- Mill motor speed control and display
- Asphalt pump motor speed control and display
- Soap pump motor speed control and display
- Latex pump motor speed control and display

ELECTRICAL SYSTEM

- 460V 3-phase, 60 Hz
- 380V 3-phase, 50 Hz
- 240V 3-phase, 60 Hz
- 208V 3-phase, 60 Hz
- Or designed to suit needs



U.S. and International Patents Pending
VSS reserves the right to make changes in specifications at any time as part of our continuing program of product improvement.

© 2016



a division of Reed International

P.O. Box 178 13024 Lake Rd
Hickman, CA 95323 USA
1-800-474-2357 209-874-2357
Fax 209-874-1174
www.slurry.com sales@slurry.com