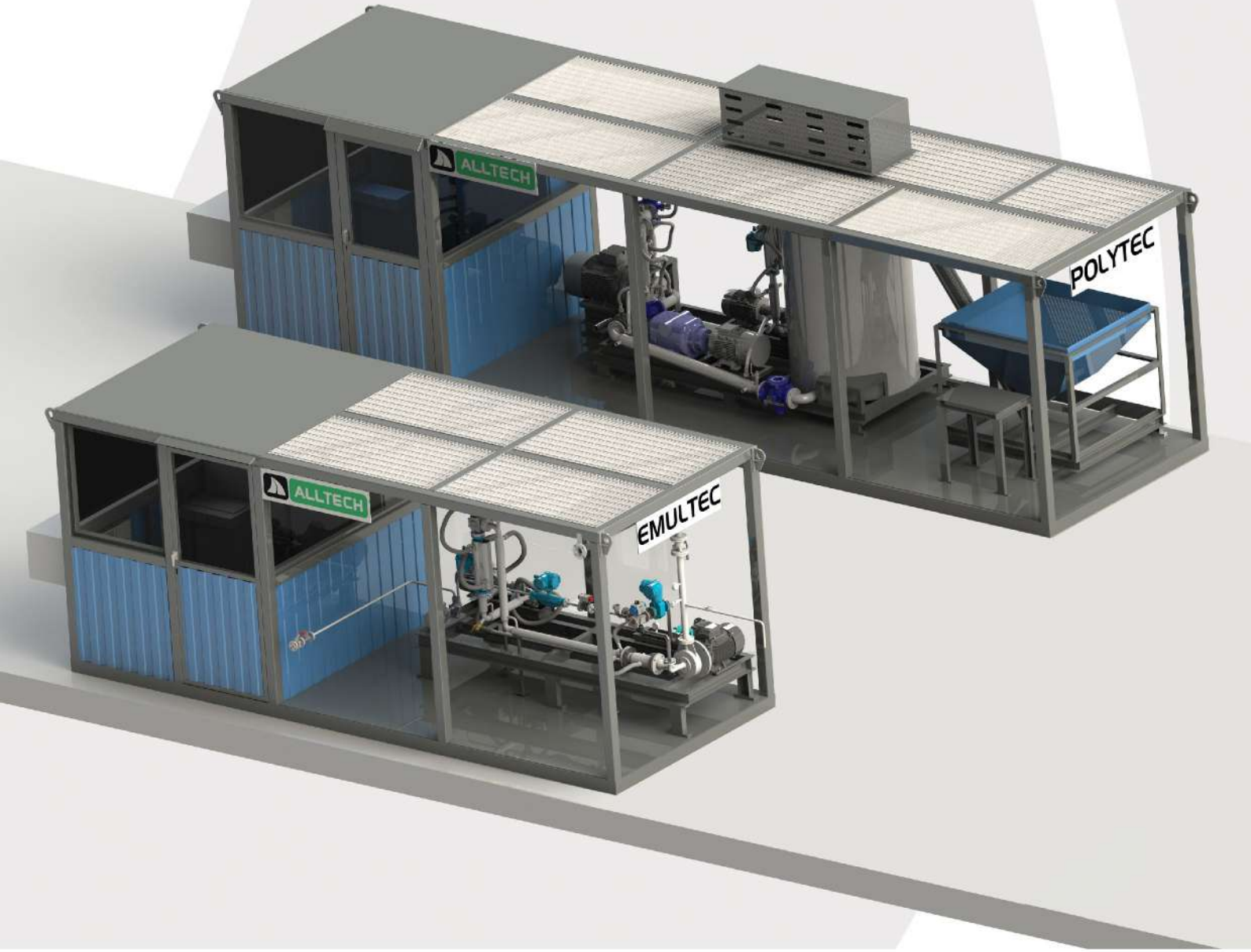
ALLTECH

Bitumen Modifying Equipments

EMULTEC | Emulsion Plant
POLYTEC | PMB/CRMB Plant

Capacity Range: **7 - 40 TPH**



RUGGED | ROBUST | RELIABLE

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Enhance Road Durability with **Alltech Bitumen Modifying Equipments**

Containerized Design | **High ROI, Low** Operation Cost | **Hassle-Free** Maintenance | Designed to Meet **Country-Specific Standards**

CERTIFIED ISO 9001 COMPANY

CERTIFIED ISO 45000 COMPANY

CERTIFIED ISO 14001 COMPANY

PMB/CRMB:

- Highway Construction
- Airport Runways
- Urban Roads
- Pavements in Harsh Environments
- Heavy Traffic Areas

EMULSION:

- Surface Treatments
- Soil Stabilization
- Road & Maintenance
- Cold Mix Asphalt
- Skid Resistance

In an era where infrastructure demands are constantly evolving, the need for advanced materials capable of withstanding the rigors of modern construction has never been greater. Whether constructing highways, airports, or urban roadways, Alltech's POLYTEC and EMULTEC Bitumen Modified plants are purpose-built to deliver unmatched performance, exceptional durability, and consistent reliability. As the demand for high-quality road construction materials intensifies, Alltech has developed the definitive solution for enhancing the performance, elasticity, and resistance of asphalt, empowering infrastructure projects to stand the test of time.

Challenges with Traditional Asphalt:

- Low elasticity and cracking resistance
- Unsuitable for high-traffic and demanding environments
- Shortened lifespan requiring frequent repairs
- Maintenance Costs and Downtime

Why Choose **Alltech's Bitumen Modified Plants?**

Skid-Mounted Design: Engineered for compactness and portability, ensuring seamless on-site setup and operation. The containerized structure guarantees efficient and hassle-free global/site transportation.

Capacity: Delivers a robust production range of 7 to 40 MT/hr, addressing diverse project demands with precision and reliability.

Performance Standards: Built to exceed IS/ ASTM/ AASHTO requirements, ensuring exceptional reliability and durability for road construction and maintenance.

Flow Metering System: Precision- engineered to maintain absolute control over bitumen, water, and chemical ratios, optimizing operational accuracy and output quality.

Superior Grade High Shear: Constructed with premium high-alloy stainless steel featuring an advanced groove and teeth pattern for superior droplet dispersion. Direct flange mounting on the motor ensures low power consumption while delivering smooth and stable shearing with consistent results.

Operational Efficiency: Designed to minimize energy consumption through an advanced organic fluid thermic heater, reducing fuel costs by up to 50%. The streamlined setup process ensures uninterrupted and cost- effective operations.

PLC-Based Control Panel: Equipped with advanced features, including warning alarms, production tracking, bypass functionality, automated operations, real-time monitoring, and data tracking. Delivers unparalleled control and user efficiency in every operation.

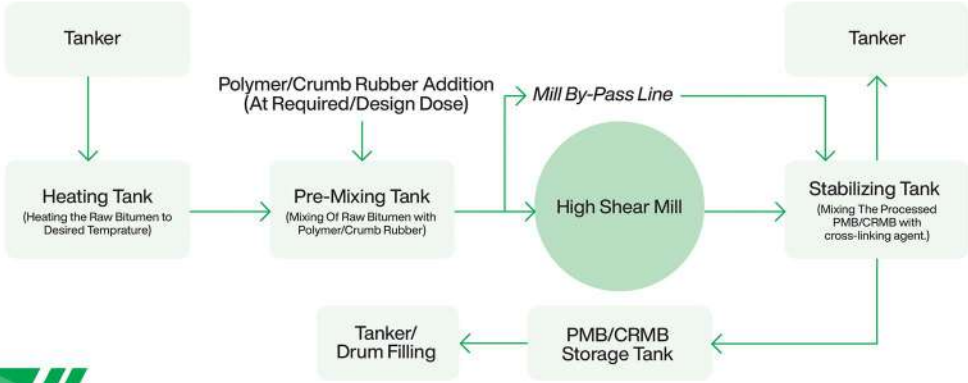
POLYTEC Series | 7 to 40 TPH

Strengthening Roads for Heavy Loads & Lasting Performance.

Alltech's POLYTEC Bitumen Modified Plant is engineered to produce Polymer Modified Bitumen (PMB) and Crumb Rubber Modified Bitumen (CRMB) at large volumes with unparalleled precision. Designed for the most demanding applications, POLYTEC enables the production of a range of high-performance bitumen grades, ideal for use in high-traffic roads, airports, and areas subject to extreme wear. This plant guarantees superior elasticity, crack resistance, and long-lasting durability, ensuring the integrity of asphalt in even the most challenging environments.

Grades Delivered by Alltech's POLYTEC Plant:						
PMB 64-10	PMB 70-10	PMB 76-10	PMB 82-10	PMB 76-22	CRMB 55	CRMB 60

Process Flow of PMB/CRMB Plant



Reliability
You Can Trust

Technical Specifications

Model		POLYTEC Series	
Plant Capacity	TPH	7 to 40	
Sections			
Mill	Type	Superior Grade Colloidal Mill	
Screw Conveyor	Type	VFD / Load Cell	
Flow Meters	Type	Electromagnetic Mass Flow Meter	
Process Control	Type	PLC - Scada	
Additional Components			
Thermic oil Heater (Skid-Mounted)	Types	Liquid/Solid/Gas Fuel	
Bitumen Tanks	Types	Cylindrical	Cuboidal
	MT	30 | 50 | 100	45
PMB / CRMB Storage Tanks	MT	30 | 50 | 100	
Drum Filling Machine	Cycle Time	As Per Requirement	

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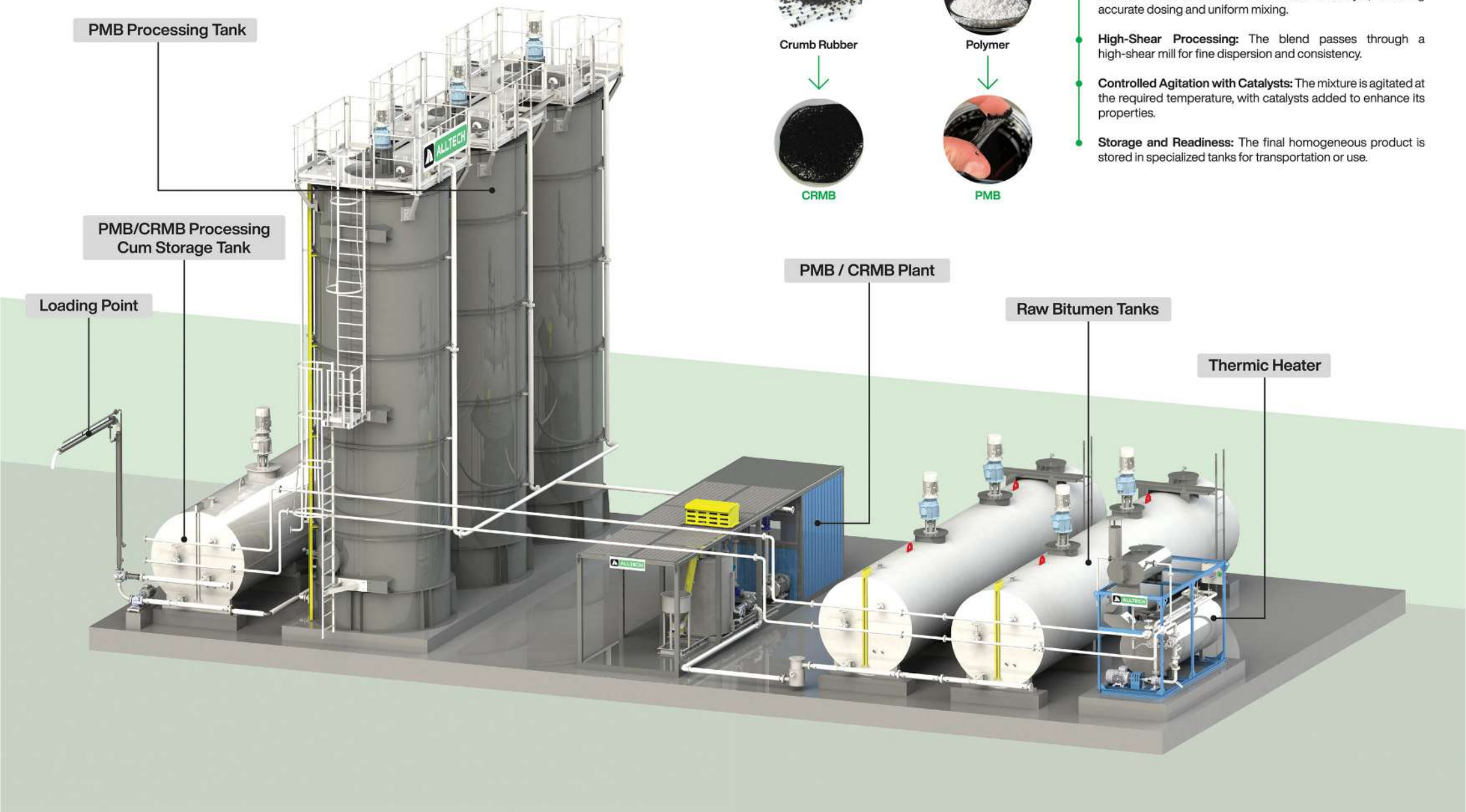
General Arrangement: PMB/CRMB Plant



Working Principle of **PMB/CRMB Production:**

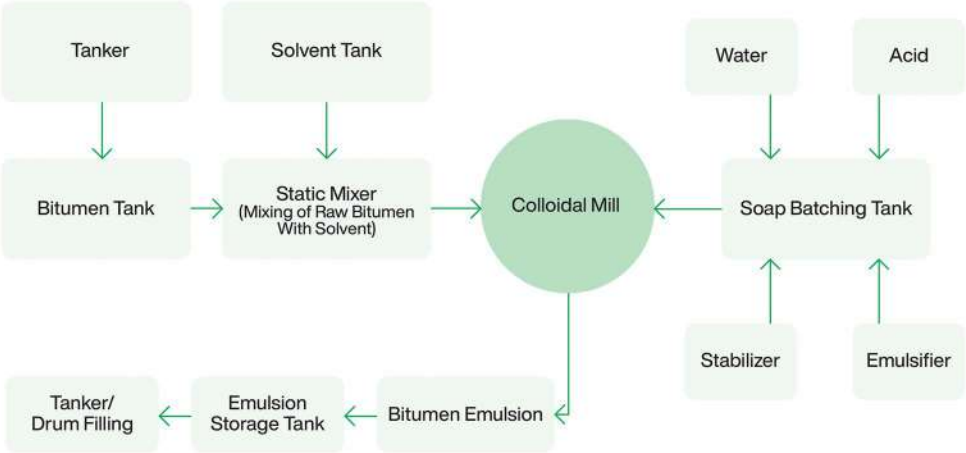
- **Precise Blending:** Base bitumen is heated, and polymer or crumb rubber is added via a screw conveyor, ensuring accurate dosing and uniform mixing.
- **High-Shear Processing:** The blend passes through a high-shear mill for fine dispersion and consistency.
- **Controlled Agitation with Catalysts:** The mixture is agitated at the required temperature, with catalysts added to enhance its properties.
- **Storage and Readiness:** The final homogeneous product is stored in specialized tanks for transportation or use.

EMULTEC Series | 7 to 40 TPH

Precise Emulsions for Stronger, More Durable Pavements.

Alltech's EMULTEC Bitumen Emulsion Plant is engineered for precision, producing consistent, high-quality emulsions suitable for a wide range of applications, including road construction, micro-surfacing, and soil stabilization. Capable of producing Cationic, Anionic, Modified, and Micro-surfacing emulsions, EMULTEC ensures the production of stable & durable emulsions capable of long-distance transport and easy application, making it the go-to choice for complex road maintenance and resurfacing projects.

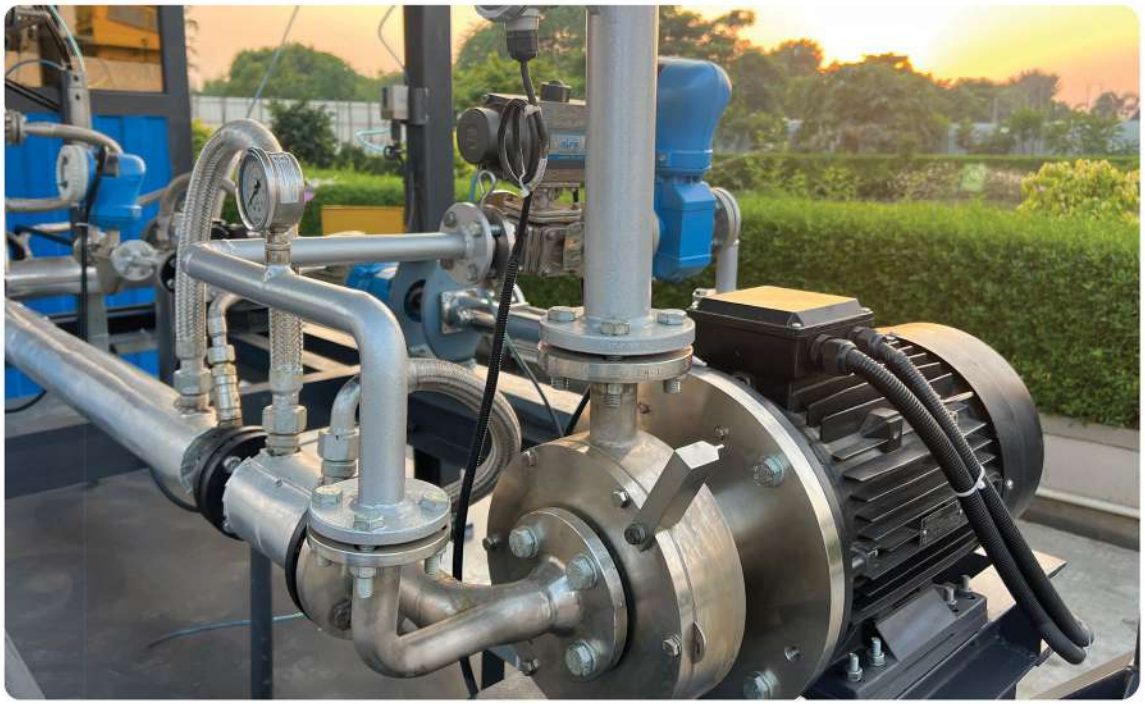
Process Flow of Emulsion Plant



Grades Delivered by Alltech's EMULTEC Plant:					
RS-1	RS-2	MS	SS-1	SS-2	Modified

Precise Flow Meter

Highly Efficient Bitumen Dosage Pump



Technical Specifications

Model		EMULTEC Series	
Plant Capacity	TPH	7 to 40	
Sections			
Mill	Type	Superior Grade Colloidal Mill	
Flow Meters	Type	Electromagnetic Mass Flow Meter	
Process Control	Type	PLC - Scada	
Additional Components			
Soap & Solvent Tanks	Liters	As Per Requirement	
Thermic oil Heater (Skid-Mounted)	Types	Liquid/Solid/Gas Fuel Bases	
Bitumen Tanks	Types	Cylindrical	Cuboidal
	MT	30 | 50 | 100	45
Emulsion Tanks	kL	20 | 30 | 50	
Water Tank with Heating Arrangement	kL	10 | 20	
Drum Filling Machine	Cycle Time	As Per Requirement	

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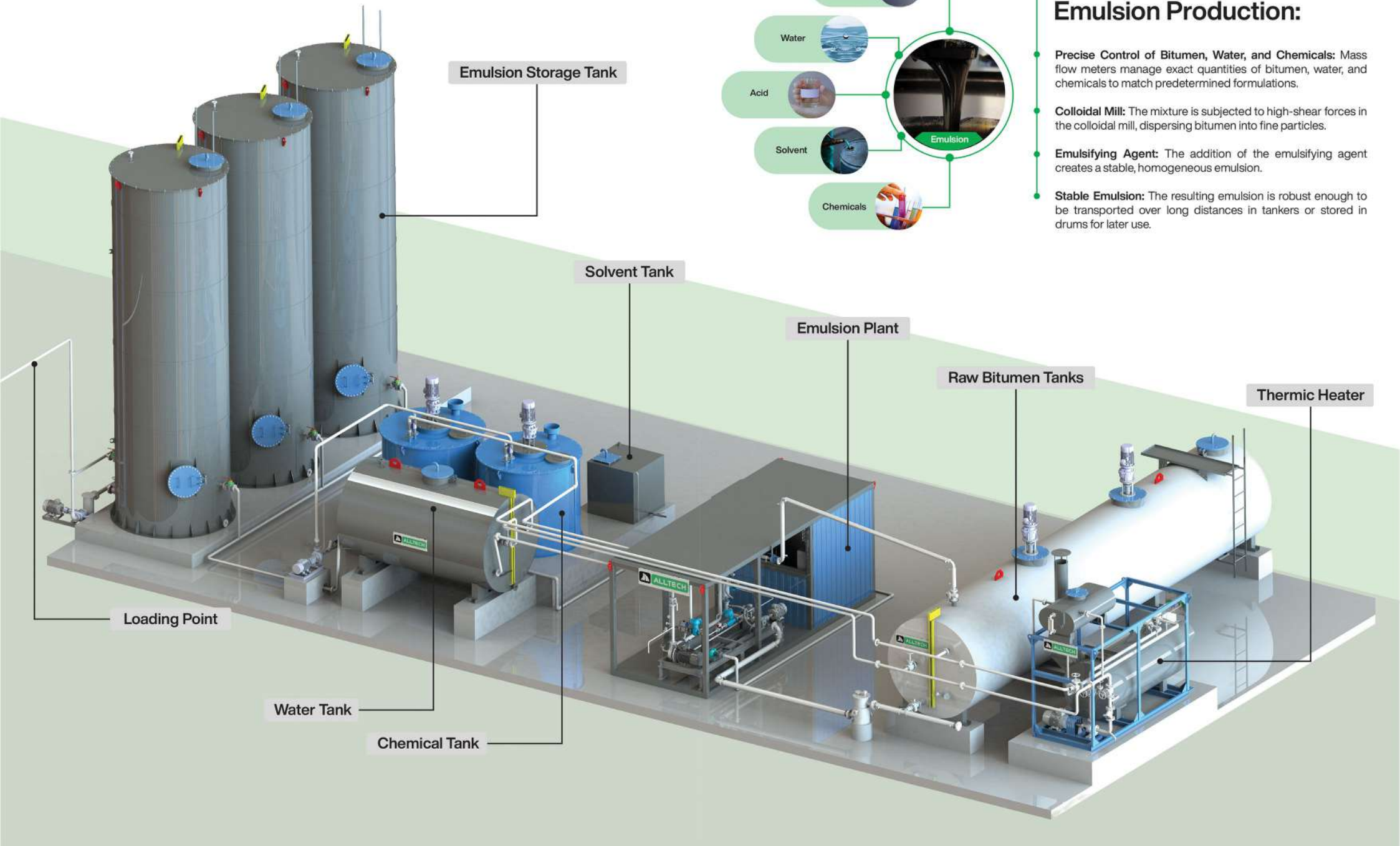
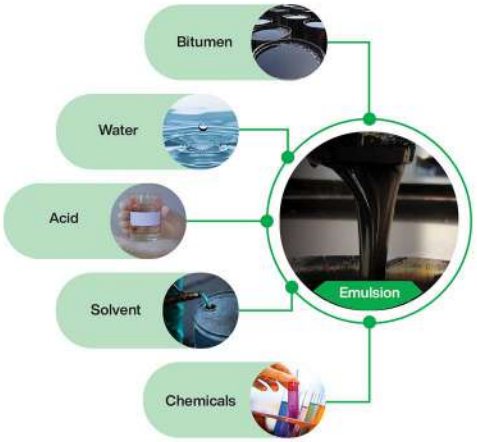
General Arrangement: Emulsion Plant





Working Principle of **Emulsion Production:**

- **Precise Control of Bitumen, Water, and Chemicals:** Mass flow meters manage exact quantities of bitumen, water, and chemicals to match predetermined formulations.
- **Colloidal Mill:** The mixture is subjected to high-shear forces in the colloidal mill, dispersing bitumen into fine particles.
- **Emulsifying Agent:** The addition of the emulsifying agent creates a stable, homogeneous emulsion.
- **Stable Emulsion:** The resulting emulsion is robust enough to be transported over long distances in tankers or stored in drums for later use.

Allied Facilities

Bitumen Tanks:

CYLINDRICAL BITUMEN TANK

Capacity - 30 | 50 | 75 | 100 MT

CUBOIDAL BITUMEN TANK

Capacity - 45 MT

- Insulated and cladded design with built-in temperature indicator.
- Piping system equipped with essential control valves for precise operation.
- Thermic Fluid jacketed bitumen piping to maintain optimal temperature during operation.
- Manual tank selection with process valves and single delivery pipeline.

Emulsion Storage Tank

- Float-type level indicator for precise stock reconciliation.
- Suitable for various bitumen emulsion grades (water & oil-based).
- Emulsion recirculation lines as per IS standards.
- Supports bulk loading and drum filling systems.
- Optional integrated platform and walkways for easy access.

Drum Filling Machine

- Accurate weighing with auto compensation and record storage.
- Controls loading, alignment, filling, and transfer.
- Auto-stoppage, alarms, and pump shut-off for safety.
- Supports manual filling.

Organic (Solid Fuel) Fire Thermic Fluid Heater:

- Fully packaged design, minimal site work needed.
- Cycloidal air injection for better efficiency and reduced combustion losses.
- High-efficiency design with concentric coils for optimal performance.
- 50% reduced footprint and significant erection cost savings.
- Lower radiation losses and 60% reduced refractory cost.
- Maintenance-free, air-cooled thermic fluid pump with zero leakage.

Liquid / Gas Fuel Fired Thermic Heater

- High efficiency reduces costs.
- Flexible diesel/LDO fuel options.
- Advanced safety and control systems.
- Low maintenance, durable design.

PMB/CRMB Processing Cum Storage Tank

Vertical Tank

Horizontal Tank

- High-performance heating for uniform temperature control.
- Integrated stirrers for consistent polymer modification.
- Available in various capacities to meet production needs.
- Compatible with existing PMB/CRMB plants.
- Robust control system for easy process management.

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Heart of the Plant
Colloidal Mill

Emulsion Mill

Minimal Pressure Drop: Engineered to deliver optimal flow with little to no pressure loss, ensuring smooth operation.

High-Durability: Built entirely with high-alloy stainless steel for enhanced durability, corrosion resistance, and long-lasting reliability.

Integrated Motor Mounting: Features direct flange mounting on the motor for a compact, streamlined design and efficient power transmission.

Optimized Milling Zone: Features a specially engineered pattern of grooves and teeth, designed to ensure efficient and uniform droplet dispersion.

Continuously Variable Speed: Allows precise control over operational parameters, enhancing versatility and performance.

Adjustable Gap for Precision: Enables fine-tuning of the gap to achieve the desired droplet size distribution with exceptional accuracy.

Energy-Efficient Design: Operates with low relative power consumption, contributing to cost-effective and sustainable performance.

PMB Mill

Trusted By Leaders

moglix · HINCOL · TARMAT · OSG REFUELS · ANISH · SHOBHA EXIM · SHELKE GROUPS · BituBin India · OMKAR SWAROOP INDUSTRIES

↑ Reserved For You

ALLTECH

Our Site Installations

KARNATAKA

MAHARASHTRA

MADHYA PRADESH

UTTAR PRADESH

MAHARASHTRA

ANDHRA PRADESH

After Sales Support

At ALLTECH, we are committed to providing exceptional after-sales support for our Bitumen Modifying Equipment. Our dedicated team ensures smooth operation and longevity of your equipment through the following services:

Technical Support

- Assistance with **installation, commissioning,** and trouble shooting.
- Guidance on equipment calibration, and **operational training**.
- **Remote or on-site support** to ensure smooth functioning as needed.

Spare Parts & Maintenance

- Timely availability of **genuine spare parts** to ensure uninterrupted operation.
- Regular **maintenance checks** to maintain optimal performance.
- Scheduled replacements and preventive maintenance for long-term reliability.

Customer Service

- A dedicated customer service team to address queries and concerns.
- **Post-installation support**, including follow-up visits, feed back collection, and performance evaluation.
- **Lab Assistance** for testing and quality compliance.

ALLTECH

Committed to Excellence
Through Rugged, Robust & Reliable Solutions.

- Asphalt Batch Mix Plant (80-320 TPH)
- Counter Flow Drum Mix Plant (60-120 TPH)
- Bitumen Drum Decanter (2-8 TPH)
- Emulsion, CRMB, PMB Plants
- Microsurfacing Machine
- Bitumen Bag Decanter (4-6 TPH)
- RDSO Steel Girders (Heavy Engineering)

ALLTECH INDIA LIMITED

(Formerly known as Alltech Industries India Private Limited & Alltech India Private Limited)

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