

**SINORoader**



**LB Asphalt Batch Mixing Plant**

Asphalt Batch Mix Plant LB Series is new and ideal construction equipment used for manufacturing asphalt that is mainly applied in highway road construction and other civil construction.

LB asphalt batching plant is a stationary asphalt mixing plant mainly consisting of cold aggregate supply system, drum dryer, burning system, hot aggregate elevator, vibrating screen, weighing system, mixing tower, dust collecting system, filler supply system, bitumen supply system, electronic control system, finished asphalt storage bin.

#### 5S Advantages

- Civil Work Saving
- Transportation Cost Saving
- Set-up Cost Saving
- Energy Consumption Saving
- Maintenance Cost Saving

#### Re-location

- Modular Design
- Compact Structure<sup>®</sup>
- Portable Chassis
- Foundation Free



- Modular design and integrity steel base, reasonable layout, demolition, transportation and installation faster and easier.
- Superior drying drum plate design, and independent research and development of advanced combustion heating technology to improve efficiency, reduce energy consumption.
- Plus high hot aggregate bin design to increase the stock of hot aggregate storage, to increase producing capacity.
- Automatic/manual control system with failure self-diagnosis program, simple and safe.
- Core components adopt international famous brand products, such as Siemens electrical components, EBICO burners, Switzerland METTLER TOLEDO weighing sensor, etc., reduces the failure rate and prolong its service life.

## Sinoroader | Aggregate Supplying System

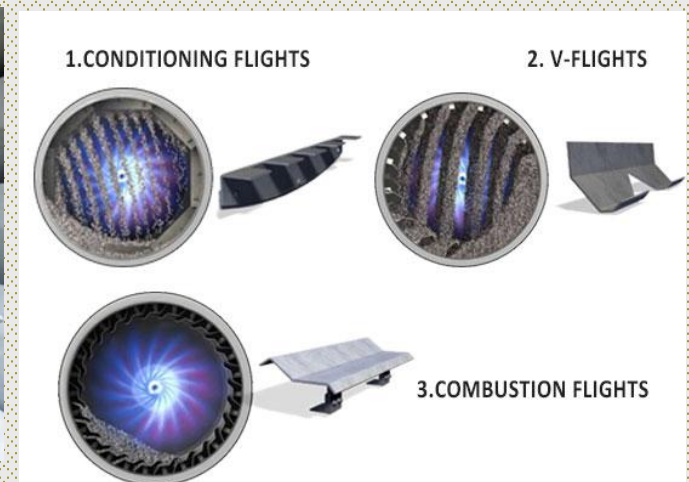
- ①. Protective plates on both sides of the aggregate hoppers to avoid sundries getting into the aggregates and conveying belt;
- ②. To make the supplying smoother, vibrators are equipped below each hopper;
- ③. Adds grid plate at top of each hopper to buffer the shock from aggregates flow, meanwhile it screens oversize aggregates;
- ④. Conveying belt is protected by dustproof cover to reduce dust emission;
- ⑤. Adds belt cleaners and pinch rollers to make the aggregates supplying more fluent and accurate, besides, they also extend the belt durability;
- ⑥. Small vibrating screen is added between belts, to further screen oversize aggregates;
- ⑦. The supplying system has insufficient material alarm system, ensuring a safe and smooth production.





## Sinoroader | Drying system

- ①. Driving units have auto lubrication device, greatly reduces labor cost;
- ②. Different areas inside the drying drum have different blade configurations, which can handle aggregates in different processes;
- ③. The rolling rings and rollers are applying high strength wear-resisting material. Deviation preventing rollers for both rolling rings;
- ④. The cylinder adopts boiler steel and stainless steel skin, which gives it high temperature resistance and non-deformability;
- ⑤. The cylinder employs thermal insulating rock wool material that can maintain the temperature inside, reducing heat loss.



### 1. CONDITIONING FLIGHTS

Break up any clumps or sticky material when the aggregate first enters drum.

### 2. V-FLIGHTS

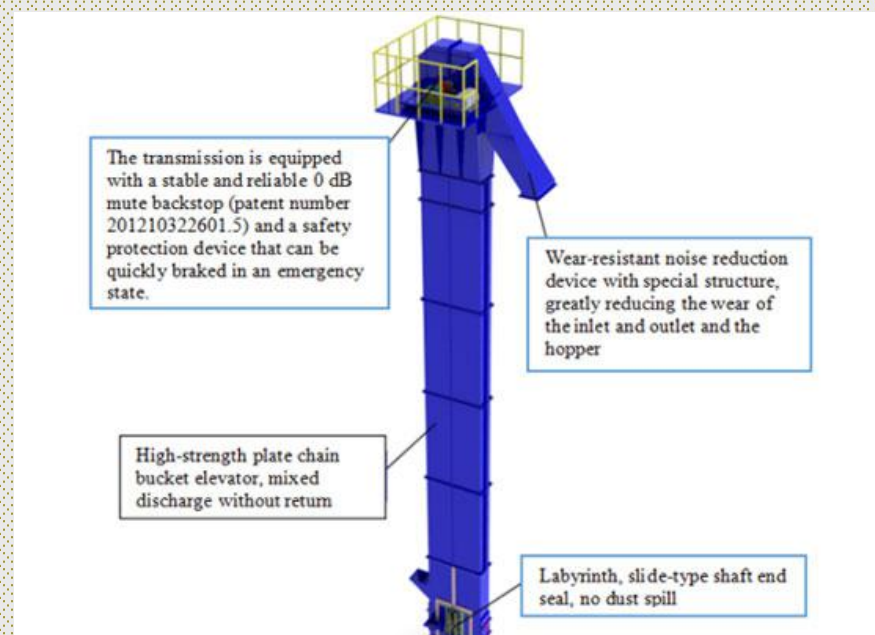
Provide greater uniformity of the aggregate veil through the gas stream during the drying process, across a wide variety of mix designs and tonnage rates.

### 3. COMBUSTION FLIGHTS

Prevent aggregate from impinging on the flame while spreading the material to maximize radiant heat transfer.

## Sinoroaders | Aggregates elevating system

- ①. The aggregates elevator takes modular design with newest dust sealing structure;
- ②. Elevator applies double plate link chains design, which extends the elevator's service life and reduces maintain frequency.
- ③. Excellent leakproofness with the motors;
- ④. Applies famous cycloidal pin gear speed reducers, more powerful and reliable;
- ⑤. The aggregates slide tunnel adopts damping structure wear-resisting plate link chains to enhance the performance.





## Sinoroader | Screening system

Vibrating screens are used to screen heated hot aggregates to ensure accurate oil-stone ratios. We use a special vibrating screen for the asphalt mixing plant to better meet the requirements of the entire equipment. Fine processing and careful assembly ensure the superior quality of all equipment. Vibrating screen bearings use internationally renowned brands (SFK or FAG) to ensure the stability of the equipment. The whole equipment is maintenance-free, and the large opening structure can quickly change the screen.

- ①. Vibrating screens that apply world famous vibration motors are completely sealed;
- ②. Aggregate storage bin adopts large bin structure to avoid material overflow;
- ③. Aggregate bins are separated by high strength wear-resisting plate to avoid aggregates mixing.



## Sinoroader | Weighing system

Adopts world famous brand (TOLEDO) weighing component, to make sure that the measurement error of aggregates is below 0.5%, and the measurement error of bitumen and filler is below 0.25%.



## Sinoroader | Mixing system

- ①. The mixer, mixing blades and liner plates are all using the best materials with high hardness and high abrasion performance;
- ②. The cycloidal pin gear speed reducer has better transmission efficiency and simpler structure.



## Sinoroaders | Dust Collecting System

In the asphalt equipment industry, we have been developing for many years. Our asphalt mixing plant is equipped with our own bag filter. The bag filter adopts the principle of atmospheric back-blowing. The dust-removing area is large and the dust-removing efficiency is high. The bag filter has a simple structure, simple installation, low failure rate and high recovery efficiency.

The LB1500 batch asphalt mixing plant baghouse is fitted directly over the dryer to eliminate ductwork. The baghouse utilizes two-stage filtration with a primary collector which separates coarse material from the gas stream and protects the bags from abrasion.

The dust-laden gas then enters the baghouse where the dust collects on the heat-resistant meta aramid bags. Pneumatically operated cylinders clean bags a row at a time. Collected dust can be stored or returned to the mix.







1. The system adopts high-pressure pulse cleaning method, and the residual dust is small. All the dust can be transported to the circulating silo for reuse or discharge through the recycling packing conveying device. Emission concentration does not exceed 20mg/Nm<sup>3</sup>
2. The bag is made of high-efficiency filter material produced by DuPont of the United States. The bag has high temperature resistance, low loss and long service life.

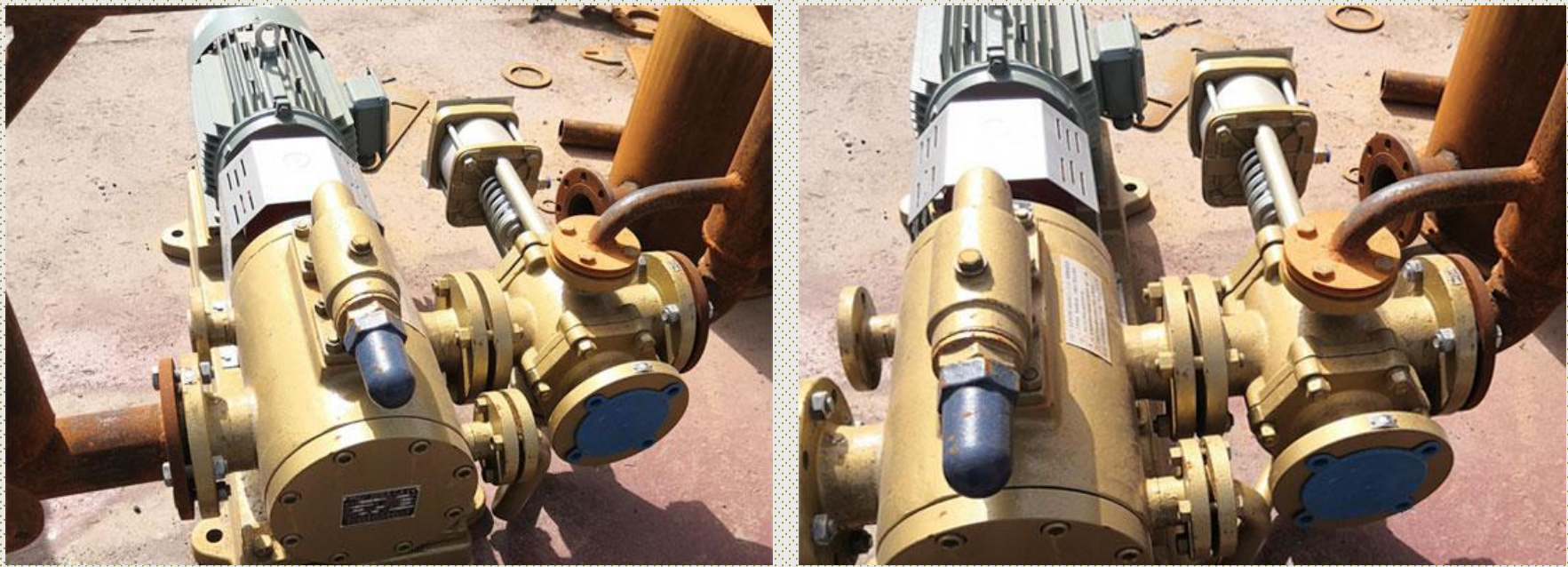
## Sinoroaders | Bitumen Pump

Three-Screw Pump of asphalt mixing plant is a positive displacement pump, and has the remarkable advantages such as simple structure, small volume, being allowed to rotate at high speed, stability and high efficiency, etc.

By using the principle of screw meshing and relying on the mutual meshing of rotating screws in pump block, the three-screw pump of asphalt mixing plant sucks the medium conveyed and seals it in the meshing cavity, then pushes it to the discharge port along the axial direction of screws at uniform speed, and forms stable pressure at the discharge port.

Three-Screw pump of asphalt mixing plant is only applicable to conveying lubricating fluids not containing solid particles at normal temperature. It may be used as a common delivery pump, and a pressure supply pump in hydraulic drive device.

The 3QGB series heat-preservation high-viscosity three-screw pumps developed by the company after many years of research optimize the cooperation between screw and pump block, and between driving screw and driven screw based on three-screw pump, in order to realize the delivery on **high-temperature and high-viscosity media**.



The 3QGB series heat-preservation high-viscosity three-screw pumps are mainly used to convey high-viscosity lubricating fluids. They are usually used as the delivery pumps of asphalt, heavy fuel oil, heavy gear oil and heavy diesel fuel. Inside the pumps, heat preservation chamber and channel are set up, gas or liquid could be used as heat carrier, and their maximum working temperature is equal to or lower than 350°C. High viscosity reduction, and the conveying viscosity is generally 3.0~760mm<sup>2</sup>.

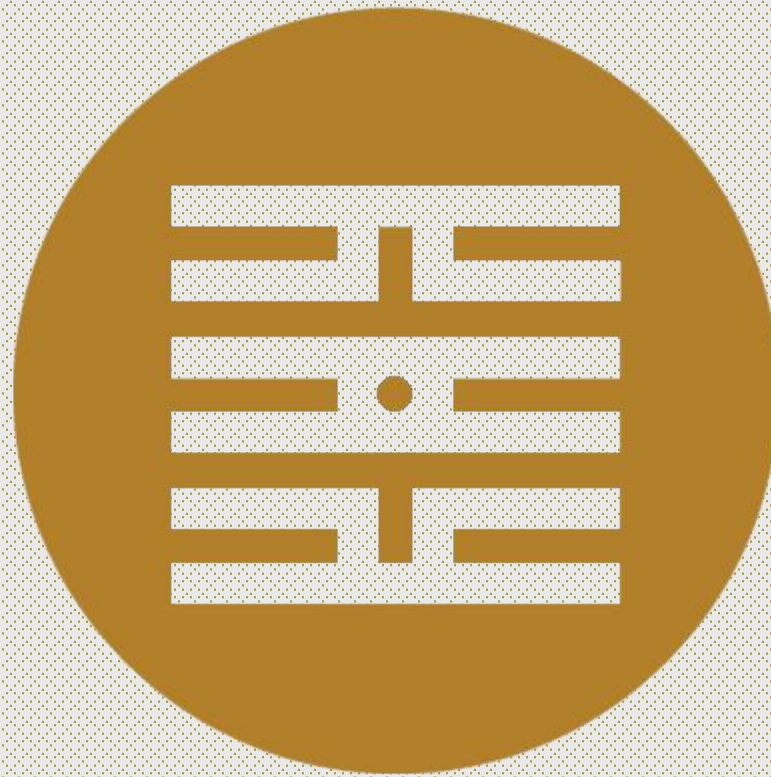
## Sinoroader | Control system

- ①. Fancy control room for operator, nice operating environment and good sound insulation effect;
- ②. Control room is equipped with split-type air conditioner, aluminium alloy sliding windows, wood floor and so on;
- ③. All operations are integrated in one room, auto and semi-auto control makes it easy to operate.



## LB BATCH ASPHALT MIXING PLANT RANGE DETAILS

Model	Capacity(Standard Conditions)	Mixer Capacity	Dust Remove Effect	Total Power	Fuel Consumption		Measurement Accuracy
					Fuel Oil	Fuel Coal	
LB700	60t/h	750 kg	≤20 mg/Nm <sup>3</sup>	178kW	5.5-7 kg/t	10kg/t	Aggregate: ±0.5%
LB1000	80t/h	1000 kg	≤20 mg/Nm <sup>3</sup>	285kW	5.5-7 kg/t	10kg/t	Filler: ±0.25%
LB1500	120t/h	1500 kg	≤20 mg/Nm <sup>3</sup>	380kW	5.5-7 kg/t	10kg/t	Bitumen: ±0.25%
LB2500	200t/h	2500 kg	≤20 mg/Nm <sup>3</sup>	547kW	5.5-7 kg/t	10kg/t	
LB3000	240t/h	3000 kg	≤20 mg/Nm <sup>3</sup>	700kW	5.5-7 kg/t	10kg/t	



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