



SINOROADER



## **Continuous Mobile Asphalt Plants**



# Company Profile

Henan Sinoroader Heavy Industry Corporation is a world-famous road and bridge machinery manufacture, located in Zhengzhou City, Henan Province. Our producing base is located in Weidu District, Xuchang City with factory area over 80,000 m<sup>2</sup>. Sinoroader has first-class production equipment and R&D team. Sinoroader has more than 500 production and research staff and workers, responsible for product research, design, production, installation, commissioning and after-sales service. The R&D team has obtained master's degree or above, and 60 of them have got PHD. The production team includes more than 200 senior technical workers and 320 skilled workers. Core business includes: road and bridge machinery equipment manufacturing; old equipment alteration; Project construction design & consulting service. Core products series includes: asphalt mixing plant; concrete and stabilized soil mixing plant; road maintenance equipments and material; Bitumen related equipments. Can meet the different needs of different regions, different markets and different customers all over the world.

In addition to Domestic market team, Sinoroader market department also has Southeast Asia, Central Asia, Africa, Middle Eastern Asia and American market teams. In

these major regions, Sinoroader has set up branch offices in Pakistan, Uzbekistan, Uganda, Myanmar, Philippines, and Kenya to be responsible for the expansion of overseas business.

Nowadays, asphalt mixing plant, concrete mixing plant and road maintenance equipment produced by Sinoroader have been widely used in more than 120 countries and regions, such as Thailand, Philippines, Indonesia, Malaysia, Myanmar, Laos, Vietnam, Bangladesh, Pakistan, Russia, Uzbekistan, Kazakhstan, Kenya, Tanzania, Nigeria, Uganda, Chile, Australia, Bolivia, Peru, Saudi Arabia, New Zealand, etc. Conforming to the trend of technological development, grasping the market demand and leading the technology trend, Sinoroader is also actively carrying out technology research and development while embracing customers. We have been carrying out technological innovations in conjunction with many universities & colleges, such as Chang'an University. For now, Sinoroader has obtained a number of patented technologies, which are of great significance for promoting the innovation of the entire road construction industry. In addition, Sinoroader also cooperates with many well-known overseas enterprises and universities in technology developing.





## High Precision In Cold Feed Dosing

When collecting ingredients, the aggregates of different particle sizes that need to be mixed are respectively loaded into different batching hoppers by using a loader, and belt conveyors are arranged under each batching hopper, and the belt conveyor is driven by a frequency conversion speed regulating motor. The ingredients are mixed according to the mixing ratio of the construction technology; the matched materials are dropped on the horizontal aggregate belt conveyor, which is transported through the filter screen to the inclined belt conveyor.

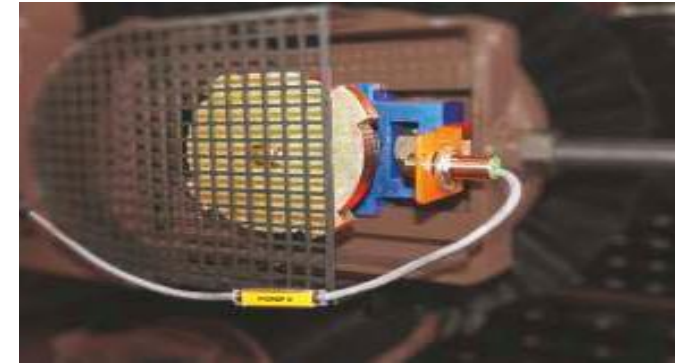
**Level sensor**



**Vibrators**



**Speed Sensor**

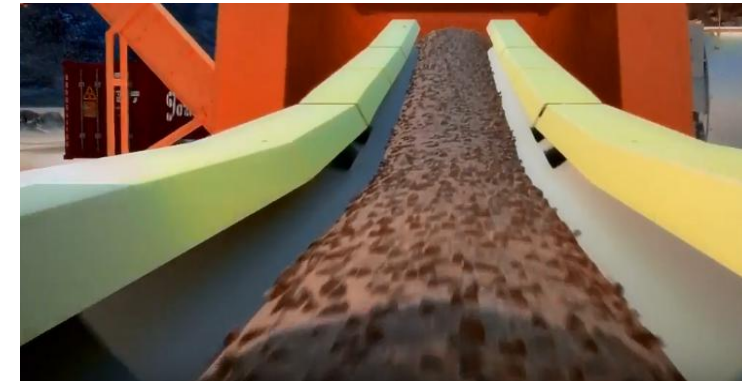
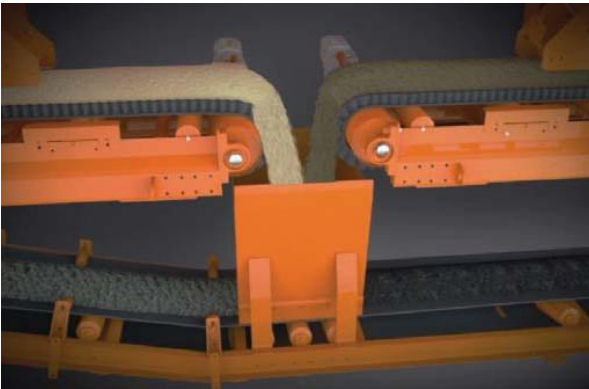


> Activated by the operator, or automatically, in case of lack of material

> Continuous verification of the belt speed.  
> Correction of speed in case of engine slippage

## Belts

They are part of the machine with the function of donating and transporting the virgin aggregation resulting from the donation. They are divided into dosing belts and conveyor belts.

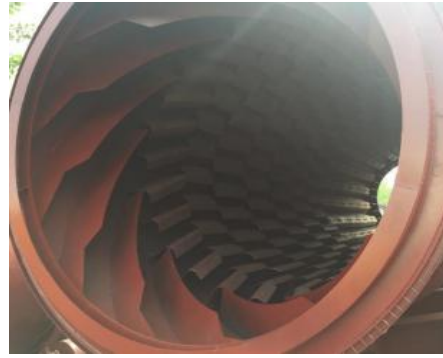


### Dosing belts:

- > With vulcanized side protections, they require low maintenance and provide accurate dosing without loss of aggregates.
- > Straps for easy stretching and alignment. Evenly distribute the weight of aggregates load on the weighing roller

### Collection Belt:

- > With scraper hoppers with counter-weight that avoid adherence and loss of fine and wet aggregates.



# Counter-flowDryer

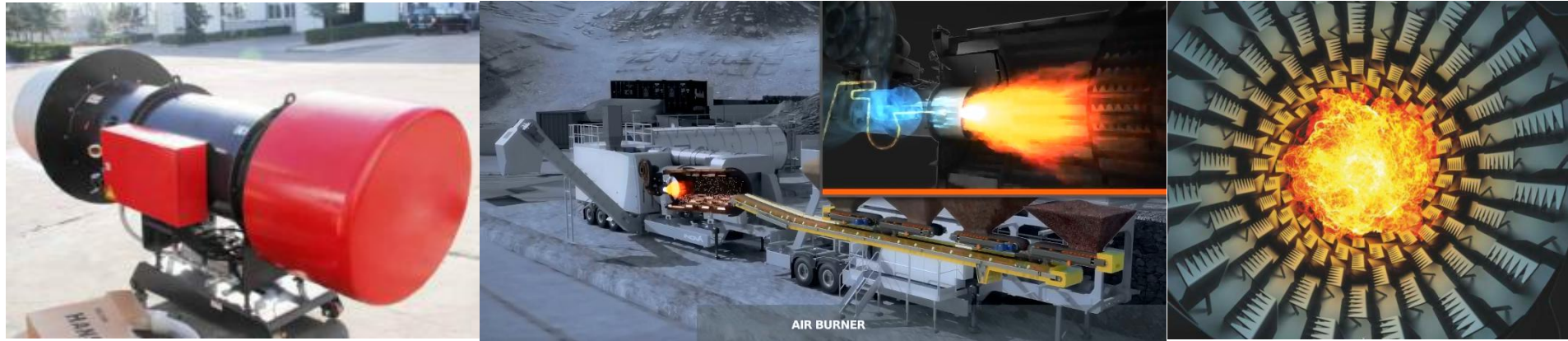
- >The drum counter-flow rotary drying heating method is provided with a spiral rewinding blade and a feeding blade in the cylinder body, and different shapes of reversing blades are installed in different regions, and the drum cylinder body has an inclination angle of about 3.5-4 degrees, and the outer layer has 40cm of thermal insulation rock wool prevents heat loss.
- > Fully dedicated to aggregates drying and heating. It operates in a counterflow system, in which the heat is applied gradually over the aggregates, respecting the physical laws for moisture extraction, ensuring high productivity and low fuel consumption.
- > Designed using advanced computerized simulation systems, it has fins designed to efficiently meet all the steps of the drying and heating stage with maximum efficiency, ensuring complete elimination of moisture, correct temperature and high throughput.

## INTELLIGENT HEAT EXCHANGE SYSTEM

- > Automatic control of the dryer spin speed results in the maximum heat exchange between the aggregates and fuel gases

## PERFECT EXHAUST CONTROL

- > Intelligent exhaust system that ensures perfect combustion regardless of the production rate



# Air Burner

The fuel burner is controlled by a single-chip microcomputer program. Simply press the “Start” button to start the oil pump, auto-ignition, flameout alarm, automatic temperature control and display. The fuel can be automatically adjusted according to the required furnace temperature. . It is also equipped with a manual function to ensure the normal operation of the burner through a manual system when the system fails.

- > Optimization of air flow used for combustion
- > Control of the exact amount of air required for burning, ensuring lower consumption
- > Innovative automatic control of the burner according to the need to heat the materials (closed loop system)
- > Operates under the principle of atomization at low pressure, guaranteeing the ideal oxygen condition for complete burning.
- > Both the air and fuel dosing is proportional and independent, guaranteeing perfect burning and full utilization of the fuel, with high production, low consumption and respect for the environment.
- > Fuel optional: heavy oil; light oil; coal; natural gas, etc.



# Twin-shaft Reverse Mixer

The mixing machine adopts the horizontal double-shaft paddle type spiral stirring method, the stirring blade, the stirring arm and the lining plate are all made of chrome-molybdenum alloy wear-resistant cast iron, and the stirring arm is made of cast steel material. It has strong corrosion resistance and wear resistance, which greatly prolongs its service life.

## EXTERNAL MIXER PUG-MILL

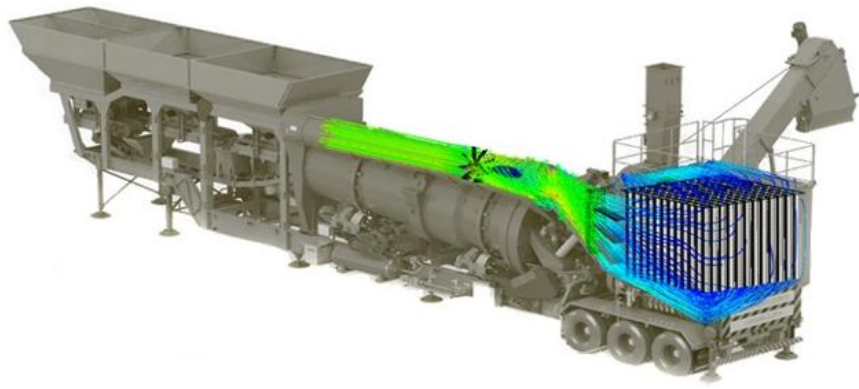
- > Mixing separated from the drying system
- > High shear rate applied to the mix
- > Completely external blending process, using the Pug-Mill type mixer, with two synchronized, symmetrical and parallel shafts, with arms and vanes made of high wear resistance material.
- > Injection of bitumen in a controlled temperature environment, without hot gas flow, avoiding premature aging of the asphalt binder during the mix with aggregates
- > Fully internally protected mixer with high hardness wear plates, divided into small sections that allow easy and low cost replacement.

## MIXING TIME CONTROL

- > Automatic adjustment of the volume of material inside the mixer as required by different types of asphalt mixes
- > Maximum power applied to the mixture that guarantees homogeneity of asphalt concrete

## DRYING MIX

- > Homogenization of the aggregates before the asphalt cement injection and perfect dispersion of this binder in the aggregates
- > Important in applications using as adhesion improver
- > Essential requirement for special mixes using fibers and other additives



# Bag Filter

High dust removal efficiency, dust removal up to 99%; flexible use, processing air volume from hundreds of cubic meters per hour to hundreds of thousands of cubic meters per hour, can be used as a small unit directly in the room, near the machine tool, can also be made into a large dust removal The room, that is, the bag room; the mechanism is simple, the operation is stable, and the maintenance is convenient.

- > Laminated polyester pleated bags with a large filtering area and high durability.
- > Particles filtering happens on the surface, avoiding impregnation by dust, increasing durability, generating less load loss and extremely low emission rates
- > Larger filtering area that guarantees production at a constant level and lower emission of pollutants to the atmosphere

# Control Room



## COMFORT, TECHNOLOGY, RELIABILITY

- > Internal environment with temperature control and ergonomically set operation stand
- > Temperature controlled power board with easy access
- > Advanced processing software that guarantees the perfect aggregates and bitumen dosing through self correction of flow and weight in real time
- > Plug and Play software, ready to receive any of the options offered, at any time, with no need for replacement
- > Automatic or manual operation, very high precision potentiometer
- > Data transmission via CAN network
- > Maximum reliability in weighing information
- > The lowest possibility of electronic noise

## EASYCONTROL® SYSTEM

- > Intuitive software with full control of productive processes
- > Easy-to-operate touch screen
- > SINORoader Push&Play® - Automatic control (without operator interference) of the burner flame and other components during production

## BROAD VISIBILITY OF THE PRODUCTIVE PROCESS

- > Cabin located in strategic position with a wide view of the production
- > SINORoader Truck-Assistant® device for communication between the plant operator and the truck

## COMFORT AND ERGONOMICS FOR OPERATION

- > Air-conditioned cabin
- > Ergonomic operation table and intuitive operation by MMI
- > Guarantee of total efficiency and safety of operation

## POWER PANEL

- > High degree of protection/sealing of components

Configuration	MR100	MR160		MR200
Production capacity	100 t/h	160 t/h		200 t/h
TRANSPORT				
Mobilities	1	2		
Axles/Tires mobility 1	3 / 12 (+ 1 spare)		2 / 8 (+ 1 spare)	
Axles/Tires mobility 2	-		3 / 12 (+ 1 spare)	
Suspension / Brakes - mobility 1	Triple tandem / ABS		Double tandem / ABS	
Suspension / Brakes - mobility 2	-		Triple tandem / ABS	
Size	21.30 x 3.20 x 4.30m (L x W x H)	21.30 x 3.20 x 4.30m (L x W x H)	13.90 x 3.20 x 4.30 / 17.10 x 3.20 x 4.30m (L x W x H)	13.90 x 3.20 x 4.30 / 19.00 x 3.20 x 4.30m (L x W x H)
DOSING SYSTEM				
Number of Bins	4			
Bin volume	2 of 10m³ + 2 of 5 m³		10 m³	
Aggregate weighing	Individual dynamic weighing by centralized high precision compression load cells, with an individual capacity of 200kg			
Speed sensor	Inductive sensor for speed check (pick up)			
Wall Vibrator	3 standard vibrators in bin 1. Optional vibrators in bin 2			
DRYING SYSTEM				
Technology	Counterflow dedicated exclusively to the drying and heating of aggregates			
Burner	SINORADER Total Air®			
FILTERING SYSTEM				
Maximum filtration/production area ratio	5,2 m²/(t/h)			5,5 m²/(t/h)
Filter efficiency	Greater than 99.99%			
Filter technology	Pleated Bags			
	Quick-change system with EasySpin tool			
MIXING SYSTEM				
Technology	Twin-shaft reverse pug mill with arms and straws			
Mixing steps	Dry mixing and mixing with asphalt cement			
Mixing time	Configurable			
Cleaning	With lower deck			
Wear elements	High abrasion resistance material			
Asphalt Injection	With sprinkling nozzles			
TRANSPORT AND STORAGE SYSTEM				
Mix Transport Technology	Redler type drag lift			
Wear elements	High abrasion resistance material			

Bin volume	1 m³	2 m³
Type	Maximum level sensor, anti-saturation window, anti-segregation plate, inspection flap	
CONTROL SYSTEM		
Operation cabin	Metallic with side door, containing control panel, supervisory, buttons for actuation in manual and PLC	
Sistema de climatização	7,000 BTU air conditioning with inverter technology	
Critical Control	Automatic (supervisory) or emergency mode (by supervisor + manual operation buttons)	
SAFETY		
	OPERATION	PRODUCTION
Feed bins	Fixed protections for mobile parts	-
	Emergency button	
Dryer	-	Reading of the rotational speed with interlocking
Dryer / burner	Emergency button	Flame sensor - UV photocell
		Pick up dryer monitoring
Mixer	Emergency button	-
Bag Filter	Emergency button	Temperature sensor
		Cold Air Damper
		Emergency valve
Control cabin	Emergency button + internal audible alarm	-
	Operating interface in extra low voltage (24V)	
Power Panel	Security PLC Monitoring	-
	Command circuits with 2 counters connected in series	

# Optional

Options -HMA R Series	
TETRAFUEL BURNER	Light oils, heavy oils, LPG and NG
COMPRESSOR EXTENSION	Compressor position displacement as required
VIDEO CAMERA	4 cameras
REMOTE MONITORING SYSTEM	Remote monitoring of production during production
ADDITIONAL VIBRATOR	Kit of 3 vibrators in bin number 2
FILLER DOSING BIN	Bin of 2 m³
FINE DOSING BIN	Bin of 4 m³
FIBER DOSING BIN	Bin of 2 m³
RECYCLING SYSTEM	15% RAP in the mixer
ASPHALT FLOW	Open and closed-circuit operation

1 | *Filler dosing bin..*

2| *Fine dosing bin.*

3| *Fiber dosing bin.*

4| *RAP.*

5| *Asphalt tank is not part of the options.*



# Customer support

## AFTER-SALES SERVICE - A PERFECT CONCEPT FROM A TO Z

Always next to the client

The SINORoader service is present in all locations in which the company markets its equipment, in order to provide fast and efficient service in any part of Latin America, Africa, Southeast Asia and Oceania. The company's goal is to facilitate the work of its clients, offering technical support and constant partnership.

## PRODUCT SUPPORT

Optimized operation of all equipment:

- > Comprehensive technical support for the entire product line
- > High quality original parts
- > Practical and intelligent customer communication system
- > Training courses for all products marketed

## WORKSHOP SERVICE

Complete workshop services:

- > Quality: highly specialized shop services
- > Services performed by highly qualified and permanently trained maintenance technicians
- > Wear parts replaced by original parts, serviced by qualified personnel
- > Professional installation of auxiliary equipment

## TECHNICAL SUPPORT

Your equipment always working:

- > Specialized technical delivery: the equipment sold is assembled and verified by experienced and qualified professionals •
- > Local support: SINORoader technicians and their resellers are close to customers, ensuring fast and efficient service
- > Trained resellers: SINORoader authorized resellers receive training to solve issues regarding all branded equipment
- > Factory support: customers can contact the SINORoader team directly, by telephone or via the internet



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