

ASPHALT MIXING PLANT



Liaoyuan (Group) Road Construction Machinery Co., Ltd.

Tel: +86-377-63877798

Fax: +86-377-63877717

E-mail: info@lyroad.com

Web: <http://www.lyroad.com>

Add.: Longsheng Industrial Park, Nanyang City, Henan Province, China

Zip Code: 473000



LIAOYUAN (GROUP) ROAD CONSTRUCTION MACHINERY CO., LTD.

CONTENT

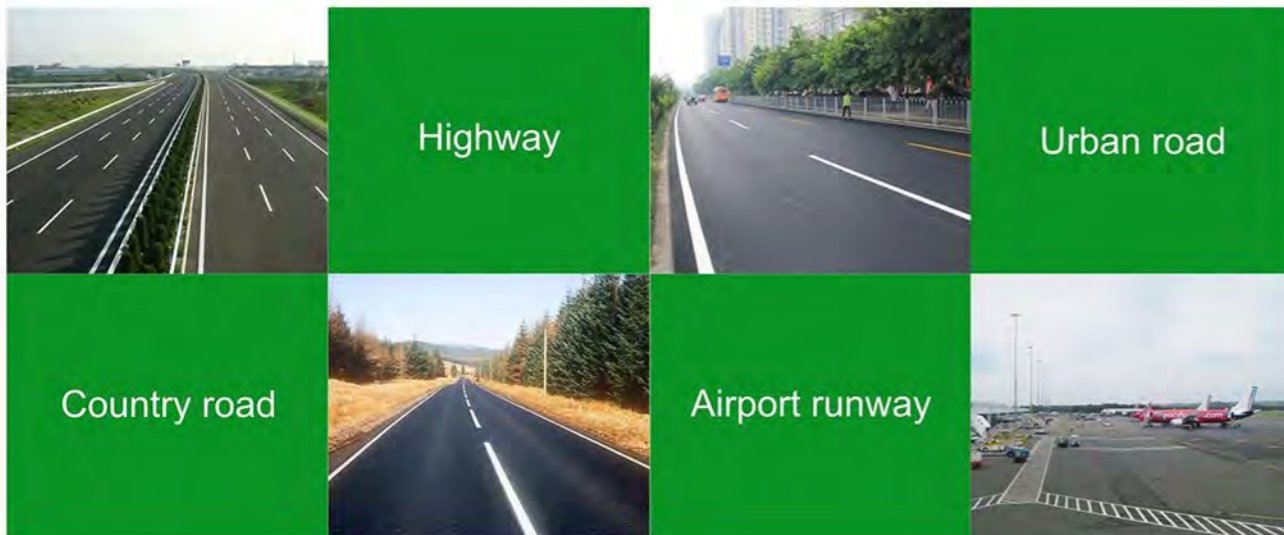
Asphalt Batch Mixing Plant LB Series.....	01P
Environmental-friendly Asphalt Batch Mixing Plant ELB Series.....	06P
Energy-saving Asphalt Batch Mixing plant LYJ Series.....	08P
Asphalt Drum Mixing Plant DHB/MDHB Series.....	12P
Mobile Asphalt Mixing Plant YLB Series.....	16P
Mobile Asphalt Mixing Plant QLB Series.....	18P
Mobile Asphalt Mixing Plant SLB Series.....	20P
Hot Recycling Asphalt Plant RLB Series.....	22P
Stabilized Soil Mixing Plant WBC/YWBC Series.....	24P
List and Comparison of Asphalt Mixing Plants.....	26P
Successful Cases.....	28P





Asphalt Batch Mixing Plant LB Series

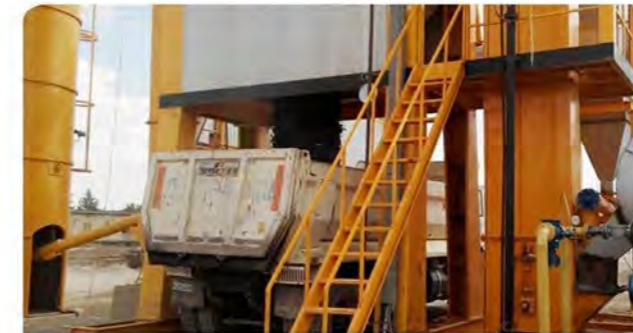
LB Series asphalt plant is stationary type, batch mixing, designed to produce high quality asphalt with different proportions and ingredients. LB Series asphalt plant is mature, reliable and featured by high efficiency, large output and high quality finished asphalt, fit for road construction projects in all grades and scales, especially for large-scale and high-grade road construction project.



Features



- Modular design; convenient for transportation and installation; fit for worldwide use;
- Precise screening, accurate measurement, batch mixing; producing good quality finished asphalt;
- Filler and additives such as dye pigment, fibres and foam can be fed into mixer, producing finished asphalt in different ingredient and color.
- Optimized drying drum structure, thermal insulation layer surface, sufficient heating, and less heat loss;
- Dual-shaft mixer, fast and evenly mixing;
- PLC system, three control modes: manual, semi-auto and auto; easy and flexible to operate;
- Two stage dust collector: gravity dust collector and bag house dust collector; dust emission $\leq 20\text{mg}/\text{Nm}^3$.



Model and Parameter

Model	Capacity (standard conditions)	Mixer Capacity	Fuel Consumption (standard condition)		Measurement Accuracy
			Oil	Fuel Coal	
LB500	40 t/h	500 kg	5.5-7 kg/t	10 kg/t	Aggregate: $\pm 0.5\%$
LB800	64 t/h	800 kg	5.5-7 kg/t	10 kg/t	
LB1000	80 t/h	1000 kg	5.5-7 kg/t	10 kg/t	
LB1200	100 t/h	1200 kg	5.5-7 kg/t	10 kg/t	Powder: $\pm 0.5\%$
LB1500	120 t/h	1500 kg	5.5-7 kg/t	10 kg/t	
LB2000	160 t/h	2000 kg	5.5-7 kg/t	10 kg/t	Asphalt: $\pm 0.25\%$
LB2500	200 t/h	2500 kg	5.5-7 kg/t	10 kg/t	
LB3000	240 t/h	3000 kg	5.5-7 kg/t	10 kg/t	
LB4000	300 t/h	4000 kg	5.5-7 kg/t	10 kg/t	
LB5000	400 t/h	5000 kg	5.5-7 kg/t	10 kg/t	



- 1 Cold aggregate feeding system
- 2 Drying drum
- 3 Coal burner
- 4 Coal feeder
- 5 Gravitational dust collector
- 6 Baghouse dust collector
- 7 Hot aggregate elevator
- 8 Vibrating screen system
- 9 Filler supply system
- 10 Weighing & mixing system
- 11 Asphalt storage bin
- 12 Bitumen supply system
- 13 Electrical control system

Main Components



Feeders are equipped with vibration motor and shortage aggregate alarm device, ensuring continuous aggregate supplying; protective grille is installed to protect feeder and prevent body injury.



Motors on drying drum adopt automatic lubricating system; drive devices have protective cover; inner structure is optimized, making drying drum safe and efficient and longer service life; drying drum surface is covered by a thermal insulation layer, less heat loss.



Pulverized coal burner, oil burner, gas burner and oil+gas dual purpose burner are available for customer options; all burners are Chinese or world famous brand, efficient and stable.



Two stage dust collecting system: gravitational dust collector + bag house dust collector; better dust removal effect, dust emission is lower than 20mg/Nm³; bag house adopt NOMEX bags, high temperature resistant and durable. .



Normally, a mixing tower is consists of screening layer, hot aggregate storage layer, weighing layer, mixer layer, finished asphalt storage layer and loading layer; each layer is an individual module, convenient for installation and transportation.



Many kinds of bitumen tanks are available for customer option: horizontal, vertical, direct heating, heat transfer oil heating; heat transfer oil furnace and bitumen discharging tank (convenient for the bitumen pump-in and pump-out).



Twin-shaft mixer, the two shaft synchronously rotate in different direction, ensuring uniform mixing; paddles on the shafts are made of wear-resistant material, sturdy and durable.



PLC control system, easy to operate; control mode can be switched between manual, auto and semi-auto; commercial computer are equipped and operation softwares support English, French, Russian, Spanish and other languages.



Environmental-friendly Asphalt Batch Mixing Plant ELB Series

ELB Series environmental-friendly asphalt plant is developed on the basis of LB Series; it retains the advantages of LB Series and attaches great importance on environmental protection and safety. ELB Series asphalt mixing plant is featured by low noise and less pollutant emission, fit for road construction projects in all grades and scales and can be used in urban or near urban area.

Features

- Precise screening, accurate weighing, batch mixing; producing high quality finished asphalt;
- Filler and additives such as dye pigment, fibres and foam can be fed into mixer, produce special finished asphalt in different ingredient and color;
- New structure design; enclosed mixing tower, minimal dust leakage and low noise, more environmental friendly;
- Adopt diesel or gas burner, clean and effective, less pollutant emission; gravitational dust collector + bag house dust collector;
- Enclosed mixing tower with lock, equipped with safety guardrails and security devices; equipment and body safety can be secured.



Model and Parameter

Model	Capacity (standard conditions)	Mixer Capacity	Fuel Consumption (standard condition)		Measurement Accuracy
			Oil	Gas	
EIB500	40 t/h	500 kg	5.5-7 kg/t	8-10m ³ /t	Aggregate: ±0.5% Filler: ±0.5% Bitumen: ±0.25%
EIB800	64 t/h	800 kg	5.5-7 kg/t	8-10m ³ /t	
EIB1000	80 t/h	1000 kg	5.5-7 kg/t	8-10m ³ /t	
EIB1200	100 t/h	1200 kg	5.5-7 kg/t	8-10m ³ /t	
EIB1500	120 t/h	1500 kg	5.5-7 kg/t	8-10m ³ /t	
EIB2000	160 t/h	2000 kg	5.5-7 kg/t	8-10m ³ /t	
EIB2500	200 t/h	2500 kg	5.5-7 kg/t	8-10m ³ /t	
EIB3000	240 t/h	3000 kg	5.5-7 kg/t	8-10m ³ /t	
EIB4000	300 t/h	4000 kg	5.5-7 kg/t	8-10m ³ /t	
EIB5000	400 t/h	5000 kg	5.5-7 kg/t	8-10m ³ /t	



Energy-saving Asphalt Batch Mixing Plant LYJ Series

LYJ Series is a new type energy-saving asphalt batch mixing plant launched by Liaoyuan Machinery in late 2016, also a premium product of Liaoyuan Machinery. LYJ Series adopts many self-developed patents and has advantages over traditional asphalt plants in respect of weighing accuracy, productivity, material and fuel conservation and pollutant elimination. LYJ Series asphalt plant is fit for road construction projects which have special requirements for asphalt quality, energy saving and environmental protection.

Features

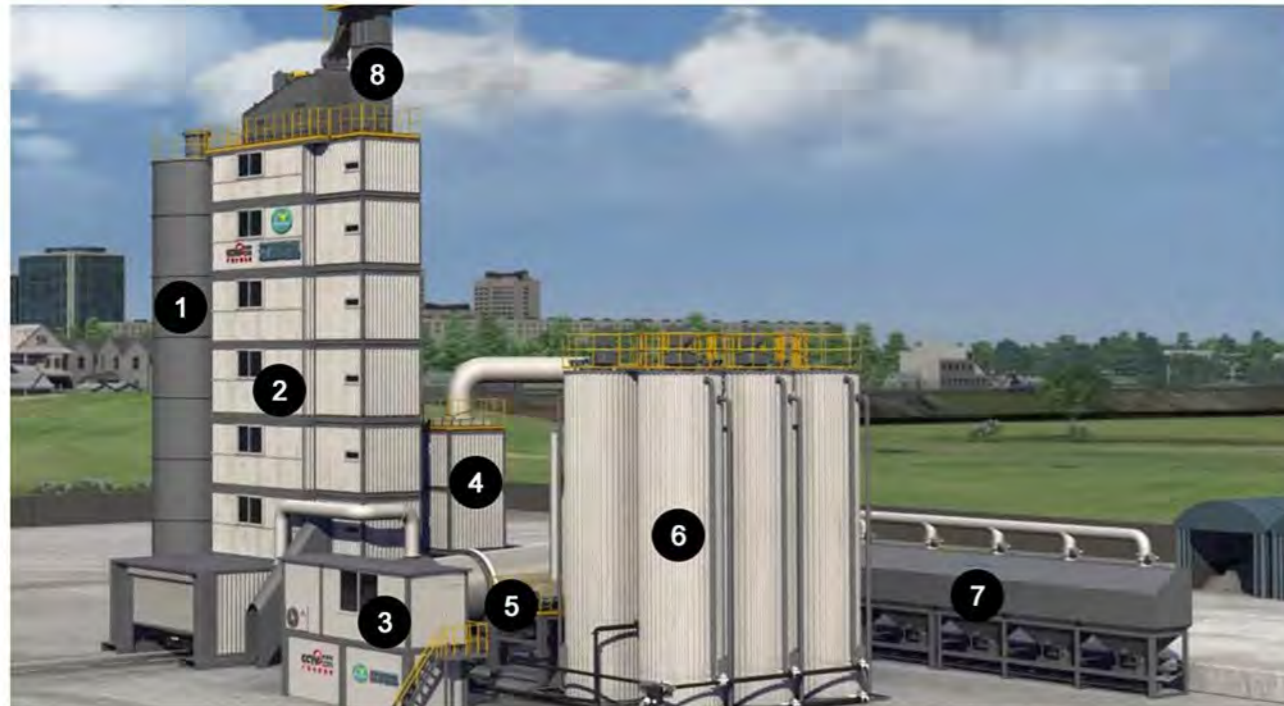
- Patent structure, whole production process is fully enclosed; aggregate feeder, belt conveyor, loading chamber and mixing tower are all enclosed; minimal dust and pollutant emission; safe and clean;
- Activate carbon devices are installed on bitumen tanks to absorb asphalt fume; asphalt fume generated in truck loading chamber is collected and circulate to drying drum and burn out, eliminating asphalt fume;
- Separated hot aggregate bins, intelligent and precise control over cold aggregate feeding and hot aggregate storage; no overflowed hot aggregate during production, no redundant hot aggregate after production; eliminating waste of aggregate and fuel;
- Patent "low flow + decrement measurement" technology, eliminating "weighing flash"; dynamic weighing accuracy: aggregate and filler < 1%, bitumen < 0.8%; static weighing accuracy: aggregate $\pm 0.5\%$, filler and bitumen $\pm 0.25\%$;
- Batch cycle time is reduced to 40 seconds, 15% more productive than that of same model batch mixing plant.



Model and Parameter

Model	Capacity (standard condition)	Mixer Size	Diesel Consumption (standard condition)	Measurement Accuracy (static)
LYJ180	180TPH	2000kg	6~6.5kg/t	Aggregate : $\pm 0.5\%$ Filler: $\pm 0.25\%$ Bitumen: $\pm 0.25\%$
LYJ220	220TPH	2500kg	6~6.5kg/t	
LYJ260	260TPH	3000kg	6~6.5kg/t	
LYJ340	340TPH	4000kg	6~6.5kg/t	

Structure



1. Filler Silo

Equipped with arch broken device, ensuring continuous filler supply;

2. Mixing Tower

Vibrating screen has 5-tier mesh, hot aggregate are classified into 5 particle size and stored in separate bins; Screening and grading are more precise; "low flow + decrement weighing" measurement, more accurate;

3. Control Room

SIEMENS electronic elements, OMRON PLC, EMERSON inverter, Mettler-Tolerdo sensor.

4. Bag House Dust Collector

Pulse jet dust removal, NOMEX bag; large filtration area and better dust removal effect;

5. Drying Drum

Centralized automatic lubricating system, optimized structure; high heating efficiency, less heat loss;

6. Bitumen Tank

Thermal conductive oil/electric warming, with active carbon asphalt fume absorption device;

7. Cold Aggregate Feeder

Enclosed structure, with dust collecting cover;

8. Aggregate Elevator

Chain hopper elevator, easy for maintenance; seamless structure, no dust leakage, sturdy and durable.

Structure Innovation



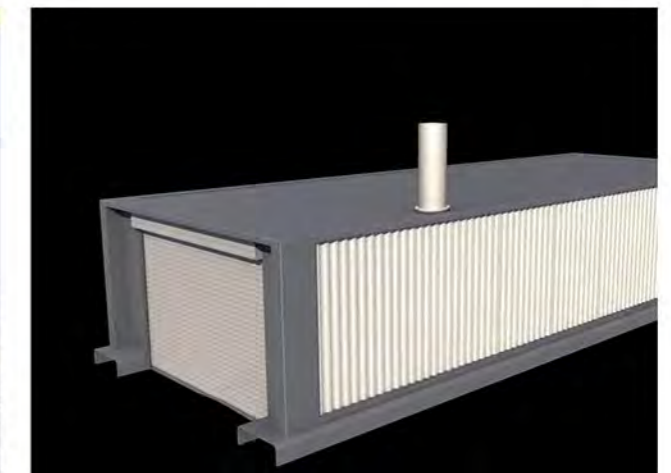
Enclosed mixing tower



Enclosed Cold Aggregate Feeding System



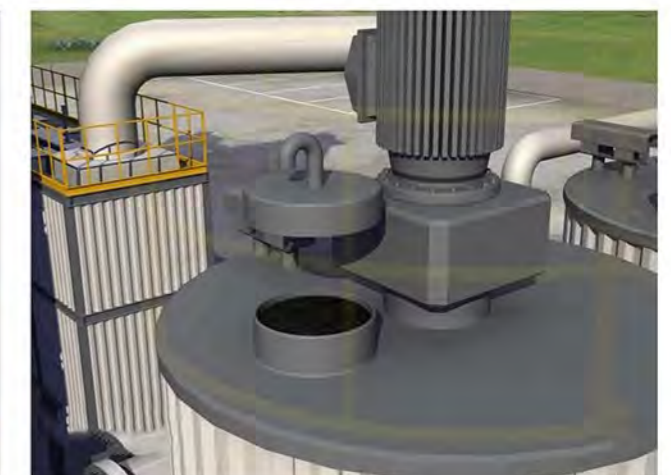
Enclosed Belt Conveyor



Enclosed Loading Chamber



Dust Collecting System: one gravitational dust collector, two bag-house dust collectors



Activated carbon device, absorbing asphalt fume



Asphalt Drum Mixing Plant: DHB/MDHB Series

DHB Series and MDHB Series (mobile) are drum mixing asphalt plant; drying drum has functions of drying and mixing; their output is 20 ~ 100tph, fitting for small and medium-sized road construction project.

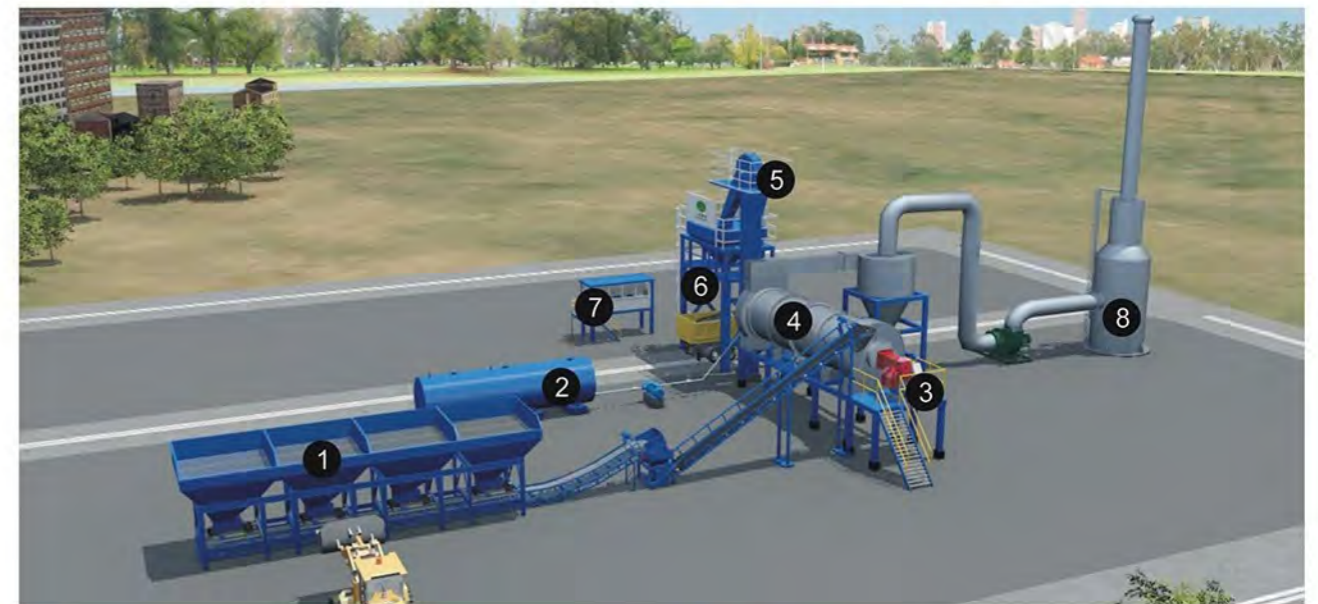


Features

- Integrated structure, less land occupation;
- Convenient for transportation and mobilization; MDHB series equipped with mobile chassis can be pulled by truck or vehicle;
- Cold aggregate equips with weight sensor and variable frequency motor; aggregate feeding rate is remote controlled; precise aggregate feeding
- Drying drum have functions of drying, heating and mixing, low heat loss; optimized inner structure, fast heating and well mixing;
- Low initial investment, highly cost-effective.

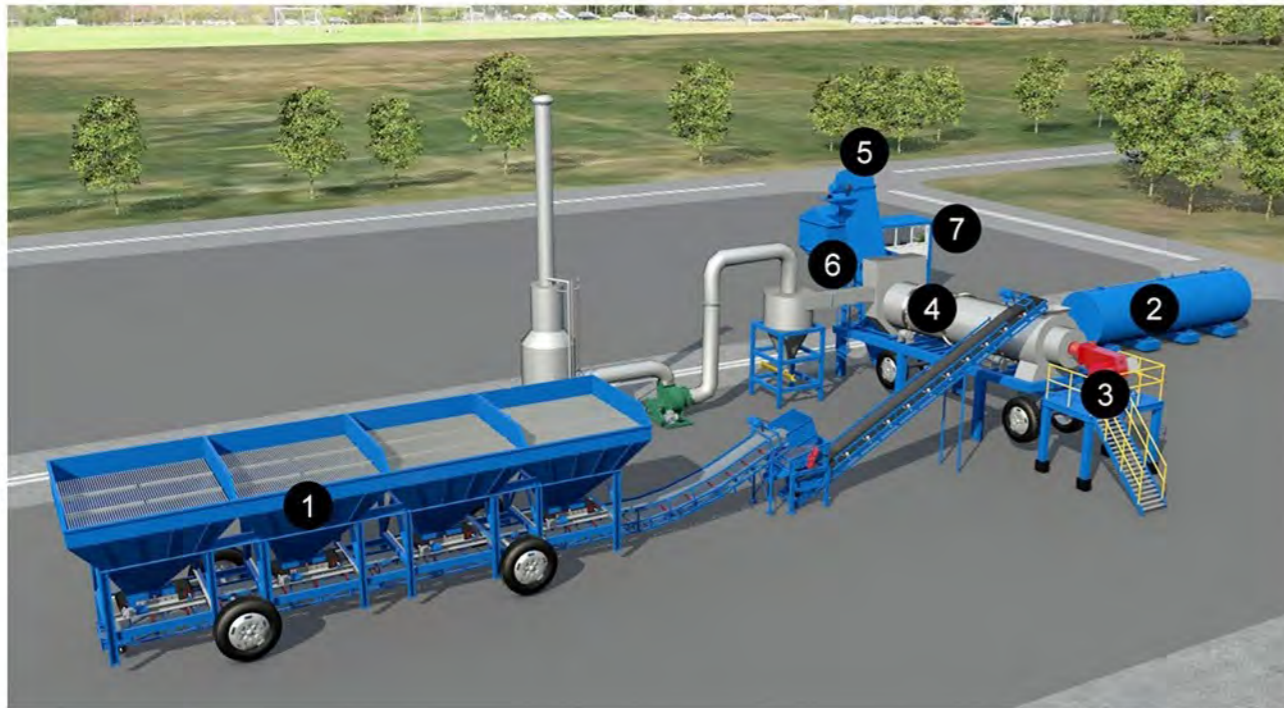


DHB Series Structure



- | | |
|---------------------------------|-----------------------------|
| 1 Cold aggregate feeding system | 5 Finished asphalt elevator |
| 2 Bitumen tank | 6 Finished asphalt silo |
| 3 Burner | 7 Control room |
| 4 Drying and mixing drum | 8 Water dust collector |

MDHB Seires Strucutre



- 1 Cold aggregate feeding system
- 2 Bitumen tank
- 3 Burner
- 4 Drying and mixing drum
- 5 Finished asphalt elevator
- 6 Finished asphalt silo
- 7 Control room
- 8 Water dust collector

Model and Parameter

Model	Capacity (t/h)	Weighing Accuracy		Total Power(kW)	Fuel Consumption(kg/t)	
		Aggregate	Bitumen		Coal	Oil
MDHB / DHB-20	20	±1.5%	±1%	40	10	5.5-7
MDHB / DHB-40	40	±1.5%	±1%	75	10-13	5.5-7
MDHB / DHB-60	60	±1.5%	±1%	128	10-13	5.5-7
MDHB / DHB-80	80	±1.5%	±1%	165	10-13	5.5-7
MDHB / DHB-100	100	±1.5%	±1%	200	10-13	5.5-7

Successful Cases





Mobile Asphalt Mixing Plant YLB Series

YLB Series is mobile batch mixing asphalt plant; it has the advantages of LB Series batch mixing plant; in addition, it is equipped with chassis and trailer and can be mobilized and relocated in a very short time. Its output is 60 ~ 160tph, fit for construction of road that is not wide, but considerable long and needs frequent relocation.

Features

- Modular design; main modules are equipped with trailers and chassises; fast and convenient for relocation;
- Precise screening, accurate measurement, batch mixing; producing good quality finished asphalt;
- Compact design, less land occupation; optional feed for filler and additives such as dye pigment, fibres and foam;
- Optimized drying drum and mixer, better performance; key parts made of sturdy material, longer service life.
- PLC system, intelligent control; easy for operation.



Four main modules: mixing tower, cold aggregate feeder, bag house dust collector and drying drum; each module has mobile chassis and can be pulled by a truck or tractor.

Model and Parameter

Model	YLB-700	YLB-1000	YLB-1500	YLB-2000	
Capacity	60t/h	80t/h	120t/h	160t/h	
Mixer Capacity (kg/batch)	700	1000	1500	2000	
Fuel Consumption	≤6.5kg/t (oil fuel)				
Weighing Accuracy	Hot aggregate:±0.5%; bitumen:±0.3%; filler:±0.2%				
Finished Asphalt Temperature	130°C-160°C(adjustable)				
Dust Emission	≤ 20 mg/Nm ³				
Working Noise	≤ 70 db(A)				
Operation Mode	Full automatic/Half automatic/Manual				
Installed Power	157kW	241kW	330kW	412kW	
Voltage	220V/380V-50Hz (as desired)				
Plant Covering Area(m)	Length	35	40	40	42
	Width	26	28	32	32
	Height	15	15	16	16



Mobile Asphalt Mixing Plant QLB Series

QLB Series is mobile, small-sized batch mixing asphalt plant with compact structure; output is 10 ~ 80tph, fitting for small and medium-sized road construction project which needs frequent site relocation.

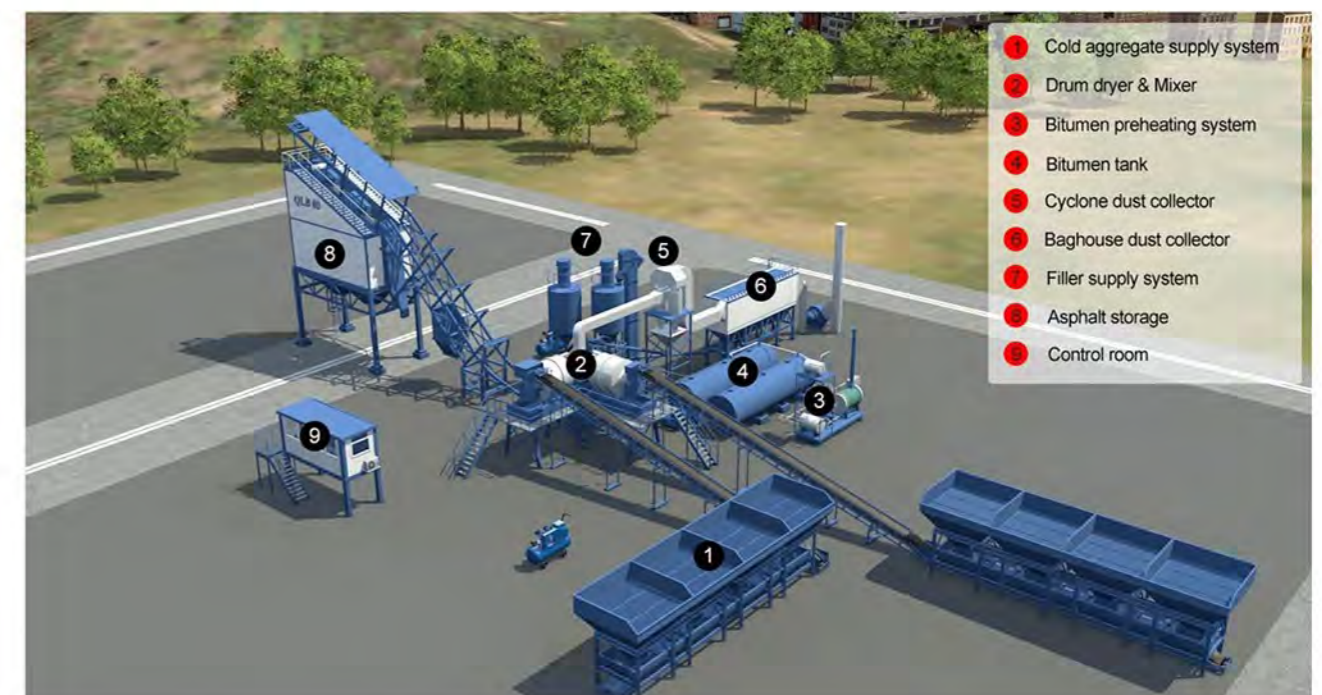
Features

- Mixing system is consisting of 2 drying drums and 1 mixer, high efficiency; batch mixing; good finished asphalt;
- Filler, aggregate and bitumen adopt electronic measurement, high weighing accurate;
- PLC system with control panel; operation modes switchable between manual and automatic;
- Equipped with trailer and chassis, convenient for transportation and relocation;
- Coal burner or diesel burner, as desired.
- Compact and simple structure, less land occupation; low initial investment, highly cost-effective.

Model and Parameter

Model		QLB-10	QLB-15	QLB-20	QLB-30	QLB-40	QLB-60	QLB-80
Capacity		10 t/h	15 t/h	20 t/h	30 t/h	40 t/h	60 t/h	80 t/h
Overall Power	Fuel Oil	41.5kW	54kW	63.5kW	104.5kW	125kW	157.5kW	200kW
	Fuel Coal	57.5kW	75kW	86.5kW	127.5kW	169kW	205kW	276kW
Aggregate Feeder		2.3m ³ ×3	2.3m ³ ×3	2.3m ³ ×3	5m ³ ×3	5m ³ ×3	5m ³ ×3	5m ³ ×4
Finished Asphalt Storage Bin		2 t	5 t	5 t	9 t	9 t	9 t	20 t
Asphalt Temperature		120-180 °C (adjustable)						
Fuel Consumption		Fuel Oil: 5-7.5 kg/t; Fuel Coal: 13-15 kg/t						
Optional Components		Water dust collector, Baghouse dust collector, Control room, Bitumen heating tank						

Structure





Mobile Asphalt Mixing Plant SLB Series

SLB Series is drum mixing asphalt plant, it is the smallest of all asphalt plant made by Liaoyuan Machinery. SLB Series is featured by small size, compact structure and easy relocation. The output of SLB asphalt plant is 8 ~ 30tph, it is mainly used in road maintenance project and small-sized road construction project.

Features



- Low initial investment, cost-effective, fit for small-sized road construction project;
- Drying drum and mixing drum connect with each other, low energy loss, saving energy;
- Simplified structure, easy to operate; when rotating in counter clockwise, drying drum heats aggregate, in clockwise, it discharges aggregate to mixer;
- Equipped with trailer chassis, convenient for transportation and relocation;
- PLC system with control panel; operation modes switchable between manual, semi-automatic and automatic;
- Stable and reliable, easy for maintenance.

Model and Parameter

Model	SLB-8	SLB-10	SLB-15	SLB-20	SLB-30	
Capacity	8 t/h	10 t/h	15 t/h	20 t/h	30 t/h	
Overall Power	Fuel Oil	23.7kW	24.3kW	33kW	46.5kW	60kW
	Fuel Coal	40kW	41kW	54kW	70kW	90.3kW
Cold Aggregate Bin	2.3m ³ ×3	2.3m ³ ×3	2.3m ³ ×3	2.3m ³ ×3	5m ³ ×3	
Finished Asphalt Storage Bin	5 t	5 t	5 t	5 t	9 t	
Asphalt Temperature	120-180°C (adjustable)					
Fuel Consumption	Fuel Oil: 5-7.5 kg/t; Fuel Coal: 13-15 kg/t					
Optional Components	Water dust collector, Baghouse dust collector, Control room, Bitumen heating tank					

Pictures





Pictures



Hot Recycling Asphalt Plant RLB Series

RLB Series hot recycling asphalt plant adds asphalt recycling equipments on LB Series; by using hot recycling technology, old asphalt mixtures milled from the destroyed road are conveyed into mixer and mixed with aggregate and filler to produce new asphalt with good quality. RLB Series can fully make use of old asphalt mixture, save fuel and material, reduce pollution and waste, bring better economic and environmental benefits for clients.

Features

- Saving fuel: high performance burner, full combustion; optimized drying drum, hot air recirculated before exhaust, higher heat utilization rate;
- Minimal pollutants: asphalt fumes and harmful gas recirculate into drying drum and burn again, reducing harmful fume emission; multi-stage dust collecting system, reducing dust emission;
- Full automatic control by the computer on the air flow through the control of the dampers and the temperature monitoring by the thermometer at various positions, bringing the recycled material to the ideal temperature for the mixing with the virgin material; avoiding aging asphalt or asphalt burning;
- Recycled asphalt proportion reaches up to 50%.

Model and Parameter

Model		RLB-60	RLB-80	RLB-120	RLB-160
Capacity		60t/h	80t/h	120t/h	160t/h
Fuel consumption		Coal: 13 ~ 15kg/t Diesel: 6 ~8kg/t			
Weighing accuracy		Dynamic: ±2.5% Static: ±0.5%			
Total power		130kW	170kW	230kW	280kW
Max. adding proportion of recycling material	LB1200	50%	/	/	/
	LB1500	40%	/	/	/
	LB2000	30%	50%	/	/
	LB3000	/	33%	50%	/
	LB4000	/	0%	37%	50%



WBC and YWBC (mobile) Series stabilized soil mixing plant are featured by compacted design, optimal layout, less land occupation, high reliability, wide adaptability, easy installation and operation. WBC and YWBC Series are cost-effective and can meet requirements of base coarse construction in road, airport, harbour and railway projects in every level and scale.



Features

- Modular design, easy to transport and install; including WBC Series (stationary type) and YWBC Series (mobile type);
- Batching system adopts electronic weighing measurement and frequency control on material feeding, ensuring high weighing and grading accuracy; .Filler silo is equipped with a small
- Regulatory cabin, cement measurement is more accurate and no filler leakage;
- Twin-shaft batch mixer, chain and sprocket drive; uniform and even mixing;
- Advanced control system, high degree of automation, PLC control system; easy to operate.



Model and Parameter

Model		(Y)WBC200	(Y)WBC300	WBC400	WBC500	WBC600
Capacity (t/h)		200	300	400	500	600
Filler Silo Volume(ton)		50	50	50	100	100
Finished Soil Silo Volume(m ³)		4	4	7	7	7
Aggregate Particle Size		≤45 mm	≤45 mm	≤45 mm	≤60 mm	≤60mm
Aggregate Feeder (Qty)		3	3	4	4	5
Weighing Accuracy	Aggregate	±3%	±3%	±1%	±1%	±1%
	Cement	±1.5%	±1.5%	±1%	±1%	±1%

LIST AND COMPARISON OF ASPHALT PLANTS

Model		LB Series	ELB Series	LYJ Series	YLB Series	QLB Series	DHB Series	MDHB Series	SLB Series
Capacity		40 ~ 400t/h	40 ~ 400t/h	180 ~ 340t/h	60 ~ 160t/h	10 ~ 80t/h	20 ~ 100t/h	20 ~ 100t/h	8 ~ 30 tph
Mixing method		Batch mixing	Batch mixing	Batch mixing	Batch mixing	Batch mixing	Drum mixing	Drum mixing	Drum mixing
Stationary / Mobile		Stationary	Stationary	Stationary	Mobile	Mobile	Stationary	Mobile	Mobile
Accurate screening (Yes / No)		√	√	√	√	NA	NA	NA	NA
Precise weighing (Yes / No)		√	√	√	√	√	NA	NA	NA
Filler / additive feeding (Yes / No)		√	√	√	√	√	NA	NA	NA
Mixing tower (Yes / No)		√	√	√	√	NA	NA	NA	NA
Weighing accuracy	Aggregate	±0.5%	±0.5%	±0.5%	±0.5%	±1.5%	±1.5%	±1.5%	NA
	Filler	±0.5%	±0.5%	±0.25%	±0.5%	±0.5%	NA	NA	NA
	Bitumen	±0.25%	±0.25%	±0.25%	±0.25%	±0.25%	±1.5%	±1.5%	NA
First stage dust collector	Gravitational dust collector	√	√	√	√	NA	NA	NA	NA
	Cyclone dust collector	Optional	NA	NA	NA	√	√	√	√
Second stage dust collector	Bag house dust collector (dust emission ≤ 20 mg/Nm ³)	√	√	√	√	Optional	Optional	Optional	Optional
	Water dust collector (dust emission ≤ 100 mg/Nm ³)	Optional	NA	NA	NA	√	√	√	√
Fit for road grade	Highway and trunk road	√	√	√	√	NA	NA	NA	NA
	Subtrunk road	√	√	√	√	√	√	√	NA
	Country and local road	√	√	√	√	√	√	√	√
	Road maintenance	√	√	√	√	√	√	√	√

SUCCESSFUL CASES

