

## Asphalt Drum Mix Plant

AN ISO 9001 : 2008 CERTIFIED COMPANY



use the  
machinery of  
**VINAYAK**  
making the  
way to **success**

**DM Series : 60 - 120 tph**  
(Stationary & Mobile Type)





## ASPHALT DRUM MIX PLANT

(Stationary & Mobile Type)

Available Models :

Model	DM - 45	DM - 50	DM - 60
Capacity	60 TPH	90 TPH	120 TPH

### Salient Features of Stationery Plants

- Easy Operation and Less Maintenance.
- Designed for International Market.
- Modern Drum Mix Technology.
- Proper Asphalt coating and saving.
- Proper Drying and mixing of aggregate.
- Less Fuel Consumption.
- Continuous Electronic Belt weighing System With Load Cell.
- SCADA/PLC Based Control Panel with online print out facility.
- Schneider Make HMI with Touch Screen.

### Salient Features of Mobile Plants

- Easy to Operate.
- Modular Design For Transport.
- Completely Pre – Wired Get Set and Go.
- No Civil Works – Massive Savings.
- SCADA/PLC Based Control Panel with online print out facility.
- Complete Chassis With Wheel Hub - Axle Assembly In Chassis With Drum, Front – Rear Break, Kaman Patta, Air Tank, Landing Gear, King Pin, Wheel Rims, Tyres.





## THERMO DRUM UNIT

### DRUM MECHANICS

The 40 -120 TPH plants are supplied with a low maintenance cradle type drum drive. The auto lubrication system ensures proper and adequate lubrication on the chain drive thereby ensuring long years of trouble free service. Optionally a four wheel friction drive, which is a standard on the 150 TPH and higher models, can be supplied.

Specially treated sprockets, thrust wheels, trunion rings and trunion rollers, engineered precisely for flawless and trouble free dryer drum rotation, ensures unlimited productivity

### THERMO DRUM

The drying and mixing unit of the asphalt plant demands complex flight design and heat transfer technology. With its continuous R & D and incorporation of the latest design up-gradations, Vinayak thermo drum is miles ahead of competition. The Vinayak thermo drum unit follows a triple heat transfer system that ensures a total transfer of heat to the aggregates translating into higher productivity and lower fuel consumption. The heat is transferred to the aggregates using the conductive, convective and radiation techniques. The unique flight design ensures total heat transfer, a through mixing & coating, lower emissions and prevention of bitumen oxidation

## BURNER

Thermo-Drum Burner is the heart of the entire system hence its efficiency, ease of serviceability etc. are most important factors.

- Two stage High & low
- Capacity to reduce the moisture up to 0.5% and achieve 180 Deg. Celsius for aggregate.
- Able to use LDO / FO / Diesel as fuel.
- Nozzle cleaning is possible during running condition.
- Fully automation operation







### COLD AGGREGATE BIN FEEDER UNIT

Four Bin Feeder Unit with AC variable frequency invertors based variable speed drives and calibrated volumetric gate controls on all four bins, programmable bin vibrator on sand bin, Gathering conveyor & Slingers conveyor. Aggregate flow indicators are mounted on each bin to indicate the on/off flow of the aggregates from each bin. The bins shall be fabricated from special Structural steel, with wear strips. Supplied with high efficiency gear - motors. Unit shall be supplied complete with safety mesh and protection. The feeders are fully computerised controlled and gradation can be changed on the go. The unit shall also be supplied with calibrated gate openings for very precise controls of the cold mix gradation.



### BITUMEN HEATING & STORAGE TANKS

Fully insulated double walled tank is equipped with separated high-pressure electronic burner for heating the Asphalt and control unit capable of metering and spraying required quantity of bitumen at specified temperature.

The positive displacement jacketed Asphalt pump coupled with reduction gearbox and variable speed motor is provided with hot oil circulating system.

All the Asphalt carrying pipelines are hot oil jacketed and thoroughly insulated with asbestos tape.

- External insulation with ceramic wool and covered with suitable thick sheet.
- Tested tube nest for diathermic oil circulation.
- Thermic duct, manhole, lifting hooks, breather pipe.
- Electronic high-pressure jet burner.
- Heavy duty jacketed Asphalt pump
- Thermometers.





## DISCHARGE SYSTEM

Anti-segregation gob hopper complete with high temperature conveyor for discharge of mix waiting dumpers/ trucks. The opening and closing of a hydraulic cylinder and hinged doors for opening and closing of the hopper. A hydraulic power pack is supplied for operating the hopper, complete with hosepipe connections mounted separately.



## FUEL STORAGE TANKS

Vinayak offers Fuel Storage Tank For Use Fuels of Dryer Burner Unit & Bitumen Tank Burner for Heating Arrangements.

## FILLER STORAGE UNIT

Vinayak offers a wide range of Mineral filler storage and feeding solutions for the customers to choose from, depending on the site requirements. A variable speed computerized synchronized metering system ensures the right proportioning in the mix.

## WEIGHING SYSTEM

A continuous electronic belt weighing system with load cell is mounted on the slingers conveyor for weighing the aggregate flow in tons per hour. Which is to be fed in to dryer drum. The belt weighing system is further synchronized by the computer to ensure precise metering of bitumen. It indicates the 'FED' in tons/Hr., With cumulative readout and totalize.

## POLLUTION CONTROL UNIT

PCU Series is a venture type high effectively wet dust collector that maintains the required environmental standards in specified areas. The extreme turbulence type venture design ensures a very good entrapping of the dust laden exhaust gas, large stainless steel spray nozzles provide a dog free operation and assure minimum water make-up requirements. The adjustable venture throat permits "fine tuning" to get optimum cleaning efficiency to meet specific plant operating requirements.

## CONTROL SYSTEM

Fully computerized control cabin with AC on board electrical power control console, distribution switch board, fully automatic process and sequence controls are a standard on all Vinayak DM series plants.

A user Friendly software gives you total reliability and ensures top notch performance.

Fail proof power interlocks and auto process controls, Online fault detection, Online printing facility Provisions to print, store and edit production details, mix proportions, etc.

Display of all process control parameters, Auto / manual operation, The control is equipped with function keys and numeric keys and does not require special skills for operation.



## TECHNICAL SPECIFICATIONS\*

Model	DM-45	DM-50	DM-60
Capacity	60 TPH	90 TPH	120 TPH
<b>Cold Aggregate Bin Feeder Unit</b>			
No. of Bins	4	4	4
Total Storage Capacity ( Heaped Form )	100 Tons	120 Tons	150 Tons
Auxiliary Drive Motor	1.5 kw	1.5 kw	2.2 kw
Auxiliary Conveyor Belt Size	450 mm width X 3 ply	450 mm width X 3 ply	450 mm width X 3 ply
Gathering Conveyor Drive Motor	3.7 kw	3.7 kw	5.5 kw
Gathering Conveyor Belt Size	600 mm width X 3 ply	600 mm width X 3 ply	600 mm width X 3 ply
Bin Vibrator	0.75 kw	0.75 kw	0.75 kw
<b>Vibratory Screen</b>			
Drive Motor	0.75 kw	0.75 kw	0.75 kw
Wire Mesh	900 mm X 1300 mm	900 mm X 1300 mm	900 mm X 1300 mm
Screening Area	45 mm X 45 mm	45 mm X 45 mm	45 mm X 45 mm
<b>Slinger Conveyor</b>			
Conveyor Drive Motor	3.7 kw	3.7 kw	5.5 kw
Conveyor Belt Size	500 mm width X 3 ply	500 mm width X 3 ply	600 mm width X 3 ply
<b>Thermo Drum Unit</b>			
Dryer – Diameter	1200 mm	1500 mm	1800 mm
Dryer – Length	6250 mm	6750 mm	7000 mm
Glass wool Insulation	50 mm	50 mm	50 mm
Drive Type	Cradle Type Chain Drive	Cradle Type Chain Drive	Cradle Type Chain Drive
Drive Motor	15 kw	18.5 kw	30 kw
Exhauster	15 kw	18.5 kw	30 kw
<b>Multi Clone Primary Dust Collector</b>			
No. of Cons	10	15	21
Dust Screw Drive Motors	0.75 kw	0.75 kw	1.5 kw
<b>Dryer Burner</b>			
Burner Capacity	350 LPH	550 LPH	750 LPH
High Pressure Burner Type	Fully Automatic Dual Stage	Fully Automatic Dual Stage	Fully Automatic Dual Stage
Fuel Type	Diesel	Diesel	Diesel
Blower Motor	3.7 kw	5.5 kw	11 kw
Burner Pumping Station Motor	1.1 kw	2.2 kw	5.5 kw
<b>Bitumen Tank ( U – Shape &amp; Completely Insulated )</b>			
Tank Capacity	15 Tons	20 Tons	25 Tons – 2 Nos.
Bitumen Drive Motor	3.7 kw	3.7 kw	5.5 kw
Heating System	Direct Heating	Direct Heating	Direct Heating
<b>Fuel Storage Tank</b>			
Tank Capacity	3000 Liters	3000 Liters	5000 Liters
<b>Load Out Conveyor</b>			
Conveyor Drive Motor	3.7 kw	3.7 kw	5.5 kw
Heat Resistant Conveyor Belt	HR 600 mm width X 3 ply	HR 600 mm width X 3 ply	HR 600 mm width X 3 ply
Hopper Capacity	1.0 Ton	1.0 Ton	1.5 Ton
Hydraulic Power Pack Motor	2.2 kw	2.2 kw	3.7 kw
<b>Mineral Filler Unit</b>			
Drive Motor	0.75 kw	0.75 kw	0.75 kw
Drive Gear Box	Heavy Duty Worm Gear	Heavy Duty Worm Gear	Heavy Duty Worm Gear
Rotary Valve	150 mm	150 mm	150 mm
Hopper Capacity	1.0 Ton	1.0 Ton	1.0 Ton
Air Compressor	5.5 kw	5.5 kw	5.5 kw
<b>Recommended Gen Set</b>	<b>100 KVA</b>	<b>125 KVA</b>	<b>182 KVA</b>
<b>Open Land Requirement</b>	<b>35 Meters X 35 Meters</b>	<b>40 Meters X 40 Meters</b>	<b>45 Meters X 45 Meters</b>
<b>Pollution Control Unit (Optional)</b>		<b>Dust</b>	
Wet Dust Type Collector	Extreme Turbulence Venturi	Less than 150 mg/m3	
Bag House Type Filter	Reverse Air Flow Type	Less than 50 mg/m3	

Offer for capacities over 150 TPH on request.

Accessories shown are optional and a part of standard supply.

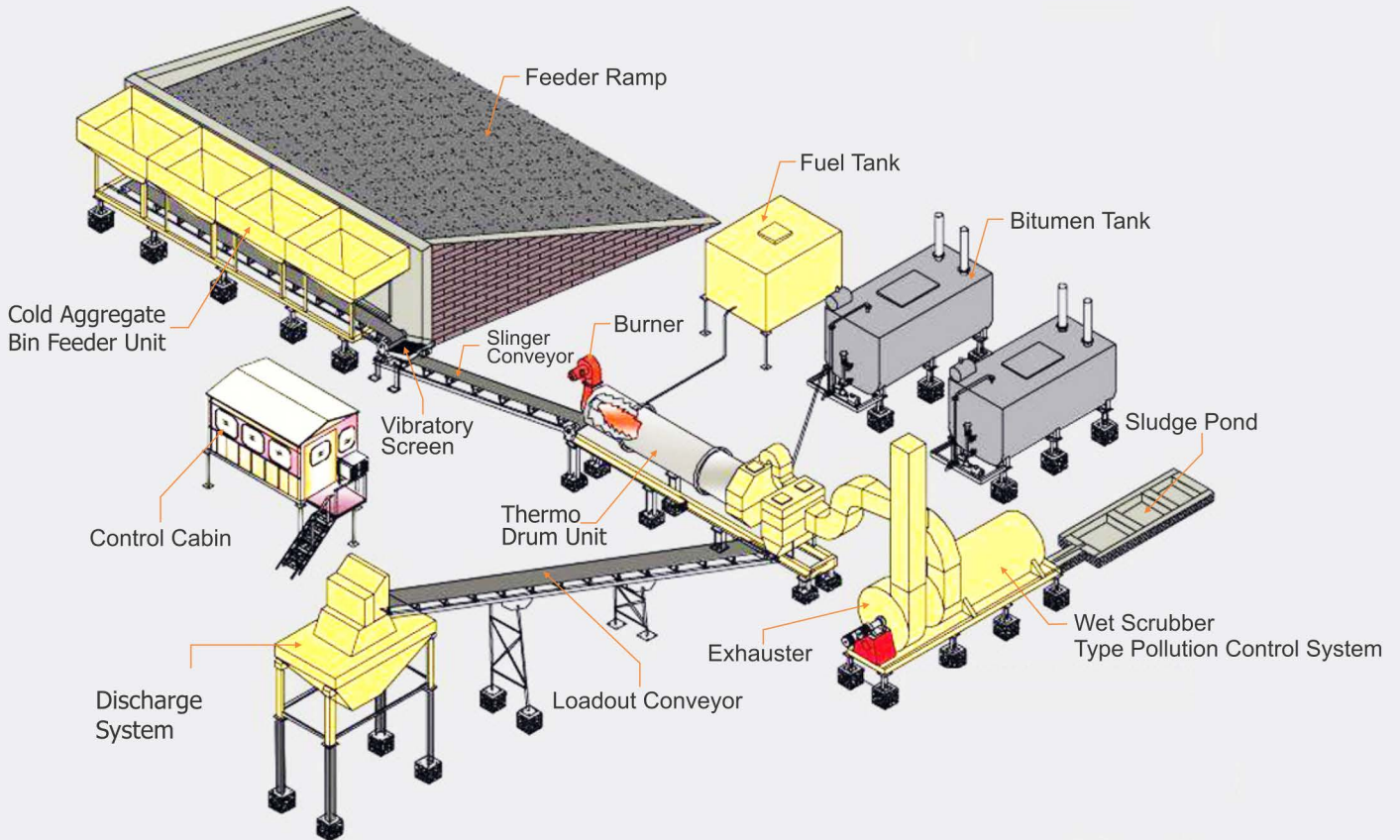
\*Vinayak's policy of constant up gradation, of specifications are subject to change without prior notice.

**Also Available with Mobility System for Asphalt Drum Mix Plant :**

- All Units Suitably Mounted on Chassis Complete With Axles, Wheel Hubs, Tow Bar With Pin etc.
- Pre-wired with cables, socket, plugs, junction box to inter connect the units



## GENERAL LAYOUT OF ASPHALT DRUM MIX PLANT



## SHIPMENT FROM OUR WORKS



## Quality Assurance

We believe that client satisfaction comes from products that perform efficiently and reliably with least down time. We have adopted stringent quality assurance checks for every product, starting with the raw material. Our workforce is self motivated with every employee considering himself to be a Quality Inspector.

## Design & Engineering

We our products are designed from basic principles. Past experience, field feed-back, innovation and application form important parameters in the design of our products.

## After-sales-service

We offer you not only prompt and effective service, but also the complete range of original spares to help prevent any down time and consequent production and profit losses. We have earned an enviable reputation throughout the country for the excellence of our sales and service.

## Unit Exported To More Than 35 Countries Worldwide

We have exported number of units to various countries, Repeat export orders speak of our quality & commitment towards customer satisfaction.



AFGHANISTAN



ALGERIA



ANDAMAN NICOBAR



BHUTAN



BANGLADESH



DJIBOUTI



ECUADOR



GUYANA



GHANA



IRAQ



KENYA



MALAWI



MOZAMBIQUE



MALDIVES



NIGERIA



NEPAL



OMAN



QATAR



PERU



TRINIDAD &  
TOBAGO



SIERRA LEONE



SAUDI ARABIA



UAE



SRI LANKA



YEMEN

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**VINAYAK**<sup>®</sup>  
ASPHALT & CONCRETE EQUIPMENT

## VINAYAK CONSTRUCTION EQUIPMENTS

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FOR THE WORLD**

