

Asphalt Drum Mix Plant DM-45.DM-50 & DM-60



Vishvakarma is the plant of choice for contractors all over the india, who demand affordable large scale production, long-terms performance and lowest operating costs per tones of asphalt. Plant focused on delivering a simple, dependable easy-to operate and maintain. Truly plant with a durable design that lets contactors be competitive on both large and small projects.

Four Bin Feeder Unit, Vibrating Screen, Slinger Conveyor, Dryer Drum Unit, Automatic Burner, Dust Collector, Load-Out Conveyor, Insulated Control Cabine, Electric Control Panel, Fuel Tank, Bitumen Tank, Pollution Control Unit.

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Four bin feeder unit is having four bins and each bin is driven by individual AC/DC motor drive so as to accurately conveyor, flow of aggregate from each bin. Vibrating arrangement of bin, low level & no flow warning device of bins. four bin feeds aggregate to gathering conveyor which is driven by motor drive. it is fitted with electronic weighting system material is form gathering conveyer flow to vibrating screen for removing over size material.

	DM-45 (40/60 TPH)	DM-50 (60/90 TPH)	DM-60 (90/120 TPH)
Four Bin Feeder Unit			
Number of Bins	4 (Four)	4 (Four)	4 (Four)
Feeding Capacity	80 TPH	110 TPH	150 TPH
Bins Plate Thickness	5 MM	5 MM	5 MM
Bin Size	2.50 m x 2 m x 1.83 m	2.70 m x 2 m x 1.83 m	2.90 m x 2.10 m x 1.83 m
Bin Belt Size	550 mm x 2.95 m	550 mm x 2.95 m	550 mm x 2.95 m
Motor	2 HP AC/DC Drive	2 HP AC/DC Drive	2 HP AC/DC Drive
Gear Box	"C" SMSR	"C" SMSR	"C" SMSR
Bin Gathering Conveyer Motor	5 HP AC @ 1500	5 HP AC @ 1500	7.5 HP AC @ 1500
Bin Gathering Gear Box	"D" SMSR	"D" SMSR	"D" SMSR
Bin Gathering Belt Size	600 mm x 27.3 m	600 mm x 27.3 m	600 mm x 27.3 m
Bin Vibrator Motor (Only 4 No Bin)	1 HP AC Drive	1 HP AC Drive	1 HP AC Drive



High Pressure Jet Auto Burner

Thermo-drum & mixing unit of the drum mix asphalt plant is the heart of the plant. As called the aggregate is heated with automatic burner to require temperature and bitumen is added in the drum at suitable stage and bitumen is coated evenly to the aggregate in this drum. There are various stages in the drum like heating, mixing zone. That helps the aggregate and bitumen to heat and mix uniformly. The fins in the dryer unit are specially designed to get maximum heat efficiency that is to say minimum heat loss.

Thermo Dryer & Mixing Unit	DM-45	DM-50	DM-60
Diameter	1219 MM	1500 MM	1800 MM
Length	6096 MM	6700 MM	7010 MM
Thickness	10 MM	10 MM	10 MM
Motor	15 HP AC	25 HP AC	30 HP AC





Vibrating screen removes oversize materials and feeds the remaining materials to charging conveyor. Separate size of screen can be provided for removing oversize material is form different kind of mix.

Fuel tank

Tank is also supplied with the plant, having 5000 / 10000 lts capacity with 2000 lts service tank.



Mineral / Lime feeder unit is also fitted at the output end of the plant, this unit into lime / cement /dust feeding rotary pump with fitted motor drive and air blower quantity of filler material to be added in the mix.

Load-out conveyor is elevates the mix aggregate to such height that the mix material can be directly loaded in the dumper. it is fitted with hydraulically operated hopper wht helps the material to fall without segregation.

Load-Out Conveyor

	DM-45	DM-50	DM-60
Dryer Burner Firing Rate	225 LPH	350 LPH	550 LPH
Fuel Type	LDO/FO	LDO/FO	LDO/FO
Dryer Burner's Blower Motor	5 HP AC @ 2800	10 HP AC @ 2800	15 HP AC @ 2800
Dryer Burner's Pump / Motor	2 HP AC	2 HP AC	3 HP AC
* Dryer Burner's Heater (Optional)	12 KW	18 KW	18 KW



High Pressure Jet Auto Burner

Slinger conveyor is provide for transferring the aggregates received from gathering conveyor as well as from vibrating screen after removing the oversize aggregates and discharging it into dryer drum under combustion zone.

Dust collector unit is fitted at the rear end of the plant, that is at the out put end of the plant. It is having an efficient dust collecting system and fitted with shutter, with can be varied as required. An exhaust fan having sufficient capacity to ensure an effective airflow through the dryer and through the dust – collecting unit.

Dust Collector Motor	2 HP AC	2 HP AC	3 HP AC
Dust Collector Outlet Screw Gear	"C" SMSR	"C" SMSR	"C" SMSR
Dust Collector's No. of Cones	15	17	20

Multi Cyclone Day Dust Collector





Electric control panel is fabricated from 16 SWG CRC sheet and processed with painting, the panel has in-feed master controls. Aggregate flow measurement system, which controls asphalt flow, individual bin, asphalt flow indicator, automatic synchronization of aggregate with asphalt, aggregate and asphalt with totalizer printer for print-out record of all parameters for an instant verify of formula, automatic temp controls with indication, metering for aggregate, asphalt, input voltage, moisture and motor load:

Control cabine is insulated cabin is provided with electric panel to operate the entire plant, the cabin may not have air conditioning system as per client requirements.



Bitumen Tank an insulated storage tank is designed with heating system. It is insulated to pro heat losses. Tank is equipped with separate automatic electric burner for heating the asphalt. Automatic burner makes a hot gas stream through pipe for heating. 25 mm thick external insulated with steel sheet covering. Temp-Gauge is provided for examining the status leading to uniform quality. It is fabricated by using m.s. section and plates. It is having 15, 20 up to 30 tones capacity in various safe like round and U safe.



Pollution Control Unit (Extreme Turbulence Venture Type)

Operation Sequence – Exhaust inducts hot gases from the thermo drum unit, higher pressure water jet is sprayed on to the gases which forms water based slurry and is diverted to the sludge pond. Air pressure is reduced and remaining gases are exhausted. The pond is made such that, the surface water is again reused.

Other Information – Nozzles and water bearing plates are made of stainless steel to resist corrosion. The sludge pond requires to be cleaned once a week based on normal site conditions. As a safety measure, always surround / cover the sludge drain pipe submerged in pond.

Description	DM-45 (40/60 TPH)	DM-50 (60/90 TPH)	DM-60 (90/120 TPH)
Dimension	1.8 x 3 m	1.8 x 3 m	1.8 x 3 m
Exhaust Capacity	10500 CFM	14500 CFM	18500 CFM
Water Pump	2 HP Mono Block	2 HP Mono Block	3 HP Mono Block
Sludge Pond Data	7 x 3 x 1.5 m	7 x 3 x 1.5 m	7 x 3 x 1.5 m
Exhaust Motor	20 HP	25 HP	30 HP



Technical Specifications

[Specification are subject to change without notice due to development.]

Description	DM-45 40/80 TPH	DM-50 60/90 TPH	DM-60 90/120 TPH
Capacity @ 3 % moisture content			
Four Bin Feeder Unit			
Number of Bins	4 (Four)	4 (Four)	4 (Four)
Feeding Capacity	80 TPH	110 TPH	150 TPH
Bins Plate Thickness	5 MM	5 MM	5 MM
Bin Size	2.50 m x 2 m x 1.83 m	2.70 m x 2 m x 1.83 m	2.90 m x 2.10 m x 1.83 m
Bin Belt Size	550 mm x 2.95 m	550 mm x 2.95 m	550 mm x 2.95 m
Motor	2 HP AC/DC Drive	2 HP AC/DC Drive	2 HP AC/DC Drive
Gear Box	"C" SMSR	"C" SMSR	"C" SMSR
Bin Gathering Conveyor Motor	5 HP AC @ 1500	5 HP AC @ 1500	7.5 HP AC @ 1500
Bin Gathering Gear Box	"D" SMSR	"D" SMSR	"D" SMSR
Bin Gathering Belt Size	600 mm x 27.3 m	600 mm x 27.3 m	600 mm x 27.3 m
Bin Vibrator Motor (Only 4 No Bin)	1 HP AC Drive	1 HP AC Drive	1 HP AC Drive
Vibrating Screen Unit Size			
Motor	3 HP AC	3 HP AC	3 HP AC
System	Spring Type	Spring Type	Spring Type
Slinger Conveyor Size	6.1 m	6.1 m	7.3 m
Motor	5 HP AC	5 HP AC	7.5 HP AC
Gear Box	"D" SMSR	"D" SMSR	"D" SMSR
Belt Size	550mm x 12.35 m	550mm x 12.35 m	600mm x 14.8 m
Thermo Dryer & Mixing Unit			
Diameter	1219 MM	1500 MM	1800 MM
Length	6096 MM	6700 MM	7010 MM
Thickness	10 MM	10 MM	10 MM
Motor	15 HP AC	25 HP AC	30 HP AC
Gear Box , Only Elecon	5 NU Worm Gear	7 NU Worm Gear	8 NU Worm Gear
Drive	Rotary Drive	Rotary Drive	Rotary Drive
Dust Collector Motor	2 HP AC	2 HP AC	3 HP AC
Dust Collector Outlet Screw Gear	"C" SMSR	"C" SMSR	"C" SMSR
Dust Collector's No. of Cones	15	17	20
Exhaust Capacity	10500 CFM	14500 CFM	18500 CFM
Exhaust Motor	20 HP AC	25 HP AC	30 HP AC
Dryer Burner Firing Rate	225 LPH	350 LPH	550 LPH
Fuel Type	LDO/FO	LDO/FO	LDO/FO
Dryer Burner's Blower Motor	5 HP AC @ 2800 RPM	10 HP AC @ 2800 RPM	15 HP AC @ 2800 RPM
Dryer Burner's Pump / Motor	2 HP AC	2 HP AC	3 HP AC
Load-Out (Hot) Conveyor Size	10 m	10 m	10 m
Motor	5 HP AC	5 HP AC	7.5 HP AC
Gear	"D" SMSR	"D" SMSR	"D" SMSR
Belt Size	600 mm x 18.06 m	600 mm x 18.06 m	600 mm x 18.06 m
Storage Hopper Capacity	1000 Kegs	1000 Kegs	1500 Kegs
Power Pack System (Hopper Open/Close)	2 HP AC	3 HP AC	5 HP AC
Mineral Filter Capacity	750 kgs	750 kgs	750 kgs
Motor (Screw)	2 HP AC/DC Drive	2 HP AC/DC Drive	2 HP AC/DC Drive
Gear Box	"C" SMSR	"C" SMSR	"C" SMSR
Blower Motor	5 HP AC @ 2800 RPM	5 HP AC @ 2800 RPM	5 HP AC @ 2800 RPM
Control Panel			
Microprocessor Base – DC / AC Drive	SP Enterprise / Sumeet Enterprise	SP Enterprise / Sumeet Enterprise	SP Enterprise / Sumeet Enterprise
Control Cabine (Insulated) Size	12' x 6'	12' x 6'	14' x 6'
1) Fuel Storage Tank Capacity	5000 Ltrs	10000 Ltrs	10000 Ltrs
2) Fuel Service Tank Capacity	2000 Ltrs	2000 Ltrs	2000 Ltrs
Pollution Control Unit-			
Extreme Turbulence Venture Type	Dust Emission Less than 150 mg/m ³	Dust Emission Less than 150 mg/m ³	Dust Emission Less than 150 mg/m ³
Pollution Control Unit Dimension	1.8 x 3 m	1.8 x 3 m	1.8 x 3 m
Water Pump	2 HP Mono-Block	2 HP Mono-Block	3 HP Mono-Block
Bitumen Tank – { "O" Shape OR "U" }	20 Tones –U-Safe	20 Tones –U-Safe	20 Tones –U-Safe
Bitumen Tank's Burner Firing Rate	25-40 LPH	25-40 LPH	25-40 LPH
Motor	250 W	250 W	250 W
Fuel Type	Only Diesel	Only Diesel	Only Diesel
Bitumen Pump Type	Hot Oil Jacked Gear Type	Hot Oil Jacked Gear Type	Hot Oil Jacked Gear Type
Bitumen Pump Make	Standard	Standard	Standard
Bitumen Pump Motor	3 HP AC/DC Drive	5 HP AC/DC Drive	5 HP AC/DC Drive
Pump Capacity	160 LPM	160 LPM	260 LPM
Pump's Gear	- NA -	- NA -	3 NU Worm Gear
Open Land Required	40 x 40 m	40 x 40 m	45 x 45 m
Total Connected Load of Plant	87 KW (115 HP)	108 KW (145 HP)	132 KW (176 HP)
Recommended Capacity of Genset	100 KVA	125 KVA	150 KVA

✓ Bitumen Tank	Tank main wall plate 5 mm and Glass-wood insulation – 40 mm thickness, Tank outer wall 18 gauge thickness plates and other fabrication works as per engineering standard.		
✓ Dryer Unit -45	✓ Dryer Unit -50	✓ Dryer Unit -60	
I Beam 250mm & 200mm Chase , Other Fabrication works as per engineering standard.	I Beam 250mm & 200mm Chase , Other Fabrication works as per engineering standard.	I Beam 400mm & 350 mm Chase , Other Fabrication works as per engineering standard.	



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