

ASPHALT DRUM MIX PLANT - DM 45 (40-60 TPH) | DM 50 (60-90 TPH) | DM 60 (90-120 TPH) TECHNICAL SPECIFICATIONS

ROAD BUILDING



COLD AGGREGATE FEEDER

Stationary four bin cold aggregate feeder unit is with each bin capacity of 8 T (in DM 45), 11 T (in DM 50) and 14 T (in DM 60).

Cold aggregate feeder includes a 600 mm wide gathering conveyor belt driven by a 5 HP AC motor.

It also includes Auxiliary conveyor under each bin which are driven by 2 HP variable speed drive and fitted with adjustable quadrant gates.



Gathering conveyor	600 mm x 24.0 meters – DM 45 600 mm x 26 meters – DM 50 and DM 60
Auxiliary belt	500 mm x 2.50 meters DM-45 500 mm x 2.750 meters –DM 50 and 60
No. of bins	Four
Each bin capacity	8.0 / 11.0 / 14.0 MT
Gathering conveyor motor	5 HP AC
Gathering conveyor reduction gear	20:1 D-Type
Auxiliary conveyor motor	2 HP Variable
Auxiliary conveyor reduction gear	20: 1 C-Type
Bin vibrator	1 HP

DRYER DRUM

Dryer drum is 1.220 meters x 6.100 meters (in DM 45), 1.520 meters x 6.710 meters (in DM 50) and 1.830 meters x 7.316 meters (in DM 60) long complete with flights; bitumen and fines piping; sprocket drive with a 20 HP (in DM 45), 25 HP (in DM 50), and 40 HP (in DM 60) electric motor; frame



mounted exhaust fan and drive with a 20 HP (in DM 45), 25 HP (in DM 50), and 40 HP (in DM 60) electric motor. A frame mounted chamber at discharge end of drum has a special configuration to remove dust particles from the exhaust gas. A dust transfer screw at

the bottom of the chamber has a 2 HP electric drive to collect waste dust.



The burner of the dryer unit is capable of heating the aggregate to required temperature without any un burnt fuel or carbon residue on the aggregate and to reduce the moisture content of the aggregate to the specified minimum. The plant will be fitted with suitable type of thermometric instrument at appropriate places so as to indicate the temperature of exhaust gases, bitumen and mix.

Dryer diameter	1.220 m / 1.520 m / 1.830
Dryer length	6.100 m / 6.710 m / 7.316 m
Dryer capacity	45 to 60 tph / 60-90 tph / 90-120 tph
Dryer motor	20 HP AC / 25 HP / 40 HP
Dryer Gear ratio	20: 1
Exhauster capacity	10500 CFM / 16500 CFM / 18500 CFM

Exhauster motor	20 HP AC / 25 HP / 40 HP
Screw Conveyor Motor	2 HP AC
Screw Conveyor Gear	40: 1 / 40:1 / 40:1

SINGLE DECK VIBRATORY SCREEN

A single deck vibratory screen is provided between the gathering and the slinger conveyor for the removal of the oversize material.

The vibratory screen net is 65 mm size and is driven by 0.5 HP vibrating motor at 440 V.



SLINGER CONVEYOR

Slinger / charging conveyor is to load the aggregates into the dryer. It uses a 5HP AC motor.

Slinger conveyor is equipped with a load cell for continuously monitoring the weight of the aggregate in tph.

Conveyor belt	DM-45	600 mm x 15 meters
	DM-50	600 mm x 16 meters
	DM-60	600 mm x 18 meters
Slinger motor	5 HP AC	
Reduction gear	5: 1 D- Type	



DRYER BURNER FOR DM 45, DM 50 and DM 60

Burner for asphalt drum mix plant includes a high pressure jet burner with a 5 HP (in DM 45), 7.5 HP (in DM 50) and 15 HP (in DM 60) fan motor and a 2 HP (in DM 45), 3 HP (in DM 50) and 3 HP (in DM 60) fuel coil pump with a 12 KW (in DM 45), 16 KW (in DM 50), 24 KW (in DM 60) electric pre heater with an auto on off control for the burner.

The auto on-off system is to maintain the desired set temperature.

Burner blower	5 HP / 7.5 HP / 15 HP AC
Fuel pump	2 HP / 3 HP / 3 HP AC
Heater (Optional)	12 KW / 16 KW / 24 KW



MINERAL FILLER AND DUST CONVEYING SYSTEM

Mineral filler / Lime filler is of capacity DM-45 & 50 1 ton & DM-60 1.5 Ton. Lime filler is fabricated with steel plates and has loading doors with pneumatic dust and filler conveying system. Rotary valve is with a 2 HP variable speed drive motor adaptor chute with piping to allow the fines back to drum mixer, compressor included is with a 10 HP electric motor.

Mineral filler rotary valve motor	1 HP Variable
Mineral filler compressor	7.5 HP



BITUMEN TANK

A stationary bitumen storage tank of capacity 15 Tons / 20 Tons with direct coil heater is standard with DM series plant. "O" or "U" shaped single compartmental bitumen tank is fitted with internal heat transfer coils. It is fully insulated from all the sides by a 2" thick mattresses of glass wool and is with vent, pipes, two fill return connection draw of connection and drain. Our bitumen tanks are complete with a dial type thermometer; manhole; socket for thermostat insertion; exterior access ladder to the tank top with walk way and handrails.



Asphalt auto burner rating	20-30 LPH / 30-40 LPH
Hot oil pump	3/4" x 3/4"

Motor	5 HP (Variable)
Reduction gear	10: 1
Bitumen pump	2" x 2"
Hot oil pump motor	1 HP

LOAD OUT CONVEYOR WITH GOB HOPPER



Loading of the trucks is done by an inclined load out conveyor which is provided with a heat resistant belt. Load out conveyor is equipped with a GOB hopper which is with a hydraulically operated cam shell gate in order to provide surge capacity when changing trucks and it also controls segregation in the mix.



<p>Load out motor: 5 HP AC / 5 HP AC / 7.5 HP AC</p>
<p>Load out Gear: 20:1 D-Type / 20:1 E-Type (DM 60)</p>
<p>Conveyor Belt – Heat Resistant: 500 mm x 16 meters / 600 mm x 18 meters / 600 mm x 20 meters</p>
<p>Hydraulic Power Pack motor: 3 HP AC</p>

CONTROLS

Our control cabin is fully insulated and strategically placed so that a complete view of the plant is easily available. The cabin is fully prewired and complete with weather proof exteriors, interior lightning, fitted with toughened glasses and flush entrance door with lock. It is the house to factory installed asphalt plant controls. It also has provisions to fit an air-conditioner.



The control cabin houses:

- (A)** Main circuit breaker
- (B)** Basic motor control centre which includes-base starter enclosure, power distribution system, control system, transformer starter mounting hardware and safety interlock system, transformer starter mounting hardware in starter panel enclosure doors.
- (C)** Cold feed aggregate controls: It controls the aggregate flow from the four cold feed hoppers at the predetermined percentage

at the desired level of feeding (between 20 TPH to 120 TPH). The total flow rate of the aggregate is displayed digitally on the panel through electronic weighbridge (load cell) mounted on gathering conveyor/ slinger conveyor.

(D) Bitumen synchronization and metering: It provides volumetric measurement of bitumen flow in liters / minute & cumulative reading of total liters. The speed of the pump is automatically controlled to discharge amount of bitumen at desired percentages of aggregate flow.

(E) The calibrated fines metering system to indicate fines feeding rate from the fines storage.

(F) Burner for hot oil as well as drum includes automatic controls for maintaining the set temperature.

(G) The temperature indicators (Digital) includes:

1. The temperature of Bitumen Passing through the pump
2. The temperature of Mix Material out of the drum
3. The temperature of exhaust gases at the exhaust fan
4. The temperature of hot oil
5. The temperature of exhaust gases at the oil heater



PLC PANEL IS ALSO AVAILABLE

POLLUTION CONTROL DEVICE

VENTURI TYPE Wet dust collectors are highly efficient and are known to maintain required environmental standards. The extreme turbulence leads to superb entrapping of dust laden exhaust gas. Large size stainless steel nozzles provide a clog free operation to ensure optimum cleaning efficiency.



POWER BREAK UP DETAILS FOR ATLAS INDUSTRIES ASPHALT DRUM MIX PLANT

Sr. No.	Description	Qty	Power consumption (in HP)				
			DM 45 (40-60 tph)	DM 50 (60-90 tph)	DM 60 (90-120 tph)		
1	<u>COLD AGGREGATE FEEDERS</u>	Auxiliary conveyer	4	8	8	8	
		Gathering conveyer	1	5	5	5	
		Vibrator	1	1	1	1	
2	<u>VIBRATING SCREEN</u>	1	0.5	0.5	0.5		
3	<u>SLINGER CONVEYOR</u>	1	5	5	5		
4	<u>THERMO DRUM UNIT</u>	Drum drive	1	20	25	40	
		Exhauster	1	20	25	40	
		Screw conveyer	1	2	2	2	
		Dryer Burner	Blower	1	5	7.5	15
			Pump	1	2	3	3
Heater	1		12	16	24		
5	<u>LOAD OUT CONVEYOR</u>	Power pack	1	3	3	3	
		Conveyer	1	5	5	7.5	
6	<u>MINERAL FILLER BIN (LIME FILLER)</u>	Rotary valve	1	1	1	1	
		Compressor	1	7.5	7.5	7.5	
7	<u>BITUMEN TANK</u>	Bitumen pump	1	5	5	5	
		Hot oil pump	1	1	1	1	
8	<u>VENTURI TYPE WET DUST COLLECTOR POLLUTION CONTROL UNIT</u>	Water pump	1	5	5	5	
TOTAL POWER CONSUMPTION				108 HP	125.5 HP	173.5 HP	

NOTE: With continuous product improvement, specifications are subject to change without prior notice. Accessories shown may not be a part of standard equipment.



An ISO 9001:2008 Company

ATLAS INDUSTRIES

Plot. No. 14/1, GIDC-II, Dediyan, Mehsana – 384 002

For inquiries contact: +91 98240 40565