

AESCO/MADSEN®



“DM” Series

Drum Mix Asphalt Plants

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"DM" Series™ Drum Mix Asphalt Plants

The AESCO/MADSEN DM Series of drum mix asphalt plants are designed with the demanding asphalt contractor in mind. Affordability, simplicity of erection, user-friendly operation, end product consistency and production rates that meet or exceed expectations are all features that make this series of asphalt plants a solid investment. These superb plants are environmentally compliant with U.S. regulations. They are built with high-quality materials that resist abrasion, high temperatures and corrosion. Configured with a venturi wet scrubber system or a baghouse all mounted on the same frame as the drum mix dryer. The DM Series range in production from 40 TPH (36 mtph) to 250 tph (227 mtph). Six models are available with 48" (1.22m), 58" (1.47m), 68" (1.73m), 72" (1.83m) or 78" (1.98m) drum diameters. All motors are 3-phase, 60 hertz, 460 volt electrical power. Optional 3-phase, 50 hertz, 380-volt electrical motors are available.

Drum Mixers

The DM Series drums are made of 3/8" (9.53 mm) steel plate for better wear and heat resistance. The drums are friction driven by four machined and heat treated trunnions. Trunnion shafts are secured into the trunnion by locking assemblies and are driven by shaft mounted gear reducers. This makes the trunnion and shafts easy to disassemble for replacement. Two spherical type bearings support each shaft and are bolted to a heavy-duty plate for easy trunnion adjustments. Thrust idlers are used to keep the drum's steel tires centered on the trunnions in the proper operating position.



Slinger Conveyors

All DM Series drum mix plants have a high speed slinger feeder conveyor to convey the aggregate from the feed bins into the drum. This eliminates the plugging associated with dryer feed chutes. The slinger is driven with an electric motor and shaft mounted gear reducer. The slinger conveyor includes; 4" idlers (102 mm), rubber lagged head pulley, winged tail pulley, screw type take-up, receiving hopper and belting.

Burner System

The DM Series includes a fuel-efficient burner mounted to the drum dryer. This "state of the art" burner needs no combustion chamber or ignition port, thereby reducing maintenance costs. The burner is configured for diesel fuel but can burn any commercial grade of fuel oil, natural gas or liquid propane as an option. Mounted to the burner is the pilot, flame scanners, manual shutoff valve, low oil pressure switch, pressure gauge, oil metering valve, control motor, dual automatic shutoff valves, blower and fuel pump with motor. The burner control includes aggregate and exhaust gas temperature indication with over temperature limit set points, flame detection, air purging of the drum dryer and burner position indicator.



Pollution Control Equipment

The *DM Series* can be furnished with a venturi wet scrubber or a high-ratio baghouse pollution control system mounted on the same frame as the drum mix dryer. The venturi wet scrubber includes all the ductwork, remotely controlled adjustable throat venturi, nozzles, dewatering tank, exhaust fan, motor, and exhaust stack. The water pump with motor is shipped loose for location next to settling ponds. The high-ratio baghouses are a pulse-jet design and includes bags, cages, valves, blowpipes, controls and a dust return system. All bags and cages can be accessed from the top for easy repair and maintenance. The dust is conveyed back into the asphalt mix. An exhaust fan with electric motor, damper, exhaust stack and ductwork are mounted to baghouse for ease of setup, erection and operation.

Cold Feed Bins

The *DM Series* can be configured with one or two bins mounted on the drum dryer frame or a separate three or four bin unit mounted on their own frame. The one or two bin configurations can be divided down the middle, with twin gates, to allow proportioning of up to four different aggregates. The one or two bin unit has an 8' (2.44 m) by 12' (3.66 m) top opening with a heaped capacity of 15 tons (13.6 mt). All feed bins have tapered self-relieving bottoms to help from bridging and plugging of the feeders. Variable speed roller belt feeders are mounted to each bin and use rubber flashing to minimize leakage around the bin. Each feeder has a reading in percent in the operator's panel. The separate three or four bin units are 8' (2.44 m) by 12' (3.66 m) top opening with a heaped capacity of 15 tons (13.6 mt) and options for portability, hopper extensions, side backfill plate, bin vibrators and extended collector conveyor.



Control Vans

The *DM Series* control van replaces the operators remotely mounted control enclosure on the drum dryer frame. The 8' (2.44 m) wide by 16' (4.88 m) long control van includes heating, air conditioning and 270-degree view of plant operations for the operator. All plant motor controls and operator's consoles are mounted in the control van and are prewired to quick disconnect plug in connectors on the outside of the van for a fast and easy setup.



The Asphalt Metering System

The *DM Series* liquid asphalt pump/metering system consists of a jacketed positive displacement asphalt pump with a shaft mounted indicating tachometer driven by a reversible variable speed motor controller. The system meters and pumps the liquid asphalt either to the asphalt tank for recirculation or to the drum mix plant through an air operated 3-way valve. An optional positive displacement meter with thermocouple, for temperature correction, or a mass flow meter can be added for better asphalt accuracy.

Surge Systems

The *DM Series* offers a complete line of surge systems ranging from 3 ton (2.7 mt) to 150 ton (136 mt). The most popular unit is the 3-ton (2.7 mt) surge system with a drag conveyor. The drag conveyor has an abrasion resistant liner mounted in bottom and heavy duty drag flights mounted to the chain. The hopper has a clam door and operates by a 4" (10.16 cm) air cylinder. A high bin indicator is used to automatically dump the hopper. Other popular self-erecting surge systems are available in 20, 35, 50, or 80 ton (18, 32, 45, 73 mt) capacities. Stand-alone units are available in 50, 80, 100, 125 or 150 ton (45, 73, 91, or 136 mt) capacities. All these units have anti-segregation batchers mounted on the top of the silo. Optional equipment on these surge systems includes heat and insulation on the cone and gate, loadout systems for ticket printing and high and low bindicators.

The Asphalt Blending System

The *DM Series* asphalt blending system is a remote manual system mounted on the drum dryer frame and receives an input signal from the aggregate belt scale and asphalt pump tachometer. The aggregate belt scale and asphalt pump reads out in (tph) or (mtph). The operator simply multiplies the belt scale meter by the desired liquid asphalt percent in (tph) or (mtph). The liquid asphalt speed dial is adjusted until the desired (tph) or (mtph) reads on the asphalt meter. An optional computer control is available to allow the operator to automatically control the aggregate/asphalt ratio in the asphalt mix. The computer control system allows the operator to enter the aggregate moisture content, asphalt content and asphalt specific gravity. The display shows aggregate and asphalt in (tph) or (mtph), liquid asphalt temperature and accumulated tonnage for daily record keeping. Options for this automatic computer system includes printer, feeder control, recycle and dry or liquid additives.



Liquid Asphalt Tanks

The *DM Series* features 10,000 (38,000 liters), 15,000 (57,000 liters), 20,000 (76,000-liter), 25,000 (95,000-liter) and 30,000 gallon (114,000 liter) asphalt tanks. These tanks can be heated with a direct fired diesel, natural gas or liquid propane burner or electrically. All tanks have a vent, fill, outlet, drain, and return lines, manhole and insulation with aluminum skin. Options include a scavenger system for heating pumps and asphalt lines, tires and wheels for portability and unloading pump.

Electric Motor Switchgear

The motor starters and breakers are mounted in a NEMA rated enclosure on the drum dryer frame. All the motors are prewired to this panel for ease of setup and operation. All the start/stop push-buttons are located with the asphalt blending system. The motor control center and all plant controls are located in the interior of the control van if the control van option is selected.



Stationary or Portable

The *DM Series* can either be skid mounted (stationary) or portable configuration. All skid-mounted units are supplied with steel legs for easy setup. Portable plants include tires and wheels for each piece of equipment and the drum dryer is pre-sloped on the frame for ease of erection.

Recycling Systems

Recycling systems can be provided with the *DM Series*. AESCO/MADSEN offers a variety of systems that can be supplied on the initial purchase or retrofitted to existing equipment. Centerfeed and rotary mixers are most common for the *DM Series*. Recycle feed bins, RAP crushers, feed conveyors and RAP controls can be supplied for the *DM Series*.



Additive Systems

Whether you need to add dry or liquid additives, the *DM Series* can accommodate any material. Just let us know what additives are required and we can supply you with the right controls and equipment to meet all of your additive needs.

"DM" Series™ Model Summary

MODEL	DIAMETER	LENGTH	AIRFLOW (CFM)	PRODUCTION @ 4% H2O*	PRODUCTION @ 5% H2O*	PRODUCTION @ 6% H2O*
4822	48" (1.22m)	22' (6.71m)	12,500	81 TPH (74 MTPH)	70 TPH (64 MTPH)	60 TPH (55 MTPH)
5825	58" (1.47m)	25' (7.72m)	18,300	118 TPH (107 MTPH)	100 TPH (91 MTPH)	88 TPH (80 MTPH)
6828	68" (1.73m)	28' (8.53m)	25,200	163 TPH (148 MTPH)	140 TPH (127 MTPH)	121 TPH (110 MTPH)
7228	72" (1.83m)	28' (8.53m)	28,200	188 TPH (171 MTPH)	160 TPH (145 MTPH)	141 TPH (128 MTPH)
7832	78" (1.98m)	32' (9.75m)	33,200	223 TPH 203 (MTPH)	190 TPH (173 MTPH)	165 TPH (150 MTPH)
7832R	78" (1.98m)	32' (9.75m)	40,000	265 TPH (241 MTPH)	230 TPH (209 MTPH)	200 TPH (182 MTPH)

**Note: Production is based on 300° F. mix temperature at 2000 feet elevation*



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