



MODEL	OUTPUT CAPACITY
DM-40	40 - 60 TPH
DM-60	60 - 90 TPH
DM-90	90 - 120 TPH

Higher Capacity Model being tailor made can be offered against specific demand.

# COUNTERFLOW ASPHALT PLANT

WAVE OF THE FUTURE

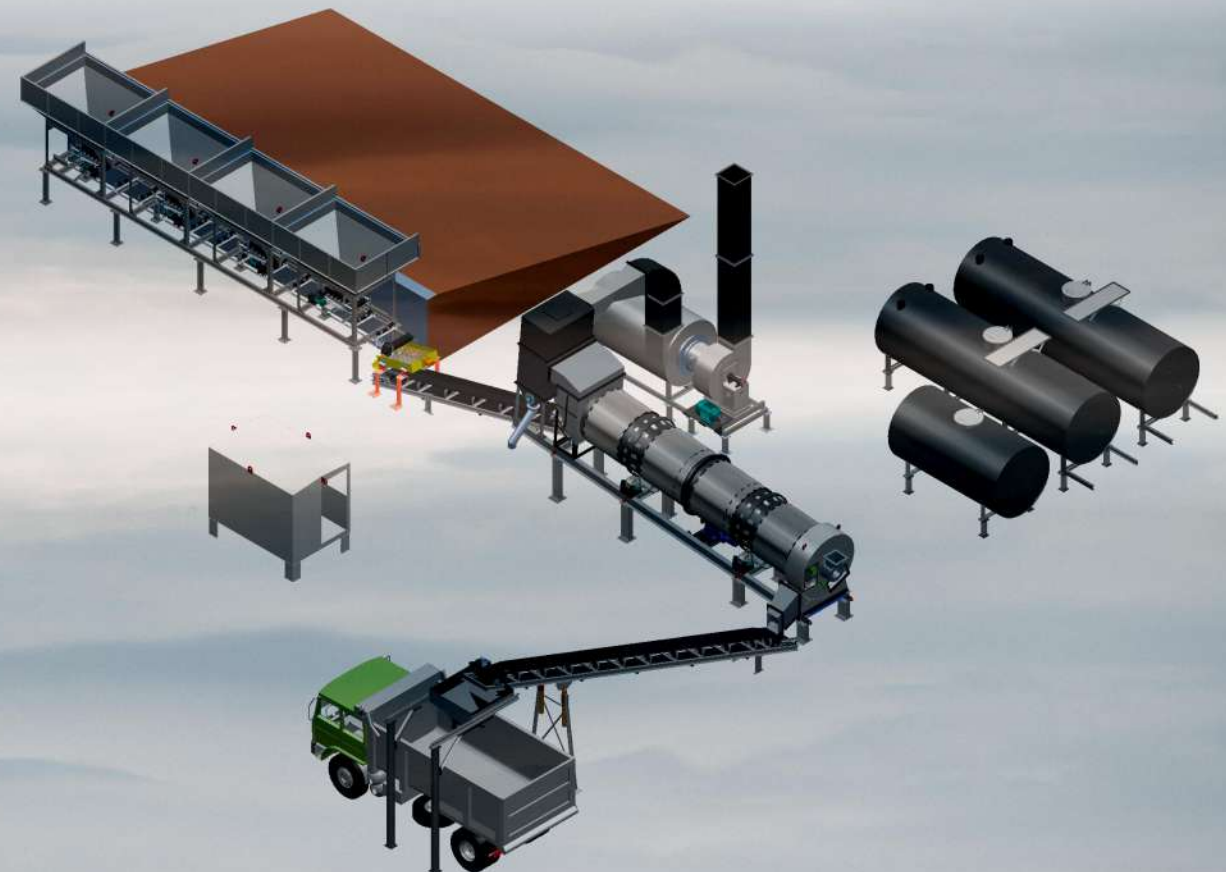
world class equipments with globally sourced components



COUNTERFLOW SINGLE DRUM



COUNTERFLOW DOUBLE DRUM



**CAPIOUS ROADTECH PVT LTD.**

An ISO 9001 : 2015 Company

Government of India Recognized One Star Export House

Plot # 1812, phase-III, B/h. Rurax Way Bridge, GIDC Vatve, Ahmedabad-382445, Gujarat, India.

Ph.: +91 79 40083274, 25833436, 25890356, M: +91 96876 18093 Fax: +91 79 40083274, 25833597, Email: [info@capious.com](mailto:info@capious.com)

[www.capious.com](http://www.capious.com)

## CAPIOUS COUNTER FLOW DRUM PLANT

Capious counter flow drum plant is designed for aggregate to flow counter to the heat source allowing for high aggregate temperatures and low stack temperatures. This design coupled with innovations such as unique flighting systems, conveying systems, and burner design advances solved the problems of earlier parallel flow drum plant designs.

In this type of plant, the material flow in the drum is opposite or counterflow to the direction of exhaust gases. In addition, the Bitumen mixing zone is located behind the burner flame zone so as to remove the materials from direct contact with hot exhaust gases. Liquid Bitumen flow is controlled by a variable flow pump which is electronically linked to the virgin aggregate flow scale. It is injected into the mixing zone along with any additive and particulate

matter (filler) from primary and secondary collectors. Because the Bitumen, virgin aggregate, and Filler are mixed in a zone removed from the exhaust gas stream, counterflow drum mix plants will likely have organic emissions (gaseous and liquid aerosol) that are lower than parallel flow drum mix plants. Our modern counter flow designs include an all-in-one drum mixer where aggregate is heated, liquid Bitumen is added and other additives are incorporated in a single chamber. Other designs variants include, separate post-dryer mixing systems like separate drum for mixing (Double Drum Plant) or external pugmill mixer. All of these designs are centered on the use of high RAP contents and eliminating blue smoke in the exhaust stack.

## SCOPE OF SUPPLY

Cold Aggregate Four-Bin Feeder

Single Deck Vibratory Screen for oversized material removal

Slinger (Cold) Conveyor

Dryer Auto Burner

Drying Cum Mixing Thermodrum with Dust Collector

Load out conveyor with Gob hopper

Asphalt Tank

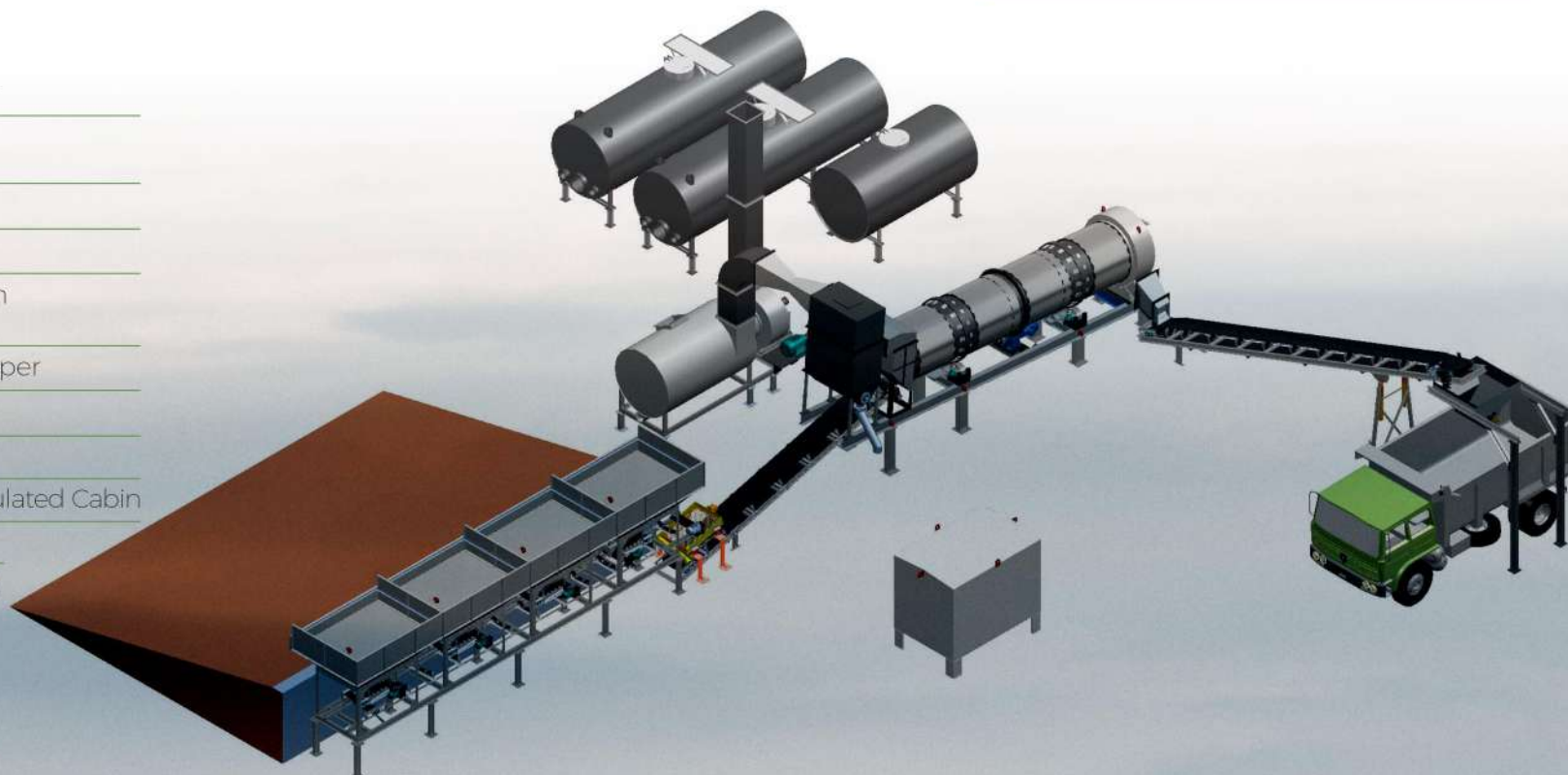
Mineral Filler Unit

Centralized Control Panel with insulated Cabin

Fuel Storage Tank

Pollution Control Unit (Optional)

Storage silo (Optional)



## SALIENT TECHNICAL FEATURES

Unmatched technology.

Superior quality products.

World wide acceptable technology

High fuel efficiency

Energy Efficient

AC Motors

Easy to establish (Erection & Commissioning)

QUICK availability of spare parts

Environment friendly.

Easy lubricating and dismantling

Convenient maintenance and repair.

User Friendly design.

High production rate

CAPIOUS ROADTECH PVT.LTD.

## ASPHALT DRUM MIX PLANT

## ADVANTAGES

Using globally renowned components

Providing extensive training & education for plant

Easy to Commissioning

Prompt after sale Service & Support

Lower maintenance

High productivity

Produce hi-quality mix products

Easily available spare parts globally

PLC base Feather touch Control Panel with HMI System

Easy to operate.

## COLD AGGREGATES BIN FEEDERS

The bins are all-welded and modular in construction, permitting easy addition of bin. Steep bin walls and valley angles allow free flow of aggregates from the feeders minimizing hold up of materials in the corners and bridging with sticky aggregates. Each bin is provided with proximity switch to warn (Instruct) the operator in control room about no flow indication.

Four bin feeder has different sizes of aggregate to an integral collecting-conveyor that runs underneath the bins. Each bin features its own adjustable gate to control feed rates of the different sizes of aggregate. Variable speed A.C. motor allows you to change production rate while keeping the job mix formula un-changes. The collecting conveyor drops the aggregate onto a vibrating screen.

One of the most important parameter of gather belt is strain gauge shear beam type load cell frame operator can easily monitor material flow rate which is also giving signal to bitumen pump to synchronize with material flow "Auto" function for homogeneous mixture of material.



## DRYER DRUM (COUNTER FLOW / PARALLEL FLOW)

### PARALLEL FLOW DRUM

Drying & Mixing drum is fully insulated with glass wool and covered with Stainless Steel sheet. It rotates on a set of four trunnions. As the drum rotates, a burner fires a flame down the center axis of the drum. A series of flights inside the drum shower the aggregate through the burner flame to remove all moisture. Dry aggregate exits the drum to the unit's mixing zone.

Special design of combustion zone flight ensures maximum utilization of radiation heat of burner. The lower capacity 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. Specially treated sprockets, thrust wheels, trunion rings and trunion rollers, engineered precisely for flawless and trouble free dryer drum rotation, ensures unlimited productivity.



## COUNTER FLOW

### SINGLE DRUM

In our single-drum counter flow system, aggregate and superheated air move in opposite directions. Aggregate enters on the feed-entry end of the drum and travels toward the burner as it's dried. At the burner nose, the dried material passes behind an isolation ring where liquid asphalt. All materials are mixed in the final drum section, and then are discharged and conveyed to the storage silo. Counterflow technology is productive, efficient and environmentally friendly.



### DOUBLE DRUM TYPE ASPHALT PLANT WITH DRAG CONVEYOR AND BAG FILTER

In this design both drying & mixing action take place in separate drum and the free dust & Water vapour are extracted from the inlet of dryer drum before mixing. Thus clean & dust free aggregates pass to mixing drum. This process ensures better mix quality. It is possible to measure temperature of hot aggregate & its temperature can be controlled before it moves to mixing zone. Separate mixing, drum allows to use R.A.P. (Reclaimed Asphalt Pavement)



### COUNTERFLOW PANT WITH EXTERNAL PUGMILL MIXER, RAP ADDITION, DRAG CONVEYOR AND BAG FILTER

The aggregated material is inserted in the dryer on the opposite end of the burner. The flow of aggregates is opposite flow of hot gasses coming from the flame of the burner. This is the main characteristic of the process known as counter-flow with external Twin Shaft Mixer Unit, which ensures better use of the energy generated in the burner, as well as more efficiency in the extraction of moisture. Once they are dry and heated, the aggregates go on to the external Twin shaft mixer. At the same time, the weighing system of the plant injects this bitumen directly into the twin shaft mixer unit. The arms of the mixer exert great energy on the mixture and the gives good quality of asphalt mix.



### BURNER

The high pressure atomized, fully automatic remotely controlled burner unit has already gained an enviable reputation for its fuel efficiency, ease of operation and high uptime. Completely automatic process controls with system interlocks ensure conformance to high safety standards.

## BITUMEN HEATING & STORAGE SOLUTIONS

Capius provides direct heating type or hot oil heated bitumen storage tanks. Storage capacities range from 15 - 50 Tons. The indirect heating tanks are supplied with a suitable thermic oil heater. The Direct heating tanks are supplied with automatic high pressure jet burner. As a standard, all Capius tanks are supplied with auto thermostatic controls and level indicators.



## CONTROLS

Fully computerized control cabin (AC optional) with on board electrical power control console, distribution switch board, fully automatic process and sequence controls are a standard on all 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 & 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.



## FILLER STORAGE UNIT

We offers a wide range of 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.



## POLLUTION CONTROL UNIT (OPTIONAL)

### WET DUST COLLECTORS

A ventury type high efficiency wet dust collector that maintains the required environmental standards in specified areas. The extreme turbulence type venturi design ensures a very good entrapping of the dust laden exhaust gas. Large stainless steel spray nozzles provide a clog free operation and assure minimum water make-up requirements.



### BAG HOUSE FILTER UNIT

Fine dust is absorbed by filter bag type air pollution control unit to meet the most stringent emission levels specify inlet current worldwide environmental standards with pneumatic bag cleaning system. Dust re-feeding to filler pneumatically screw conveyor. It operates forward-reverse mode as per the requirement of dust to the mix with coarse dust or without coarse dust. It is fitted with safety devices for temperature controller. Bag house filters are envied in the industry for their guaranteed savings on power, lower maintenance, trouble free service and strict conformance to stringent environmental norms



## DRAG CONVEYOR

Heavy-duty and proven design ensure long-life, clean and trouble-free operation. The drag conveyor is built rugged steel liner for durability, a heavy-duty drag chain, and segmented sprockets for easy maintenance. The conveyor discharge opening is set back from the head sprocket so that the mix is fully discharged from each flight. This eliminates carry-over of residues that can cause excess wear of the head sprocket and chain. Hot oil circulation arrangement at the bottom of conveyor.



## HOT MIX SILO

Capius offers a complete range of customized solutions for asphalt storage. The standard systems. Silos are available with different storage capacities. The silos are supplied with automated standard safety controls and process interlocks. Different Shapes are available like Pyramid, Square, round etc. Silos of higher capacity can be supplied optionally as per requirement.

