

Counter mix 90-120TPH



Counter flow Asphalt Drum Mix Plant

New technology for the drum mixing

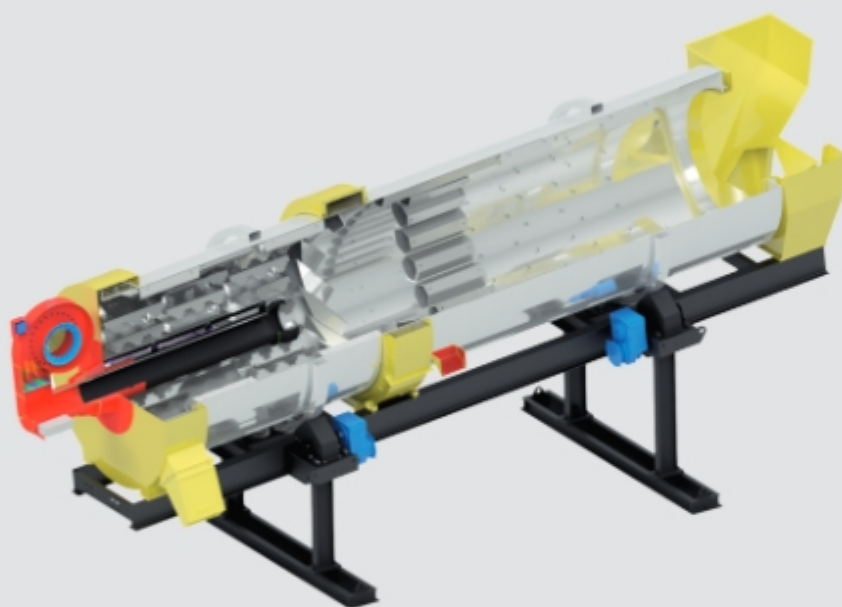
The new Counter flow technology continuous drum mix plant is setting new standards for asphalt mix production in the 90–120 t/h output classes. The prime benefits of the plant are fuel efficiency, low carbon foot print, environment protection and facility to add RAP.

Counter Flow Drum Mix Plant:

The heart of this plant is a high efficiency counter flow drier drum with a matched fully modulating long nose burner. In conventional continuous mixing plant the parallel flow heat transfer technology is used where in the material to be heated and the hot gases flow parallel to each other in the same direction. In a counter flow drier drum, the material to be heated and the hot gases flow contra to each other meaning in opposite directions. This is highly efficient heat transfer system to maximize the transfer of heat from hot gases as well as radiation heat from the burner flame to the aggregates. And the spraying of bitumen and filler is done when the hot aggregates pass behind the burner in the same drier drum.

Cold Bin Feeder:

Compact and modular standard four bin feeder ensures quick transport and erection. With the sufficient storage of 8 m³ per bin, the quality of a mix is decisively influenced right from the feed stage. Frequency controlled feed regulating conveyers extending up to drum inlet chute ensures hassle free conveyance accompanied by simple calibration system. Its low tipping height can help eliminate the need of construction of expensive full ramps and one can work with a loader and small ramp. All Shaft mounted geared motors ensures low maintenance and high energy efficiency.



Counter Flow Continuous Dryer

Counterflow continuous dryer:

Special KDI design continuous dryer drum with counterflow heat transfer technology yields significant fuel efficiency and much better pollution control. The drum is fitted with a long nose fully modulating burner extending inside the drier. The flight arrangement in the drum will be classified as Loosening zone, Convecting zone, Radiating zone in front of the burner flame and mixing zone behind the burner flame. The unique flight design ensures total heat transfer, a through mixing & coating, lower emissions and prevention of bitumen oxidation. Four friction drive through shaft mounted gear motors, sufficiently sized drier rings with robust leaf supports, covered material inlet section to minimize dust suction makes it a very powerful and compatible to perform in diverse climatic conditions. In addition, one can choose an optional feature of 25 mm thick cerawool insulation to cope with very cold climatic conditions.

Oversize removal vibratory screen:

The drum hot mix plant is supplied with oversize removal vibratory screen for protection of drum. Any oversize material, detrimental for the heating and mixing thermodrum internals, are screened out ensuring better performance and safety of the plant

Pollution control system:

The latest counter flow continuous drum enables the safe use of latest pollution control equipment bag house because of low temperature of exhaust gas and no risk of bitumen fumes going to bag house. The bag house filter designed based on KDI design principles combining best efficiency with highest degree of mobility. Adequately sized filtration area and filter bag material ensures global standard emission control. Pre separator design ensures that the coarse dust is separated before bag chamber. In standard configuration both the dust are conveyed together to the mineral filler silo for reuse. Optionally it is possible to separate out the coarse dust from fine dust. Efficient reverse air flow cleaning using KDI's cleaning mechanism, direct drive exhauster fan for high efficiency make it a compact but world class bag filter design. Bags made from Aramid needle fabric with PTFE treatment make it heat resistant and it will be oil and water impermeable. Optional insulation can help in cold climatic conditions.

Loadout conveyor:

Loadout belt conveyor with gob hopper (1.2 t) is standard supply for loading the finished hot mix into the truck directly.

Control Panel Unit:

Custom built continuous hot mix process controller with powerful plant control and monitoring facilities in very user friendly and simple way. Calibration of all feeders, loadcell, temperature indicators and span adjustment helps operator to easily calibrate the plant. Facility to enter the recipe, set temperatures, plant load factor, truck load hooter setting etc. helps operator to operate the plant in full auto mode as per the set recipe. All important fault alarms and log helps for easy diagnostics and quick troubleshooting. LCD display to display the plant operating values and data entry with sufficient number of touch keys give a compact but functional human machine interface. Burner sequence control ensures burner control as per the set temperature.



Pollution control system

Technical Specification

PLANT TYPE	90	120
CONTINUES PLANT CAPACITY AT 3% MOISTURE*	90 t/h	120 t/h
CONTINUES PLANT CAPACITY AT 5% MOISTURE*	70 t/h	100 t/h
NO OF COLD FEEDERS	4	
COLD FEEDERS	8 m3 each bin with extension plate	
AUXILARY CONVEYOR BELT AND DRIVE	450 mm x 1.4 m /1.4 kw x 4 nos. = 5.6 kw	
GETHERING CONVEYOR BELT AND DRIVE	500 mm x 11 m / 3.7 kw	600 mm x 11 m / 3.7 kw
BIN VIBRATOR MOTOR	0.18 kw	
OVERSIZE REMOVAL SCREEN MESH AND DRIVE	45 x 45 / 0.18 kw	
SLINGER CONVEYOR BELT AND DRIVE	500 mm / 3.7 kw	500 mm / 3.7 kw
TYPE DRYING DRUM	inclined Counter flow	
DIAMETER/LENGTH	1650/7080 mm (with RAP ring)	1800/8500 mm (with RAP ring)
DRUM DRIVE	4.5 x 4 = 18 kw (Total 4 nos.)(with RAP ring)	9.5 x 4 = 38 kw (Total 4 nos.) (with RAP ring)
BURNER POWER OUTPUT	6.59 MW (Long nose burner)	7.67 MW (long nose burner)
FUELS	Standard burner for LDO / Diesel. Heavy oil as an options.	
FILTER CAPACITY	15 000 Nm ³ /h	31 000 Nm ³ /h
FILTER SURFACE	200 m ²	420 m ²
EXHAUSTER CAPACITY	37.3 kW / 50 HP motor power	56 KW /75 HP motor power
LOAD-OUT CONVEYOR CAPACITY	200 t/h	
LOAD-OUT CONVEYOR BELT WIDTH	600 mm	
LOAD-OUT CONVEYOR DRIVE	5.5 kW	
GOB HOPPER CAPACITY	1.2 t	
HYD. POWER PACK	2.2 kW	
FILLER SUPPLY	Mineral filler tank capacity 1.5 m ³ , Drive 1.5 kW. Air compressor 11 kW. Other sizes and types on request.	

OPTIONAL ITEMS

DRAG SLAT CONVEYOR CAPACITY	100 t/h	120 t/h
HOT MIX STORAGE SILO	50 t	
BITUMEN TANKS	20 kl / 30 kl Horizontal type. Direct heating / Hot oil heating.	
RECYCLING ADDITION	Through RAP addition ring in the drum	

Special size on request

Hot mix production capacity based on following conditions:10% bitumen and 12% filler addition.input moisture of aggregates 3%

Hot mix temperature of 150°C and 0/2 fraction share max. 40%.

Per KDI's policy of constant upgradation of products,specifications are subject to change without prior notice.



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