



Flexi Clean Mixers





FLEXICLEAN
MIXER

High Intensity Continuous Mixers

The Flexi-Clean mixer family from Aran has a heritage of decades of uncompromised performance across all continents. Experience gained from mixing a wide diversity of material types in demanding conditions has resulted in a mixer of clever design which typifies Aran products. Aran FlexiClean is the most advanced Aran mixer yet.



Aran Mixing Technology

Through mixers work on the presumption that the ingredients are all correctly proportioned one to the other by the metering system before they enter the mixer and are in effect “ribbon fed”. The through mixer has only a modest task of “macro mixing” and can devote most of the mixing effort to “micro mixing”.

“Minimum Mixing Time” is a common constraint applied to batch mixers to ensure adequate macro and micro mixing. Retention time in a through mixer is a function of mixer speed, material type, the number of mixing elements and the way in which they interact. A higher speed mixer with a shorter transit time may produce a superior result to a slower mixer with a longer transit time. Mixing effectiveness is a result of the number and severity of the mixing interactions. Aran designers have studied these interactions and collated results to deliver mixers which are optimized for the materials to be mixed.

Aran “High Intensity” mixers have greater power, run faster, mix more intensely, and have greater output for their size than other types.

Applications

Aran FlexiClean mixers are integrated within Aran MODUMIX and ENVIRONMENTMIX mixing plants. The mixer forms part of a total system of which the feed metering system is an integral and critical part. Correctly applied they are well suited to:

- ▶ High Quality Paving Concrete
- ▶ Lean Mix Sub Base Concrete
- ▶ Roller Compacted Concrete (RCC) for Dams & Pavements
- ▶ Stabilised Road Base
- ▶ Paste Fill for Mines (mixed from tailings)
- ▶ Land Fill Liners from Soil or Clay mixed with Bentonite
- ▶ Solidification of Sludges
- ▶ Mixing of Contaminated Soils
- ▶ Recycled Concrete or Asphalt with both bitumen emulsion and foam bitumen

Any granular or fine material can be mixed with both particulate and liquid binders in an Aran FlexiClean mixer.

Easy Clean Mixer

The mixer has hinged and flexible rubber side walls. It is first lined with sand or other fine material. This forms the wear surface. Only the crust nearest the mixing zone is hardened by cement. When the doors are opened by hydraulic cylinders, the lining material easily falls away. The mixer has a rubber belt floor which removes cleaned material and disposes of it through the normal discharge opening.

Low Cost Operating

FlexiClean mixers have internal surfaces of rubber and low adhesion polyethylene which are not abraded in normal operation. There are no expensive liners to replace. The only wear parts are the mixing blades.

Maximum Availability

The worst enemy of mixers handling materials such as concrete and cemented paste fill is ingress of abrasive fine paste to the bearings and drive components. Unique Aran housings for all mixer bearings keep lubricant in, and contaminants out. Seals and bearings are separated from the mixing zones by air gaps and flingers.



Discharge Arrangement

Aran FlexiClean mixers can be configured to deliver to a close coupled inclined conveyor or to discharge to a vertical chute.

Technical Data

The number and configuration of the mixing elements is varied to suit different applications.

Flexiclean 480, 610 & 650. Three sizes in two lengths.

Aran FlexiClean mixers are designated by the shaft centre distance 480, 610, and 650. A FlexiClean 610L is a long series mixer with 610 mm shaft centres. For most applications where mixing intensity is crucial, FlexiClean Long series mixers are standard. For some applications such as the addition of water, lime, or cement to crushed gravel for road base, FlexiClean Short series mixers are adequate. Short series mixers consume less power.

Aggregate Mixing

The standard Aran design uses round arms welded to the shaft with reversible Aran-Hard 194 mm x 140mm x 25mm thick. Mixing elements are arranged in interleaving planes with an helix advancing or reversing in 60 degree increments along each shaft dependant on application. In each plane there are four blades, two on each shaft. Dependant on the size of your aggregate the FlexiClean can hold between 62 & 72 wearfaces.

Paste Tailings

For mixing fine or cohesive materials, such as paste or mine fill, propeller shaped Aran-Hard blades are used. These are through bolted to the shaft in an advancing spiral. For very fine paste materials 120 mixing blades are used. The blades are set at a closer pitch and at a lesser angle of 25 degrees. Each plane has six blades, three on each shaft.

Drive Options

Aran FlexiClean mixers are available with both electric and hydraulic drives. The power required depends upon the material type and throughput. Mechanical gear reducers are available in both shaft mount and foot mount configurations.

Electric Power Combinations

FlexiClean 480S, 480L

Standard: 90 kW single drive

Optional: 75, 110 & 132 kW single drive

FlexiClean 610S, 610L & 650L

Standard 150 kW single drive

Optional: 75, 90, 110 & 132 kW single drive

Optional: 150 & 180 kW in dual drive

General Dimensions

Mixing Chamber Length: L series: 4,075 mm - S Series: 3,475 mm

Shaft Diameter: 190mm (hollow core)

Bearing Diameters: Drive end: 150mm

Discharge End: 90mm or 130mm

* For installation dimensions, request a layout drawing to suit the application



Specifications change as product development progresses. Information presented here in indicative only.
Always contact Aran for updated information.

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