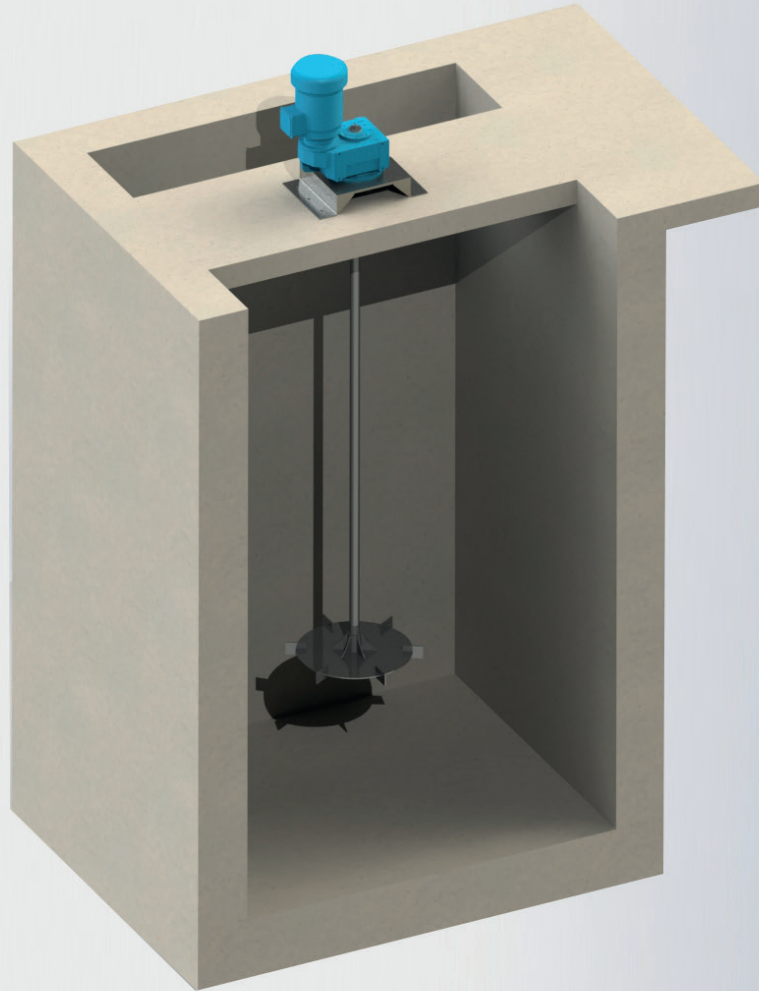




VERTICAL SHAFT TYPE FAST MIXERS



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VERTICAL SHAFT TYPE FAST MIXERS

General Description and Intended Use

Generally, it is used to mix solid-liquid, liquid-liquid materials in a homogeneous way and to prepare solutions in the water and wastewater treatment facilities.

Fast mixers are used to mix the wastewater in a (effective) fast way to carry out coagulation process. Efficiency of the mixture is directly related to the created turbulence and maximum turbulence should be provided with minimum power consumption.

Fast mixers consist of motor/reducer, motor/reducer bench, shaft connected to drive group and paddles.

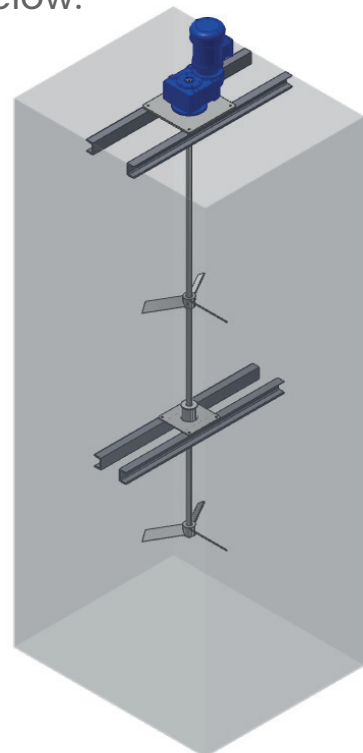
Working Principle Of Equipment

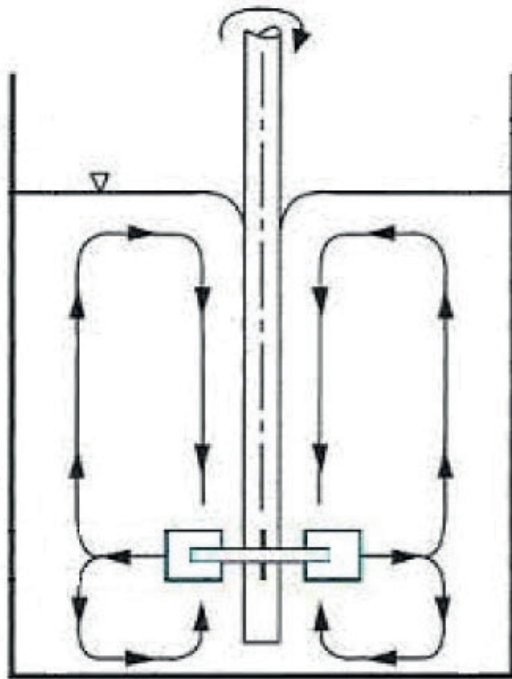
It is designed to provide exact mixtures according to pool geometry, liquid viscosity, chemical solubility in water and wastewater treatment facilities. The mixture is provided with the turbulence created in the water.

Fast mixers are manufactured as with or without coupling, with reducer/motor, with/without bearing. There are speed options for desired speed.

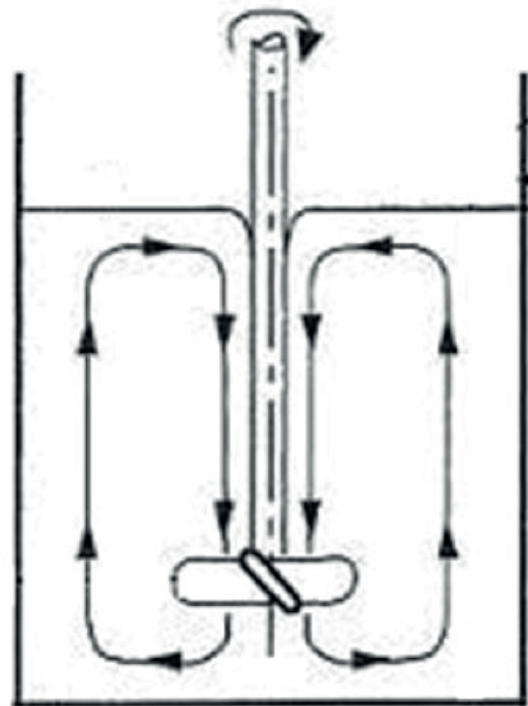
Generally axial and radial type mixers are used as mixer type. Axial type mixers are generally manufactured as with three blades. In axial type mixers, flow direction is determined according to rotation direction of the propeller. This movement occurs with the rotation of the accumulated liquid mass. This rotation movement necessarily creates a liquid vortex.

Radial type mixers are manufactured with 2, 4 or 6 pallets generally placed onto a tray. Force of friction and shear form during the movement. For this reason, first, vertical flow line forms in the container and axial flow line length stays short with the crash of vertical flow lines into to sidewalls of the pool/tank. As this movement contains rotations movements, three dimensional flow is obtained with radial mixers. These flows are shown below.





Radial Type Mixer



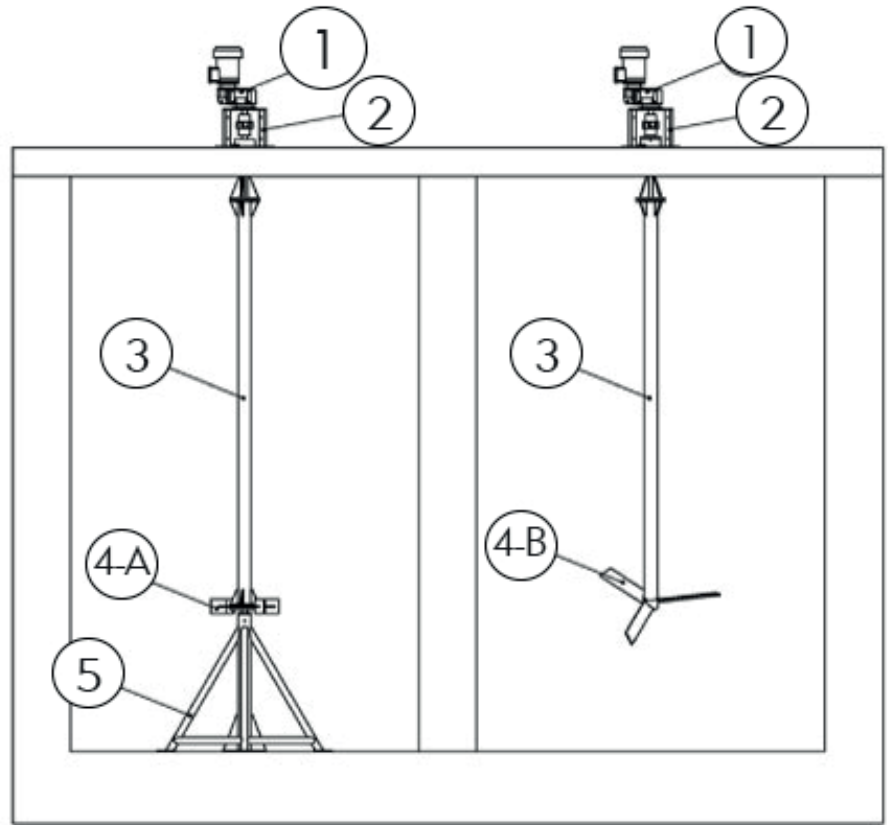
Axial Type Mixer

TECHNICAL SPECIFICATIONS

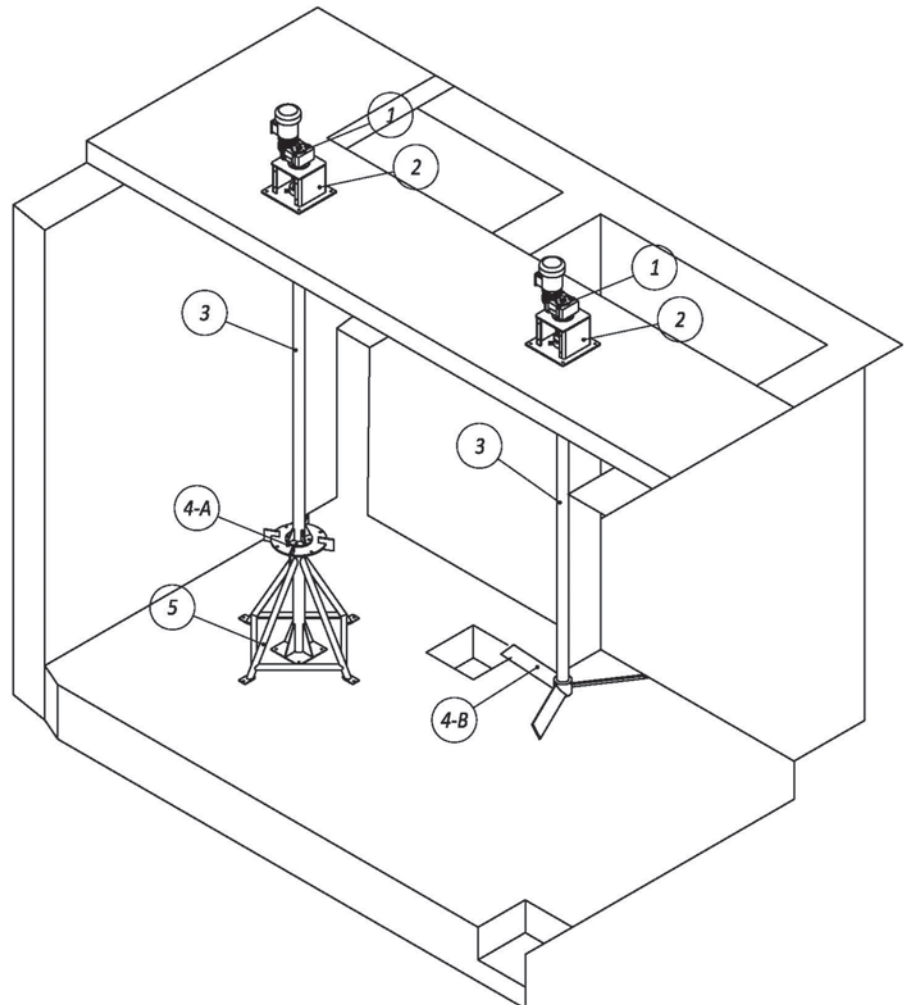
- Generally, axial type mixers are preferred for 1–5 m³ solution preparation tanks and radial type mixers are preferred for bigger solution preparation tanks.
- Type of the mixer is selected according to width, height and length of the pool, and viscosity features of solid–liquid, liquid–liquid materials.
- Diameter of the mixer, flap measures, motor/reducer speed etc technical data are calculated and the mixer that can make the most suitable mixture is chosen.
- Mixer material is chosen in accordance with the pH properties of solid–liquid, liquid–liquid matters to be mixed.
- It is designed and manufactured to use minimum energy and make the most efficient mixture.
- Type of the mixer is designed as single or double order on the shaft depending on the requirements.

ADVANTAGES

- High Performance Mixture
- Possibility to Tracking and Check the System Operation over SCADA,
- Low Operation and Maintenance Costs,
- Resistant Heavy-Duty Design,
- Easy Transportation and Mounting,
- Long Operation Life,
- Low First Investment Cost,
- Easy Maintenance Possibility,
- Suitable for Outdoor Operation.



No	Part Name
1	Motor / Reducer
2	Motor/ Reducer Bench
3	Shaft
4- A	Radial Mixer
4- B	Axial Mixer
5	Bottom Bearing



Material Details

- Shaft: They can be manufactured as DIN 1.4301 (AISI 304) or DIN 1.4401 (AISI 316).
- Propeller: They can be manufactured as DIN 1.4301 (AISI 304) or DIN 1.4401 (AISI 316).
- Bearing: They can be manufactured as DIN 1.4301 (AISI 304) or DIN 1.4401 (AISI 316).
- Bench: They can be manufactured as S235JR (St52) + Hot Dipping Galvanized Coating, S235JR + Epoxy Paint, DIN 1.4301 (AISI 304) or DIN 1.4401 (AISI 316).

"Different materials can be preferred in accordance with the request of the customer."

ACCESSORIES

- Motor/ Reducer Bench
- Mounting Bridge*
- Coupling*
- Bearing*
- Frequency Inverter*
- Emergency Button*
- Local Power and Control Panel*

* Optional accessories are defined.



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