

# AFX

## AGITATORS



## KEEPING FLUID IN MOTION

AFROMIX

A DIVISION OF AFX HOLDINGS



<http://www.afromix.co.za/>



# ABOUT US

AFROMIX, a division of AFX Holdings, is a leading South African manufacturer of mixers and peristaltic pumps. With a proven track record of successful installations and decades of expertise, we provide reliable mixing solutions to industries worldwide. Our strong presence in Europe, North America, Australia, and Africa reflects our reputation for innovation, quality, and trusted engineering excellence.

While our origins lie in the mining sector, AFROMIX has steadily expanded into diverse markets, including chemical, food & beverage, pulp & paper, water treatment and pharmaceuticals.

## WHAT MAKES US DIFFERENT

### POWERFUL TRACK RECORD

With more than 30 years experience and a proven track record of successful installations worldwide.

### ENERGY EFFICIENT DESIGNS

With increasing emphasis on global energy usage, AFROMIX carefully considers power usage on all products. Our range of peristaltic pumps use a unique roller design to reduce power and increase hose life. Our careful choice of selection and impeller geometry on our agitators ensure optimum power and operating efficiencies.

### MANUFACTURING “EXOTIC MATERIALS”

We manufacture in a range of “exotic” materials to your industry requirements.

### WORLD CLASS PRODUCTS WITH A WORLD CLASS GUARANTEE

As an ISO 9001-rated company, we provide exceptional product guarantees and back-up service with representation globally.

### OUR DESIGNS AND MANUFACTURING ARE SPOT ON

AFROMIX ensure that all equipment is manufactured to stringent standards.

### INCREASED PLANT PRODUCTIVITY

Our on-site inspection and service reports will guarantee enhanced plant productivity and reduce maintenance.

### ONGOING R&D

AFROMIX's is continuously improving manufacturing techniques ensuring that our products range assists processing plants in achieving optimum process results with minimum downtime.

# ENGINEERING

## DESIGN

AFROMIX makes use of custom design packages that incorporates the mechanical and process design of the equipment. These state of the art design packages ensure that every piece of AFRMIX equipment fulfills your expectation.

## FINE ELEMENT ANALYSIS

The application of FEA to our designs allows AFRMIX's in-house engineers to model the combination of loads applied to the components resulting from equipment rotation and it's interaction with the different fluid regimes. In this way the applied bending moment, torque and thrust can be predicted and accomodated in the designs.

Our analysis combine all operating loads within the system, allowing the designer to identify potential weakness prior to manufacture. Where important components carry critical loading, detailed FEA analysis is used.



# MANUFACTURING

## AGITATOR SHAFTS AND HUBS

Shafts are manufactured to stringent straightness tolerances. This would entail all shafts being machined, no matter the length. Ears are attached to circular machined hubs using deep penetrating continuous welds. Ears are never attached directly to hollow shafts.

Hubs and ears are machined using CNC machines to minimize clearances between ears and hub, thereby ensuring weld strength. After final assembly shafts are stress relieved and pressure tested to ensure integrity.



## AGITATOR MOUNTING BASES

Mounting bases are critical in ensuring that gearboxes are correctly aligned and mounted to the beams or structure. This reduces the potential of twisting or flexing the gearbox housing - a common cause of failure of some gearboxes.

All large, top entry AFRMIX agitators are fitted with integral mounting bases, or pedestals, where necessary. All bases have machined pads or surfaces, top and bottom, to ensure accurate and positive alignment.



## AGITATOR IMPELLER BLADES

AFROMIX manufactures impellers for a wide range of applications, including high-viscosity duties. Most applications are either flow or shear-dependent, making our F-range high flow impellers and P-range high efficiency gas dispersers the workhorses of our product range.

Available Impeller Ranges:

- F-range: Flow impellers
- P-range: Pressure impellers for gas dispersion and medium to high-viscosity applications
- R-range: Flat and curved blade radials
- FS-range: Pitch blade turbines
- Specialized impellers for pumping, foam breaking, and dispersion

Impellers are manufactured in all materials, including exotic alloys, and can be coated with rubber, urethane, epoxy, or other specialized materials. For rubber and urethane linings, blade leading edges are precision-machined to maximize bonding with the metal and are double-layered as standard for increased wear life.

All impeller blades undergo rigorous inspection to ensure precise tolerances for angle, camber, and curve. Any blade that does not meet specification is rejected.

Special attention is given to the blade-ear interface to ensure both surfaces are within tolerance, preventing unnecessary preload on bolts. Additional bolting between the blade and ear is incorporated as a cost-effective safeguard, significantly reducing the risk of catastrophic failure.

# MAKE THE RIGHT CHOICE FOR YOUR BUSSINESS

AFROMIX is a global leader in agitator technology. Manufactured in South Africa and trusted around the world, our AMX range of top-entry agitators (0.25 kW to 750 kW) is built to deliver power, efficiency, and reliability. Designed for versatility, AFROMIX agitators play a vital role in industries such as mining, chemicals, pharmaceuticals, waste management, and paper. This ensures seamless mixing solutions that keep your operations running at their best.

## WHY AFROMIX'S AGITATORS

- ➔ Energy Efficiency That Saves Costs, optimise mixing power, reducing energy consumption without compromising performance.
- ➔ Custom-Built for Your Process – Each agitator is engineered using state-of-the-art design tools (FEA & custom packages) to deliver the right solution for your exact application.
- ➔ Proven Reliability, Guaranteed.



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