KEEPING FLUID IN MOTION

AFROMIX

AFX MIXING AND PUMPING TECHNOLOGIES

AMX AGITATORS BROCHURE

KEEPING FLUID IN MOTION



www.afxholdings.com



ABOUT US

A division of AFX Holdings, we are a global manufacturer and supplier of engineered mixing and pumping technologies, delivering high-performance solutions to customers across a wide range of process industries. With over 30 years of engineering expertise, we design, manufacture and supply pumps and agitators that delivers reliable performance, maximises process efficiency and reduces operating costs in demanding applications worldwide.

Originally established to serve the mining industry, our expertise has expanded across water and wastewater treatment, chemical processing, food and beverage, pulp and paper, pharmaceuticals, energy and general industrial manufacturing.

WHAT MAKES US DIFFERENT

- ONGOING R&D
- ENERGY EFFICIENT DESIGNS
- SUCCESSFUL INSTALLATIONS WORLDWIDE
- MANUFACTURING "EXOTIC MATERIALS"
- MORE THAN 30 YEARS EXPERIENCE
- INCREASED PLANT PRODUCTIVITY
- WORLD CLASS PRODUCTS WITH A WORLD CLASS GUARANTEE

ENGINEERING

DESIGN

AFX utilizes 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 AFX equipment fulfills your expectation.

FINITE ELEMENT ANALYSIS

The application of FEA to our designs allows AFX'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 accommodated 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 precision-machined using CNC technology to minimize clearances between the ears and hub, thereby enhancing weld strength. After final assembly shafts are stress relieved and pressure tested to ensure integrity.



AGITATOR MOUNTING BASES

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

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





AGITATOR IMPELLER BLADES

AFX 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 BUSINESS

AFX 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, AMX 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 AMX 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.

CONTACT US

AFROMIX

AFRICA

T +27 (0) 11 397 6911
E sales@afromix.co.za

HEAD OFFICE

25a Rudo Nell Road
Jet Park
Boksburg
South Africa

AFX MIXING AND PUMPING TECHNOLOGIES

EUROPE

T +44 (0) 1 202 798 452
E contact@afxmixing.co.uk

Unit 17 Abbey Business Park, Holton Heath, Poole BH16 6NN, United Kingdom

AFX MIXING AND PUMPING TECHNOLOGIES

NORTH AMERICA

T +1 (0) 289 291 7770
E contact@afxmixing.com

Unit 105, 18663 52 Avenue, Surrey, BC, V3S 8ES, Canada