

## The “Original” Mud Mixer

SERVING DRILLING CONTRACTORS FOR OVER 50 YEARS



A World Leader in Industrial Mixing since 1923, Lightnin has 90 years of unrivaled experience in industrial mixing technology, process knowledge, and technological innovation. Lightnin enjoys a global reputation for durable, long-lasting mixers, agitators, aerators, and flocculators for fluid process systems. We offer a full spectrum of impeller designs for diverse applications. In addition, we offer a worldwide service network, mixer repair, gearbox repair, and replacement parts programs. Look to Lightnin for knowledge, technology, and service excellence.

SPX FLOW, Inc. (NYSE:FLOW) is a leading manufacturer of innovative flow technologies, many of which help define the industry standard in the market segments they serve. From its headquarters in Charlotte, North Carolina, it operates a sales and support network, centers of manufacturing excellence, and advanced engineering facilities, throughout the world. Its cutting-edge flow components and process equipment portfolio includes a wide range of pumps, valves, heat exchangers, mixers, homogenizers, separators, filters, UHT, and drying technology that meet many application needs. Its expert engineering capability also makes it a premium supplier of customized solutions and complete, turn-key packages to meet the most exacting of installation demands. Incorporating many leading brands, SPX FLOW has a long history of serving the food and beverage, power and energy, and industrial market sectors. Its designs and engineered solutions help customers drive efficiency and productivity, increase quality and reliability, and meet the latest regulatory demands. In-depth understanding of applications and processes, state-of-the-art Innovation Centers, and advanced pilot/testing technology further assist in optimizing processes and reducing timescales to reliably meet production targets. To learn more about SPX FLOW capabilities, its latest technology innovations and complete service offerings, please visit [www.spxflow.com](http://www.spxflow.com).

## Lightnin has 90 years of unrivaled experience in mixing technology, process knowledge, and technological innovation.

### DEPENDABLE PERFORMANCE

Lightnin guarantees the performance of the mixer as well as the mixing result. Lightnin mud mixers are designed and engineered to provide complete suspension of the mud and cuttings. This provides a uniform feed to the mud cleaning equipment regardless of the mud weight. This results in sending less sand and silt back into the mud pumps and into the hole, reducing wear and increasing the life span of pump liners, drill string, bearings and other moving parts. Efficient mixing also minimizes the solids build-up on tank bottoms and helps keep mud weights uniform.

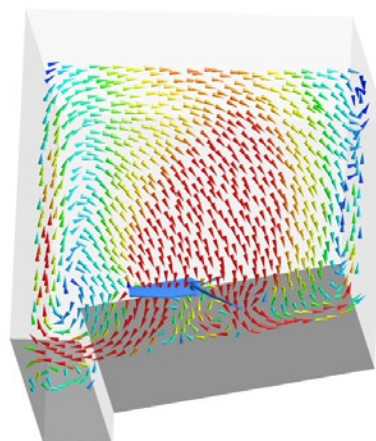
Lightnin's unrivaled, patented, Hydrofoil high-flow, high-efficiency style impellers are used to develop the highest flow achievable for solid suspension and blending. Equal power is not equal mixing – Lightnin's axial flow impellers provide more mixing at the same motor power than competitive impellers.

### DURABLE DESIGN

Lightnin provides equipment that will meet the rugged requirements of mud mixing service. The result is dependable trouble-free mixers that require less maintenance. All internal gearbox components are sealed against the effects of chemicals, heat and moisture.

### CFD - COMPUTATIONAL FLUID DYNAMICS SOFTWARE

LDV data and scale model testing is augmented by state of the art Computational Fluid Dynamics (CFD) software. CFD models the combined dynamic effects of impeller design, vessel geometry and fluid properties. This powerful capability allows quick evaluation of existing process mixing problems, and significantly reduces the cost of pilot scale experiments and full scale trials.



## HIGH-EFFICIENCY IMPELLER TO MATCH YOUR PROCESS NEEDS

**A510 - Low blade solidity hydrofoil, recommended for low viscosity blending and solid suspension applications:**

- Varying tip chord angle allows for further optimization of mixer selection.
- Maximizes flow generation while minimizing fluid shear and minimizing loads on the agitator drive.
- Generates the same flow as a pitched bladed turbine (A200) for 60% of the power and 50% of the torque.



A510: General Purpose Impeller

## LESS MAINTENANCE

- Helical/Bevel gear construction minimizes gear wear that often plagues worm gear designs.
- Oversized bearings and shafts increase life and decrease maintenance.
- Splash lubrication provides constant, worry-free flow to all critical areas.
- Dry well construction is standard on these Lightnin mixers protecting the equipment from lubrication loss.
- Lightnin's strong gearbox design allows longer shaft lengths which removes the need for steady bearings in many cases.



Series 10 Mixer

## LOW PROFILE

- Some mud systems require a low profile mixer to accommodate headroom requirements. Lightnin right angle drives have a very low vertical profile.

## OTHER FEATURES

- Lightnin mixers can be beam mounted directly on open tanks or flange mounted on closed tanks with shaft seals.
- One piece shafts as standard. Optional couplings with rabbet/spigot fit to assure alignment.
- Special paint and other options when your installation requires them.
- Worldwide sales and service network, mixer repair, gearbox repair, and replacement parts programs.
- Rugged overhung shaft design eliminates the need for steady bearings.
- Slap/limit rings are optional for dynamic applications.



Right Angle Drive Mixer

Lightnin product can be built and certified to meet the requirements of CE, ATEX, PED, GOST, RTN (including technical passports), NORSOK, VIK and DNV DRILL(N), as well as other certifications that might be required.



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# SPXFLOW

## TECHNICAL SERVICES

With more than 90 years experience in the manufacture and supply of agitation equipment, we know what parts need to be on hand to support our customer base so that your downtime is minimized. The Lightnin brand after sales support teams are on call to offer advice, support on-site installation and commissioning, servicing of equipment, or supervise and train your maintenance staff in best practice care of equipment.

## SERVICE SUPPORT & REFURBISHMENT

The equipment audit is specifically designed to identify potential mechanical problems before they occur. Using many forms of modern technology and drawing on our mixer manufacturing experience, our technicians can identify the onset of bearing and gear failures, misalignment and system problems without the need to interrupt production. Factory gearbox exchange and refurbishment programs offer a fast and cost-effective route to extending equipment life.

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