

## 98 Series Mixers

PARALLEL DRIVES FOR HEAVY DUTIES



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 98 Series – Geared for the long run

We understand that when it comes to efficient process plant operations, equipment reliability is of paramount importance. As a long-standing member of AGMA (American Gear Manufacturers Association) SPX FLOW's Lightnin brand recognizes that multipurpose commercial gearboxes are poorly suited to Agitator service.

For more than 50 years the Lightnin products have utilized proprietary, purpose designed agitator gear drives to ensure dependability and low cost of ownership. With more than 1 million units in the field our operating experience is unsurpassed.

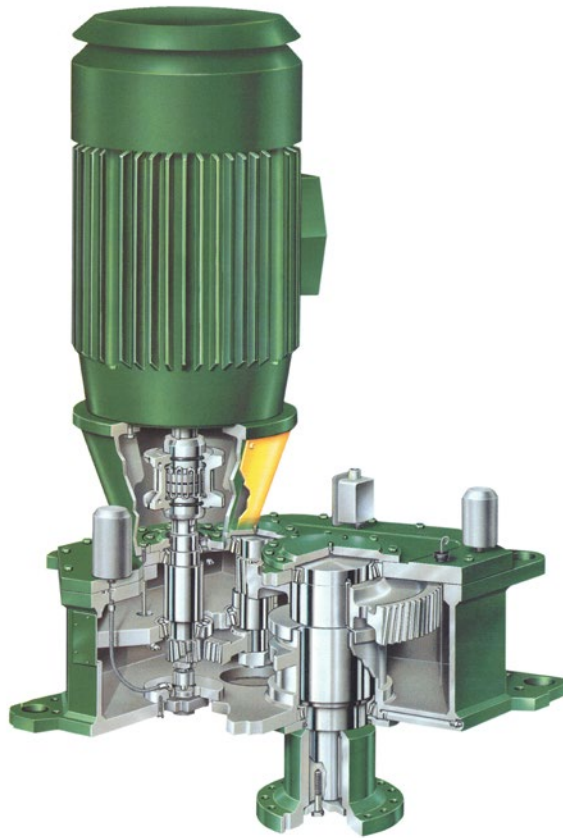


### 98 SERIES FEATURES:

- **Parallel shaft, double reduction design** provides enhanced installation flexibility where there are space limitations on top of the vessel.
- **Carburized and ground helical gearing** helps ensure quiet operation and extended gear life.
- **Dry well oil dam** is integrated into the gear housing to prevent lubrication from leaking down the mixer shaft.
- **Integral positive displacement pump** driven off the input shaft provides continuous lubrication whenever the mixer motor is operating. No separate lubrication motor is required.
- **Compact drive design** requires significantly less oil for lubrication - eliminates need for large oil sump.
- **Forced lubrication system filters** any contaminants to increase oil life.
- **Standard flanged motors and pedestal mounted** reduces assembly time while eliminating high-speed coupling alignment and the need for outboard motor support.
- **Integral mounting plate** eliminates the need for an additional bolted plate.
- **Optional seal cartridge** can be removed easily in four simple steps without having to move the gear drive or motor, and without having to loosen any mixer shaft bearings.

## STANDARD RANGE:

- 15 - 130 kW (20 - 175 hp)
- 20 to 100 rpm
- Open tank, stuffing box or mechanical seal options



Select SPX FLOW Mixing equipment and you get more than an efficient and cost effective process. You get over 85 years of experience in superior processing technology. We were the first to use computational fluid dynamics (CFD). This experience has enabled us to design and develop products specifically for chemical, municipal and mining industries into the 21st century.

Our laboratory is a standard for the business, and allows us to optimize your process, from pilot to full-scale testing. Your benefits are higher reliability, lower production costs, greater output, resulting in higher profits.

Processing.....we perfected it

### LightninLube™

As part of our commitment to our Customers and their operations, SPX has introduced LightninLube™, a range of gear oil for our Lightnin Mixers. It is available to order with your new equipment or as a maintenance item throughout the life of your equipment. LightninLube is manufactured to AGMA Standard 8005-D94. Our synthetic oils are designed to give you a wide operating range and are available in ISO 100, ISO 150, ISO 220 and ISO 320 grades.

Contact our Service department or your Sales Representative to discuss your needs.

## CUSTOM FEATURES AS STANDARD

### COMBINE THE 98 AND THE LIGHTNIN SEAL TO EXTEND BEARING, SEAL AND GEAR LIFE.

Traditionally, internal gear drive components are subject to large axial and bending loads which are the primary source of unwanted gear deflection and misalignment. Left unchecked, these dynamic loads can significantly reduce gear life or cause sudden gear-drive failure. These loads are attributed to the fluid forces which act on the mixer shaft at the impellers.

#### THE SOLUTION

Lightnin's design isolates the gearing from the effects of these fluid forces through the following combination of design advantages:

- The lower quill shaft bearing experiences no external loading and does not support the mixer shaft in any way.
- Clearance between the mixer shaft and quill shaft ensures that no bending loads are imposed on the quill shaft, effectively isolating the gearing from the mechanical effects created by the fluid forces.
- The fixed bearing located below the gear drive in the seal cartridge absorbs radial reaction forces in addition to the axial loads. As a result, they are prevented from being transferred to the gear drive.
- The precise positioning of the fixed bearing within millimeters of the mixer seal faces minimizes shaft runout and dynamic deflection to maximize seal life.



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or use your SmartPhone and the QR Code.



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