

Lightnin®



SERIES 10

Medium Torque Top Entry Mixers



SPXFLOW®

SERIES 10 MIXERS FROM LIGHTNIN – PROVEN, VERSATILE, COST-EFFICIENT

One look at this rugged design will tell you, Lightnin's field-proven Series 10 is no ordinary mixer. With thousands of installations worldwide, the Lightnin brand Series 10 mixer continues to deliver dependable performance and exceptional value across a broad range of applications. Backed by Lightnin's renowned technical support and customer service.

Unmatched Durability

- **Long gear and bearing life:** The largest tapered roller bearings in a mixer of this class help produce an L10 life of 100,000 hours and greater. Designed specifically for mixer service, Series 10 speed reducers are capable of handling large variations in mixer loads, adapting to different process conditions and accommodating long overhung shafts. Conventional, off-the-shelf reducers not built for mixer duty cannot offer the same durability or performance assurance.

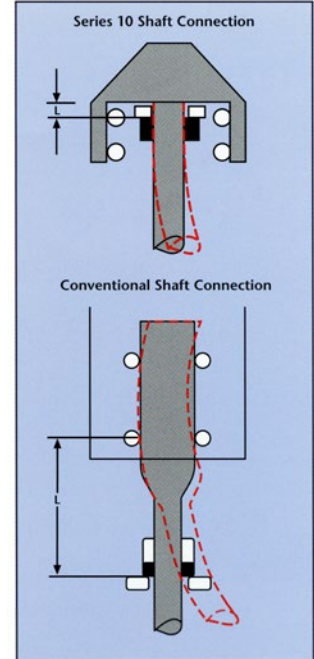
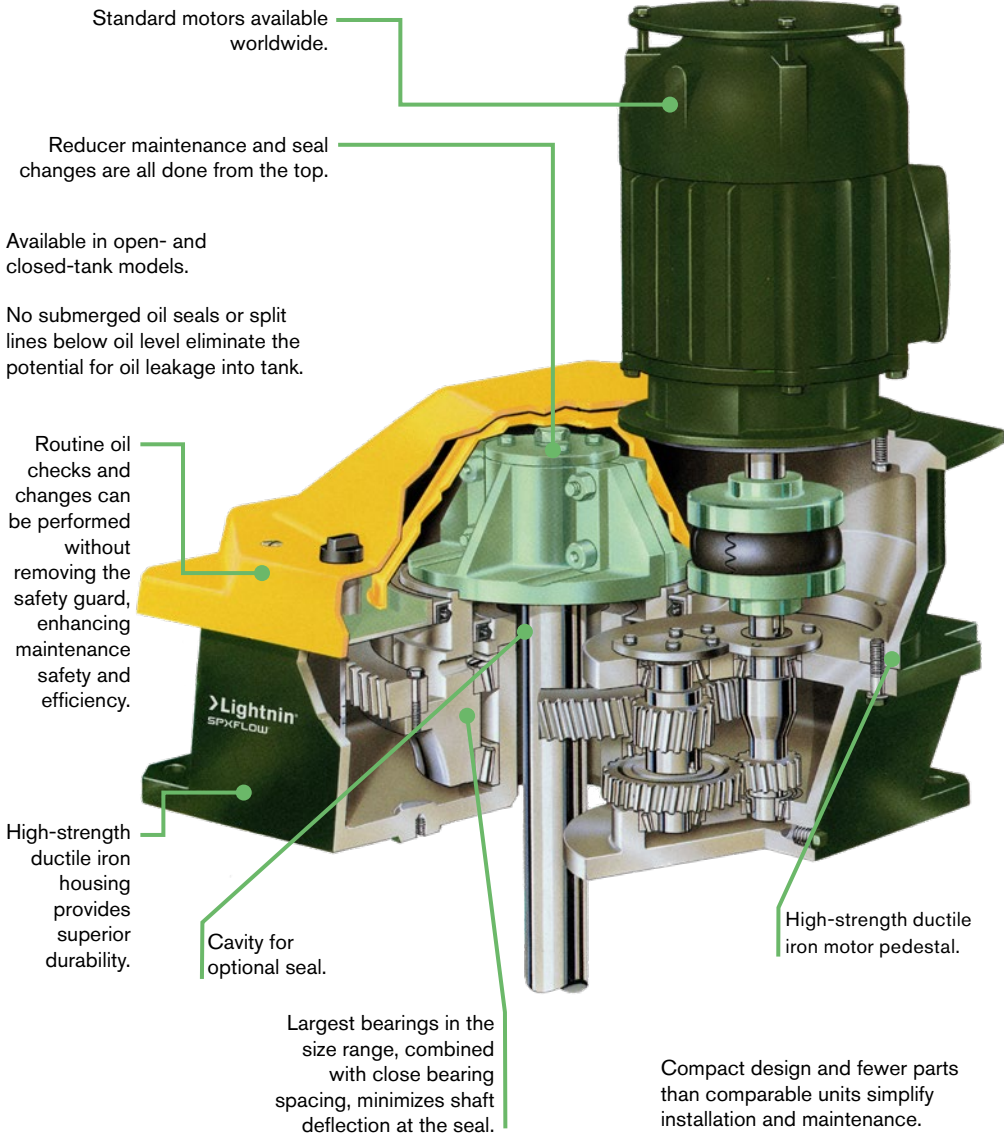
In addition, high-quality carburized and ground gearing features a minimum AGMA Service Factor of 1.5 for long life and added protection against shock loading.

- **Unique output shaft connection - the largest of any competitive unit - reduces shaft deflection to extend seal life:** Greater mechanical stiffness reduces deflection at the seal (less than 0.26mm / 0.010 inches) compared with seal-on-a-sleeve or cartridge designs. As a result, you'll be able to specify longer overhung shafts and replace seals less frequently. When servicing is called for, seal changes can be completed in under 30 minutes—among the fastest in the industry.

Excellent Versatility

- **Wide range of output speeds:** Select the combination of output speed and torque that meets your mixing requirements. Output speeds from 9 rpm to 125 rpm; 0.75 kW to 22 kW (1 HP to 30 HP).
- **Choice of motors:** Select the motor that's consistent with your specific plant standards. A wide variety of motor options is available, including explosion-proof and multiple-speed units.
- **Longer shaft lengths accommodate a wider range of tank configurations:** Carbon steel or 316 stainless steel shafts are standard. Shafts in excess of 9 meters (30 feet) in length let you specify Series 10 mixers for large tanks without the need for steady bearings. High alloy and composite shafts are also available.
- **Choice of mechanical seals:** Closed-tank mixers can be equipped with dry-running single mechanical seals or lubricated double mechanical seals for hazardous materials and higher-pressure applications.
- **Optional seal pedestal design eliminates temperature constraints:** Series 10 mixers can be mounted on a pedestal to permit operation up to vessel temperatures of 204°C (400°F).
- **Dry-well construction and no submerged seals prevent oil leakage:** An integral reducer housing with dry well construction prevents oil loss, as well as the risk of product contamination. The reducers simply can't leak; even when the mixer is mounted on angle risers. In addition, the absence of submerged oil seals or split lines below the oil level prevent leakage over the tank or into the product.
- **International Legislation:** Lightnin Series 10 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.

Theory of Operation



Distance between seal face and rigid support (L) is shorter in Series 10 design compared to conventional design, minimizing shaft deflection at seal face.



Our dry well construction removes the risk of lubrication leakage into the mixing chamber. The bearings are immersed in the gearbox lubrication which ensures that they continue to perform under high loads. Oil changes are made easy with our tall pedestal allows a 5 US gal (20 liter) pail to be placed beneath the oil drain for convenient oil changes.

LightninLube™

As part of our commitment to our Customers and their operations, SPX FLOW 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.



Optional angle riser brackets let you save up to 15% on tank costs by eliminating the need for baffles.



Lower Ownership Costs

- **Fewer moving parts simplifies maintenance:** Series 10 mixers let you reduce spare parts inventory, frequency of repair and servicing costs.
- **Perform routine maintenance quickly:** Check, add or change oil without removing the high-strength safety guard. Synthetic oil needs to be changed only once a year. Oil-lubricated gears and bearings do not require grease servicing.
- **Easy, fast seal replacement:** Seals are replaced from the top of the mixer without disturbing the shaft. Fast replacement means more uptime and lower maintenance costs.
- **High-efficiency helical gearing provides more usable power:** Efficient in-line helical gearing and parallel shafts minimize horsepower loss through the drivetrain. As a result, virtually all the power you pay for is transferred into the mixing vessel.



A World Leader in Industrial Mixing since 1923, Lightnin has 100 years of unrivaled experience in industrial mixing technology, process knowledge, and technological innovation.



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30-Minute Seal Replacement

Seal changes are performed in less than 30 minutes. Simply loosen hardware and lower the shaft support collar onto the hub shoulder (1). Once the split coupling has been removed (2), lift off the seal assembly and replace with a new or rebuilt unit (3).

