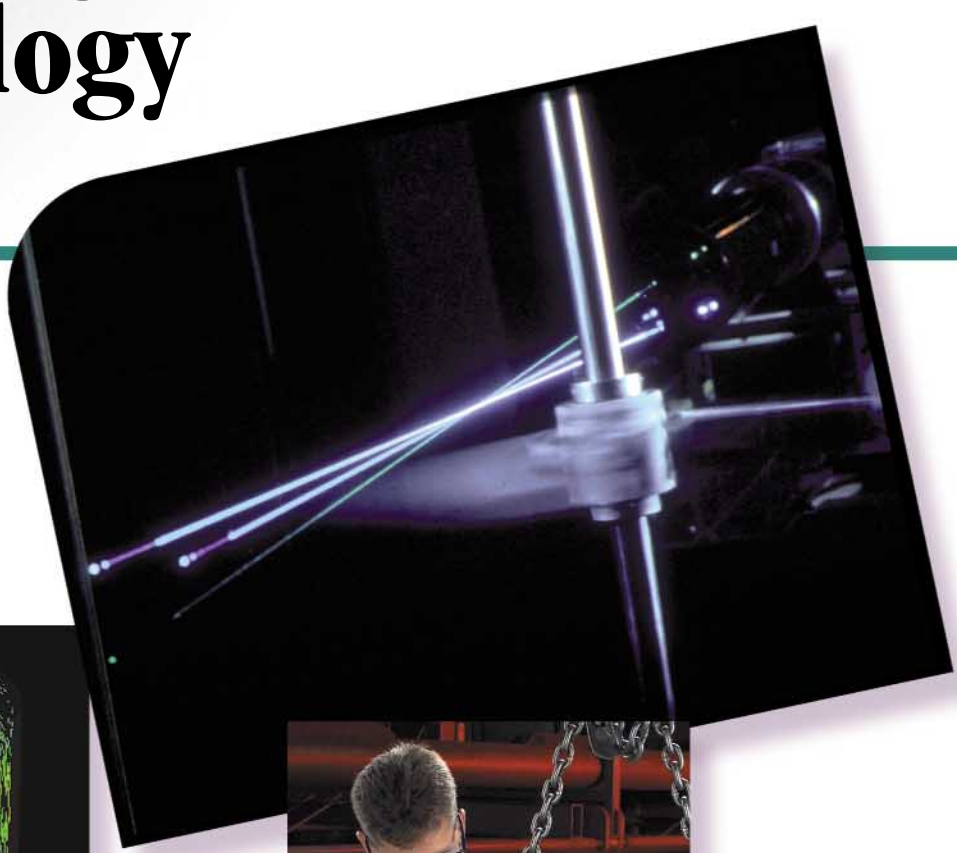
SPX®

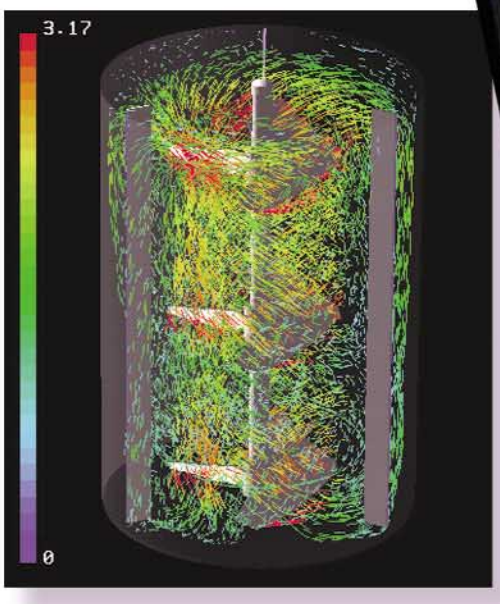
Where Ideas Meet Industry

LIGHTNIN®

Knowledge Technology Service

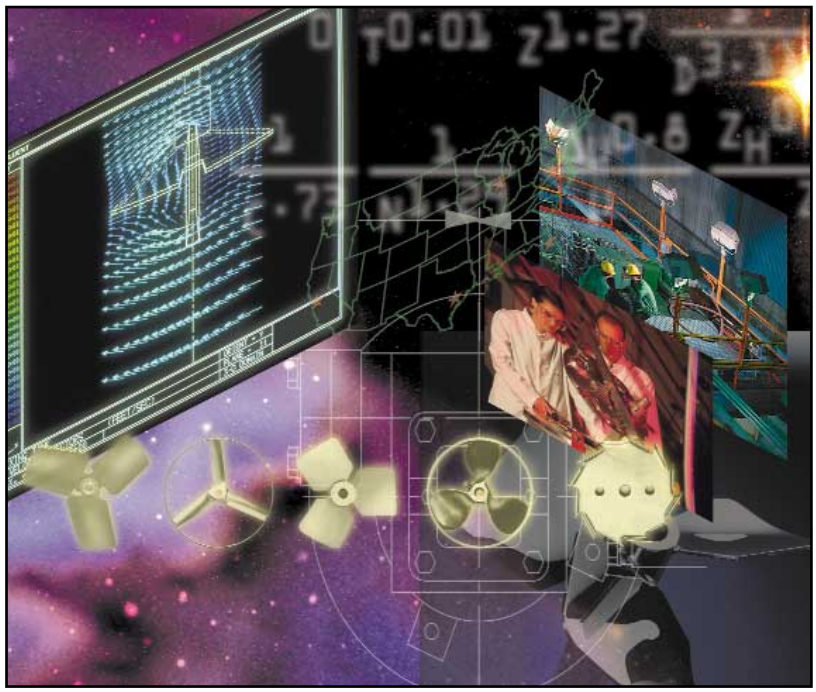
They're in the mix.





At LIGHTNIN we surround your mixing process with over 75 years of knowledge, technology and service excellence.

We call on the knowledge and experience of our worldwide network of engineers to fully understand your process objectives. We utilize our technological expertise to continuously analyze and apply new methods to maximize your mixing performance. And we stand by our products and services with the promise to always guarantee your 100% satisfaction with the end result.



KNOWLEDGE

For predictable mixing results.

Having a multi-million dollar state-of-the-art technical center is only half the mixing equation – you need the scientific know how to harness the technology. At LIGHTNIN, that knowledge rests with an incredibly talented and diverse group of researchers and engineers, combining hundreds of years of experience in process, mixing and impeller design.

With our intellectual assets working for you, we can solve virtually any mixing challenge, while maximizing productivity and minimizing energy requirements. We also can test your process – from the lab, through pilot plant up to full scale. Using LIGHTNIN's proven scale-up techniques, you'll be confident you're getting optimum performance from your process without the need for extensive modifications in the future.

Full scale testing performed in a 50' tank at LIGHTNIN.

TECHNOLOGY

The key to successful impeller design.

The heart of LIGHTNIN's impeller research and design effort is its Rochester, NY-based Knowledge and Technology Center featuring the world's first integrated Laser Doppler Velocimeter (LDV) and Computational Fluid Mixing (CFM) workstations. The LDV converts fluid motion measurements into digital information. As a result, many variations of impeller design can be accurately assessed for optimum results.

The LIGHTNIN laser can simultaneously measure flow, power, and mechanical load. A computer controls all the tests and displays the results.

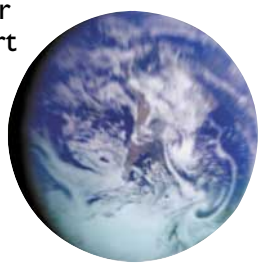
LDV data can be combined with the power of Computational Fluid Mixing (CFM), where predictions can be made about the mixing dynamics of any vessel configuration. This powerful capability significantly reduces the time and cost of pilot scale experiments and full scale trials. The result is an impeller selection that meets the needs of your process accurately and efficiently, while requiring the lowest combination of capital and operating costs.

Reassembly of a 700 series reducer after repair.

SERVICE

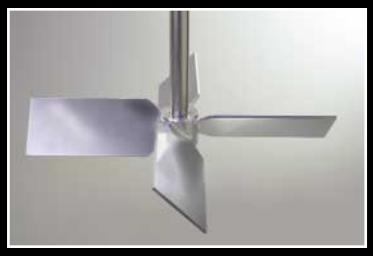
No matter where in the world you're mixing.

At LIGHTNIN, we make more than a great mixer. We offer comprehensive support services that protect your investment, increase your productivity, maximize your profitability, and minimize your capital equipment costs.



That's why we created a dedicated support organization – LIGHTNIN Process Equipment Services (LPES) – to provide comprehensive aftermarket services covering everything from installation to mixer maintenance and asset management programs. And, if repairs are needed, we guarantee results for a full year.

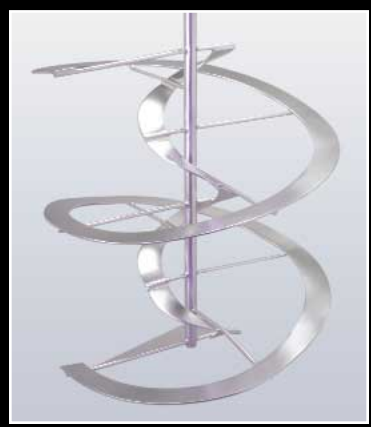
When you partner with LPES, you're assured of customized, comprehensive and dependable support from a worldwide network of dedicated service centers and local LIGHTNIN sales representatives.



A200 For low-to-medium viscosity flow controlled applications. Although superceded by the **A510**/A310, the A200 still has a specific role in applications where a degree of fluid shear is beneficial to the overall process result.

A340 High efficiency hydrofoil up-pumping impeller for use in multi-phase mixing. The up-pumping A340 can greatly increase process gains (up to 100%). This is accomplished by its gas induction at the surface and its high velocity at the tank wall, which increases heat transfer. There is no practical upper limit for the amount of gas the A340 impeller can handle.

A315 Axial flow impeller for gas/liquid applications. Can handle 3 times the gas of conventional hydrofoil impellers and eliminates staging that occurs with radial flow impellers. Can improve mass transfer by 30% compared with the Rushton impeller. Energy costs can be reduced up to 45% and yields improved in shear-sensitive processes.

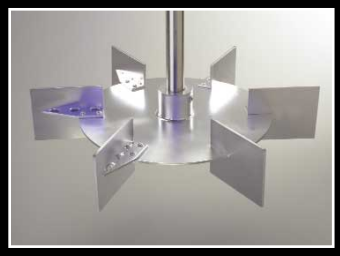


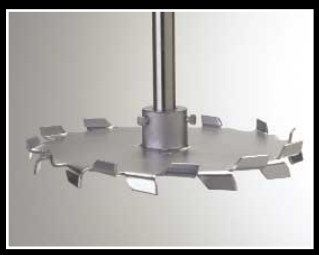
A400 Helical impeller for very high viscosity (+100,000 cps) applications. Options include number of flights, pitch and helix to suit the specific requirements. Also promotes surface renewal and heat transfer.

R320 Curved blade pumper impeller used in the Solvent Extraction process. Optimizes head and flow while reducing air entrainment through lower power consumption. Has lower shear generation and turbulence and greatly decreases operating expenses.

R400 Contoured, two bladed anchor for high viscosity applications. Used for blending and heat transfer where viscosities range from 10,000 to 100,000 cps.

R100 For use in high shear mixing and gas-liquid mass transfer controlled systems. Produces high shear rates ideal for gas dispersion, liquid-liquid immiscible contacting, particle size reduction and other process requirements.





R500 For high shear applications, especially difficult to disperse pigments. Generally, used in conjunction with a high flow impeller in applications requiring a combination of blending and a need for physical change created by fluid shear.

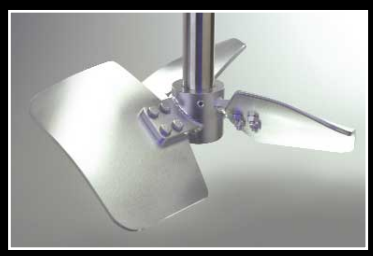
C110 For draft tube circulators. A true airfoil shape that provides high flow, even in unstable process conditions, while minimizing power requirements. The unique airfoil design of the C110 can increase the wear life of the impeller by 2 to 6 times.

Our mix of impeller designs is unparalleled…providing an impeller for virtually any process, for accurate, guaranteed process results.

A510/A310 For low viscosity flow controlled applications. Combines performance and high flow efficiency not found in other axial flow impellers.

It reduces power requirements by 40% over the older technology of pitch blade turbines. The A510 impeller system, with its varying angle options, can optimize processes by changing its shear characteristics or impeller/tank diameter ratio.

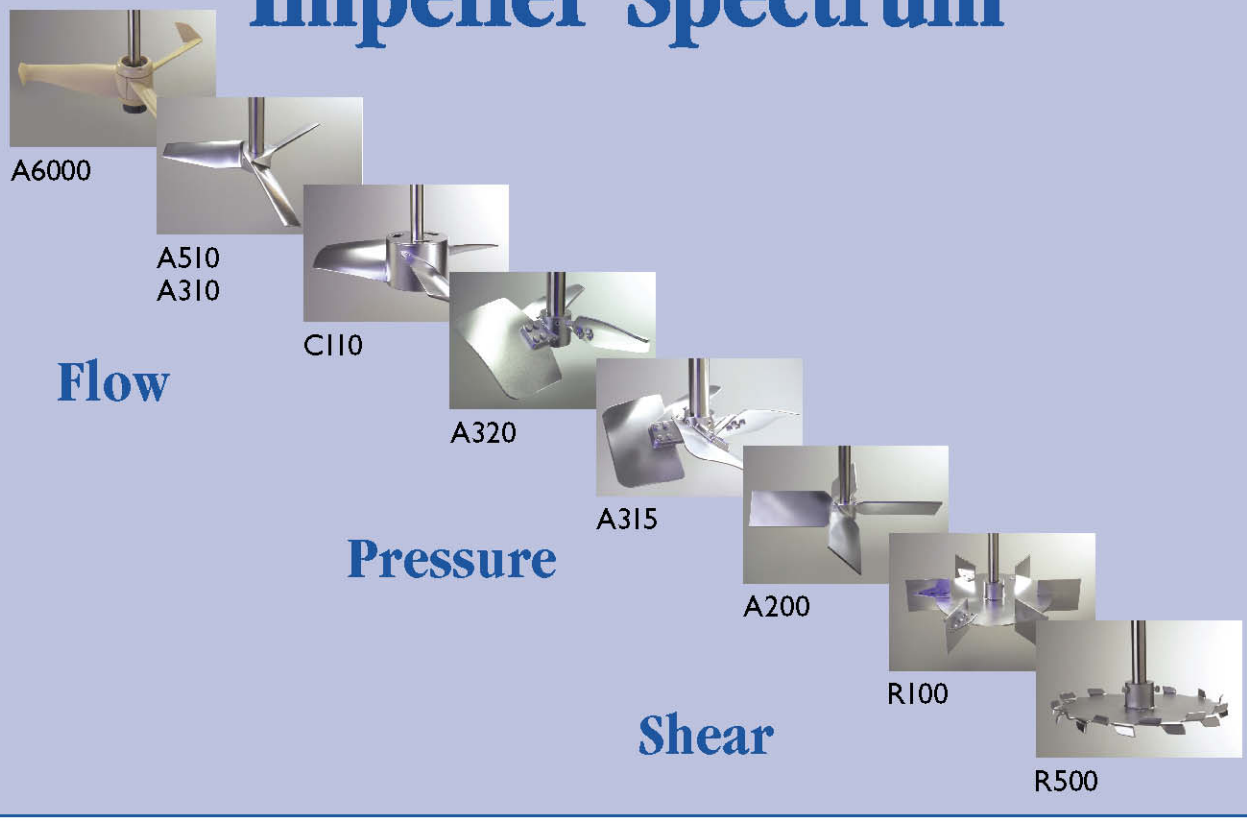
A6000 For low viscosity flow controlled applications. Uses a high-grade vinyl ester resin system for strength and corrosion resistance in hostile environments. Composite construction makes it an effective alternative to exotic metals. Truly an optimized airfoil design, the A6000 is 25% more efficient than the **A510**/A310.



A320 High flow impeller for higher viscosity and gas applications. The wide blade fabricated A320 impeller blends 40% faster than a conventional pitch blade impeller.

A312 Axial flow impeller for side entry applications. Designed for arduous requirements of pulp, paper and oil storage. The A312 produces the same process result at 50% of the power of the conventional impeller.

Impeller Spectrum



Add a LIGHTNIN impeller to your mix

For every commercial mixing application, there's a LIGHTNIN impeller to match. Successful impeller design is the result of our commitment to process research – and the capability to carry out dynamic testing using state-of-the-art facilities, instruments and protocols. For maximum product yield, consistently superior batch quality, smooth, dependable operation and guaranteed results, add a LIGHTNIN impeller to your mix.

B-799 B-656 B-797

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LIGHTNIN
An SPX Process Equipment Operation

When it comes to mixing We never stop

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