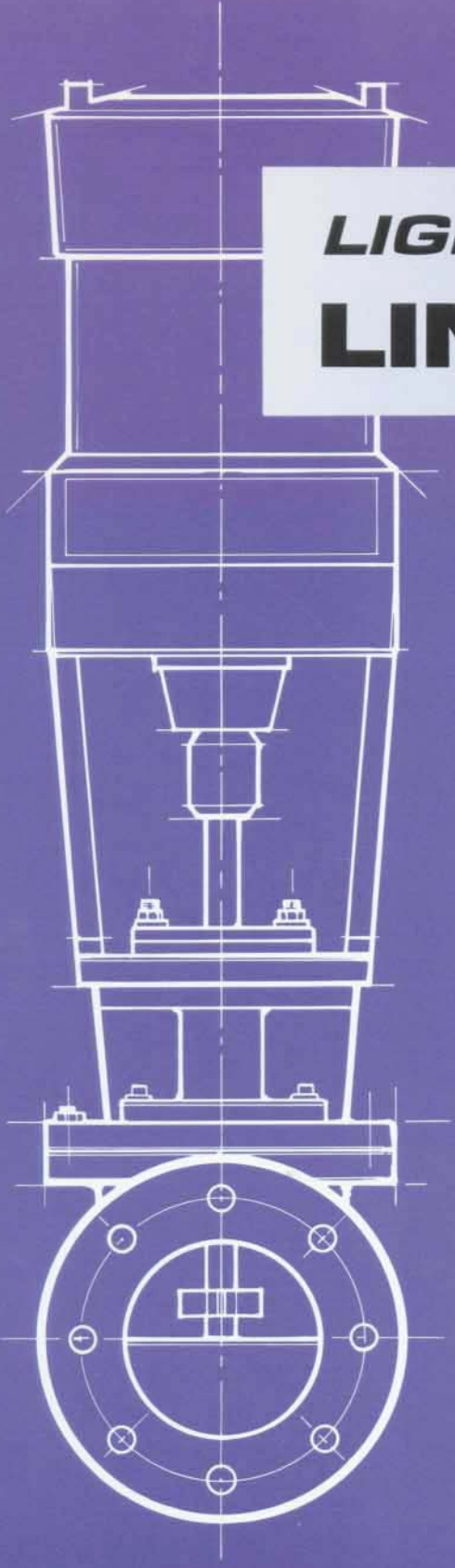




 **Where Ideas Meet Industry**



LIGHTNIN **LINE BLENDER**

IN-LINE MIXERS



Mix

Continuously

Without A

Tank

Mix Continuously Without A Tank

Now you can save your investment in tanks and space by using in-line mixing. The two-stage **LINE BLENDER™** produces a uniform effluent from various feed streams and will handle any fluid you can pump. It achieves uniformity not attainable with static mixers. The **LINE BLENDER™** produces a continuous flow, high intensity agitation which completely overcomes the fluid velocity in the pipeline. Particles of fluid which have time-interval separation can now easily be blended.

The design features two separate mixing chambers where high-speed, high-power impellers smooth fluctuations, produce uniformity at flow rates up to 20,000 G.P.M. The **LINE BLENDER™** uses standard pipe flanges. The mechanical seal is replaceable under pressure and requires no special lubrication.

A Look Inside The Vessel

The **LINE BLENDER™** has a 2-stage, 4-flow pattern retention chamber. The separator plate divides the two zones of agitation, directs the flow through the vessel and prevents short-circuiting and back-mixing. Tank baffles are installed to insure optimum flow pattern and reliable power consumption. The result is a far more intense blending and dispersing action than a single-stage unit will give.

Profit Before You Start

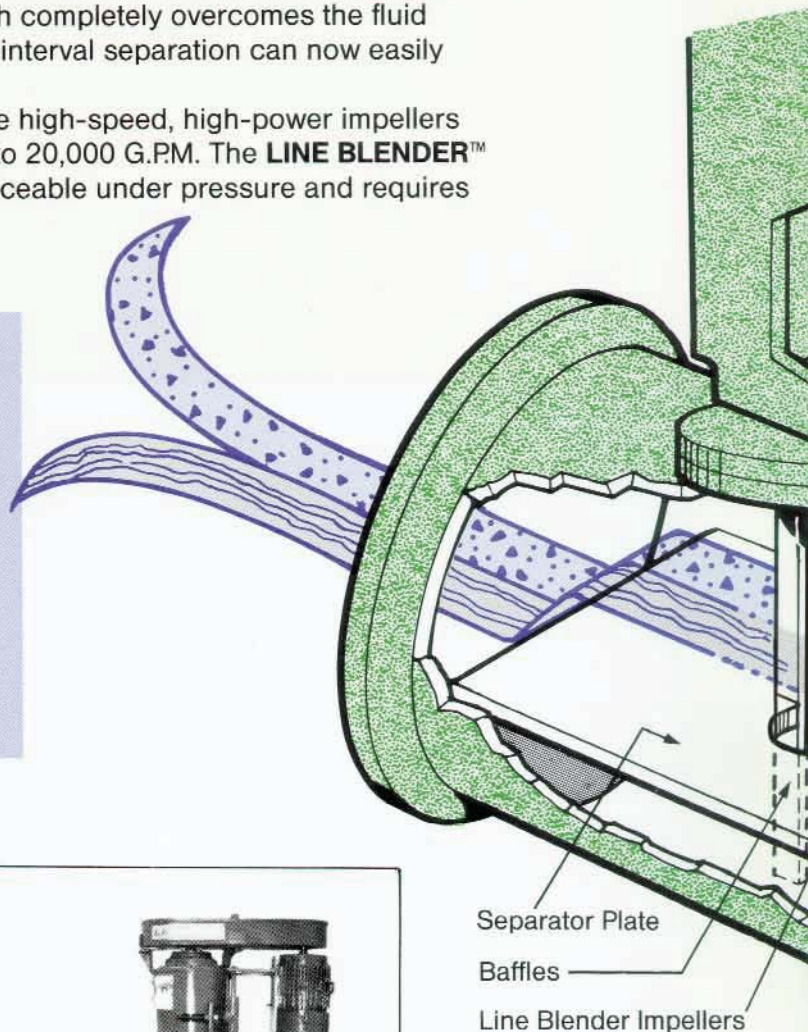
- **Lower Initial Investment** — Save the cost of a tank,
— Lower processing and maintenance costs,
— Continuous processing with little or no supervision.
- **Save Space** — Little room is needed for installation,
— Run pipelines vertically, horizontally or at any angle.
- **Low Power Consumption** — Low Horsepower usage compared to batch mixing.
- **Easy Installation** — Standard pipe flanges bolt the **LINE BLENDER™** into existing pipeline, — No need to locate unit at joints or elbows, — No special fittings required.



Engineering Features

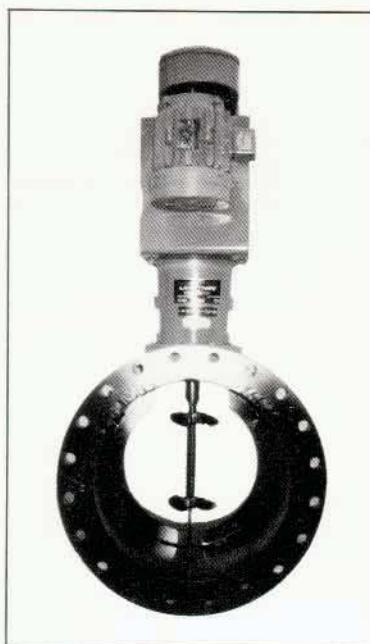
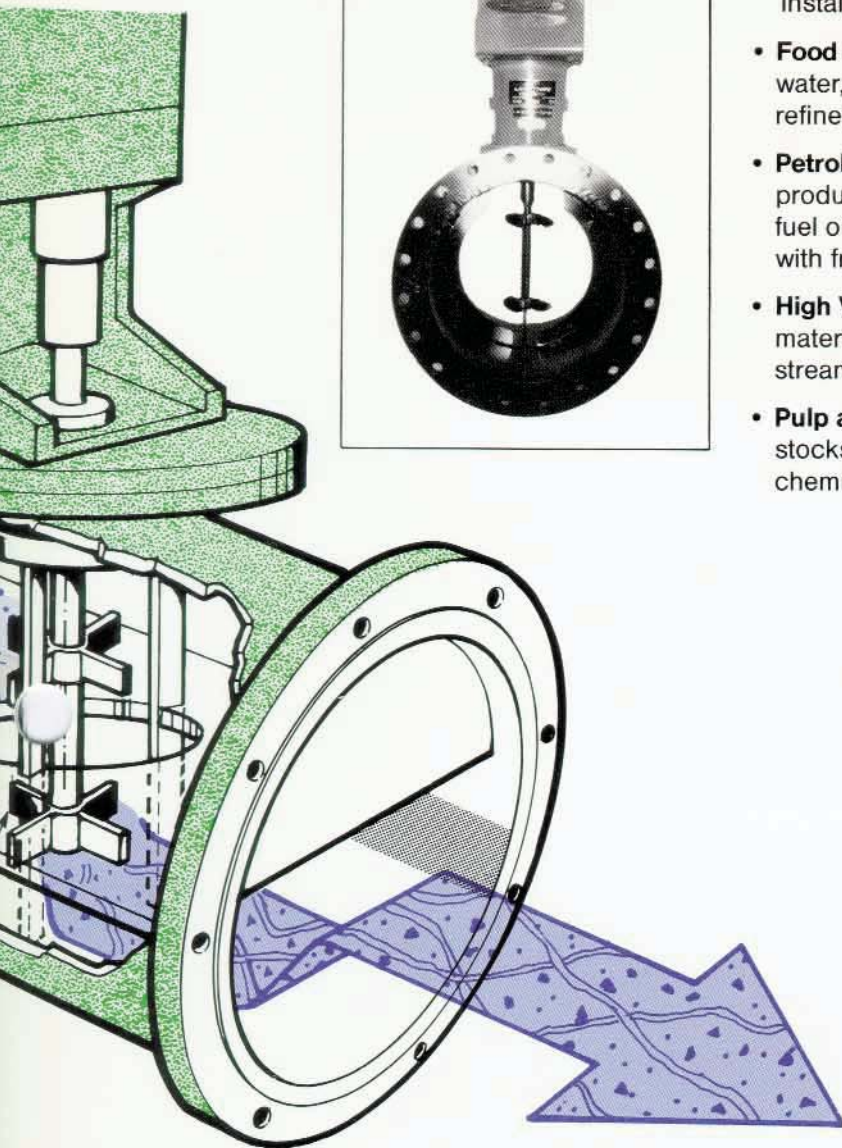
THREE TYPES OF SEALS AVAILABLE

- **Packed Stuffing Box** — Good for pressures up to 150 PSIG and to 300°F.
- **Single Mechanical Seal** — For temperatures to 485°F and pressures up to 200 PSIG. A unique automatic air bleed protects the seal against running dry.
- **Double Mechanical Seal** — Suitable for all possible applications of high temperature and high pressure.



LABORATORY LINE BLENDER™

- Test out your process.
- Flow rate of 4½ G.P.M. of material up to a viscosity of 1,000 cp.
- Suited to handle small scale production jobs.
- Air driven model available.
- All laboratory units provided with single mechanical seals.

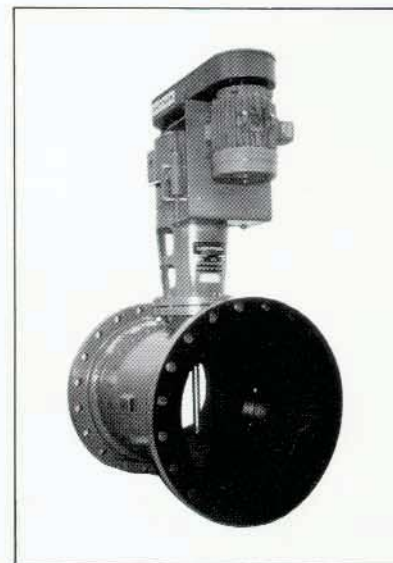


Typical Applications

- **Chemical Processing** — Used for all blending requirements, disperse cakes from filters and centrifuges, — Mix components quickly for reactions and mass transfer, — Provide additional shear in recirculation lines, — Premix for in-tank installations
- **Food Processing** — Blend syrups and sugar solutions with water, — Mix caustic solution with vegetable oils for refinement.
- **Petroleum Refining** — **LINE BLENDER™** used to treat petroleum products and organic chemicals, — Blending lube and fuel oil components with additives, — Contacting crude oil with fresh water for desalting.
- **High Viscosity Blending** — Blend additives with a high viscosity material ie: adding a catalyst to rubber polymerization streams.
- **Pulp and Paper Service** — Control Consistency by blending stocks from different sources, — Mixing additives, colour, chemicals and dilution water into paper stock.

Water and Waste Treatment

Flash-mix water treating chemicals into wastewater stream.



GUARANTEE

Every **LIGHTNIN®** Mixer is guaranteed to do the job for which we recommend it. **LIGHTNIN®** guarantees that the results you obtain from a **LINE BLENDER™** will be exactly the results you specify.

If the unit does not do the job, we will, without additional charge, provide a unit which will or refund the purchase price.

In the case of a failure of **LIGHTNIN®** equipment, which you feel is our responsibility, we will repair or replace it to your satisfaction, or we will refund the purchase price. This guarantee applies for the first full year you use your mixer, or eighteen months after we ship it, whichever comes first.

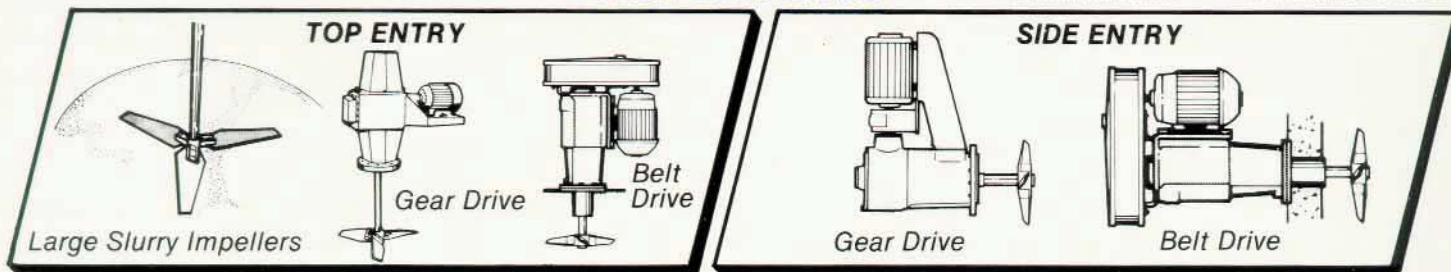
LIGHTNIN PRODUCTS

QUALITY

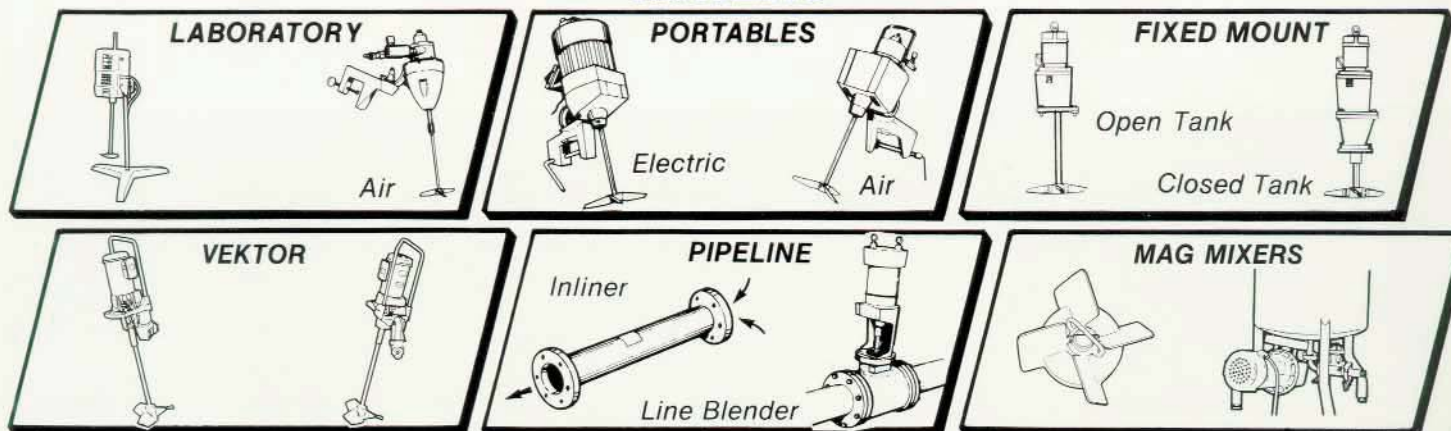
VALUE

ASSURANCE

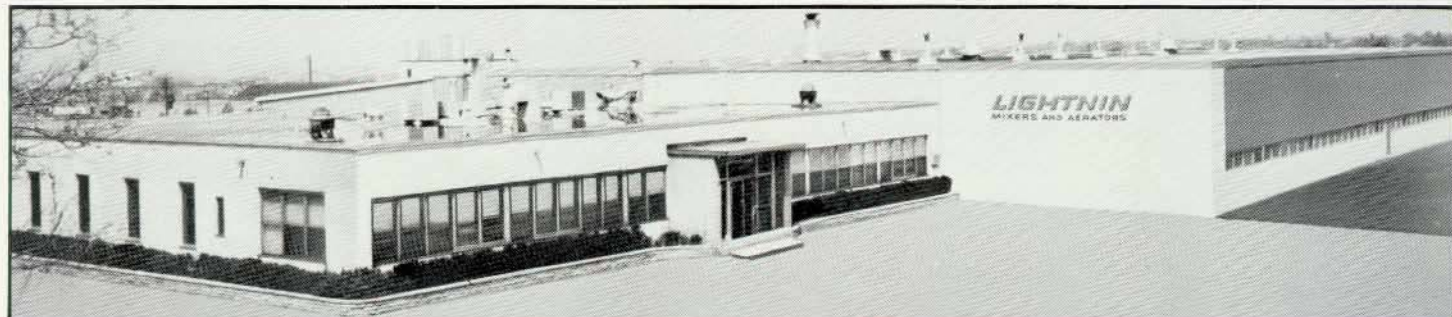
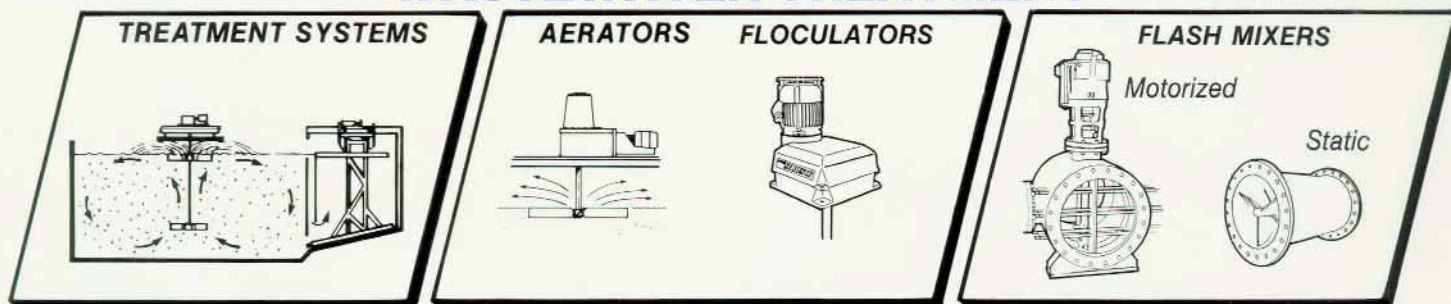
AGITATORS



MIXERS



WASTEWATER TREATMENT



CANADIAN FACTORY DEVOTED TO THE MANUFACTURE OF LIGHTNIN PRODUCTS

Greedy **LIGHTNIN**
SINCE 1874 UNIT OF GENERAL SIGNAL LIMITED

MECHANICAL LINE BLENDERS

Members of the LIGHTNIN® group are located in Toronto, Canada: Rochester, N.Y., USA: Poynton, England: Neinhagen, Germany: Sydney, Australia: Jurong, Singapore: Shanghai, China: Mexico D.F.

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