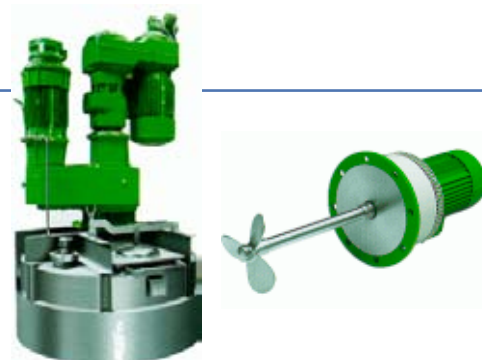


JLS International provides process equipment from high quality manufacturers located in Europe, Asia, and the US to customers worldwide. We assist our manufacturing partners with equipment design, prepare quotations according to customer specifications, and follow all projects very closely through realization, keeping our customers informed.

Agitators

This is one of the most comprehensive agitator lines in the industry, including fast seal removal, coaxial with independent drives, magnetic drive for non-polluting production and sterile product treatment, side entry, and compact designs. Many options are available, including standard or customized agitators, as well as systems. Our supplier is one of the world's leaders in agitator engineering and is ISO 9001 certified.



Buflovak Drum Dryers and Cooling Drum Flakers

Drum Dryers are available in single and double drum models. Single drum units may be dip or splash fed, or equipped with applicator rolls. The latter is particularly effective for drying high viscosity liquids or pasty materials such as mashed potatoes, applesauce, fruit-starch mixtures, gelatin, dextrine-type adhesives, polyacrylamide, synthetic resins, and various starches.

Double drum dryers are the most versatile and widely applied. These dryers are used to dry many food, chemical, and pharmaceutical materials of widely varying densities and viscosities: dilute solutions, heavy liquids, pasty materials, or fairly heavy sludges. The movable drum permits complete control of product film thickness. Feed may be by perforated tube trough, pendulum, or special engineered devices.

Cooling Drum Flakers — Special applications include single drum, double drum, twin drum, and special flaker configurations. Enclosures range from dust-tight, vapor tight, and extra tight designs.

Testing Lab and Rental Units — Buflovak maintains a complete testing facility for testing your product on all their equipment. Also rental units are available for some applications and equipment for use at the customers facility.



Samhwa Eductors and Ejectors

Eductors — These jet mixing eductors are placed in a vessel and fed by a recirculation line. The recirculated liquid sucks in surrounding liquid from the vessel, mixes with it, and is ejected. The ejected liquid promotes further mixing by forming a swirling flow inside the vessel.

Ejectors — We offer four types. Ejector systems are available for producing higher vacuum levels.

Steam: These offer a range of vacuum levels using steam as the motive fluid. Single stage units are for low vacuum use, while high vacuum applications require multistage designs with intercondensers.

Steam Jet Liquid: For transporting, discharging, or heating liquid with high speed steam as the motive fluid.

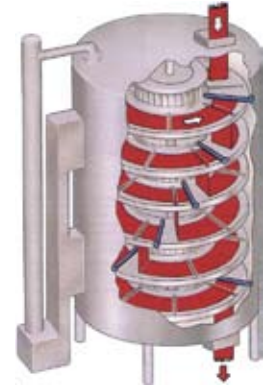
Liquid: Used to suck and mix, transport, or compress fluids using high speed fluid (usually water) as the motive medium.

Air: Installed in the suction line of a water sealed vacuum pump, using atmospheric air as the motive medium.



Wyssmont Continuous Process Dryer

The Turbo-Dryer® is a very versatile dryer offering gentle handling with little dust or fines, product mixing for high uniformity, and the tightest temperature control of any dryer available, up to 1200 °F. It can operate as a dryer, cooler, reactor, heat treater, calciner, humidifier, agglomerator, sublimator, roaster, or combination of these. Various models are available, including explosion-proof, environmentally sealed, and solvent recovery.



High Performance Gear Pumps

These high precision gear pumps are capable of handling high pressures, temperatures, and viscosities. Three types are available:

- Polymer extraction for discharging reactors under vacuum.
- Polymer boost/transfer for gently transferring or boosting pressure.
- Chemical pumps for conveying or metering fluids up to 10,000 Pas.



Samhwa Mixing Heat Exchangers

We specialize in building heat exchangers which incorporate static mixing elements and are specially suited for heating/cooling high viscosity fluids. The mixers continuously renew the interface between the product and tube wall, thereby producing much higher heat transfer (3x to 4x) and a uniform heat history in the product. Mixing heat exchangers are very compact, offering a short residence time.

Units can be provided to meet ASME, DIN, Chinese Safety Quality License, and other certifications.

New Design Lowers Cost — A new, patented design, developed by JLS and Samhwa and proven on customer polyester lines worldwide, substantially reduces vessel weight, and therefore cost. It does this by passing the product through coiled tubes that surround mixing elements. This arrangement provides the same benefits as traditional designs, but requires much less flange and wall thickness for a given pressure.



Strahman Process Valves

Strahman is a leading manufacturer of process valves. In 2004, they acquired MG Process Valves and now offer a complete line of valves including:

- Ball
- Drain
- Gate
- Injection
- Line blind
- Multi-way (2 – 12 ways)
- Ram
- Sampling
- Spray rinse
- Tank bottom

Most valves can be supplied with jackets, vacuum hoods, butt weld or flanged connections, and a variety of seals, seat designs, actuators, and configurations.



Bepex Thermal and Polymer Processing

Thermal Processing

Bepex International offers an array of products for food, chemical, and polymer processors whose needs are drying, heating, cooling, and reaction. Technologies include indirect, direct, and radiant drying systems.

Polymer Processing

Bepex has developed innovative solutions for processing:

- Polyesters
- Polyolefins
- Biodegradable polymers
- Recycled plastics

Processes include:

- Crystallizing/Drying
- Solid State Polymerizing
- Dedusting/Cooling
- Gas purification



Samhwa Static Mixers: Helical and HSM

Helical Mixers — Four types are available:

General Purpose: For liquid and powder mixing, reaction, extraction, dividing, composition, coloring, emulsification, heat exchange, pH control, neutralization, diffusion.

Food / Pharmaceutical: For applications such as edible oil, mayonnaise, ice cream chocolate, beverage/milk industry, ketchup, pharmaceuticals.

Viscous Fluids / High Pressure: Used for melted resin coloring and polymer mixing, plastics extrusion, mixing and dividing in chemical fiber processing, adhesives, and other high viscosity fluid mixing.

Pilot Plant: Applications include laboratories and pilot plants, mixing of small quantities, and mixing of two-component resins (resin + hardener).

High Shear Mixers — Compared to helical mixers, HSM mixers are better for low/low or low/high viscosity liquids, liquid/gas, and gas/gas mixing applications in most cases. HSM mixers have a higher pressure drop than helical mixers.



Samhwa Static Mixers: Gas and Low Viscosity Liquids

These are HSM-L type mixers for mixing, chemical reaction, and dispersion of low viscosity liquids and gasses. They produce the desired results in a very compact space. Example applications where we have placed these mixers are:

- Caustic mixing
- Ammonia mixing
- LNG mixing



Process Vessels

Our fabricators are capable of building vessels, heat exchangers, and systems to almost any specification and to the major standards such as ASME, ANSI, DIN, JIS, and KS. They have manufactured vessels and systems for major corporations around the world.



Hastelloy, Inconel, and Titanium Pipe and Fittings

JLS has access to a large quantity of pipe, tubing, fittings, and fasteners made from Hastelloy, Inconel, Titanium, and other exotic alloys. These partners also maintain larger stocks of Hastelloy, Inconel, and Titanium sheet and bar from which pipe can be fabricated.



High Pressure Gear Pump Parts and Repair

JLS can supply all your needs for gear pump spares and for repairing worn or damaged pumps. Parts and repair service is available for Shimadzu, Witte, Maag, Barmag, LCI and other chemical, booster, or polymer gear pumps up to 224/224 in size.



LCI Agitated Thin-Film Processing Systems

LCI is a recognized leader in providing agitated thin-film (and wiped-film) processors and systems for evaporation and distillation. These systems provide continuous, reliable processing of many heat sensitive or viscous materials without product degradation.

LCI offers a wide variety of design options and over 40 years' experience applying the technology in hundreds of applications in the food processing, dairy, chemical, petrochemical, and polymer industries. Applications include solvent recovery, mass reduction, stripping, devolatilization, and concentration of process streams.

For R&D facilities, LCI's LabVap laboratory thin-film evaporator offers maximum versatility to evaluate a broad variety of applications.

Test Center

LCI's Test Center is the most comprehensive thin-film test facility in the industry. It is expertly staffed and equipped for performing a wide range of tests from lab to pilot plant quantities.



Headquarters

JLS International, Inc.
PO Box 240948
Charlotte, NC 28224-0948
USA
Tel: 704-679-9575
Fax: 704-679-9574
Mobile: 704-661-6908
Email: info@jlsintl.com

Gulf Coast Office

JLS International, Inc.
40 FM 1960 W #399
Houston TX 77090-3530
USA
Tel: 713-242-6454
Fax: 704-679-9574
Email: jsgulfcoast@jlsintl.com

JLS International (UK) Ltd.

62 Mill Road
Ringmer, Lewes
East Sussex, BN8 5HZ
England
Tel / fax: +44(0) 1273 812029
Email: info@jls-europe.de

JLS International (Germany) Ltd.

Schlagkamp 6
46509 Xanten
Germany
Tel: +49(0) 2801 984314
Fax: +49(0) 2801 987052
Email: info@jls-europe.de

JLS Engineers and Traders (India) Pvt. Ltd.

Bungalow #C-3
Vrundavan Hsg. Complex
Opp. Guru Ganesh Nagar
Kothrud, Pune 411 038
India
Tel / fax: +91 20 2538 9933
Mobile: +91 98 220 31397
Email: info@jls-europe.de