



EVAPORATION, DISTILLATION AND SEPARATION SOLUTIONS

HEBELER PROCESS SOLUTIONS LLC
hebelerprocess.com

MORE THAN A CENTURY OF PROCESS KNOWLEDGE & EXPERIENCE

Hebeler Process Solutions, LLC, a division of Hebeler Holdings, LLC, specializes in innovative, technology-driven solutions for the food, chemical, pharmaceutical, waste treatment, bio-energy industries. One of only a handful of companies worldwide to offer product research and testing, as well as the design, engineering and manufacturing of complex one-of-a-kind and first-of-a-kind process equipment and systems all from a single source. Hebeler Process Solutions is very proud of our strong brand heritage: Buflovak PK Evaporation, Distillation and Separation Solutions; Buflovak PK Thermal Drying & Solidification Solutions; and Buflovak PK Blending & Powder Processing Solutions

HISTORY

Our story is unique and blends a rich history of leadership and innovation from three companies - Buflovak, PK Process and Hebeler LLC.

Buflovak has its origins from the merger of two small manufacturing companies in Buffalo, New York USA over 100 years ago. In 1902 the David Bell Engineering Works and The Buffalo Foundry Company merged and created the Buffalo Foundry and Machine Company. The company evolved into a specialist in the design and manufacture of double drum dryers, vacuum dryers, evaporators, vacuum pumps, condensers, and receivers. Several years after the merger, the "Buflovak" trade name was coined to encompass the company's vacuum process equipment and was an abbreviation for "Buffalo Vacuum Equipment".

From 1902 the company prospered and went on to pioneer new technologies, patented proprietary equipment and developed pioneering fabrication of high alloy materials. In 1945 the company was acquired by the Blaw Knox Corporation and renamed Blaw Knox Food and Chemical Equipment Division. The "Buflovak" trade name was expanded to encompass a variety of equipment including drum and rotary flakers and dryers, and modular evaporators.

In 2004 the company name was changed to Buflovak, LLC to leverage the name recognition and reputation Buflovak enjoys with our customers.

The Patterson Kelley Company originated in 1880 as a heat transfer equipment manufacturer in Brooklyn, NY. Patterson Kelley Process Equipment division began in 1949 with the development and introduction to the market of the Twin Shell Dry Blending System. Over the next 25 years additional innovations were introduced, including a

variety of blenders, dryers and granulators that operated in both batch and continuous modes. In 1974, the Patterson family sold the business to the Harsco Corporation.

In 2010, Buflovak purchased the Patterson Kelley Process Equipment division from Harsco Corporation to expand Buflovak's process equipment line to incorporate blending and drying of powders. In 2011, the company was re-branded to Buflovak PK to reflect the integration of the two companies into one entity.

In 2016, Hebeler Holdings, LLC acquired Buflovak PK and formed Hebeler Process Solutions, LLC. The Buflovak and PK brands will continue developing their internationally recognized product lines, as well as offering custom process solutions and will offer a new realm of custom manufacturing capabilities.

MANUFACTURING

The manufacturing arm of Hebeler Holdings, Hebeler, LLC specializes in custom engineering and manufacturing, with a focus in the power generation industry. Through Hebeler Process Solutions, the company will continue manufacturing all the Buflovak and PK lines while bringing strong knowledge of compliance and quality to these new industries. All products will be manufactured at the integrated Tonawanda, New York facility and at the J. Oskam Steel, LTD facility located in Port Colborne, Ontario.

Our unique capabilities allow us to design and manufacture the most economical and efficient equipment and systems possible. In-house design and engineering competencies eliminate costly communication errors and delays, while allowing our team to react quickly when design changes are necessary.

With a global customer base, our welders are qualified for pressure vessel code work in the USA, Canada, European Union, Russian Federation, China, South Korea, India and other countries around the world. certifications and numerous country code compliance qualifications for manufacturing, including:
Canada - CSA, CRN | Russia - GOST | Uzbekistan - GOST-U | Algeria - DEPM
Australia | Brazil | European Union - PED, CE, ATEX, IECEx | United States - ASME | UL

Registration with Intertek and ISO 9001:2008

Hebeler Process Solutions has the capabilities to engineer, fabricate and deliver custom modular processing system. From blueprint to final delivery, our team works closely with customers to assure that projects are completed to specification and on time. Whether the need is for small or large equipment; whether the materials used are carbon steel, stainless steel, exotic alloys or nonferrous; the results will be quality-assured equipment that will perform at or better than specification.

PILOT PLANT & LABORATORY TESTING

The Pilot Plant & Lab allows customers to thoroughly evaluate all aspects of a proposed process and equipment prior to the commitment to a full-scale installation. This fully equipped test facility has conducted more than 21,000 product and process tests. New products for the pharmaceutical, food, chemical, and environmental industries as well as existing products can be tested with absolute confidentiality in the 975 sq. m (10,500 sq. ft) Pilot facility.

Hebeler Process Solutions focuses on contributing to the success of our customers. In-house development of new product offerings and upgrades keeps us abreast of the changing conditions of the industries we serve. Close interactions and collaboration with customers plays an important role in understanding of the changes and new directions their industries are undergoing, and is key in the development of new products and services.

CUSTOMER SUPPORT & SERVICE

All Hebeler Process Solutions brands offer sales support and customer service as well as Field Service. We service all types of PK equipment including processors, dryers, and blenders as well as Buflovak rotating and vacuum thermal equipment and installations.

Our team can identify and correct the source of mechanical problems and can instruct the customer's personnel in the correct operating procedures and preventative maintenance of all equipment.

BUFLOVAK EVAPORATION, DISTILLATION & SEPARATION SOLUTIONS



DESCRIPTION OF AN EVAPORATOR

An Evaporator is the descriptive name generally given to process equipment used to remove liquid by vaporization. The feed material may be a single liquid, mixtures, solutions or slurries, or any combination of these. Heat applied through some form or heat transfer surface is used to produce the vaporization. The concentrated product, as discharged, is still in fluid, pumpable form.

DESCRIPTION OF DISTILLATION

DISTILLATION is the descriptive name generally given to process equipment used to separate a liquid mixture into separate components via vaporization and condensation. Buflovak designs systems using distillation in applications such as solvent recovery, product purification, solvent drying, VOC steam stripping, alcohol recovery and others. Our designs are determined through our years of engineering experience, process simulation and pilot testing.



TYPES OF BUFLOVAK EVAPORATORS

Buflovak evaporators are designed for use as single pass or recirculation, multiple effect or thermal recompression units as may be necessitated by desired product characteristics, product quality, operating efficiency, initial equipment costs and specific plant conditions.

VRC (NATURAL CIRCULATION) EVAPORATOR

VRC evaporators' circulation is induced thermally by the rising action of the boiling liquid in the tubes. These evaporators are designed for foamy and non-viscous liquids.

FALLING FILM EVAPORATOR

Falling Film evaporators offer distinct operating advantages in concentrating materials too viscous for natural circulation and those which are heat sensitive and require minimum retention time.

FC (FORCED CIRCULATION) EVAPORATOR

Forced Circulation evaporators liquid is pumped through the tubes at controlled velocities to provide high heat transfer rates. Since no boiling occurs in the tubes, fouling is reduced or eliminated and used for viscous and crystal or scale producing liquids. Often used in Buflovak crystallizers.

RFC (RISING-FALLING FILM) EVAPORATOR

RFC evaporators' operates combining rising and falling film action. Product quality is preserved through minimum holding volume and short retention time. Especially suited for low headroom requirements and concentrating extremely heat sensitive, foamy, and/or viscous liquids.

PLATE EVAPORATOR

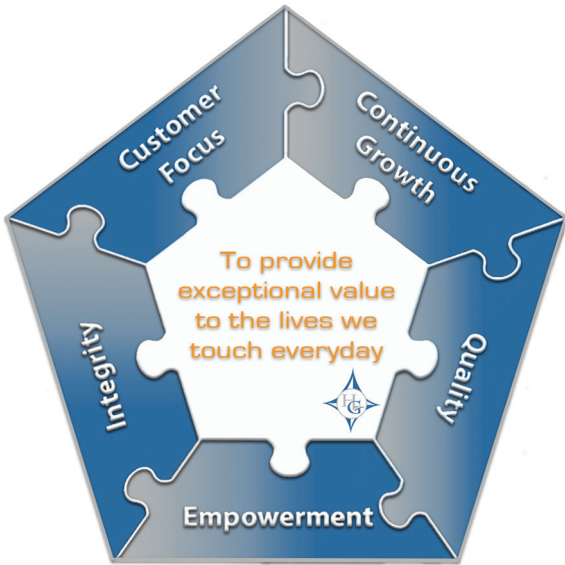
Buflovak offers various plate processing systems for evaporating from viscous and heat- and shear-sensitive materials.

BUFLOVAK DISTILLATION

Buflovak uses its knowledge of heat transfer, evaporation and condensation to offer systems for liquid mixture separation. Distillation systems include solvent separation and recovery, steam stripping, product purification and others.

HEBELER CULTURE

At Hebeler, we foster a principle-based culture that embodies our values of Customer Focus, Quality, Integrity, Empowerment and Continuous Growth.



VISION

To provide exceptional value to our customers and employees

QUALITY

Our customers expect and deserve the highest quality products and services available. This is why we are dedicated to continually improving our quality programs. Currently, Hebeler is ISO 9001:2008 certified, utilizes Lean Six Sigma practices and is working to maintain and improve our maturity level.

We utilize Hoshin Kanri, a planning tool used to help focus the organization's efforts on projects which directly impact its vision. Hoshin Kanri encourages intra-company communication, ensures that every employee is aware what the goals are for the company for the upcoming year, and how they help us reach our goals. This allows us to effectively plan and communicate our quality programs to the entire company, which elevates our overall quality level as a whole.

At Hebeler, the quality program is integrated throughout the entire organization, from our processes and procedures used by our employees, to the products and services delivered to our customers. Our quality can be seen from the inside out, and the result is top of the line products and ongoing field service. Our customers easily recognize our dedication to upholding our high standards for quality.

We create a workplace where **ENTHUSIASM** and **PURPOSE** come together • we encourage **CREATIVITY** and **INNOVATION** • we believe **HONESTY, INTEGRITY,** and **RESPECT** are the only option • we live **SAFETY** because we matter • we believe **LEADERS** are in **SERVICE** to their teams • we believe every **VOICE** should be and needs to be heard • we are **PROFESSIONAL,** we are **COMPASSIONATE,** we are **ENGAGED**
• at our core we are **FRIENDS,** we are **FAMILY,** we are



LOCATIONS

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