



Tech Update: Pellet Mill Equipment

Comact-Promill

High performance, low operating costs and many built-in safety features have helped Comact-Promill machines achieve an excellent reputation. All of Comact's machines are designed to work in extreme conditions. Customers can expect very high quality equipment that is built to last, the company says.

Benefits include easy set-up, low maintenance, and high flexibility. More than 200 units have been sold.

Comact-Promill pellet mills can manufacture all kinds of pellets. The company's patented system eliminates product contamination from lubricants and Comact says the maintenance costs of their pellet mills are half that of gear box type pellet mills. They add that their mills' compact construction make it easy to replace an existing pellet mill.

www.comact.com

Bühler

The Bühler RWPR pellet mill has been specifically designed to satisfy wood and biomass pelleting requirements.

Thanks to its massive construction, it is ideally suited to the production of wood pellets. The rollers, dies, and other important wear parts are capable of withstanding high pressures and require replacing only after several thousand operating hours. All the machine components in contact with the raw material are made of stainless and non-rusting materials. The pellet mill is additionally characterized by its high safety standards.

The RWPR pellet mill achieves above average throughputs in conjunction with the DFCC pellet mill controller. It has a relatively low power requirement and therefore low energy costs. In addition, the pellet mill is carefully matched to the other equipment and process operations from the Bühler range, ensuring low cost and efficient pellet production.

www.buhlergroup.com

ZCME

Zhengchang is the first company in China to engage in the development, design and installation of sawdust engineering equipment.

A wide range of raw materials can be utilized by the equipment. Evenly grinded by the company's hammer mill, the powdered sawdust, with a low rise of temperature, is conditioned online to meet the requirements of continuous production. A pellet conditioner then checks moisture online and adds water at appropriate intervals to ensure quality pellets. Cooled by the highly efficient counter-flow cooler, the pellet attains even moisture and a smooth appearance. Finished pellets can be recycled for fuel for dryers and they can be packed in various specifications.

www.zhengchang.com



Bliss Industries

Bliss Industries, LLC is a leading manufacturer of wood and biomass pelleting equipment for residential, commercial and industrial pellet fuel.

Founded in 1981, Bliss Industries maintains a reputation of manufacturing among the most efficient, reliable and well-built equipment in the industry. Developed from a design concept proven world-wide, the company's range of Pioneer Pellet Mills continues to expand.

The company offers a variety of models ranging from 21" diameter dies to 34" diameter dies. Its 3-roll design along with the feed cone system delivers "even striations" throughout the body of the pellet. The result is uniform wear within the pelleting chamber and a high quality finished product. The company's two stage twin drive offers greater flexibility and allows for lower electrical demand at start-up.

Overall reliability, maximum efficiency, ease of operation and maintenance combine to provide lower operating costs to owners. Bliss also manufactures an extensive line of hammermills and coolers for biomass size reduction, processing and cooling.

www.bliss-industries.com

Briquetting Systems

Briquetters consume approximately half the horsepower per ton output compared to pelletizing, says Briquetting Systems Inc. The company adds that the capital and operating costs in the 50,000 ton or less plant are approximately three-quarters of that of a pellet operation.

Briquetters are said to be more versatile and can densify a wide array of feedstocks, including mixed species and bark mixes, as well as agriculture and other industrial wastes. They can also deal with dust issues such as sander and MDF fines in plants.

These briquetters are modular in construction, can be ramped up in capacity and are also available in a containerized mobile version as well as a system that comes in its own large circular silo enclosure, complete with sweep auger feeding system.

They use modern UL/CSA electrical systems and touch screen controls adaptable to most plant controls as well as modems.

The briquetters can make consumer and industrial products for heat, combined heat and power as well as co-firing with coal. The heat values of the product, as well as densities, are similar to pellets.

Recent developments have targeted the torrefaction markets. The equipment's manufacturer, CF Nielsen, has done extensive research on densification of torrefied product and is a leader on this process. They are working with some of the largest forest-related companies in the world, as well as power generation companies.

www.briquettingsystems.com



Altentech

Shoveling wet biomass into the boiler is a paradigm that has lingered and has been promoted for years, even in the face of scientific realities as shown in reports, such as below.

“Drying biomass fuel improves combustion efficiency, increases steam production, usually reduces net air emissions, and improves boiler operation... A biomass-fired boiler will perform better when fuel has an optimum dryness... without supplementary use of fossil fuels... air emissions are reduced... More complete combustion results in lower quantities of volatile organic compounds and ash produced... reducing entrained particulates in the flue gas and erosion of dryer surfaces.” - Biomass Drying and Dewatering for Clean Heat & Power September, 2008 Carolyn J. Roos, PhD WSU Extension Energy Program.

Altentech’s vertical, small-footprint biomass dryers have been uniquely engineered to dry virtually any type of biomass cost-effectively, consistently and quickly. This includes, but is not limited to, wood fibre, agricultural byproducts, peat residue and even various types of sludge down to a moisture content of 10 per cent.

www.altentech.com

MÜNCH-Edelstahl GmbH

MÜNCH-Edelstahl GmbH of Hilden, Germany is one of the leading exporting manufacturers of pellet presses, complete pellet mill and grinder lines as well as high quality spare parts for pellet mills. With more than 40 years of experience, MÜNCH plans, develops and constructs machines and installations in the pelletizing sector, including for wood pelletizing.

MÜNCH’s ringdie pellet mills (RMP) are well designed with compact construction. They are operating on all continents under various conditions and deliver optimum economies for customers. MÜNCH’S pellet mills are V-belt driven units from 7 to 450 hp with two equal synchronous drives and extendable to double-pelleting, long term conditioning, fat coating at the die, automatic control and visualization, and forced feeder for straw. An optional one drive model is available.

MÜNCH also offers containerized pelleting systems for biomass. The plant is fully assembled in two standard 40” overseas containers and has a capacity of about 1.2 to 1.5 tonnes per hour. A bagging system, press control and an automatic fire extinguishing system are available on request.

www.muench-gmbh.net

Amandus Kahl

Since its establishment in 1876, Amandus Kahl has been committed to engineering the finest production equipment on the market. By committing countless hours and resources to research and development, Amandus Kahl has produced a machine that excels in pelleting rough and irregular materials, the company says.



For years, the company has been supplying equipment to the forest industry. Kahl not only has among the most energy efficient machines on the market, says the company, but it is matched with low wear costs, little down time and the simplicity of a flat die system.

SARJ Equipment Corp. has teamed up with Amandus Kahl to supply, build and support their systems throughout Canada. It has a start-up team, service team and warehousing located in Ontario to serve the entire Canadian market.

rbmacarthur@sympatico.ca

Silvana Trading/SPC

SPC Sweden, distributed in Canada by Montreal-based Silvana, specializes in small scale pellet presses. The smallest press produces about 150 kgs of pellets per hour for annual production of between 600 to 1000 tons per year.

The press is suitable for dry waste with a maximum of 16 per cent moisture content from a planer or other operations, but can also be used by farmers using straw.

SPC also delivers larger presses for annual production of up to 10,000 to 20,000 tons of pellets per year. The presses can be delivered stationary or mobile.

SPC's concept is local production using already dry low cost material that is available without transportation, and then developing a local market to reduce transportation costs.

As SPC's presses are based on the same principles as larger presses, many research organizations are using SPC's presses in their research.

www.silvanatrading.com

Pellet Systems International Inc.

Pellet Systems International Inc. (PSI) and its associated company, Torrefied Wood Pellet Equipment Ltd. (TWPE) are both manufacturers of pellet mill equipment based in New Brunswick.

The companies are involved in the manufacturing of regular wood pellet mills and torrefied biomass pellet mills, using a double die technology. This unique way of pelletizing biomass results in a substantial reduction in production power demand, resulting in prolonged equipment life.

PSI and TWPE specialize in offering global turnkey solutions, starting with engineering right up to commissioning of the plant. Because of its unique technology, TWPE presses are able to handle the challenges imposed by the densification of bio-coal and to produce a truly hydrophobic pellet. TWPE is also pleased to announce the construction of its first commercial large scale torrefied wood pellet plant in Europe and is working on several other large proposed plants.

www.pelletsystems.com