Polymer Processing Systems

BKG® Melt Delivery & Pelletizing Systems

At Nordson BKG, our commitment to innovation is as solid as the products we engineer. With decades of industry experience, we understand the challenges faced by global plastics processors and have tailored our melt delivery and pelletizing solutions to meet these needs with unparalleled precision and reliability.

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Nordson
Polymer Processing Systems

You Require Innovative Solutions

We're Ready to Meet the Challenge

From 1953 to 1967, BKG® developed and launched innovative melt filtration, melt pump, and valve products for the plastics industry in Muenster, Germany. Their success led to Nordson establishing a high standard of excellence in the extrusion and polymerization markets. In 1994, the product range was extended to include underwater pelletizing systems.

Nordson Corporation acquired BKG® in 2013 as part of the company's new line of business dedicated to serving the needs of the plastics industry. The newly formed division, Nordson Polymer Processing Systems (PPS), brought together several legacy machinery manufacturers into one unique and collaborative organization.

Today, the PPS division employs experts in polymer processing solutions who have crafted systems used worldwide to melt, extrude, and pelletize polymers. Our team works to understand the needs of your business and designs our products to enhance the performance of your processes.

Since 1953, BKG has created a standard of excellence in melt delivery and pelletizing systems for extrusion, compounding, polymerization, and recycling applications. The company remains committed to the changing needs of customers, developing new products that have resulted in performance improvements and increased production opportunities. Our products range from simple two-screen bearing piston screen changer to the highly innovative and game-changing BKG® HiCon™ K-SWE-HD/RS recycling filter for packaging applications or our CrystallCut® pelletizing technology that allows for pelletizing and crystallization in one single process step without the need of additional energy. Through it all, we have engaged end-users and key OEM partners, listening to feedback about what products and features are truly needed by the industry.

Whether you require a BKG® gear pump, melt filter, polymer valve, pelletizing system, or an EDI® extrusion and fluid coating die system, we're ready to meet the challenge.

Engineering & Technology

Our team of experienced engineers has decades of experience. They provide advanced technology for melt filtration, melt pump and valve systems resulting in optimal results and increased production efficiencies for customers. Over the course of the past several decades, we have partnered with our customers to understand what they require, which has enabled us to provide them with the most effective and efficient solution for even the most demanding applications.

Research & Development

Nordson has been at the forefront of product innovation for the extrusion and polymerization industries, largely due to an investment in capital equipment and personnel dedicated to conducting research and development testing and trials. Our teams' numerous patents prove our dedication to continuous improvement and providing our customers with state-of-the-art technology.

Technology & Training Centers

Globally, Nordson PPS operates several advanced technology and testing centers, including one in Münster, Germany, and in Hickory, NC, USA. The laboratories offer customers an economical alternative to using their commercial scale equipment for product and process testing, thereby reducing the amount of raw material cost and lost output from machine downtime.

The technology centers also allow for continued technological advancements, as they are used to support the creation, development and refinement of new and existing extrusion, recycling and polymerization systems.

BKG® Technology Centers

Process Parameters: Münster, Germany

Material melting point:	50 – 420°C (122 – 788°F)
Throughput rates:	1,200 kg/hr (2,645 lb/hr)
Pellet diameter:	0.5 – 12.0 mm (0.02 – 0.47")

Process Parameters: Hickory, North Carolina, USA

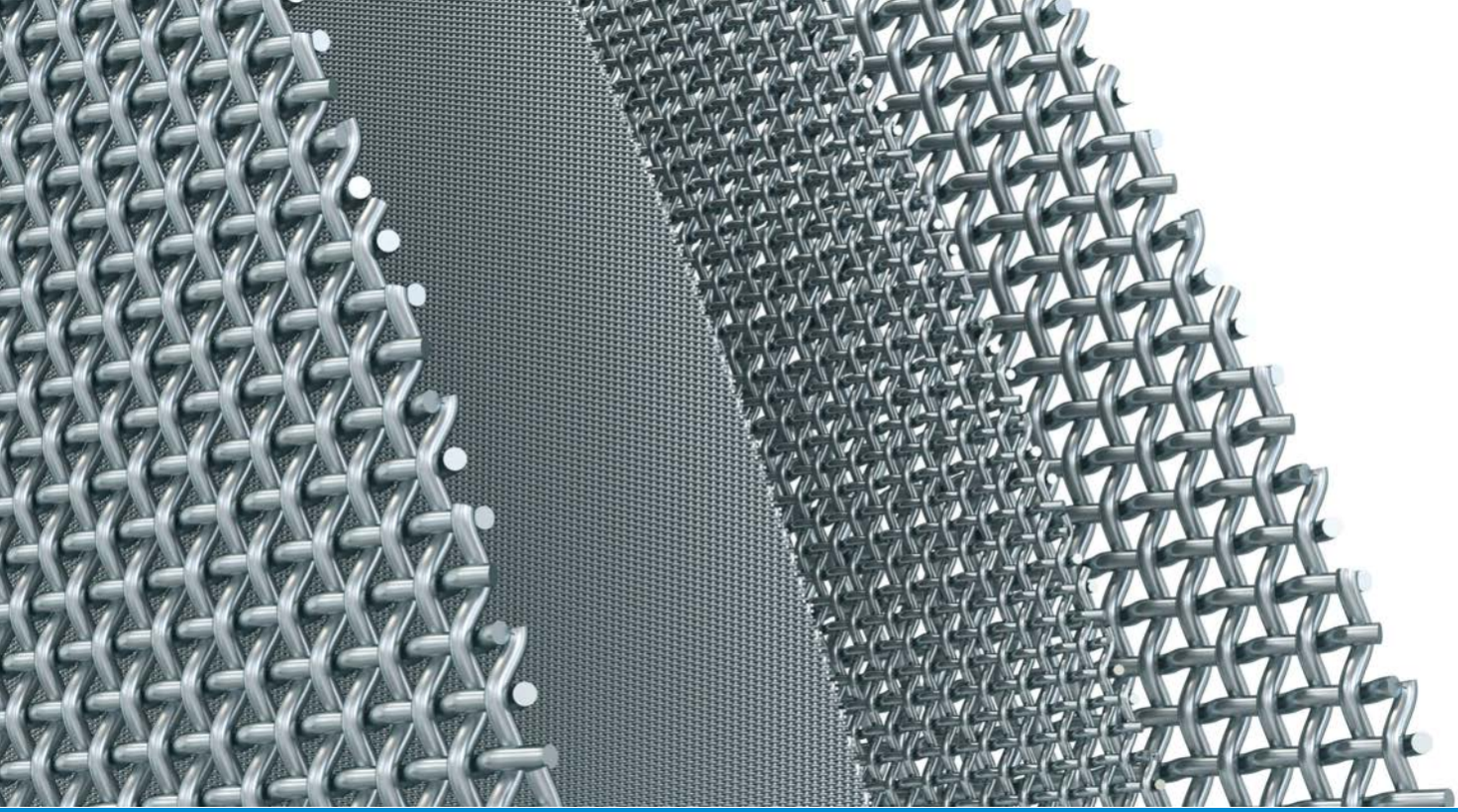
Material melting point:	50 – 343°C (122 – 650°F)
Throughput rates:	340 kg/hr (750 lb/hr)
Pellet diameter:	2.0 – 6.4 mm (0.08 – 0.250")

Technical Support & Spare Parts

Ensure consistent product quality with original replacement parts for optimized performance. Our direct access to engineering records allows us to design and produce custom parts quickly, getting your lines back up and running. We also offer technical support through our regional service centers.

Service & Installation

Maximize line performance and productivity with installation and commissioning by our experienced and dedicated field service engineers, who are based regionally throughout the world. Our technicians are available to conduct on-site operation and maintenance training.



BKG® Melt Filters

Ensuring High-Quality Polymers for Throughputs up to 60 tons/hr

In the quest for excellence in polymer production, the purity of the melt is paramount. High-quality products are a direct result of high-quality polymers, which can only be achieved through the implementation of superior melt filtration systems. At the forefront of this critical process is our BKG® brand, whose filtration systems are engineered to remove impurities and ensure a clean, homogeneous melt that facilitates trouble-free processing.

Our BKG® filtration product line consists of comprehensive systems designed for compounding, extrusion, and polymerization applications, and recycling filters adept at handling elevated levels of contamination. Together with a range of filtration accessories, these systems are integral to achieving optimum process performance. Furthermore, our melt delivery systems are meticulously designed to transport your polymer to the pelletizer, minimizing thermal stress and pressure fluctuations, and thereby safeguarding the highest quality and consistency in the final product.

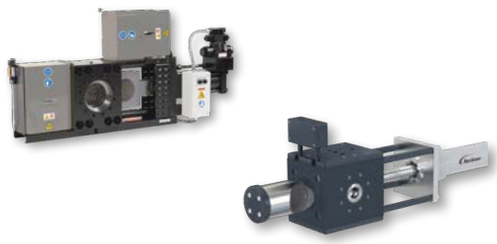
Whether the challenge is to process engineering plastics or highly filled compounds, our advanced melt filters demonstrate our commitment to exceptional performance and control. Our standard is excellence, and our melt filtration systems are optimised down to the last detail to uphold this credo.

Features and Benefits

- **Discontinuous, continuous, and self-cleaning filtration systems**
  Achieve optimal results through tailored solutions, ensuring high-quality production and process reliability
- **Utilization of various filter media including screen packs, filter discs, FlexDiscs™, and filter candles**
  Increased flexibility to meet high throughputs and enhance filtration performance
- **Systems designed to integrate seamlessly into the complete production line**
  Enhanced line efficiency, reduced downtime, and improved overall productivity
- **Numerous patents that reflect continuous advancements in filtration technology**
  Access to cutting-edge solutions that drive industry standards and deliver exceptional performance
- **Collaborative partnerships with customers to address the most challenging applications**
  Effective, and efficient solutions to meet specific processing needs

BKG® NorCon™ Discontinous Melt Filtration Systems

Benefits



- Easy adjustment of the hydraulic device via the hand control valves
- Quick and easy cleaning allows for rapid material and color changes
- Large filter area in a comparable small housing due to oval-shaped screens (LD-SWE model)
- Pressure activated sealing for hydraulic and mechanical slide plate melt filters

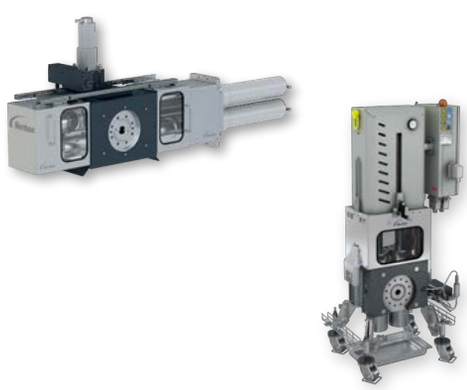
BKG® NorCon™ Continuous Melt Filtration Systems

Benefits

- Continuous production process during a filter change, resulting in no disruptions to the melt flow
- The hydraulic device can be effortlessly adjusted with either the hand control or solenoid valves
- The optional fully automated venting procedure (via PLC) significantly reduces the need for operator intervention

BKG® HiCon™ Self-Cleaning Melt Filtration Systems

Benefits (some are model-specific)



- Systems for highly contaminated polymers available (PET, Polyolefins,...)
- Reduced spare part costs are recognized due to the integrated self-cleaning feature of the filter medium
- The fully automated backflush and venting procedure also reduces the need for operator intervention
- Significant reduction in operating costs (material and labor costs) possible because of up to 200 backflushes before a filter change is needed
- Pressure constant operation ensures high-quality end-products

BKG® Large Area Melt Filtration Systems

Benefits

- Low operating costs through the use of low-cost filter media (flat screen mesh)
- Easy handling during a filter change since there is no need to use a hoist or lifting device
- Optimized flow channel design with short residence time eliminates degradation of the polymer
- Suitable for high-capacity throughputs

BKG® Melt Filtration Accessories

Benefits

- From breaker plates and screen retainers supporting the filtration medium and keeping it in place to filter candles and the patented BKG® FlexDisc™ enlarging your filtration area significantly - we push your operation to a new level.

Interested in learning more? Scan our QR code with your mobile phone to request more information.

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BKG® Melt Pumps

Where We Build The Pressure for Throughputs up to 20 tons/hr

BKG® high-precision melt pumps are paramount in enhancing conveyance accuracy, thereby significantly elevating your process profitability. With a steadfast commitment to innovation and quality, BKG® stands at the forefront as a premium polymer melt pump manufacturer, dedicated to optimizing your processes. This optimization ensures that extrusion and pelletizing lines not only meet but exceed the highest standards of quality and throughput.

Our gear pumps are engineered with cutting-edge technology to ensure optimal efficiency across various industries and applications. Whether you are engaged in extrusion, compounding, recycling, or polymerization, BKG® gear pumps are designed to integrate seamlessly into your operations, providing a level of reliability and efficiency that is unmatched in the market.

By choosing BKG® melt pumps, you are not just selecting a component; you are investing in a solution that will drive your production lines towards higher quality output and increased throughput. This translates directly into enhanced profitability and a competitive edge in the global plastics processing industry.

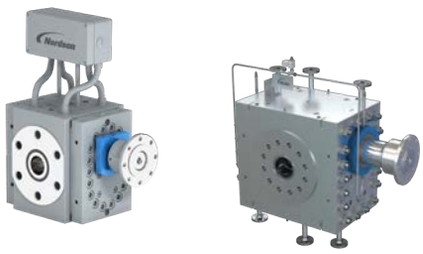
Features and Benefits

- **Homogeneity Improvement**
  A consistent melt flow leads to homogenous product quality, a critical factor in meeting stringent industry standards and achieving customer satisfaction
- **Throughput and Pressure Stability**
  Elimination of variations in throughput and pressure pulsations, which is essential for producing products that meet precise specifications and high quality
- **High Filler Content Processing**
  Capable of processing products with up to 85% powdery additives, BKG® pumps accomodate a wide range of formulations, broadening the scope of applications and material innovations

BKG® EP Melt Pump

Benefits

- Suitable for extrusion, compounding, and recycling applications
- Available as EP-SE-EO model equipped with smaller, rheologically optimized in-/outlet geometries
- Cooling rings for process stability, even for low-viscous polymers
- Easy start-up process, simple design for easy maintenance and low downtime
- No disassembly of the pump is needed thanks to interchangeable dynamic seals on the outside



BKG® RP Melt Pump

Benefits

- Designed for discharging low to medium viscosity melts from reactors or tanks
- Available as RP-LE-EO model equipped with smaller, rheologically optimized in-/outlet geometries
- Sophisticated sealing system that prevents leakages, even under difficult processing conditions

BKG® MHDP Melt Pump

Benefits

- Designed for high-pressure polymer extrusion applications
- Capable of building pressure up to 689 bar (10,000 psi)
- Enables simplified line configurations by substituting additional pumps

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BKG® HyFlex™ Polymer Valves

Our BKG® polymer valves are designed to regulate the melt flow in a controlled manner, and even discharge the material out of the running process as necessary. As a valve manufacturer, we have years of experience designing, innovating upon, and producing polymer valves to support your specific processes.

With BKG® Start-up, Discharge, and Shut-off valves for underwater pelletizing systems, multi-way-, and multi-port valves you control your process and guide the melt stream through with the perfect timing for smooth operation.

Features and Benefits

- Proven piston type design
- Fast separation of the process in case of failures
- Switch between different applications without modifying the existing line layout
- Compact design with short flow paths
- Electrical heating or possible option of oil/steam

BKG® Jet Cleaners

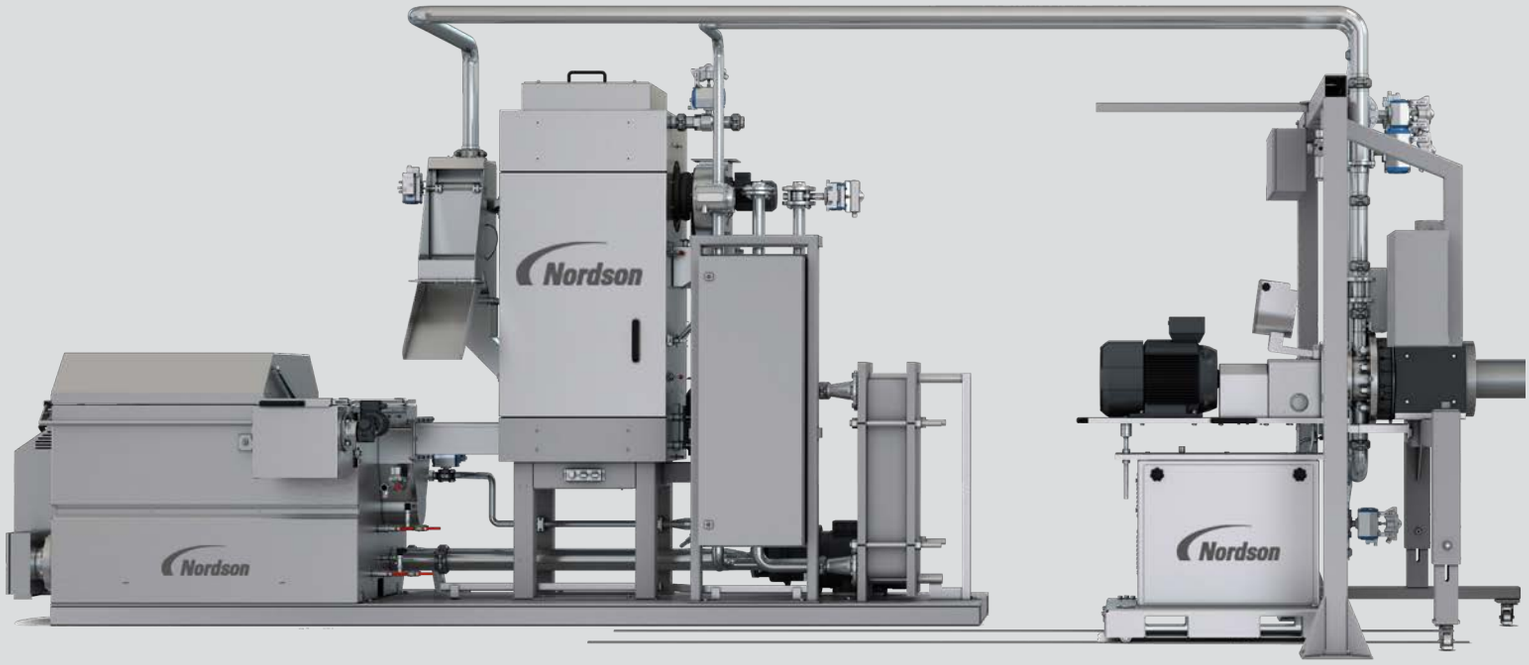
For High Sustainability

Processing molten polymers always leave you with polymer residues on your production line's metal parts. This leads to increased operating costs, decreased functionality, and increased maintenance effort. Given the all-present goal of being as sustainable as possible, it is a must to reuse metal parts that have been exposed to polymer melt as often as possible.

BKG® Jet Cleaners are the most advanced cleaning method for fast and safe removal of polymer residue from metal parts.

Features and Benefits

- Capable of removing most polymeric materials
- Multiple reuses of metal parts reduce spare parts costs significantly
- Fast cleaning cycles
- Energy-saving operation
- Keep the functionality of your process line up by using perfectly clean parts that otherwise could compromise throughput, pressure conditions, etc.



BKG® Pelletizing Systems

Perfectly Shaped Pellets for Throughputs up to 35 tons/hr

One of the key advantages of our BKG® pelletizing systems is their versatility. BKG® pelletizing systems are the most effective and modern method of processing not only thermoplastics, but also all materials that behave like thermoplastics, ensuring perfectly shaped pellets. This means that whether you're working with traditional plastics or more specialized materials, our systems can handle the job with ease.

In addition to their versatility, our BKG® pelletizing systems are also renowned for their precision. Our engineers have developed advanced control systems that ensure the pellets produced by our systems are consistently shaped and sized. This level of precision is crucial in industries where the quality of the pellets directly impacts the performance of the end product.

By optimizing the pelletizing process, our systems can reduce waste and increase production efficiency, leading to significant cost savings for your business. In addition, our systems are designed to be energy-efficient, further reducing operating costs.

Features and Benefits

- **Boost Productivity and Quality**
  By utilizing cutting-edge technology, our systems ensure that each and every pellet is flawlessly shaped and sized, resulting in consistently high-quality products
- **Reduce Waste and Save Money**
  By seamlessly integrating into your production line, our systems optimize material usage and minimize scrap, allowing you to maximize your output and reduce costs
- **Enhance Flexibilty**
  Whether you need to switch between different materials or adapt to varying production demands, our technology allows for seamless transitions, giving you the flexibility to respond quickly to market changes
- **Enhance Safety and Sustainability**
  At BKG, we prioritize safety and sustainability. Our underwater pelletizing systems utilize state-of-the-art technology to ensure a safe and eco-friendly production process.

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BKG® Pelletizers Type AH, AH D

Benefits

- Throughput rates of 2 - 35,000 kg/hr (4 - 77,000 lb/hr)
- With automatic hydraulic blade pressure regulation, these pelletizers deliver superior cutting quality across all viscosities
- Say goodbye to operator intervention thanks to automatic die plate grinding
- Optimize wear with fine adjustment of the blade pressure regulation
- Still available: Pelletizers Type A with mechanic blade pressure regulation

BKG® Master-Line™ (with Belt Filter)

Benefits

- Throughput rates of 50 - 2,000 kg/hr (110 - 4,400 lb/hr)
- Economic, automated, self-cleaning tempered water system
- Entry-level underwater pelletizing system with BKG® standard quality
- Simple handling and fast cleaning
- Comes with a pelletizer with hydraulic or mechanic blade pressure regulation

BKG® Combi-Line™/Combigon™

Benefits

- Throughput rates of 50 - 2,000 kg/hr (110 - 4,400 lb/hr)
- Generously equipped pelletizing system with various process water filtration systems
- Available with filter cassette, curved sieve or BKG® Polygon™ filter
- Includes a pellet dryer type BKG® TVE ED with a double door access for easy cleaning
- Best technology for low and medium throughput ranges
- Comes with a pelletizer with hydraulic blade pressure regulation

BKG® Opti-Line™/Optigon™

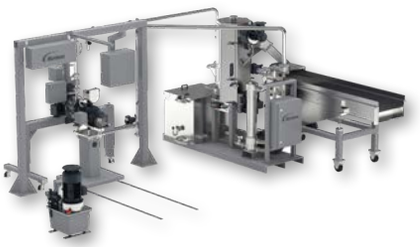
Benefits

- Throughput rates of 50 - 35,000 kg/hr (110 - 77,000 lb/hr)
- Fully featured pelletizing system with various process water filtration systems and an extensive range of optional features
- Available with filter cassette, curved sieve or BKG® Polygon™ filter
- Includes a pellet dryer type BKG® TVE SR with noise reduction and numerous available options
- Advanced technology for each throughput
- Comes with a pelletizer with hydraulic blade pressure regulation

BKG® CrystallCut®

Benefits

- Throughput rates of 2 - 35,000 kg/hr (4 - 77,000 lb/hr)
- Allows for pelletizing and crystallization in one process step without the need of additional energy
- Patented BKG® process
- Proven technology for large scale systems
- Hydraulic or mechanic blade pressure regulation



BKG® Polygon™ Filter

Benefits

- Automated, self-cleaning, tempered water system
- Improved water filtration level (up to 70µm)
- Large filter surface
- High energy savings during operation compared to conventional filtration systems
- Still available: water filtration through curved sieve

BKG® Pellet Dryers

Benefits

- Throughput rates up to 30,000 kg/hr (66,000 lb/hr)
- Suitable for a wide range of polymers and pellets
- Special feature: Noise reduction <80 dB(A) starting from TVE 2004 SR
- Multiple models available

BKG® Pelletizing Accessories

Options

- Die plates
- Blades and cutter hubs
- Die plate grinding tool (grinding in-line without demounting the die plate)
- Original replacement parts for all BKG® systems

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A Global Mission

At our core, we aim to transform the polymer processing sector through our inventive and top-performing offerings that cater to the ever-changing demands of our clients all around the world.

Our unwavering dedication lies in delivering exceptional quality, unmatched customer service, and state-of-the-art technology that propels our clients towards success.

With our continuous pursuit of research and development, we strive to push the boundaries of what is possible, empowering our clients to attain new levels of effectiveness, productivity, and environmental sustainability.

Our ultimate goal is to become the top choice for polymer processing systems globally, setting the bar for excellence and instigating positive transformation in the markets we operate in.

BKG® Melt Pumps, Melt Filters, Valves, Jet Cleaners & Pelletizing Systems

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