

Considerations for the use of Lobe Pumps in the confectionery manufacturing industry



The confectionery manufacturing industry is known for its high demands placed on production processes. From preserving flavors and textures to meeting hygiene standards, every aspect of production requires precise attention and expertise. In this context, lobe pumps play a crucial role. This white paper provides insights into the key considerations for selecting and implementing hygienic rotary lobe pumps in the confectionery industry.

Trends in the industry

The candy industry, characterized by its vibrant innovation and dynamic consumer preferences, is undergoing a remarkable transformation. As consumers increasingly demand healthier and more sustainable options, candy manufacturers, who still rely on conventional production processes, are compelled to adapt and innovate. Current trends in the production landscape focus on reducing sugar content, embracing vegan ingredients, and minimizing energy consumption — each reflecting broader societal shifts towards health and environmental consciousness.

In this evolving context, the role of specialized equipment, such as pumps, becomes crucial. Efficient and versatile pumping solutions are imperative to meet the stringent demands of modern candy production. They must not only handle a variety of ingredients, ranging from high-viscosity syrups to delicate flavorings, but also operate under the principles of energy efficiency and process optimization. This white paper explores how advanced pumping technologies can address these contemporary challenges in the candy industry.

The reduction of sugar, not merely a health-driven choice but also a response to global regulations, challenges manufacturers to maintain taste and texture while altering traditional recipes. Similarly, the surge in veganism has prompted the development of confections free from animal-derived ingredients, catering to a rapidly expanding market segment. Moreover, the industry's focus on sustainability has intensified efforts to decrease energy usage in production processes, thereby reducing carbon footprints and operational costs.



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The importance of Lobe Pumps in the confectionery industry

Lobe pumps are an integral part of the hygienic production processes in the confectionery industry, not only because of their ability to pump viscous products but also due to their outstanding performance under various operational conditions. These pumps are particularly suited for applications that require high temperatures, such as processing melted chocolate (< 100 degrees) or sugar masses (>100 degrees), maintaining efficiency and reliability. Moreover, lobe pumps offer excellent Net Positive Suction Head required (NPSHr), enabling their use in vacuum applications, a requirement in confectionery manufacturing for specific process steps.



These pumps meet the highest hygiene standards, an essential factor in the food processing industry. They are designed for optimal cleanability, which helps prevent cross-contamination and ensure the safety of food products. The use of materials suitable for food contact and the capability for CIP (Clean-In-Place) procedures strengthen their role as the preferred choice for applications where hygiene is of importance.

This combination of high temperatures, excellent NPSHr, and hygienic design makes lobe pumps exceptionally suitable for a wide range of applications in the confectionery industry. From pumping chocolate and sugar masses to dosing additives — their versatility and reliability are crucial for maintaining consistent product quality and improving efficiency in production processes.

Key considerations:

Process specification:

The choice of a lobe pump strongly depends on the viscosity, suction and discharge pressure, and product temperature. Pumps must be selected to operate effectively under all process conditions.

Hygiene and cleaning:

The confectionery industry requires strict hygiene standards. Pumps must be cleanable and designed to prevent contamination.

Material compatibility:

Materials that come into contact with food must be safe and suitable to not compromise the safety and quality of the product.

Efficiency and maintenance:

Selecting pumps that are efficient and have minimal maintenance requirements can significantly reduce operational costs and maximize production uptime.

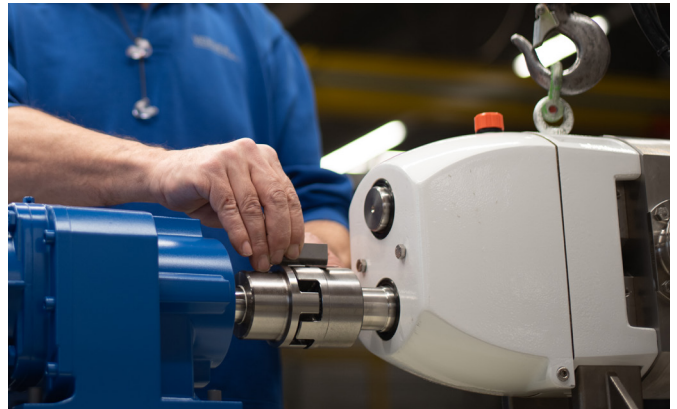
Technological innovations (Twin Screw Pumps)

Continuous innovations in pump technology open new doors for the confectionery industry, elevating production to a higher level. A good example of progress is the development of the Twin Screw pump, which excels in an even better required Net Positive Suction Height (NPSHr) and a wide operating range in terms of capacity. These features make the screw spindle pump, alongside lobe pumps, particularly suitable for the confectionery industry. These pumps meet the highest hygiene standards, an essential factor in the food processing industry.



Conclusion

Selecting the right lobe pump is crucial for efficiency, quality, and hygiene in the confectionery manufacturing industry. By carefully considering the specific requirements of their production processes and products, manufacturers can find an optimal balance between performance, reliability, and costs. Leverage our hygienic expertise to refine your confectionery production processes, enhance product quality, and meet the expectations of today's consumers. Should a lobe pump not be the right solution for your process, we can offer other pumping solutions from our extensive portfolio.



More than 60 years of experience in professional pumping applications make VERDER the pump manufacturer of choice for customers from many industries on all continents. VERDER offers you process understanding, the technological expertise and the market insight to develop pumping solutions which rank among the best in the world. This is how we enable your progress.

