

SPX Homogenizers Mixing Performance and Design for Maximum Efficiency

Widely used in industries including chemicals, biotechnology and pharmaceuticals, homogenisers play an important role in ensuring the correct end product quality. The technology within a homogeniser is not complicated but its design and application to meet specific process requirements requires skill and understanding. It is with detailed process understanding and the ability to apply the homogenisation technology for optimised results that SPX delivers maximum benefit to its customers.

CHICAGO, USA, Sept. 15-18, 2015 – The homogenisation process helps control particle size and viscosity; improves solution stability and uniformity, and, in biotechnology applications in particular, can improve yields of intracellular products. APV, an SPX brand, has led the way in homogenisation solutions for many decades, with heritage from the pioneering Rannie and Gaulin technology.

A homogeniser can be a single-stage or, if further improvements in stability of the end product are required, a two-stage device. The homogenisation of the basic product fed into the system is accomplished by forcing it through a small area between a valve and seat at high pressure. This causes a rapid increase in the velocity of the product and a decrease in pressure, creating turbulence and pressure differences which tear the particles apart. To obtain a narrow particle size distribution as required in many pharmaceutical and other processes, the product may be homogenised a number of times possibly by using multiple homogenisers.

Designing and applying homogeniser technology to meet specific process requirements requires skill and understanding. To ensure a process is optimised, the type of homogenisation valve needs to be selected with an understanding of



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the products involved, their compositions, structures and abrasiveness. SPX is able to provide reliable, efficient, high performance homogenisation machinery customised to specific customer needs along with leading expertise and process understanding to ensure production and quality targets are met.

To optimise the process and ensure the necessary product characteristics are being created, SPX Innovation Centres in Copenhagen/Søborg and Silkeborg, Denmark are outfitted with all the necessary equipment to perform trials of the homogenisation process on product samples and to analyse the results. Different emulsions have different requirements and designing the process to run as close to the minimum required pressure as possible provides the best efficiencies. The use of these centres ensures machine design is to exact requirements and that capital and operating expenditure is optimised.

APV Rannie and Gaulin Series homogenisation solutions enable customers to get the results they need from their processes. Machines are carefully designed to meet specific application requirements and optimise both energy and water consumption for efficient production while providing consistent, reliable performance. Solutions are further supported by a comprehensive, global support network to ensure they continue to operate reliability and efficiently.

About SPX:

Based in Charlotte, North Carolina, SPX Corporation (NYSE: SPW) is a global, multi-industry manufacturing leader with approximately \$4.5 billion in annual revenue, operations in more than 35 countries and over 14,000 employees. The company's highly-specialized, engineered products and technologies are concentrated in Flow Technology and energy infrastructure. Many of SPX's innovative solutions are playing a role in helping to meet rising global demand for electricity and processed foods and beverages, particularly in emerging markets. The company's products include food processing systems for the food and beverage industry, critical Flow components for oil and gas processing, power transformers for utility companies, and cooling systems for power plants. For more information, please visit www.spx.com.



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CONTACT DETAILS:

Toni Parker

Manager, Marketing Services - Americas

SPX FLOW, Inc.

TEL: +1 262 | 728 | 4920

toni.parker@spxflow.com

www.spx.com

PHOTO(s):

