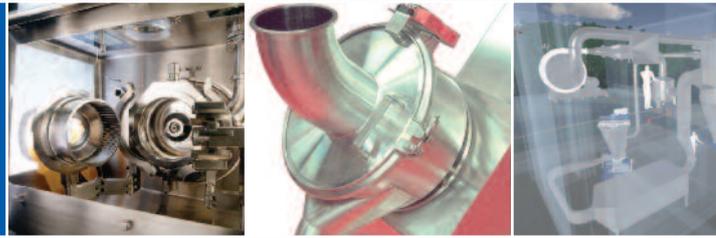




Autumn 2018

# newsletter



## Food Processing Awards, Shortlist

**H**osokawa GEN4 is proud to have been shortlisted for the finals of the annual Food Processing Awards. Designed to acknowledge and recognize companies for their excellence and innovation within the UK food engineering sector, nine separate awards are on offer.

Hosokawa GEN4 has been nominated in the Continuous Improvement category.

The awards are part of the prestigious Appetite for Engineering event, a forum for innovators in the food engineering sector to network with peers and industry experts and debate topical issues including the digital transformation of food plants and the potential of new technologies.

Paul Gilroy, GEN4 Global Business Manager says, *'Investment across our whole food and chemical Contract Manufacturing Facility has allowed us to link process equipment and controls enabling us to measure, monitor and control our contract processing plant to enhance our productivity and competitiveness and offer customers an improved service both in terms of contract processing and*



*process development.*

*With our unique ability in blending human expertise with data analysis, knowledge capture and its application within the food processing environment, we are now working with production managers across all tiers of the processing industries to offer a flexible, cost effective way for them to maximise the opportunities of 'data driven manufacturing' to enhance continuous improvement techniques to optimise yield, reduce waste and save energy.'*

### SEE FOR YOURSELF

The Contract Manufacturing Facility has been built as a Demonstrator as called for in the Made Smarter Report, and Hosokawa Micron is inviting interested parties to arrange visits to understand how these technologies can be applied to their businesses.

## Hosokawa GEN4 Launch at Powtex Tokyo 2018

28th – 30th November

Hosokawa Micron Corporation will demonstrate for the first time, at Powtex Tokyo, the latest Hosokawa GEN4 data driven manufacturing service designed to enable manufacturers to optimise production and processing performance through the application of industrial internet of things (IIOT) technologies. Hosokawa GEN4 provides a flexible toolkit to convert live data from sensors and controls into scalable and secure solutions to effectively address the challenges of dry end processing.

Hosokawa Micron's, Runcorn, Contract Processing Facility will provide a fully operational demonstrator enabling visitors to understand how the GEN4 technologies might support their businesses and a transition to smarter manufacturing.

Iain Crosley, MD, says, *'Our ability to support this international launch with real data, decisions and actions faced every day in the manufacturing of powders means visitors to the Powtex stand will realise a better understanding of the proven GEN4 potential for their own businesses'.*



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# Containment Challenges Driving Innovation at Hosokawa

**W**hilst demand for containment solutions in the pharmaceutical industry remains high, industries such as chemical, detergent, food and cosmetics are increasingly generating their own unique requirements for isolator and downflow booth solutions as they strive to keep workers safe from airborne contaminants and address health and safety obligations.

These expanding markets bring with them their own standards, manufacturing procedures, applications and codes of practice and create unique challenges in containment design. Here we look at the design challenges which are positively driving containment solution innovation at Hosokawa to deliver expanded contained processing capabilities and increased manufacturing opportunities.

*\*Read an extended version of this article which illustrates with case study examples how Hosokawa is meeting containment design challenges. <https://hml.to/vwp3b>*

## Lower Operator Exposure Levels

The rise in potency and potential toxicity of chemicals and the risks involved in inhaling or ingesting airborne particulates created in production processes is driving the development of isolator gloveboxes and downflow booths with ultra low OELs down to 10ng/m<sup>3</sup> and <1µg/m<sup>3</sup>. OELs, previously only associated with the pharmaceutical industry, are now being adopted in other industries. However the complexities of transferring isolator technology into different processing applications is not straight forward. For example, when designing an isolator/glovebox it is not just the normal operating conditions which need to be considered but also safety under failure which may cause exposure to hazardous materials – this could be failure of the process or failure of the containment itself such as a breach condition e.g. a glove being ripped or similar. Failure to address safety under failure could be catastrophic.

## Process Complexity



Manufacturers are no longer simply seeking an enclosure to provide a contained environment around their processing activities but increasingly want fully contained process solutions that deliver a streamlined production route to multi-process integration.

The increasing complexity of manufacturing stages addressed under containment and the demand for multi-task, operational integration are some of today's chief drivers of isolator innovation and process system design change. Combined processing expertise as well as containment know-how produces optimum design results.

Hosokawa's established process/containment knowledge can add real value for customers seeking production and commercial advantages through the revolutionary changes in production that the new contained, complex process system opportunities can offer and is delivering a real step-change in containment innovation.

## Production Flexibility



Production flexibility is a major driving force across manufacturing today. Rapidly changing consumer demand means production agility and nimble response is vital. The accommodation of a variety of tasks and volumes handled is increasingly a significant, flexibility, game changer in capital investment decisions when it comes to containment solutions.

## Ergonomics & Human Factor Engineering

Operation of a process within a containment solution can be very restrictive and the design of isolators can have a significant impact on human performance. Designing tasks, equipment and isolator or downflow work stations to suit the user can reduce human error, accidents and ill-health.

Hosokawa combines early design stage, human factor engineering and wooden mock-up trials with smart manufacturing technologies to determine the customer's absolute requirements and confirm specification before fabrication takes place – save time, costly positional



changes and unplanned re-build stages whilst helping to ensure a user friendly, safe performance workplace.

3D and airflow modelling show how equipment and personnel placement can potentially compromise airflows and scheduled tasks. Virtual Reality technology allows visualisation of a virtual isolator or full processing system for demonstration and assessment prior to manufacture. This is particularly welcomed by customers seeking commercial advantage through process design changes, complex operational requirements and those with integrated installations or installations 'shoe-horned' within existing process lines or restricted spaces.

#### Ongoing Innovation

Hosokawa is currently addressing a number of enquiries for complex processing solutions when containment is disrupted by the demand to take certain manufacturing stages out of the contained environment for another processing step before a return to containment for further processing. Without an understanding of the processes and technology involved in the manufacturing phases; an integrated solution cannot be achieved.

*'As customers change their production systems to meet market demands, new routes to safe handling are in demand. Our in-house expertise and process knowledge and flexible approach to design options allows us to develop practical containment solutions that meet and frequently exceed customer expectations,'* explains Ben Jackson, Hosokawa Micron Ltd.

## Unique Micron Angle Disintegrator Offers Five-a-day Processing

**H**osokawa Micron's unique Angle Disintegrator, with 5-a day, streamlined processing options is helping manufacturers of soups, purées, sauces and dressings meet the market demand for increasingly authentic and quality fruit, vegetable purées and demand for the flavours of exotic and often difficult to handle spices and fruits.

This multi-tasking machine offers 5 different processing options in one machine: pulping or blending; coarse or fine purée; hot or cold ingredients; wet or dry ingredients and rejection of unwanted plant matter or injection of water, steam or inert gas.

By eliminating peeling and chopping operations and by continuously removing unwanted fibres, skin particles and seeds to produce an homogenous, pureed product reduces processing steps and product handling to deliver a higher quality, fine textured, end product.

Garlic, root ginger, tomatoes, onions, oranges and vanilla pods can all be pulped and pureed using the Micron Angle Disintegrator with reject material ejected through a secondary outlet to leave a pristine, homogenous puree. Selection of coarse to fine end product are easily achieved by the changing of removable screens.

Capable of handling dry or soaked ingredients the Angle Disintegrator is equipped with a water injection system making it suitable for continuous mixing and blending – the option to inject steam or inert gas during operation is also possible.

With a capacity to handle up to 3000kg/hour of either wet or dry, hot or cold products the hygienic construction enables fast product changeover without cross contamination.



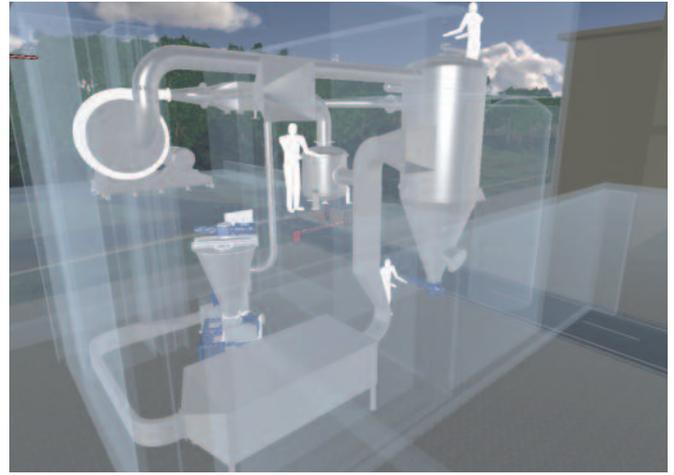
# Hosokawa Speak at Applied Visualisation Forum

Adam Harper, Hosokawa Micron, joined other speakers at the Applied Visualisation Forum, to share their expertise, knowledge and understanding of how applying data capture, analytics and virtual and augmented reality can be beneficial for business. Hosted by the Institution of Engineering Technology, High Value Manufacturing Catapult and Immerse UK the event provided a collaborative environment with extended reach into all sectors of industry.

Presenting case study evidence, Adam explained how Hosokawa had identified AR and AV as beneficial for the design of isolator and glovebox products, manufactured by the company and incorporated the technology within their design protocols.

Adam also demonstrated how Hosokawa's digital twin processing plant – a virtual model that displays real time data captured by sensors installed in the physical plant, aids fault detection, predictive maintenance, production scheduling and much more.

*A review of the forum is available from IET.*



## Autodesk Accelerate 2018

Hosokawa Micron was one of a select number of clients invited to present at Autodesk's recent Accelerate 2018 event in Toronto. Held in the MaRS Discovery District, Accelerate brought together Autodesk customers, industry executives and top market experts to learn, network, and share strategies for solving the design and manufacturing challenges that will shape the future of making things.

Hosokawa Micron ICT Manager Nigel Harrison and James Stirling detailed how the company initially engaged with Autodesk as part of the Future of British Manufacturing Initiative and went on to collaborate to digitise its business through the implementation and application of Autodesk's Fusion Lifecycle PLM (Product Lifecycle Management) solutions.

Real-world examples of how Hosokawa has been able to accelerate and enhance operations across multiple departments and locations by automating workflows, key tasks and delivering timely information.



Hosokawa Micron has agreed to share its implementation journey and subsequent business benefits with other prospective and existing clients of Autodesk.

Nigel Harrison: *"It was great to be invited to present at Accelerate 2018, having attended last year's event merely as an interested customer, seeking inspiration.*

*A cloud-based platform like Fusion Lifecycle means that everyone at Hosokawa has access to the data they need anytime, anywhere, which has allowed us to achieve significant benefits already in important areas such as change orders, assembly issue reporting and supplier inspections."*

## EVENTS 2019

Hosokawa Micron Ltd will be taking part in the following events. Please visit us on our stand.



**Powtech 2019**  
9 - 11 April 2019  
Nuremberg, Germany  
Stand Hall 4A / 4A-233



**ChemUK Expo**  
Yorkshire Event Centre,  
Harrogate, UK.  
1st & 2nd May 2019



**16th European Symposium on Comminution & Classification**  
University of Leeds, UK  
2nd – 4th September 2019

For further information on anything within this newsletter please visit  
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