SAS Spice Application Systems Ltd

www.spiceapplications.com

Spice Application Systems Ltd (SAS) is the market leader in the use of electrostatic technology to apply flavourings, coatings, powders, additives, vitamins, spice and oils to foodstuffs and pharmaceuticals.

With several hundred units already installed on food processing production lines around the world, its award-winning technology is ideal for use with a wide range of products, including snacks, confectionery, cheese products, breakfast cereals, frozen foods and dry pet food. It is also increasingly popular within the pharmaceutical sector, where it is used in tablet coating.

Equipment can either be installed on new machinery or retrofitted to existing production lines, enabling manufacturers to take advantage of the latest technology without the need for major investment.

Based in Oxfordshire, England, SAS is led by Managing Director and company founder Peter King, who has more than 25 years' of experience working in electrostatics. With an in-house research and development programme, plus a global network of engineers and distributors and an after sales and technical support service, SAS offers a cost-effective solution for all flavouring and coating requirements and its equipment is available for purchase or rent.

Key benefits of using SAS electrostatics include:

- **Achieves significant cost savings**
- **Delivers 100% accuracy of powder quantities**
- **Provides 98%+ coating of products**
- **Dramatically cuts powder wastage**
- **Increases energy efficiency**
- **Requires less downtime for cleaning and flavour changes**
- **Enhances product quality**

Discover the best system for your needs

The SAS control box

The SAS Drum

Spice Application Systems has a wide range of electrostatic equipment designed to suit a variety of different product types – from fragile pasta-baked snacks to chewing gums, processed meat to dry pet food.

Each model has specific advantages for different products, but no matter which one you choose, the benefits of SAS's advanced coating techniques will save money, provide a cleaner working environment, improve efficiency and deliver enhanced product quality.

Our Wire Belt System and our Shaker System also provide alternative options for applying electrostatics, while our automated control panel can store information for up to 100 different powder applications.

Read more here or visit our website to see which model provides the best answer to your product requirements and to see online videos of our equipment in action.

If you would like to find out more or discuss new ideas, visit www.spiceapplications.com or email us info@spiceapplications.com and we will be in touch.

SAS Complete Food Coating Drum System

Spice Application Systems have designed and engineered a range of complimentary products which work together to create a complete flavouring system.

The system works with our market leading electrostatic food coating equipment and comprises a Screw Feeder, Oil Spray System, In-feed Tray and Cylindrical Drum. All are engineered to our highest standards, using only fully approved food grade (316 stainless steel) materials and components.

We offer a comprehensive full before and after sales service. All equipment is available for trial, rental, lease or purchase and we are happy to provide an economic price structure after consultation. Contact us for further details.

The Complete SAS System featuring our superior electrostatic technology

Drum

- Stainless steel 316/304
- Electronic drive motor
- On castors
- Adjustable drum speed
- Adjustable drum angle
- Sizes from 1mtr-2.5mtr/ diam 0.4mtr-1mtr

Close-up of SAS drum flights

Oil Spray System

- 25ltr-100ltr hopper
- Compressed air flow system
- Feeds up to four spray heads
- On castors
- Electronic pump
- Stainless steel 316/304
- Designed to fit the SAS drum

Screw Feeder

- Twin screw
- 0.5kg-65kg
- Remote controls
- Stainless steel 316/304
- Designed to complement the SAS drum

In-Feed Tray

- 0.75mtr-3mtr x 450mm
- Adjustable height
- Adjustable speed
- Stainless steel 316/304

The Science of Electrostatics

Some of the world's most sophisticated laboratories already use electrostatics for drug testing on sports stars at events such as the Olympics and in the ultra-competitive world of horseracing.

The energy industry uses electrostatics to remove smoke particles from industrial chimneys to reduce pollution, and many car manufacturers use electrostatics to apply paint to their latest models.

Electrostatics has an undoubted powerful reputation for reliability, pinpoint accuracy and its ability to handle minute quantities of materials.

Today, that technology is available to food manufacturers from Spice Application Systems.

SAS is working with an experienced applications chemist in laboratories at the University of Reading in Berkshire, England, to help companies gain the most benefit from using electrostatics.

By examining the make-up of powders and spices in laboratory conditions and adding a negative charge, SAS can now demonstrate the exact level of electrostatic conductivity that manufacturers can expect when powders, additives, vitamins, spices and oils are applied to a base product.

Pharmaceutical industry expert Robin Brownsill, M.Sc. CChem MRSC, who is working exclusively with SAS, says: "For SAS's clients, the biggest question has always been 'does electrostatics work', these tests give them an unequivocal 'yes'.

"These tests provide major food companies with the proof they need and we believe it will give them the confidence to invest in SAS's equipment. You can't argue with science."

Harnessing the power of electrostatics

Electrostatic technology has been widely used in some manufacturing sectors for several decades, but its application within the food and pharmaceutical industries is a relatively new phenomenon.

SAS's electrostatic spray equipment is designed specifically to fill that gap and is most commonly used in powder, oil and slurry system applications as well as to apply vitamins, additives and spices.

Until recently, most manufacturers have applied flavourings and coatings to products in a large tumbling drum, but the method is largely inefficient because of poor coverage and high powder wastage.

SAS's solution resolves these problems thanks to its unique harnessing of the power of electrostatics, and its equipment can be retrofitted onto existing production lines.

The system provides pinpoint accuracy for applications and companies will see a return on investment within around four months in terms of savings alone – mainly through less wastage and greater energy efficiency.

The process dramatically cuts excess use of expensive powders, oil and slurry and vastly improves product coverage and consistency. In today's health-conscious environment, where levels of oils and fats need to be tightly controlled, the accuracy of the system ensures that manufacturers know exactly how much they are using.

Recently, SAS launched a new automated electrostatic control panel which can register and store precise air flow application figures for up to 100 different powders.

Powder contamination and misting on and around the production line is kept to an absolute minimum, resulting in a cleaner working environment for employees and less downtime for cleaning and flavour changes.

SAS's electrostatic equipment will work with all common types of pump and screw feeders, and products can be configured to apply both oil and dry spice simultaneously from the same control panel.

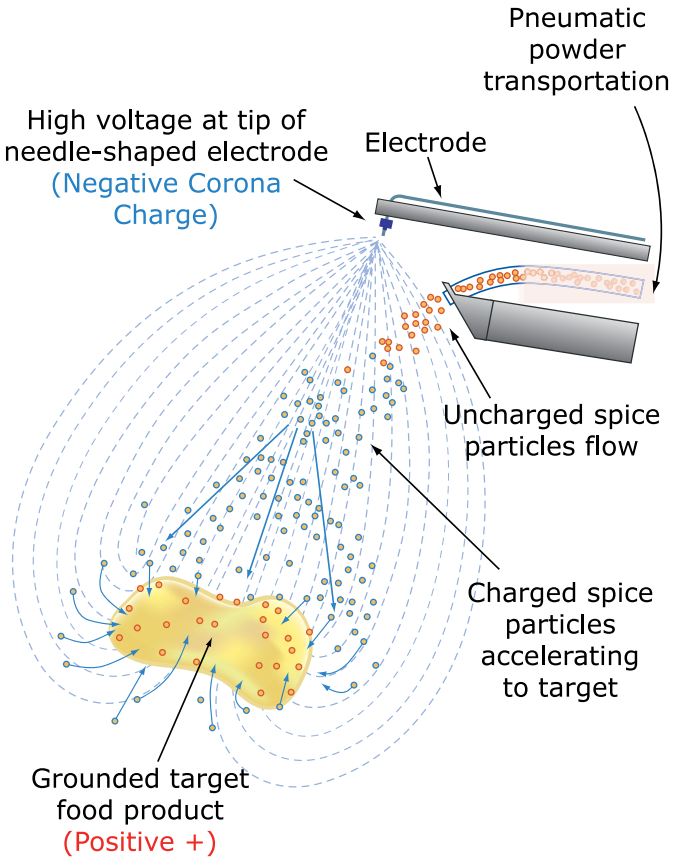
The SAS electrostatic process compared to other technologies

	Scarf Feeder	Paddle	Auger	Spinning Disc	SAS Electrostatic
Powder Saving	10%	0%	0%	0%	10-45%
% Coverage	75%	75%	40%	40%	100%
Drop Off	60%	60%	65%	60%	5%
Line Contamination	75%	80%	70%	90%	20%
Packer Contamination	75%	80%	70%	90%	20%
Drum Contamination	60%	75%	75%	90%	15%
Payback	**2 Years**	**2 Years**	**3 Years**	**2 Years**	**3 Months**

How it works

The technique works by applying a static charge to the powder, oil or slurry as it is being sprayed onto the base product, such as snacks, chewing gum or tablets.

As the flavourings and coatings become 'negatively' charged, they adhere automatically to the 'positive' base product, creating a true wraparound effect.



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