

A Complete Range of Liquid Electrostatic Spray Solutions



OTSON 2023 Product Catalog

HYBRID

Innovative Technologies of Liquid
Solvent / Waterbased
Electrostatic Coating Solutions



Technical Overview

 **HYBRID**

2K/3K WATERBASED

2K/3K SOLVENT

OTSON PAINT SHOP - Electrostatic Spray - THINK GREEN and Power Saving



AUTOMATION



INTERNET OF THINGS



SMART PRODUCTION



GREEN ENERGY



SMART FACTORY



CYBER SECURITY



ARTIFICIAL INTELLIGENCE



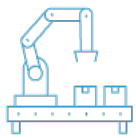
MACHINE LEARNING

Overview-Paint Shop

iOTSON[®]
Technologies

iOTSON PAINT SHOP -Electrostatic Spray - THINK GREEN and Power Saving

INDUSTRY 5.



AUTOMATION



INTERNET OF
THINGS



SMART
PRODUCTION



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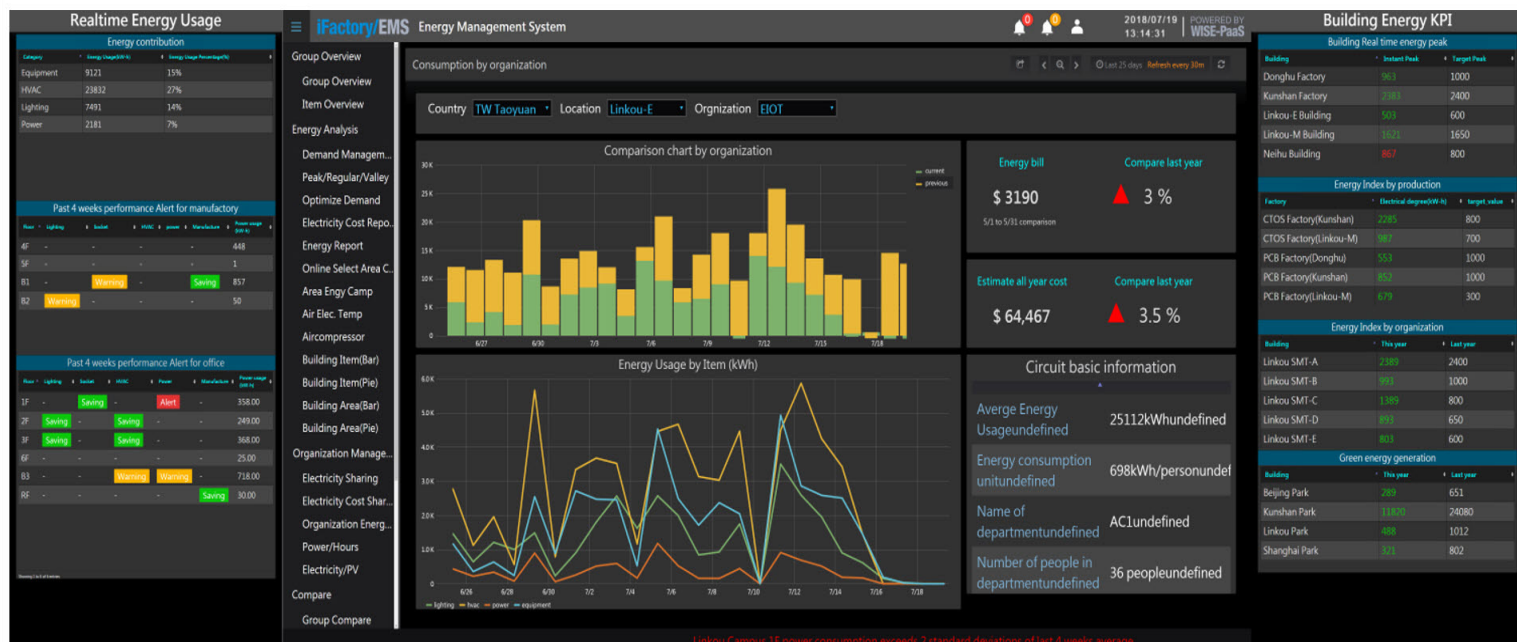
MACHINE
LEARNING



Dashboard of Electrostatic Spray Coating – Paint Shop



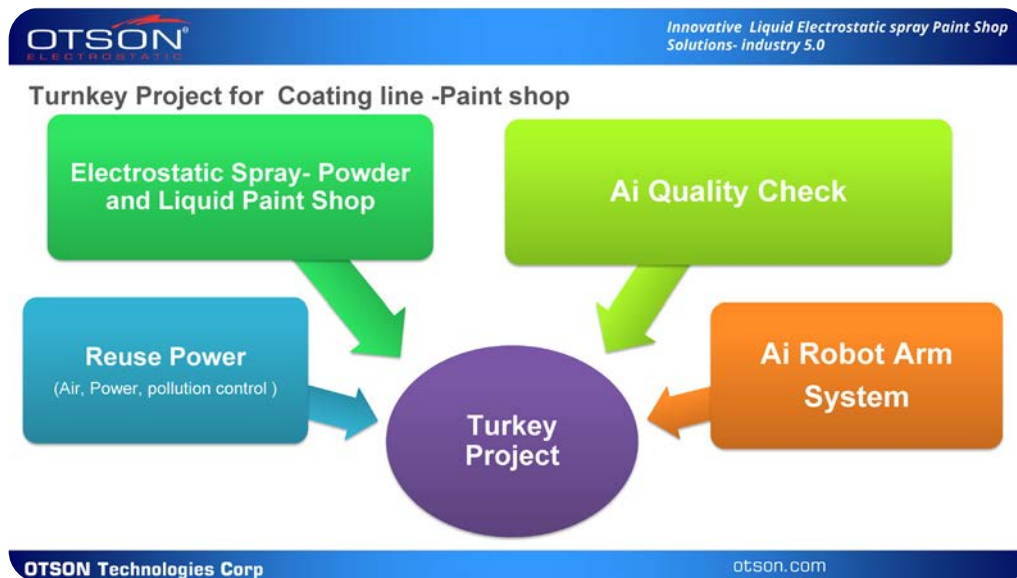
Energy & Environment-Dashboard of Paint Shop



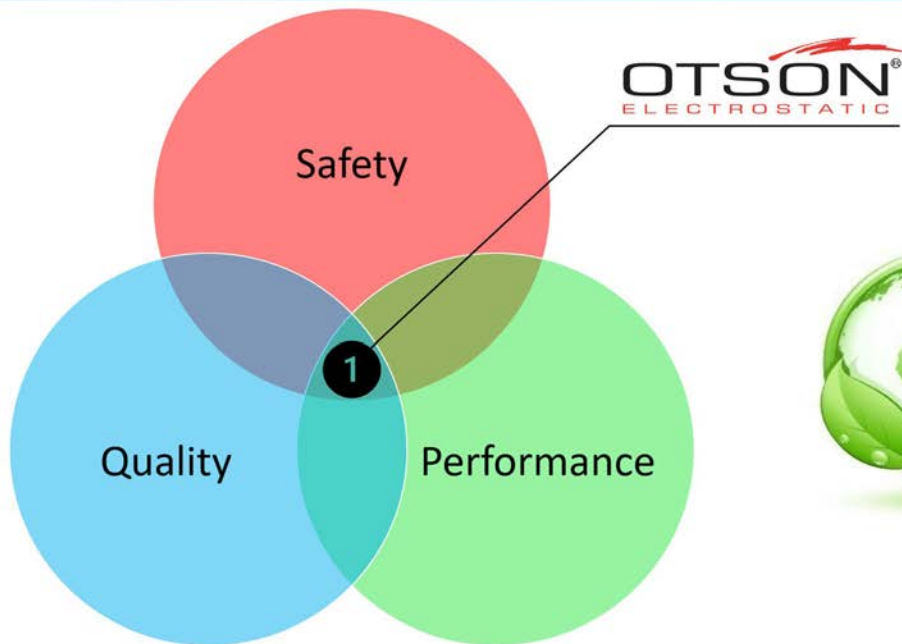
iOTSON PAINT SHOP -Electrostatic Spray – THINK GREEN and Power Saving

Industry 4.0, the Fourth Industrial Revolution, is a current trend in manufacturing technology that involves automation and data exchange, utilizing advanced technologies such as IoT, AI, and machine learning. On the other hand, Industry 5.0, the Fifth Industrial Revolution, focuses on creating a more sustainable and human-centered manufacturing environment by building on these technologies. A paint shop that operates as part of Industry 5.0 may incorporate advanced technologies and practices to optimize the coating process, reduce waste, and enhance efficiency. Some of the key features of a paint shop operating as part of Industry 5.0 may include:

- **Human-centric approach:** Industry 5.0 prioritizes the well-being and safety of workers and aims to enhance their working conditions through the use of advanced technologies.
- **Sustainable practices:** A paint shop operating as part of Industry 5.0 is expected to incorporate eco-friendly and sustainable practices to minimize its environmental impact.
- **Integration of advanced technologies:** To improve efficiency, accuracy, and quality, a paint shop may integrate advanced technologies such as robotics, AI, machine learning, and IoT-enabled equipment and systems.
- **Real-time data monitoring:** IoT-enabled sensors can monitor various aspects of the coating process, enabling real-time data analysis, and assisting in decision-making for process improvement.
- **Predictive maintenance:** AI and machine learning can be leveraged to predict equipment failures and reduce downtime by performing predictive maintenance.
- **Customization:** Industry 5.0 encourages customization of products and processes to meet specific customer demands, enabling paint shops to provide unique and tailored coating solutions.

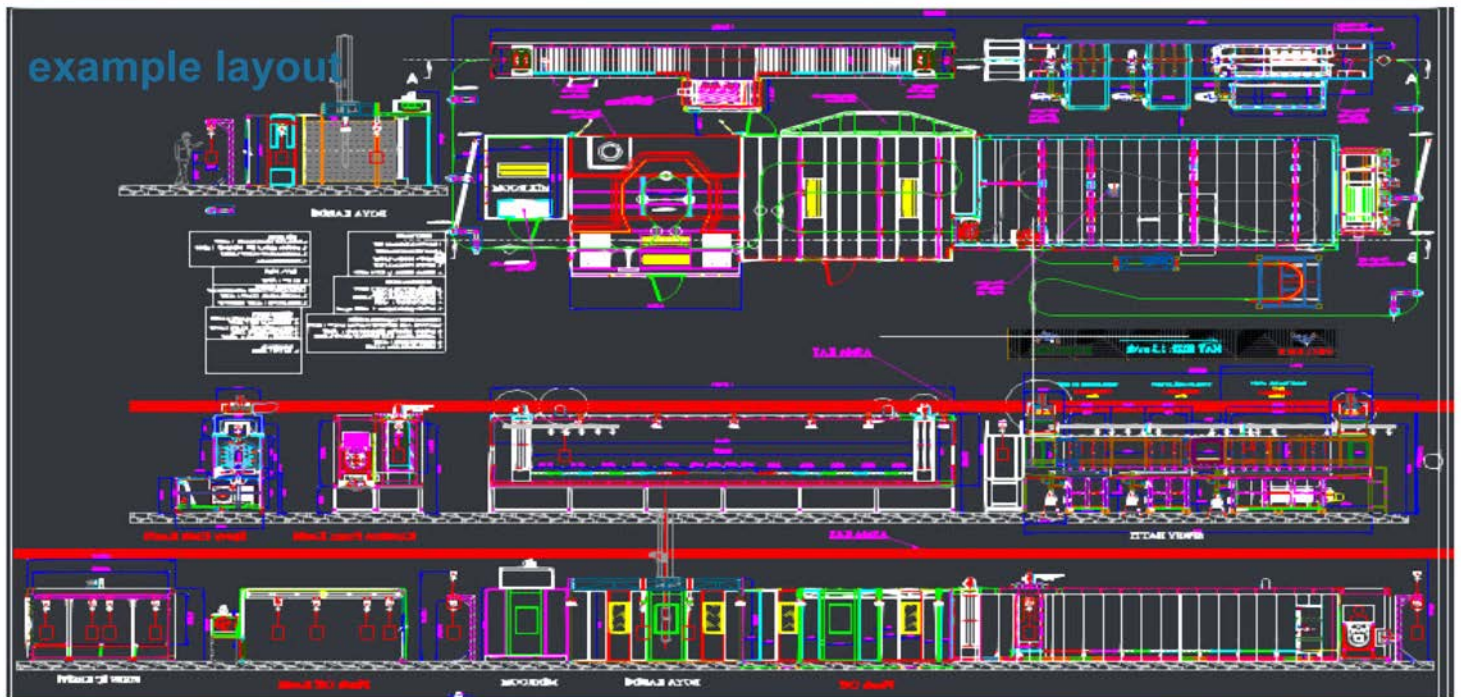


In conclusion, Industry 5.0 takes Industry 4.0 to the next level by focusing on sustainability, human-centered practices, and the integration of advanced technologies in manufacturing. A paint shop operating under this framework has the potential to increase efficiency, reduce waste, and enhance the quality of the coating process, which ultimately benefits both the business and the environment.



Features

- **Customized solutions:** OTSON provides customized solutions for different industries, including automotive, woodworking, bicycles, glass bottle, and metal parts, based on their unique needs and requirements.
- **Advanced technologies:** OTSON uses advanced technologies such as Industry 5.0, IoTSON, robotics, AI, and machine learning to improve the efficiency of the coating process, reduce waste, and create a more human-centered and sustainable manufacturing environment.
- **High-quality equipment:** OTSON is dedicated to providing customers with the highest quality paint shop equipment to achieve a high production rate and improve production efficiency.
- **Experienced team:** OTSON's team of experts has extensive experience and knowledge in the field, providing support and guidance throughout the entire process, from design to installation and maintenance.
- **Commitment to customer satisfaction:** OTSON is committed to providing customers with the best possible solutions for their coating needs and ensuring their satisfaction.



The production rate of a paint shop factory refers to the amount of paint that the factory is able to produce in a given time period. This will depend on a variety of factors, including the size and capacity of the factory, the efficiency of the production processes, and the availability of raw materials and other resources.

There are a few key considerations that can impact the production rate of a paint shop factory:

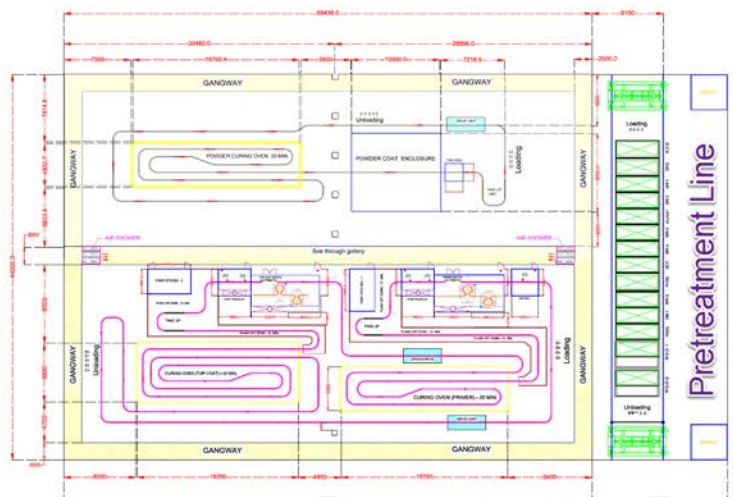
- **Capacity of the mixer room:** The capacity of the mixer room, which is the area where the paint is mixed and prepared for use, will impact the production rate of the factory. If the mixer room is small or has limited equipment, it may be able to produce less paint than a larger or more well-equipped mixer room.
- **Efficiency of the production process:** The efficiency of the production process, including the speed and accuracy of the mixing equipment and the efficiency of the material handling and storage systems, will also impact the production rate of the factory.
- **Availability of raw materials and other resources:** The availability of raw materials, such as pigments and solvents, and other resources, such as labor and energy, will also impact the production rate of the factory. If these resources are in short supply or not being used efficiently, it may limit the factory's production capabilities.

- **Quality control:** It is important to ensure that the paint being produced meets the required quality standards. This may involve performing regular quality control checks to ensure that the paint is properly mixed and meets all necessary specifications. This can impact the production rate of the factory, as time must be set aside for these checks and any necessary adjustments to the production process.
- **Production schedule:** The production schedule of the paint shop factory will also impact the production rate. If the factory is operating at full capacity, with all of its equipment and resources being used to the maximum extent possible, it will be able to produce more paint than if it is operating at a lower capacity.
- **Customization:** Some paint shop factories may offer customized paint products, which may require additional time and resources to produce. This can impact the overall production rate of the factory, as customized products may take longer to produce than standard products.
- **Automation:** The use of automated systems and equipment can help improve the efficiency and speed of the production process, increasing the production rate of the factory.

Overall, the production rate of a paint shop factory will depend on a variety of factors, and it can be influenced by changes in the factory's equipment, processes, and resources. By carefully managing these factors, it may be possible to increase the production rate and improve the efficiency of the factory.

The paint shop is designed and built according to the needs and established technology from selected, following process equipment units:

- Surface preparation
- Water drying
- Painting
- Drying / heating of paint
- Cooling details
- Wastewater treatment
- Preparation of process water
- Air purification
- Parts transport in the production system
- Supplying and receiving media to / from facilities
- Object and system control



example layout

The painting installation project is always consulted with the investor and suppliers of materials for technological processes, and the production of equipment monitored by the investor's staff, who is a qualified specialist in the industry.



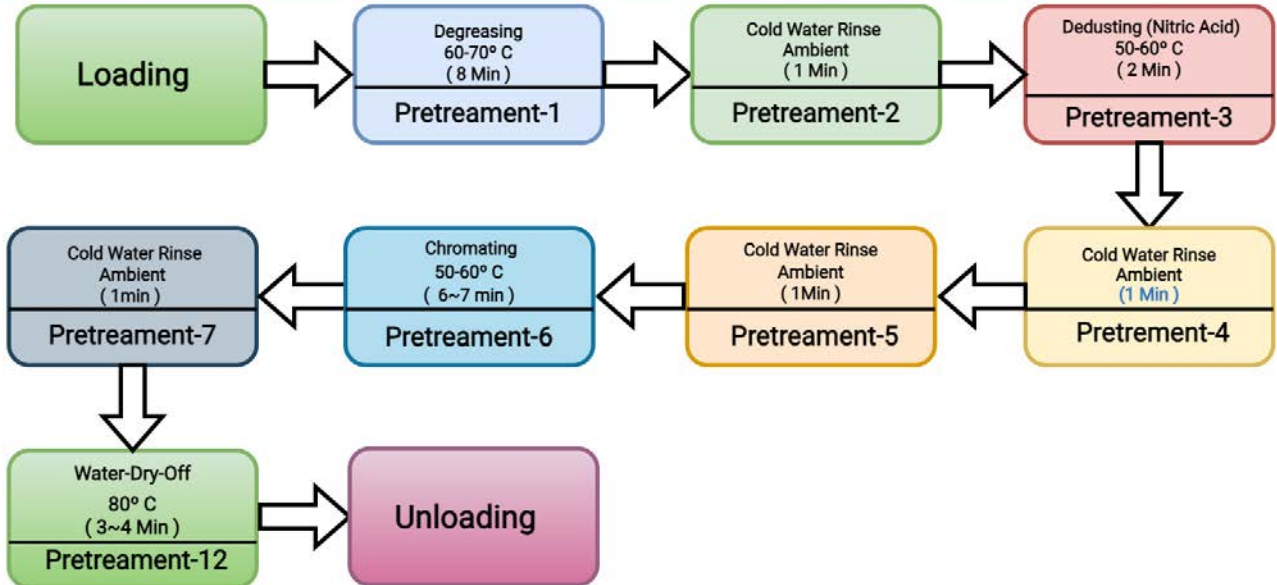




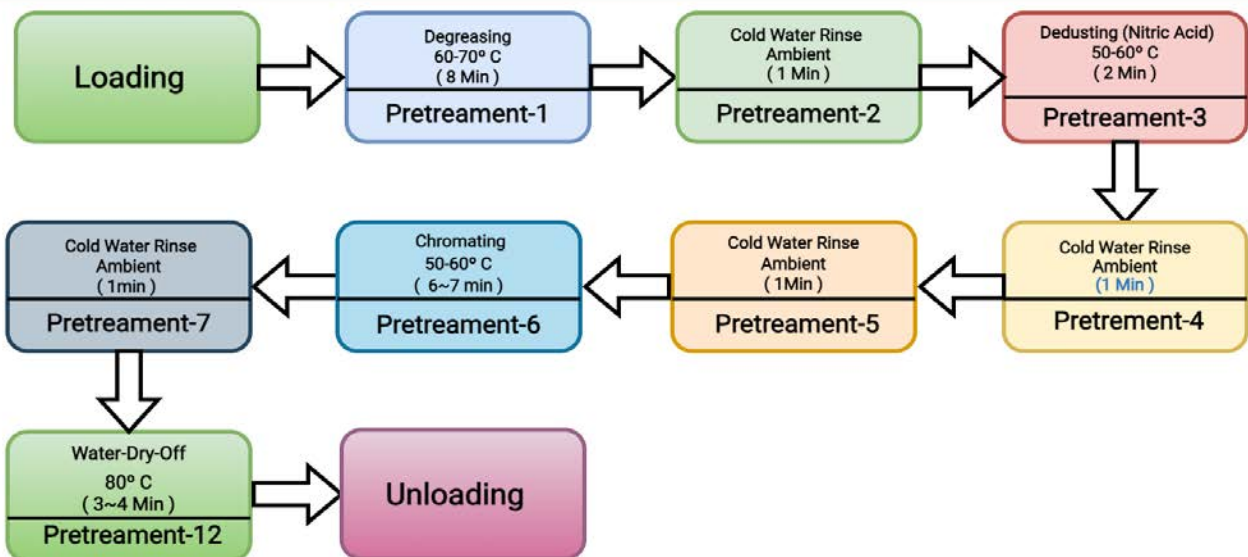
Spray Booth



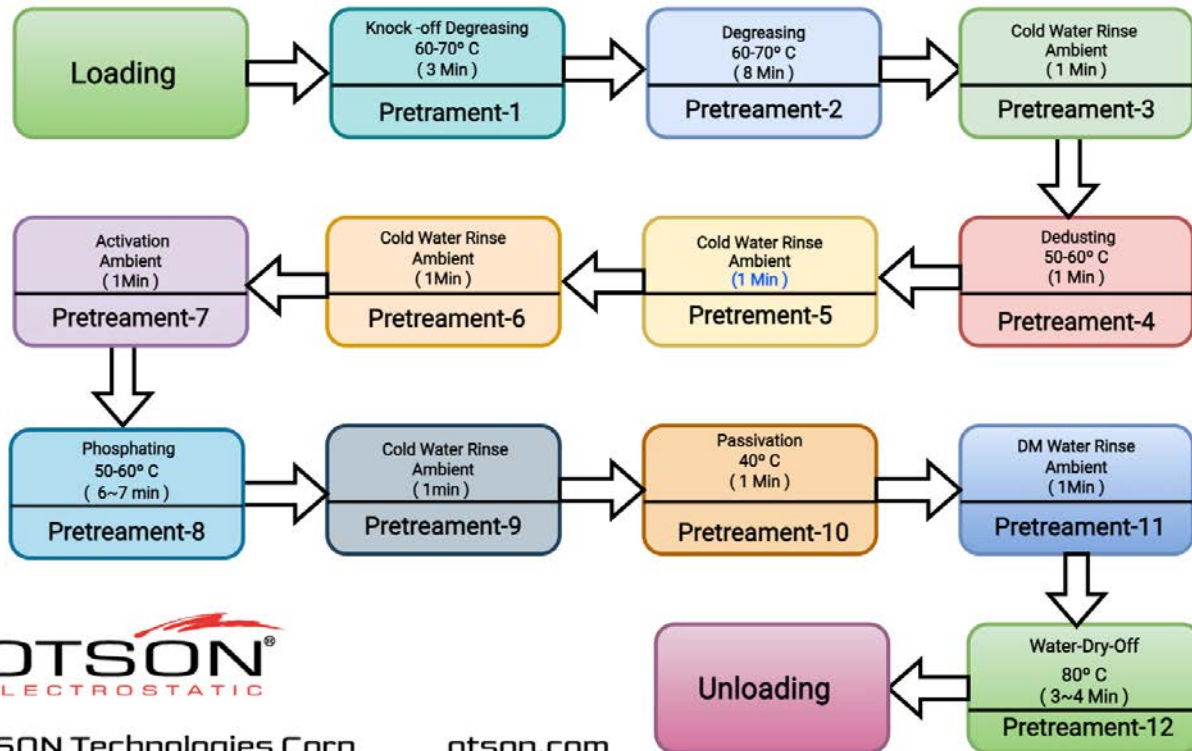
The Pretreatment Process Step of Die-casting



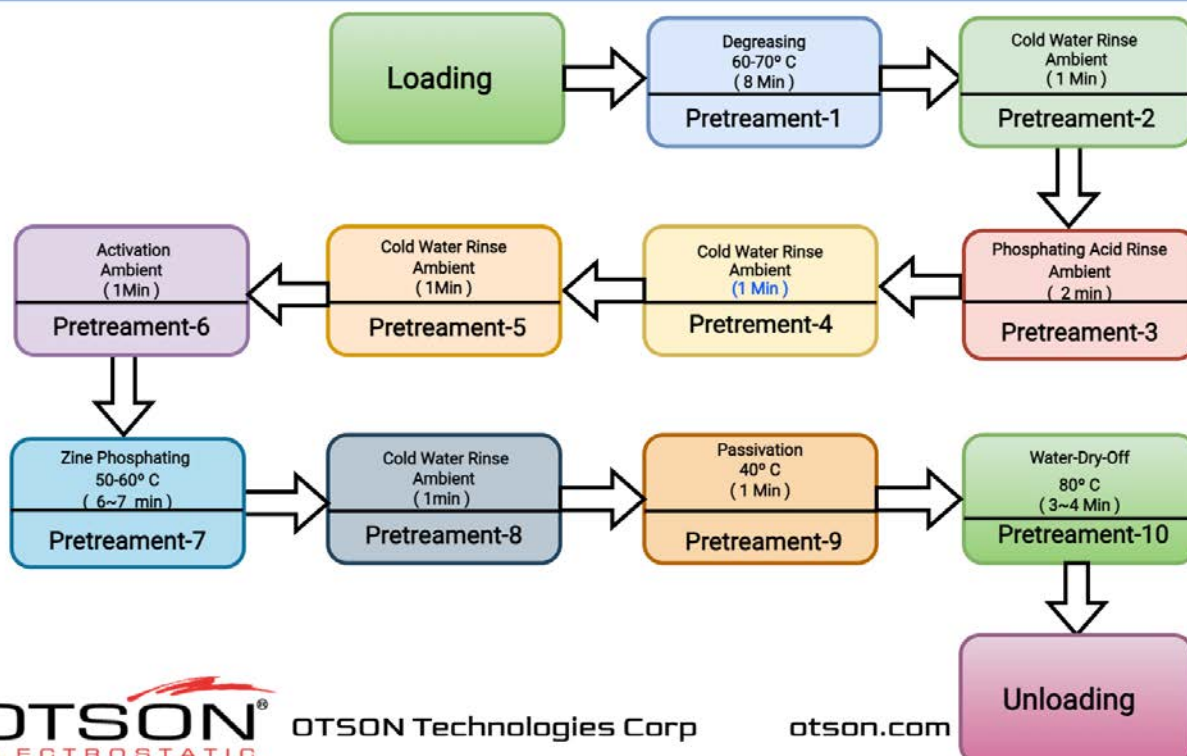
The Pretreatment Process Step of Aluminum



The Pretreatment Process Step of Carbon Steel



The Pretreatment Process Step of Galvanized Steel



Overview- Liquid Electrostatic Spray

Electrostatic Spray Coating - Reduce Paints Cost-

OTSON Technologies Corp. is a well-known provider of cutting-edge paint shop solutions for various industrial and commercial markets. Our extensive range of products and services are designed to help our clients improve their painting processes, reduce costs, and increase overall efficiency. With years of experience as a reputable manufacturer, we take pride in delivering high-quality products and services to meet the needs of our valued customers.

One of our flagship products is the OTSON Liquid Electrostatic, which features innovative technology and patented designs for electrostatic liquid coating and fluid transfer applications. Our product range includes a wide variety of equipment options such as disc and bell systems that cater to the unique requirements of various industries and applications.

OTSON Liquid Electrostatic systems are renowned for their precision, high efficiency, and reliability. Our products are specifically designed to minimize paint waste and increase production rates, resulting in a significant return on investment for our customers. Furthermore, our systems meet industry safety standards with ATEX certification, ensuring the delivery of high-quality finishes to our clients.

At OTSON, we understand the significance of offering complete solutions to cater to the diverse needs of our clients. Therefore, we are committed to integrating our OTSON Liquid Electrostatic systems with our smart paint shop solutions that provide greater process control, enhanced efficiency, and improved quality.

If you are looking for a reliable and efficient liquid electrostatic coating system, OTSON's OTSON Liquid Electrostatic line is the perfect choice. Get in touch with us today to learn more about our products and services, and how they can benefit your business.



At OTSON Technologies Corp, we specialize in the manufacturing of iOTSON paint shop technologies, which includes the design and production of spray booths for electrostatic spray systems. Our spray booths are designed to provide a controlled environment for the efficient and effective application of paint or other coating materials, while also ensuring compliance with ATEX regulations and safety standards.

Our key features include:

- Large capacity mixer room equipped with state-of-the-art mixing equipment
- Advanced material handling and storage systems, as well as automated systems and equipment
- Access to a steady supply of pigments and solvents, as well as enough labor and energy
- Regular quality control checks to ensure paint meets necessary specifications and standards
- Flexible production schedule to meet the specific needs of our customers
- Customized paint products and solutions to meet the unique needs of our clients
- ATEX compliant equipment to ensure safe operation in hazardous environments
- Fire detection sensors for early warning of potential hazards
- Emergency stop button for immediate shutdown in case of emergency

Our mixer rooms are designed to handle high volumes of paint production and ensure a consistent, high-quality output. We use advanced material handling and storage systems, as well as automated systems and equipment, to keep the production process moving smoothly and quickly. This helps to minimize downtime and increase overall production rate.



We also prioritize the availability of raw materials and other resources. This includes ensuring that our factories have access to a steady supply of pigments and solvents, as well as enough labor and energy to keep the production process running smoothly.

Quality control is also a key consideration for us. We have a team of experts that perform regular quality control checks to ensure that the paint produced meets all necessary specifications and standards.

Our production schedule is flexible and can be adjusted to meet the specific needs of our customers. This allows us to keep the factory running





OTSON is a leading manufacturer of liquid electrostatic equipment, including spray guns and automatic systems, that are designed to efficiently and effectively apply a variety of coatings to various surfaces. The company's range of equipment is known for its high-quality performance, reliability, and durability, making it a popular choice for professionals across a range of industries.

The OTSON Liquid Electrostatic Equipment is designed to reduce CO2 emissions and overspray, which can help to save costs and be more environmentally friendly, ultimately leading to cost savings for your customers.

The range of equipment includes spray guns and automatic systems that are designed to provide uniform, high-quality coverage of liquid coatings on a range of surfaces. They use an electrostatic charge to atomize the coating, ensuring that it evenly coats the surface. This leads to reduced overspray, which not only saves on material costs but also reduces the amount of paint that goes to waste, making it a more environmentally friendly option.

The automatic systems available in the range provide high production rates and reduce labor costs. They come with a fully automated control panel that gives operators total control flexibility and allows them to change process parameters, not only between batches but also within the same part. The simplified user interface control panel is capable of recording ten different coating parameters, making it easy and efficient to apply to various objects.

Moreover, OTSON Liquid Electrostatic Spray Equipment can use 2k/3k systems, which allows for the efficient mixing and application of two or three-component coatings, providing enhanced coating performance and durability.

Furthermore, the equipment has received CE and ATEX certification, ensuring that they meet high safety and quality standards. The CE marking indicates that the equipment meets the EU's health, safety, and environmental protection requirements, while the ATEX certification shows that the equipment complies with the EU's regulations for equipment used in potentially explosive environments.

Overall, the OTSON Liquid Electrostatic Equipment offers a cost-effective and environmentally friendly solution for professionals looking to efficiently and effectively apply coatings to a range of surfaces while meeting high safety and quality standards.

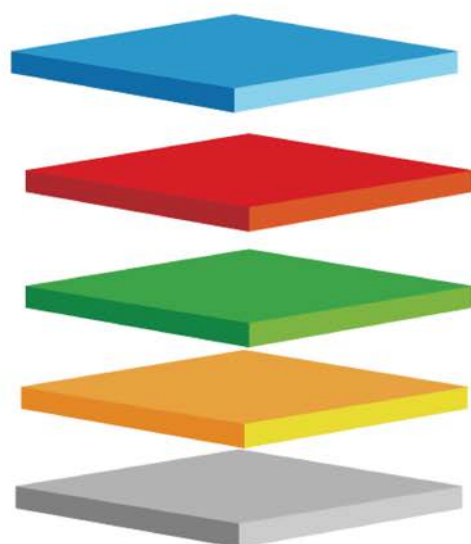
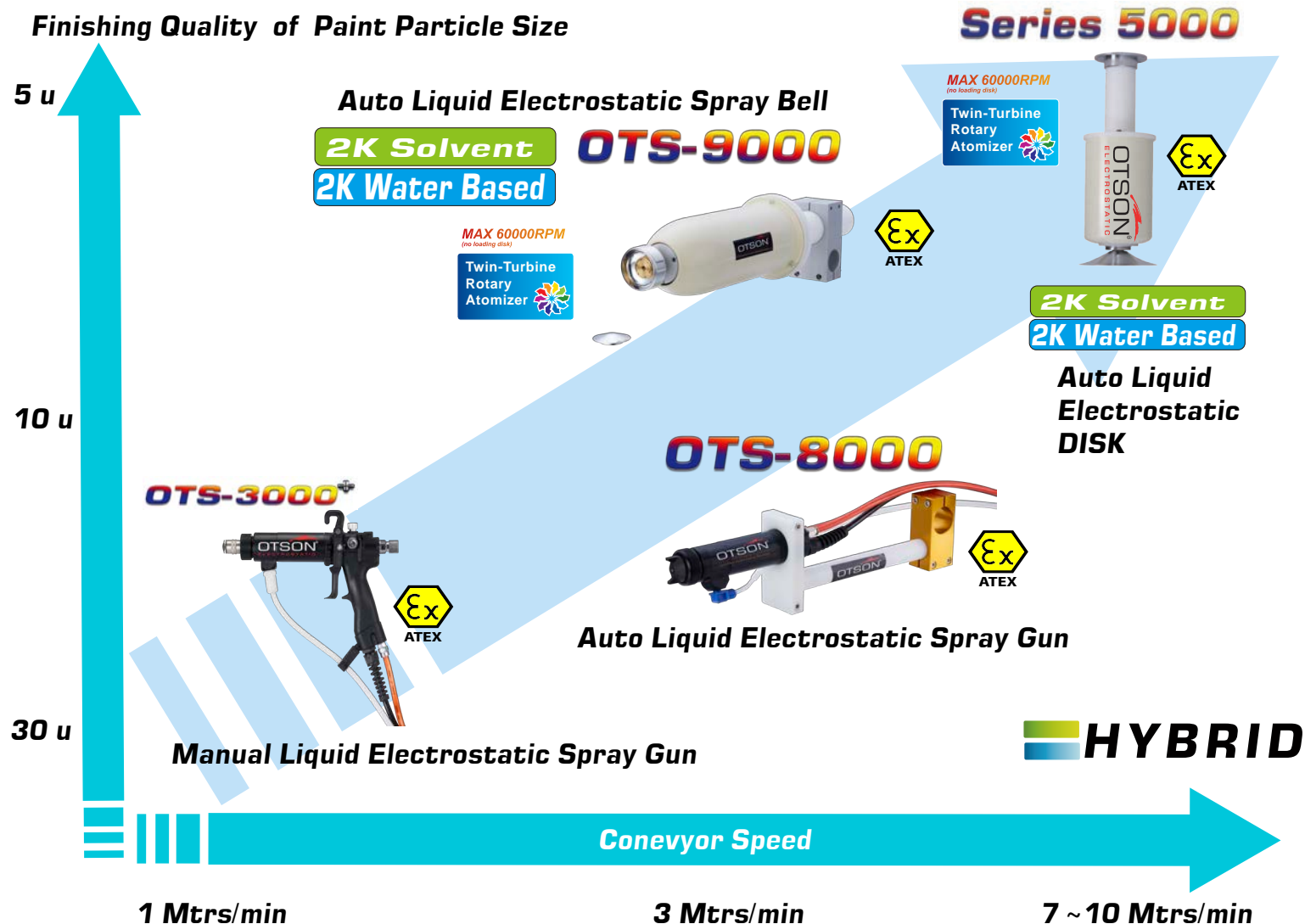


2K/3K WATERBASED

2K/3K SOLVENT

***Dual Coating for
Solvent and Waterborne Paint***





Clear Coating :

Clear Coat: A clear coat layer is applied to the surface to provide additional protection and durability. The thickness of the clear coat is around 20-30 microns. The clear coat is cured in an oven at a temperature of around 150-180°C for 20-30 minutes.

Base Coating:

Base Coat: A thicker layer of base coat is applied to the metal surface to provide the desired color and finish. The thickness of the base coat is around 30-50 microns. The base coat is cured in an oven at a temperature of around 150-180°C for 20-30 minutes.

Primer Coating:

Primer Coating: A thin layer of primer coating is applied to the metal surface to improve adhesion and provide corrosion resistance. The typical thickness of primer coating is around 10-20 microns. The primer coating is cured in an oven at a temperature of around 120-150°C for 20-30 minutes.

CED Coating:

CED (Cathodic Electrodeposition): This is an electrocoating process that uses an electrical current to deposit a uniform and consistent layer of paint onto the metal surface. The thickness of the CED coating is around 50-80 microns. The CED coating is cured in an oven at a temperature of around 180-200°C for 30-60 minutes.

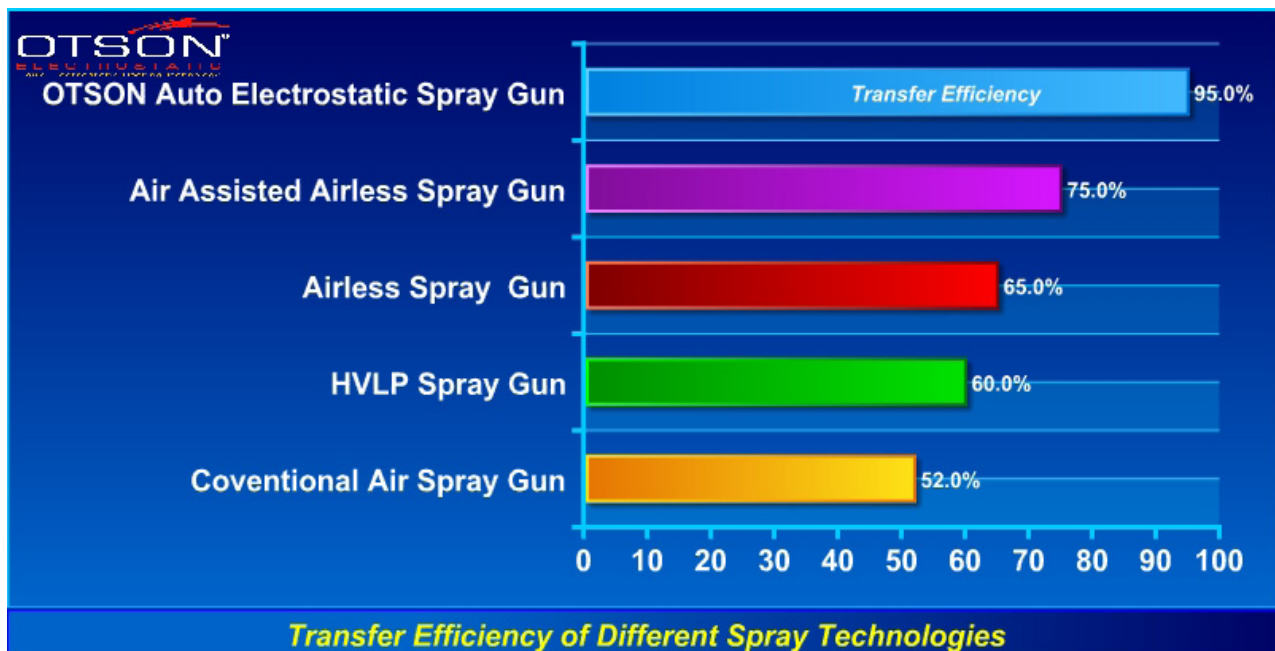
Metal Material



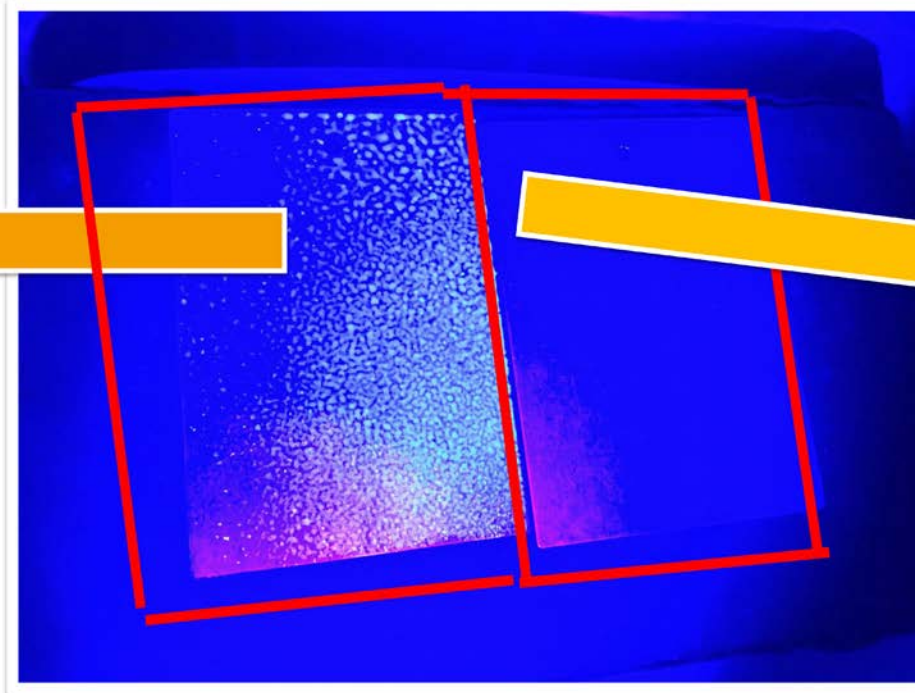
There are several advantages to using electrostatic spray coating over traditional spraying methods:

Electrostatic spray coating is a popular choice for mass production factories due to the many benefits it offers over traditional coating methods. Some of the key advantages of using electrostatic spray coating include:

- **High Spray Efficiency:** Electrostatic spray coating is highly efficient, requiring less material to achieve the desired coating thickness. This leads to cost savings and reduced waste.
- **Uniform Coating:** Electrostatic spray coating creates a uniform coating on the surface of the product, thanks to the electrostatic charge that attracts the coating material to the surface. This ensures even distribution, resulting in a higher quality finished product with fewer defects.
- **Lower Environmental Impact:** Electrostatic spray coating has a lower impact on the environment than some traditional coating methods. It produces less air and water pollution and can be used in enclosed areas with proper ventilation, reducing the amount of overspray and waste.
- **Advancements in Electrostatic Coating Equipment:** In recent years, there have been significant advancements in electrostatic coating equipment. High-voltage electrostatic generators, new structures for electrostatic spray guns, and new automatic control panels have enhanced the reliability and efficiency of the electrostatic coating process, providing a solid foundation for its continued development and implementation in various industries.



Overall, electrostatic spray coating is a versatile, efficient, and sustainable method that is widely used in various industries, including automobiles, bicycles, wheels, instrumentation, electrical appliances, agricultural machinery, household electrical appliances, daily hardware, steel furniture, doors, windows, power tools, toys, gas appliances, and other industrial fields. The benefits of electrostatic spray coating make it an ideal choice for businesses looking to improve their coating processes, reduce costs, and increase efficiency while reducing their environmental impact.



No uniform spray
by other
conventional
sprayer

Uniform spray by
OTSON
electrostatic
spray
technologies

Uniform Coating Quality



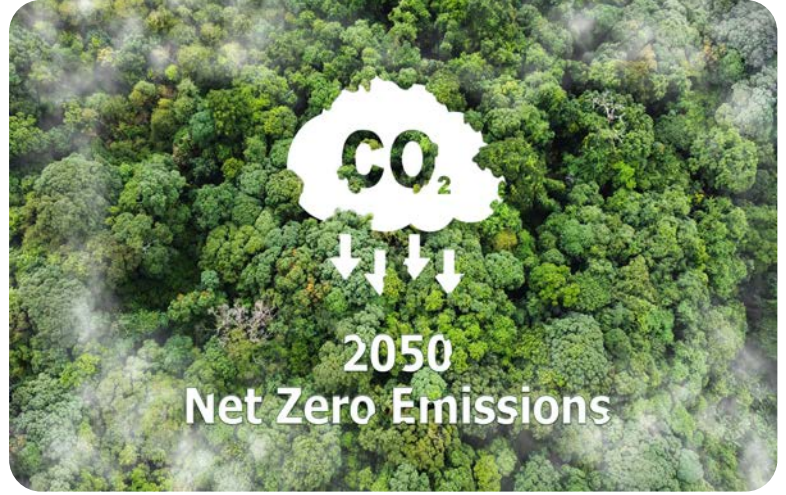
Electrostatic spraying is a highly efficient and cost-effective coating method that has become increasingly popular across a range of industries. Here are some key features and benefits of using electrostatic spray equipment in your paint shop:

- **Increased efficiency:** Electrostatic spraying allows for a more efficient use of paint, resulting in significant cost savings and reduced waste.
- **Improved coating quality:** Electrostatic spray equipment provides a more even and consistent coating, resulting in a higher-quality finish, improved product durability, and longer lifespan for the coated item.
- **Greater flexibility:** Electrostatic spray equipment can be used for a wide range of coating applications, including large and irregularly shaped objects, making it a versatile solution for many different industries.
- **Increased safety:** Electrostatic spraying reduces the amount of overspray and allows for a safer working environment by eliminating the need for excessive amounts of paint in the air.
- **Reduced downtime:** Electrostatic spray equipment is easy to clean and maintain, reducing downtime and increasing productivity.
- **ROI-friendly:** Electrostatic spray equipment has a relatively low initial investment cost and is known to have a relatively short payback period, making it a cost-effective solution for many businesses.
- **Energy-efficient:** Electrostatic spray equipment typically uses less energy than traditional spray equipment, leading to cost savings and a reduced environmental impact.
- **Environmental-friendly:** Electrostatic spray equipment results in reduced emissions, leading to a smaller environmental footprint.



Overall, electrostatic spray equipment can provide a wide range of benefits for paint shops, from increased efficiency and improved coating quality to greater flexibility and increased safety. With its relatively low initial investment cost and short payback period, it can be a cost-effective and environmentally-friendly solution that can improve the ROI of your paint shop operations.

Water-based electrostatic spray coating



Water-based electrostatic spray coating has a variety of features that make it a popular and environmentally friendly coating option. Here are some of the key features of this process:

- **Environmentally friendly:** Water-based electrostatic spray coating produces fewer emissions and less VOCs than solvent-based coatings, making it a more environmentally friendly option.
- **High-quality finish:** The electrostatic charge created during the spraying process ensures that the coating material is uniformly attracted to the substrate, resulting in a high-quality finish.
- **Wide range of substrates:** Water-based electrostatic spray coating can be used on a wide range of substrates, including metals, plastics, and composites.
- **Versatility:** This process can be used to coat a variety of products, such as automobiles, bicycles, electrical appliances, agricultural machinery, household items, steel furniture, and more.
- **Specialized equipment:** Water-based electrostatic spray coating requires specialized equipment, including a high-voltage electrostatic generator, a water-based electrostatic spray gun, and a control panel that regulates the voltage and flow rate of the coating material.
- **Proprietary technology:** Some companies, such as OTSON, have developed proprietary technology that ensures optimal performance of the equipment and the coating.

Overall, water-based electrostatic spray coating is an environmentally friendly and high-quality coating process that can be used on a wide range of substrates and products. Its specialized equipment and proprietary technology make it a versatile solution for many different industries.



- Electrostatic atomizer spray systems use an electrostatic charge to apply a coating material to a surface. The charge is generated by an electrical current applied to the coating material as it is atomized into fine droplets.
- The charged droplets are attracted to the surface being coated, allowing for more precise application and a more even finish. The charge also helps to increase the transfer efficiency of the coating material, resulting in less material being used and potentially reducing costs.
- Electrostatic atomizer spray systems are often used in the automotive, aerospace, and manufacturing industries to apply paints, coatings, and other finish materials. They can be used to coat a wide range of surfaces, including metal, plastic, and composite materials.
- Electrostatic atomizer spray systems have several advantages over traditional spraying methods, including improved precision, reduced overspray, increased efficiency, and better transfer efficiency. They also offer greater control over the coating process and can be more environmentally friendly, as they often produce fewer volatile organic compounds (VOCs) compared to other coating methods.

OTSON Powder Electrostatic is a leading provider of electrostatic powder coating solutions, designed to improve the efficiency and quality of your industrial coating processes. Our patented technology utilizes a high-voltage electrostatic charge to attract powder particles to the surface being coated, ensuring a uniform and consistent finish.

Our powder electrostatic systems include disc and bell systems, both of which are designed to handle a wide range of coating materials and applications. The disc system utilizes a rotating disc to distribute the powder evenly, while the bell system uses a bell-shaped nozzle to create a fan-shaped powder spray.

Our powder electrostatic systems are also designed with safety in mind, featuring built-in overload protection and emergency stop buttons to ensure the safety of our operators. Our systems also include advanced control panels for easy operation and process monitoring.

At OTSON, we understand the importance of reducing costs and improving efficiency in industrial coating processes. Our OTSON Powder Electrostatic systems are designed to do just that, by reducing paint waste and increasing production rates, ultimately leading to a higher return on investment for our customers.

With OTSON Powder Electrostatic, you can trust that you are getting the best in electrostatic powder coating technology, backed by the expertise and innovation of OTSON— a leading smart paint shop solutions provider.

Power electrostatic spray is a process in which an electric charge is applied to a liquid coating material as it is sprayed through a nozzle. This creates an electrostatic field around the droplets of coating, which attracts them to the surface being coated. The result is a more uniform and efficient coating process, with less overspray and waste.

Power electrostatic spray is often used in industrial and manufacturing applications where precise and consistent coating is critical. It is commonly used to apply coatings such as paints, primers, and adhesives, as well as a variety of other materials including lubricants, insecticides, and flame retardants. The process is especially useful for coating complex shapes or hard-to-reach areas, as the electrostatic attraction helps to ensure that the coating material adheres evenly and completely.





There are a few key benefits to using power electrostatic spray for coating applications. These include:

Increased efficiency: Power electrostatic spray can significantly increase the efficiency of the coating process, with up to 50% less overspray and material waste compared to traditional spraying methods.

Improved coverage: The electrostatic field helps to ensure that the coating material adheres evenly and completely to the surface being coated, resulting in improved coverage and a more uniform finish.

Greater precision: Power electrostatic spray allows for precise and consistent application of the coating material, making it ideal for applications where a uniform finish is critical.

Easy to use: Power electrostatic spray systems are relatively easy to operate and maintain, making them suitable for use in a variety of industrial and manufacturing environments.





- **Power supply:** The power supply provides the electrical charge that is applied to the coating material as it is sprayed. This can be generated through a variety of means, such as a high voltage transformer or a corona discharge system.
- **Spray gun:** The spray gun is the device that is used to apply the coating material. It typically consists of a nozzle, an electrode, and a handle with a trigger. When the trigger is pulled, the coating material is sprayed through the nozzle and the electrical charge is applied to the droplets.
- **Hose:** The hose is used to connect the spray gun to the power supply and to the source of the coating material. It is typically made of a flexible, non-conductive material to ensure the safety of the operator.
- **Material pump:** The material pump is used to deliver the coating material from its container to the spray gun. It may be a separate unit or it may be integrated into the spray gun itself.
- **Control unit:** The control unit is the central component of the power electrostatic spray system. It is used to regulate the flow of coating material and the electrical charge applied to it. It may also include features such as variable speed control and automatic shutdown.
- **Grounding system:** The grounding system is an important safety feature of a power electrostatic spray system. It is used to ensure that the electrical charge is safely discharged to the ground, protecting the operator and equipment from electrical shock.



Different coatings thicknesses by OTSON Electrostatic Spray System



Benefits of Electrostatic Spray Technology

- Improve Finishing Quality
- Reduce Refinishing Work
- Time Savings
- Reduce Paint Wastage
- Material Savings

Reduce Paints Costs

OTSON[®]
ELECTROSTATIC



Conventional
Air Spray Gun



HVLP
Spray Gun



Airless
Spray Gun



Manual
Electrostatic
Air Spray Gun



Auto
Electrostatic
Air Spray DISK



Paints
Saving



Return-on-Investment (ROI)

By replacing Conventional Air Spray gun with Auto Electrostatic Spray Disk (Disc) System

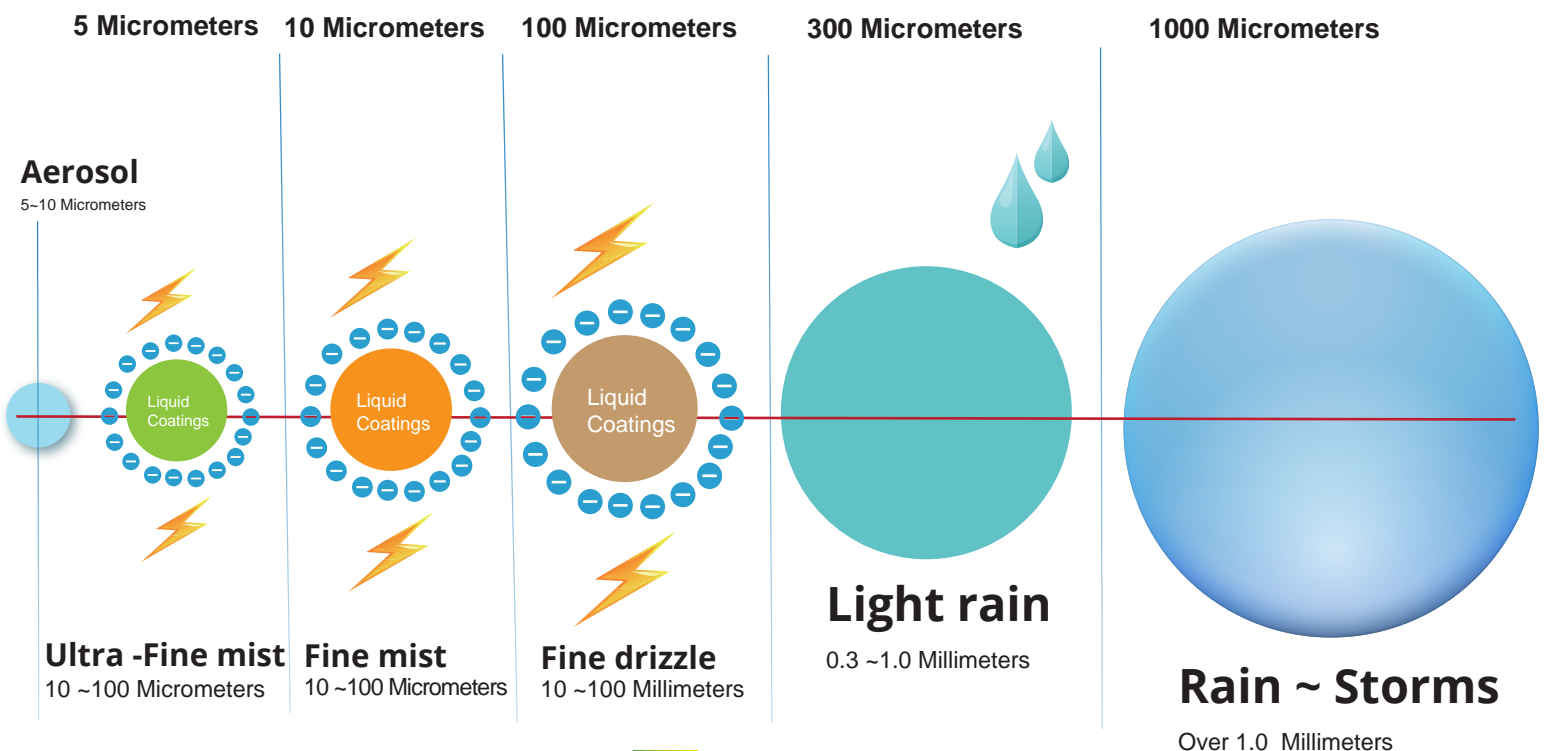
	Typical	Calculate Your Own Application
Paint price per litre	USD 10	
	X	X
Litre Used per Day	100 litres	
	X	X
Business Days per Year	220 days	
Electrostatic Transfer Efficiency	95%	
Annual Savings	USD 209,000.00	



OTSON Technologies Corp

otson.com

Classification of Electrostatic Spray Droplet / Particle Size



5.0~ 300.0 Micrometers **HYBRID**

Waterbase Coatings

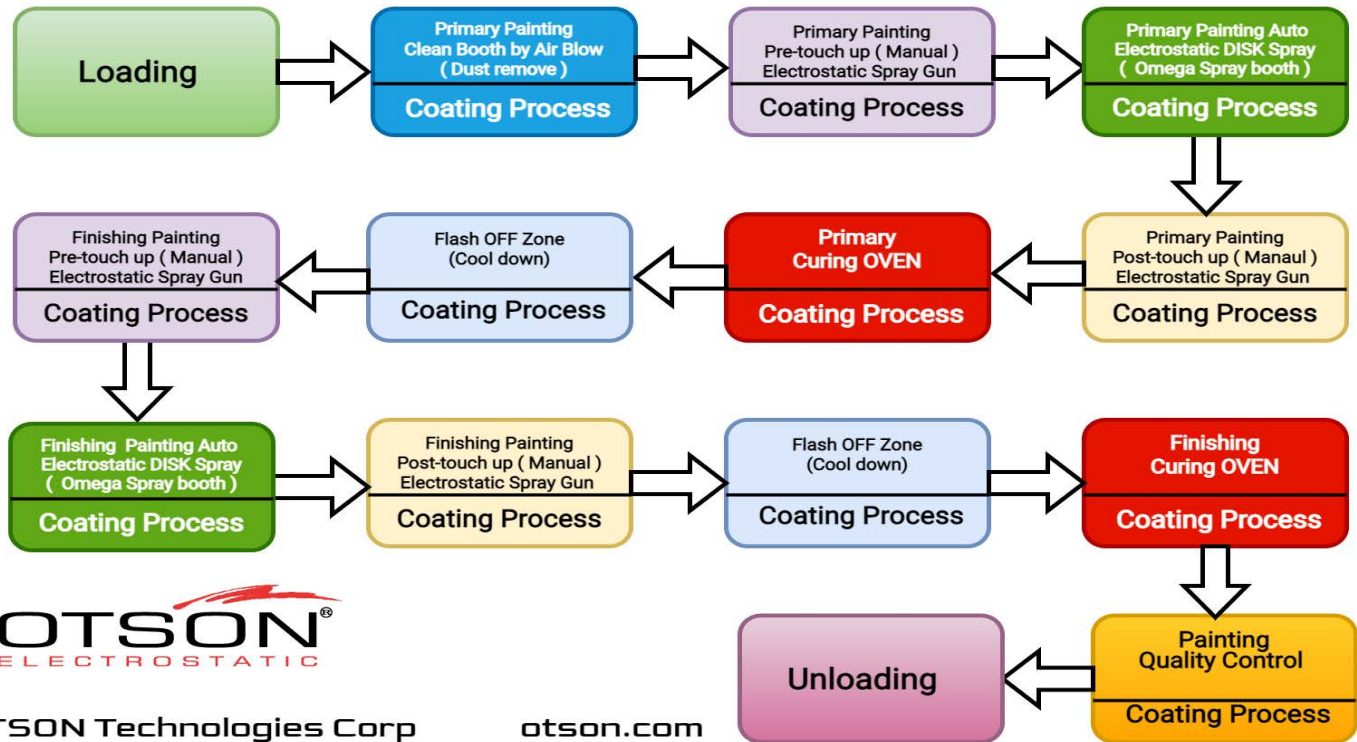
Solvent Coatings

Auto DISK (Disc) Electrostatic Spray

Series 5000

The Process Steps of Disk Electrostatic Automatic Coating System

The Process Step of Disk Electrostatic Automatic Coating System



Water Tank Coating - Base Coating

Benefits of Electrostatic Spray Technology

- *Improve Finishing Quality*
- *Reduce Refinishing Work*
- *Time Savings*
- *Reduce Paint Wastage*
- *Material Savings*

Reduce Paints Costs



Chemical Reduction of at least 75 % - after 1 hours operation



Conventional
Air Spray Gun



HVLP
Spray Gun



Airless
Spray Gun



Manual
Electrostatic
Air Spray Gun



Auto
Electrostatic
Air Spray Gun



LIQUID
Saving



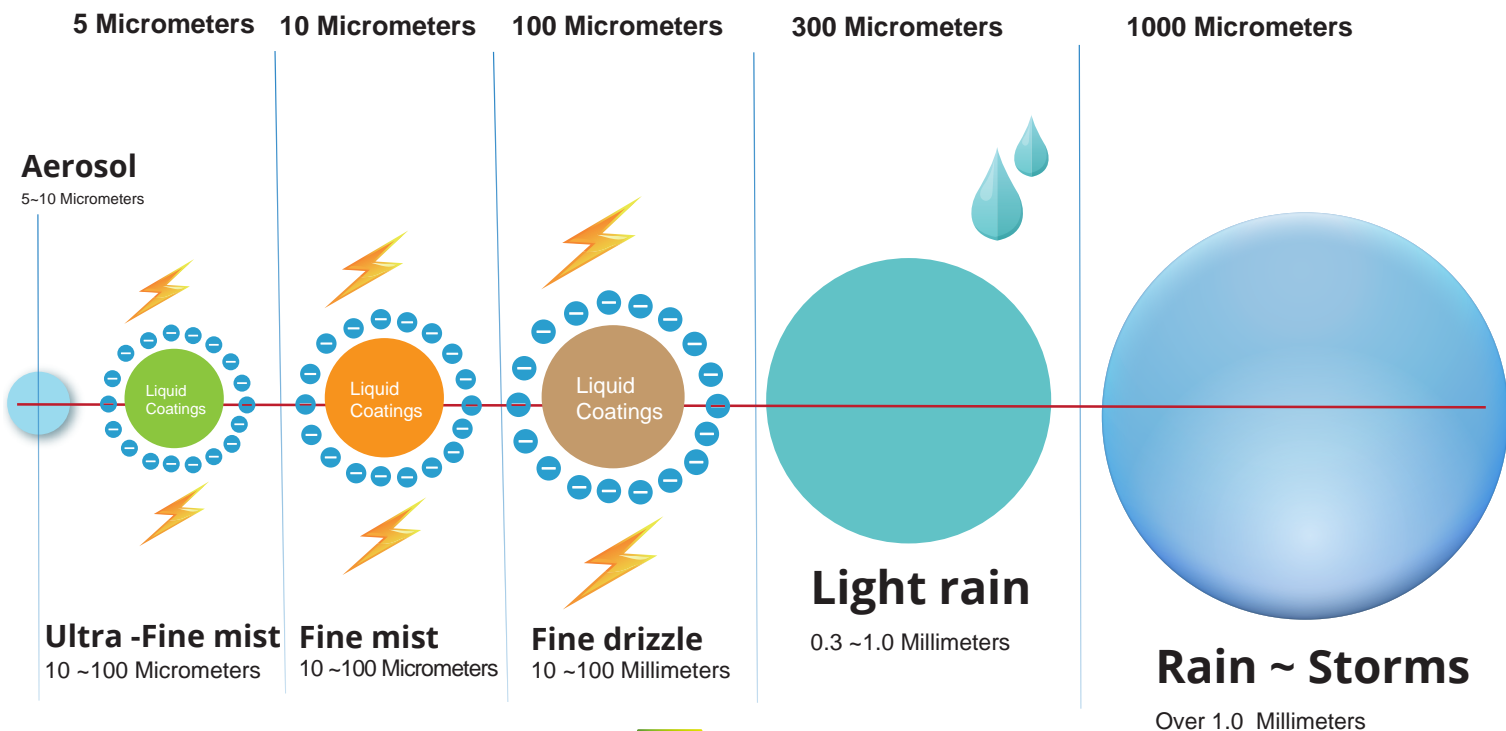
Return-on-Investment (ROI)

By replacing Conventional Air Spray gun with Auto Electrostatic Spray Bell System

	Typical	Calculate Your Own Application
Paint price per litre	USD 10	
	X	X
Litre Used per Day	100 litres	
	X	X
Business Days per Year	220 days	
Electrostatic Transfer Efficiency	95%	
Annual Savings	USD 209,000.00	



Classification of Electrostatic Spray Droplet / Particle Size



5.0~ 300.0 Micrometers  **HYBRID**

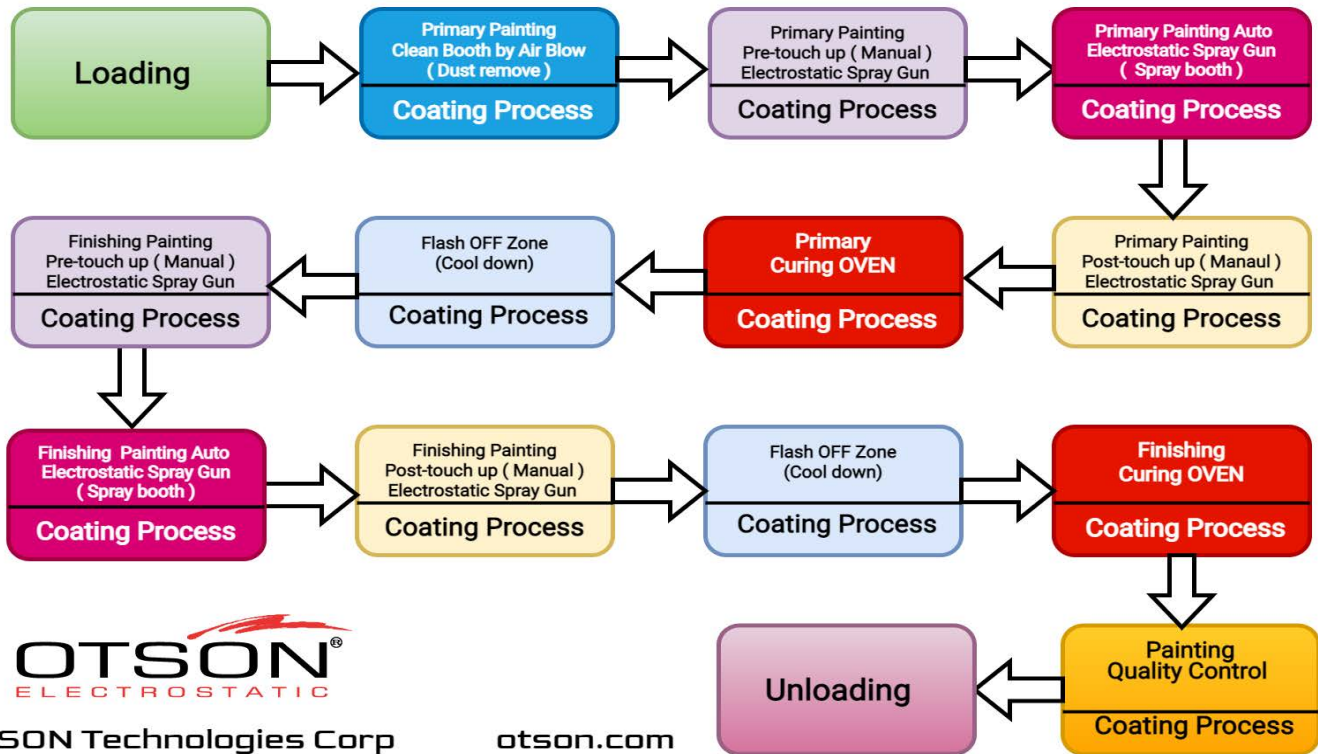
Waterbase Coatings

Solvent Coatings

 **OTS-8000**
Auto Electrostatic Spray Gun

The Process Steps of Auto Electrostatic Spray Gun Coating System

The Process Step of Automatic Electrostatic Gun Coating System



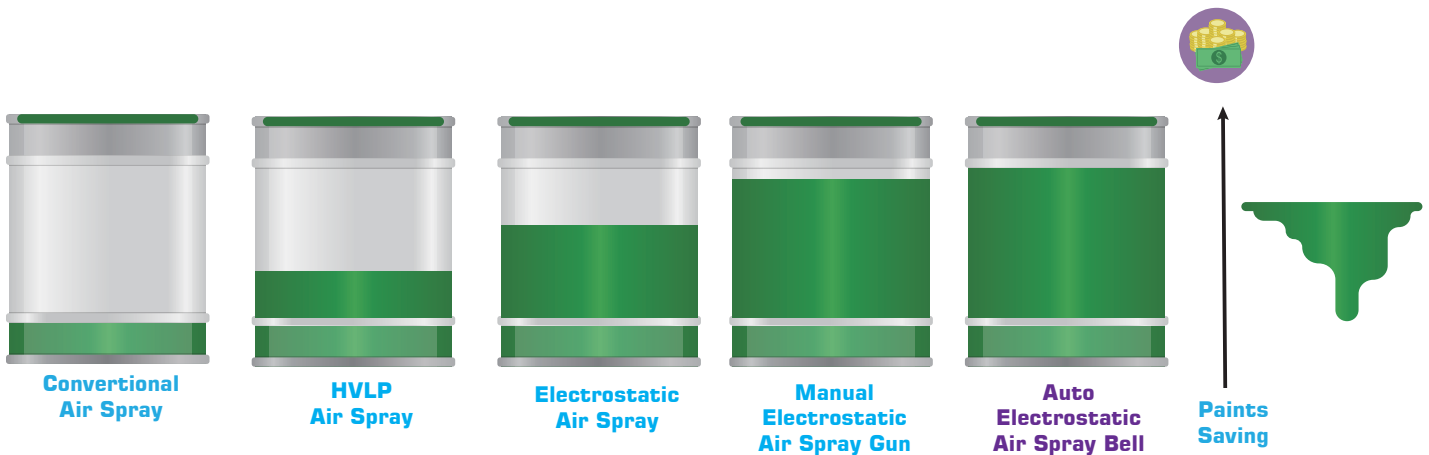
**Round TIN
Nozzle - B**



Benefits of Electrostatic Spray Technology

- *Improve Finishing Quality*
- *Reduce Refinishing Work*
- *Time Savings*
- *Reduce Paint Wastage*
- *Material Savings*

Reduce Paints Costs



Return-on-Investment (ROI)

By replacing Conventional Air Spray gun with Auto Electrostatic Spray Bell System

	Typical	Calculate Your Own Application
Paint price per litre	USD 10	
	X	X
Litre Used per Day	100 litres	
	X	X
Business Days per Year	220 days	
Electrostatic Transfer Efficiency	95%	
Annual Savings	USD 209,000.00	



Classification of Electrostatic Spray Droplet / Particle Size

5 Micrometers

10 Micrometers

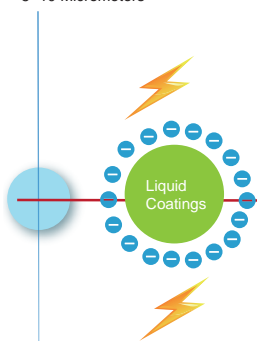
100 Micrometers

300 Micrometers

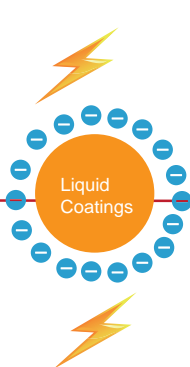
1000 Micrometers

Aerosol

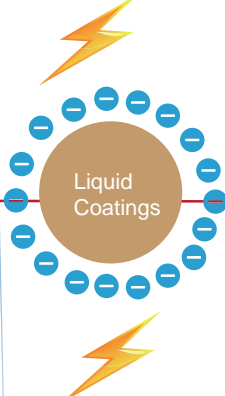
5~10 Micrometers



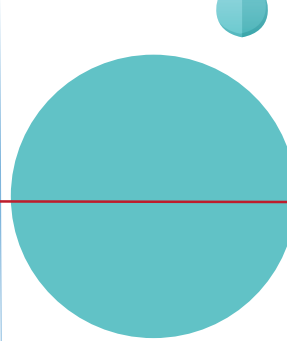
Ultra -Fine mist
10 ~100 Micrometers



Fine mist
10 ~100 Micrometers

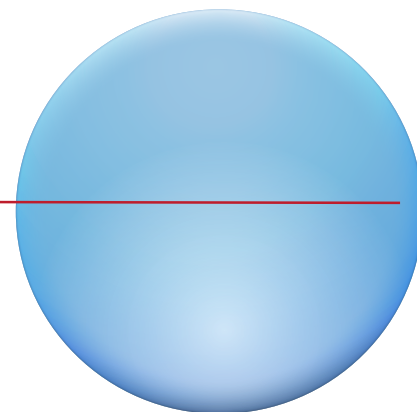


Fine drizzle
10 ~100 Millimeters



Light rain

0.3 ~1.0 Millimeters



Rain ~ Storms

Over 1.0 Millimeters

5.0~ 300.0 Micrometers

HYBRID

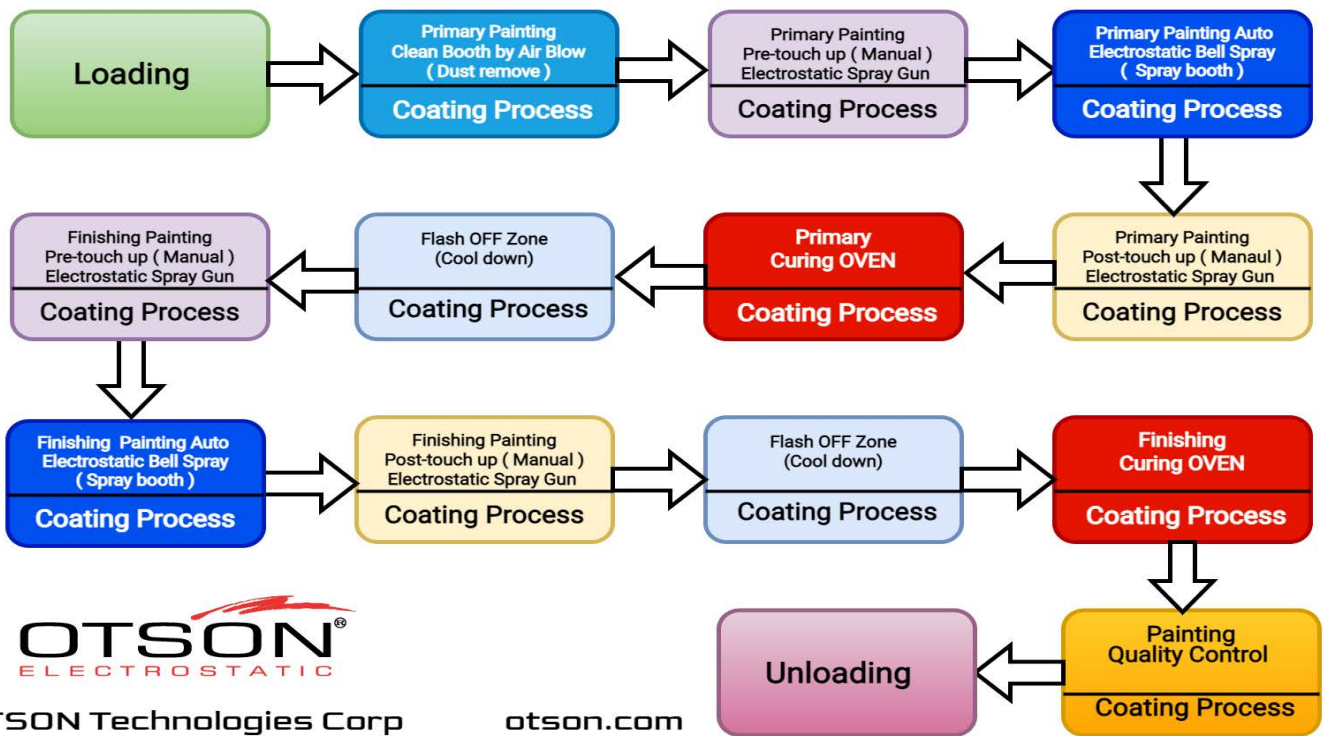
Waterbase Coatings

Solvent Coatings

OTS-9000
Auto Electrostatic Spray Bell

The Process Steps of Auto Electrostatic Spray Bell Coating System

The Process Step of Bell Electrostatic Automatic Coating System



OTSON[®] **OTS-9000**
Rotary Speed Control (Atomization)



Benefits of Electrostatic Spray Technology

- *Improve Finishing Quality*
- *Reduce Refinishing Work*
- *Time Savings*
- *Reduce Paint Wastage*
- *Material Savings*

Reduce Paints Costs



Chemical Reduction of at least 75 % - after 1 hours operation



Conventional
Air Spray Gun



HVLP
Spray Gun



Airless
Spray Gun



Manual
Electrostatic
Air Spray Gun



Auto
Electrostatic
Air Spray Gun



LIQUID
Saving



Return-on-Investment (ROI)

By replacing Conventional Air Spray gun with Auto Electrostatic Spray Bell System

	Typical	Calculate Your Own Application
Paint price per litre	USD 10	
	X	X
Litre Used per Day	100 litres	
	X	X
Business Days per Year	220 days	
Electrostatic Transfer Efficiency	95%	
Annual Savings	USD 209,000.00	

OTS-7900 Auto Electrostatic Spray Bell –Robot ARM

ABB

YASKAWA

KUKA

FANUC

Kawasaki

EPSON

STÄUBLI



OTS-7800 Auto Electrostatic Spray Gun Kit –Robot ARM

ABB

YASKAWA

KUKA

FANUC

Kawasaki

EPSON

STÄUBLI



OTSON Technologies Corp

otson.com



2K/3K Mixer and Color Change System- Disk Electrostatic Spray

Color change valves, also known as paint dispensers, are a valuable investment for any business in the painting industry. These devices are used in paint shops to mix and dispense paint quickly and accurately, reducing waste and cleanup time.

One of the key benefits of a color change valve is its ability to automatically switch between different paint colors, which can save time and increase efficiency. This feature is especially useful for businesses that work on multiple projects and need to switch between colors frequently.

Another advantage of color change valves is their mixing capabilities. These devices can mix the paint with hardeners, reducers, or other additives as it is dispensed, ensuring that the paint is properly mixed and ready to use, which can help improve the quality of the paint job.

In terms of market view, the use of color change valves is prevalent in industrial paint application such as automotive, aerospace, and wood finishing industries. Many companies are investing in color change valves to improve their production efficiency and reduce cost.

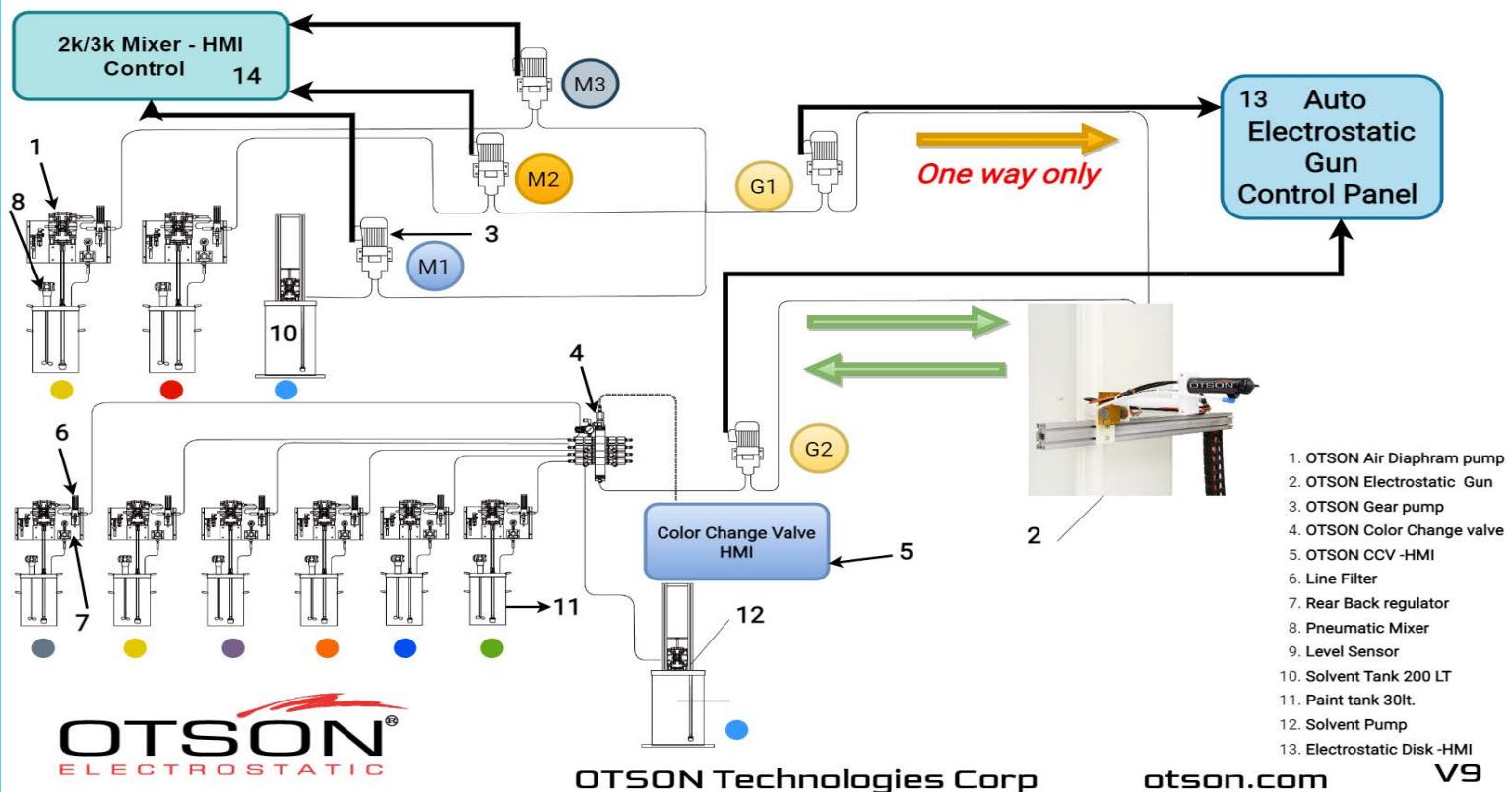
Overall, color change valves are an essential component of any paint shop, providing accurate and efficient paint dispensing and color change capabilities. Investing in a high-quality color change valve can help businesses in the painting industry to increase productivity, improve the quality of their paint jobs and save money in the long run.

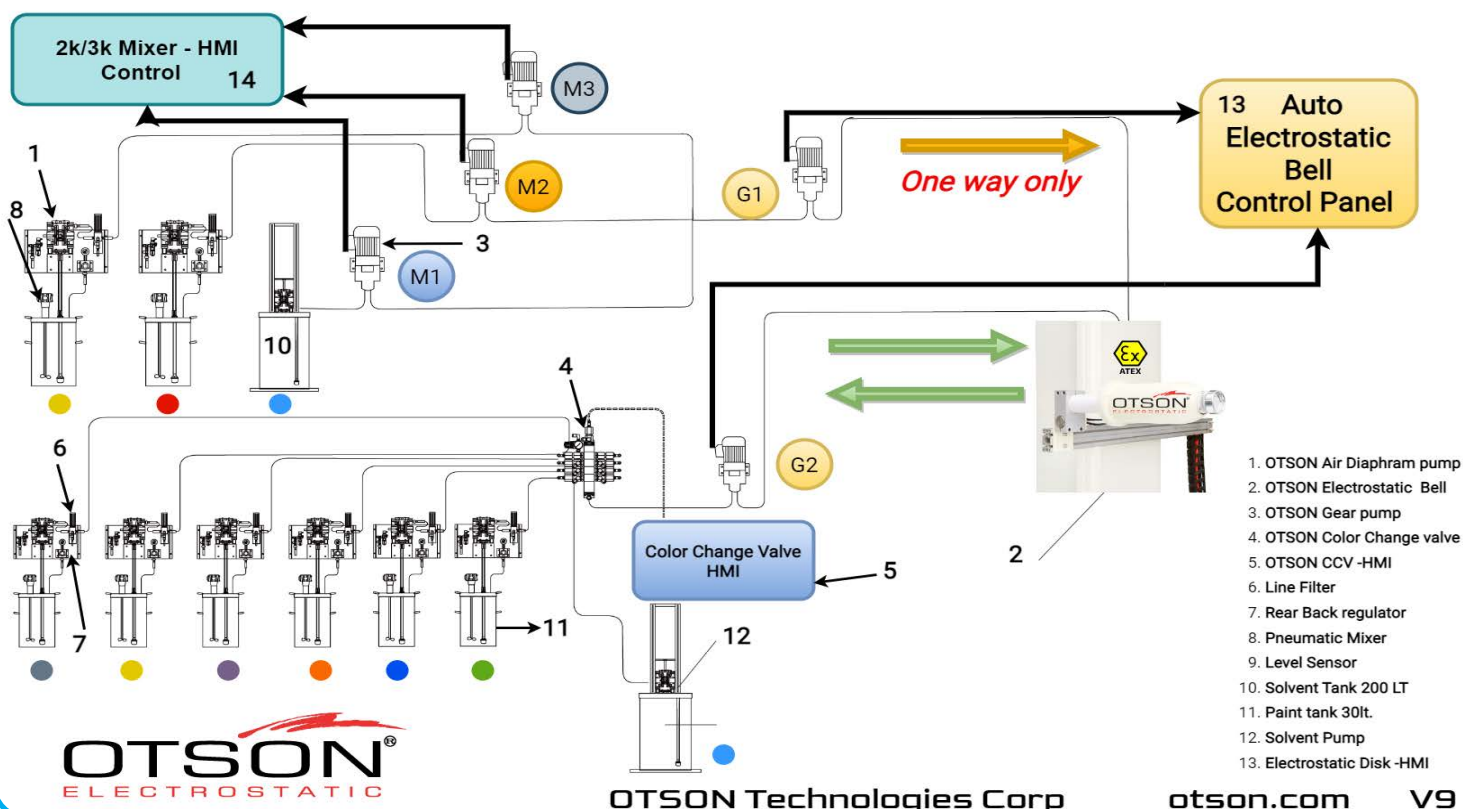
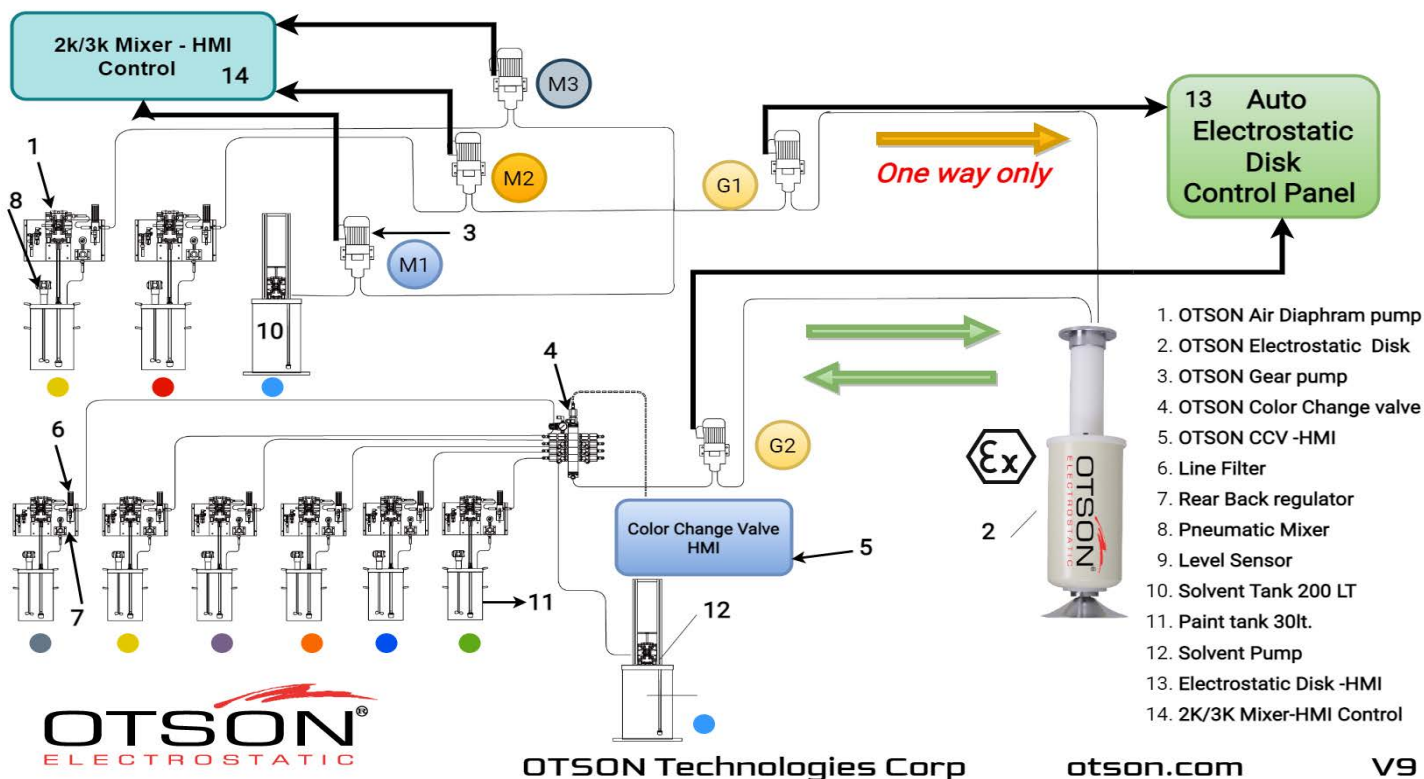
2K/3K WATERBASED

2K/3K SOLVENT

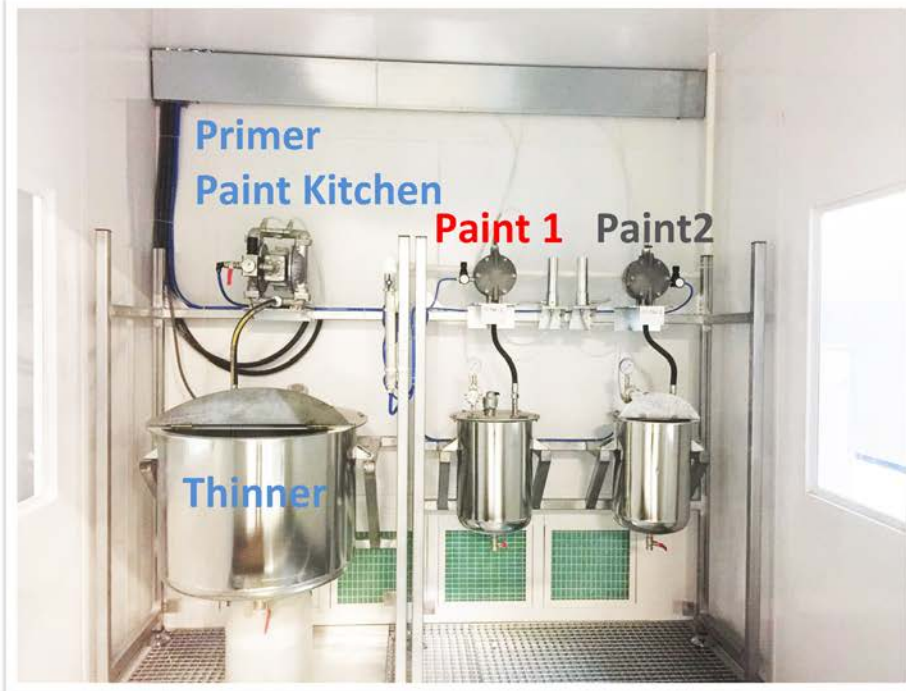
OTSON
Fluid Technologies

2k /3K Mixer and Color Change System - Electrostatic Spray Gun





The 2K-3K Electronic Mixing & Dosing System is an advanced system designed for use in a liquid electrostatic spray system. It is used to control the mixing and dosing of two or three liquid components in a precise and accurate manner. The system uses electronic sensors and controls to measure and adjust the flow rate of each component, ensuring that the correct proportion of liquids are mixed and sprayed. The end result is a more uniform and efficient application of the sprayed liquid, resulting in improved product quality and increased productivity.



The 2K-3K Electronic Mixing & Dosing System typically comprises of the following components:

- **Metering Pumps:** These pumps are used to accurately control the flow rate of each component, ensuring that the correct proportion is mixed and sprayed.
- **Mixing Chamber:** The mixing chamber is where the two or three liquid components are combined and mixed together.
- **Control Unit:** The control unit is the heart of the system and is responsible for monitoring and adjusting the flow rate of each component. It may use electronic sensors, computer control and software to manage the mixing and dosing process.
- **Display Unit:** A display unit is used to show the operator the current status of the system, including the flow rate of each component, total amount of liquid mixed and any alarms or faults that may arise.

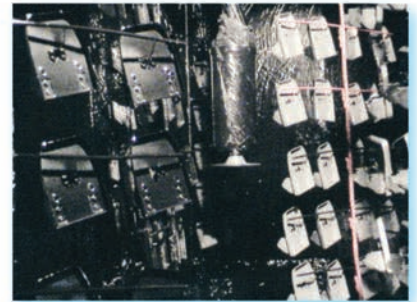
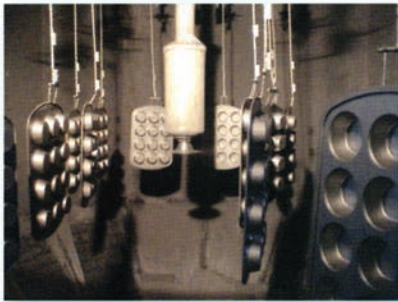
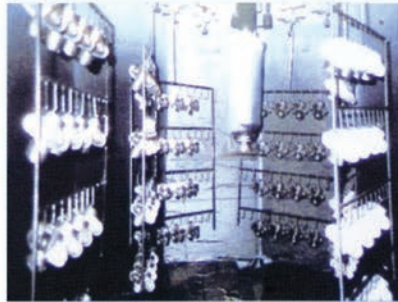
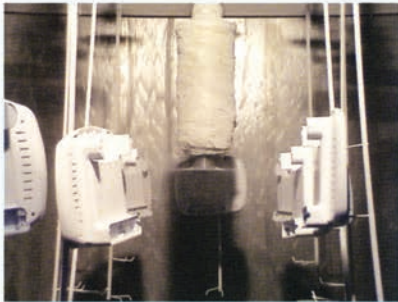
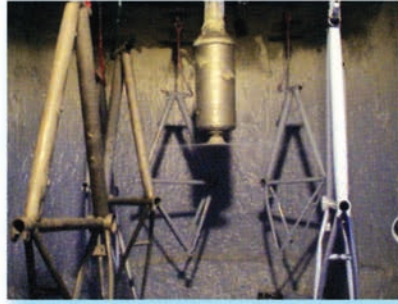
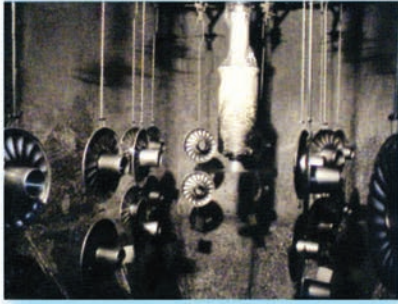
The system may also be equipped with additional features such as automatic cleaning, continuous monitoring, and alarms for low level and low pressure, to ensure the reliable and consistent operation of the mixing and dosing process.

Overall, the 2K-3K Electronic Mixing & Dosing System provides precise control over the mixing and dosing of two or three liquid components, which results in a more efficient, consistent and uniform

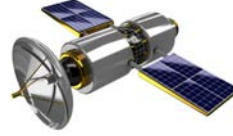
Application - Industries



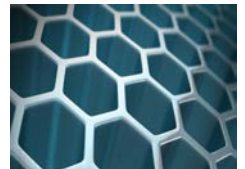
- Small parts
- Bicycle
- Application
- Small parts
- Bicycle
- Computer Housing
- Stationery
- Wooden Furniture
- Hardware
- Lockers
- Freezers
- Iron Railing
- Display Cases
- Office Partitions
- Medical Equipment
- Rest room Partitions
- Roller Bars
- Metal Doors
- Decorative Lamps
- Electrical Home Appliances
- Car Accessories, Teflon Pot
- Sports Equipment
- Handcraft
- Files
- Desks
- Sports Equipment
- Handcraft Computer
- Housing
- Stationery
- Wooden Furniture
- Hardware
- Lockers
- Freezers
- Iron Railing
- Display Cases
- Refrigerators
- Heavy Machinery
- Office Equipment



Application - Industry



*Meeting the requirements
of each industry....*



Application - Spray Range



OTS-8000

Auto Electrostatic Spray Gun System



OTS-9000

Auto Electrostatic Spray Bell System



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<https://spray.otson.com>

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Tel : 886+2+2659-7162

Fax : 886+2+8192-6058



OTSON Technologies Corp.

was established in 1983. With over 37 year's experience in electrostatic coating equipment and products precision machine in Taiwan. OTSON consistently endeavours to invent and develop the advanced products to meet the newly trends on the surface coating markets.



Liquid Electrostatic Coating Solutions

For more than 40 years, OTSON has developed, manufactured and sold liquid electrostatic spray equipment to world-wide customers in the liquid electrostatic coating sector.



In the recent years, OTSON have been extending the business to the global markets , in where OTSON also earned a lot of good comments on the outstanding products.

It is no doubt , innovative products at competitive prices is the key to gaining world recognition and acceptance. In this field, OTSON has obtained the patents of structure improvement individually in electrostatic Twin-Twin Turbine Atomizer, Bell Disk , all kinds of spraying nozzles ,Auto and Manual liquid electrostatic spray gun and gear pump. OTSON ensure complete customer satisfaction by offering high quality and transfer efficiency coating equipment for various coating solutions.

If customers unsure of what type of coating equipment they may require. We also operate a full pre sales and after sales service to ensure existing customers obtain the optimum performance from their investment in OTSON's equipment.

OTSON focus on liquid electrostatic technology, we provide full range liquid electrostatic types of equipment for customers. We also provide various nozzles and spray disks for your applications.

Electrostatic spray coating with high spray efficiency, uniform coating, less pollution and other characteristics and adapt to large-scale from The production line is becoming one of the most popular coating processes in production.

Used in automobiles, bicycles , wheels,instrumentation, electrical appliances, agricultural machinery, household electrical appliances, daily hardware, steel furniture, doors Windows, power tools, toys and gas appliances and other industrial fields.

In recent years, with the development of high safety and adaptive electrostatic coating equipment, including high-voltage electrostatic generator, new structure of electrostatic spray gun , new automatic control panel ,new Bell cup and new disk atomizer , etc. in the reliability and equipment structure has a significant light into the high advance for the development of electrostatic coating process provides a solid foundation.

OTSON
ELECTROSTATIC



OTSON
ELECTROSTATIC

OTSON Auto Electrostatic Spray Bell

Air Assisted Airless Spray Gun

Airless Spray Gun

HVLP Spray Gun

Coventional Air Spray Gun



Transfer Efficiency of Different Spray Technologies

OTS-3000⁺

MANUAL
LIQUID ELECTROSTATIC SPRAY GUN

HYBRID



- * New Design Model
- * New LED Panel
- * Adaptive Electrostatic Power
- * More Safety, Low Maintenance
- * High Transfer Efficiency
- * High Quality Finishing
- * Light Weight Gun

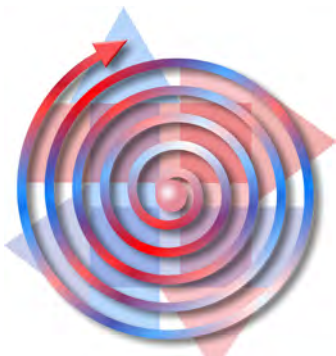


470g

Solvent **Waterborne** **DUAL Coating** **H.E.T**
High Efficiency Technology

Features

- Dual Coating- Solvent and Waterborne Paint
- Improve Coating Quality
- Reduce Air Pollutions
- Reduce Water Pollutions
- High Transfer Efficiency - Spray Painting
- High Atomized Nozzle
- Easy Handle for Long Term Operation
- Long Life Operation
- Low VOC Emissions
- Low Failure Rate and Easy Maintenance
- Light Weight Gun - 470g Only



The Spray Direction of High Atomized Nozzle



Air Compressor Tank



Round Tin Nozzle(A)



Round Tin Nozzle(B)



Round (FRP) Nozzle



Flat (FRP) Nozzle

Series 5000

**DISK ELECTROSTATIC
AUTO COATING SYSTEM**

MAX 60000RPM
(no loading spray disk)



HYBRID

Solvent

Waterborne

**DUAL
Coating**

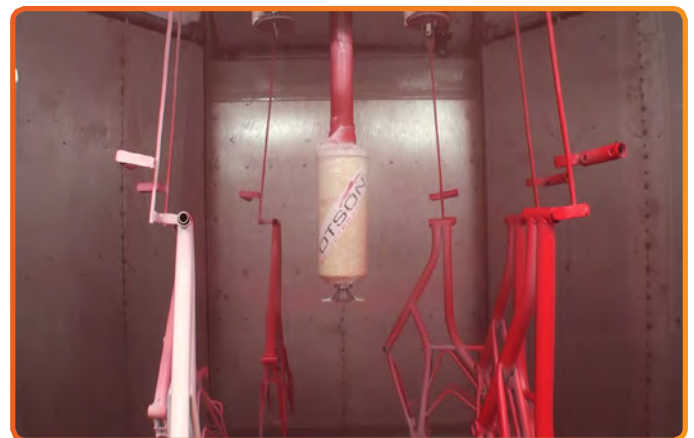
H.E.T
High Efficiency Technology

Features

- **Dual Coating-**
Solvent and Waterborne Paint
- **Improving Coating Quality-**
Uniform Film Thickness
- **Good Edge Cover-**
High quality atomisation and coating finish
- **Reducing Coatings Cost-**
High Transfer Efficiency
- **Good Wraparound-**
Very little over spray and no bounce back
- **Low VOC** (volatile organic compounds) **Emissions -**
Reducing Air Pollutions
- **Reducing Water Pollutions**
- **High Production Rates.**
- **Long Life Operation**
- **Low Failure Rate**
- **Easy Maintenance**



Primer Coating



Final Coating

MAX 60000RPM
(no loading disk)

**Twin-Turbine
Rotary
Atomizer**



300 mm
Spray Disk



230 mm
Spray Disk



170 mm
Spray Disk

**Dual Coating for
Solvent and Waterborne Paint**

OTS-8000

Auto Electrostatic Spray Gun System



HYBRID



Solvent

Waterborne

**DUAL
Coating**

**H.E.T.
High Efficiency Technology**

Features

- Dual Coating- Solvent and Waterborne Paint
- Improve Coating Quality
- Reduce Air Pollutions
- Reduce Water Pollutions
- High Transfer Efficiency - Spray Painting
- High Atomized Nozzle
- Easy Handle for Long Term Operation
- Long Life Operation
- Low VOC Emissions
- Low Failure Rate and Easy Maintenance
- Light Weight Gun - 470g Only



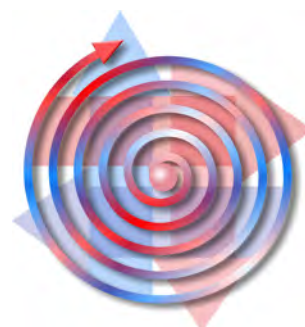
Round FRP Nozzle



Flat FRP Nozzle



Round Tin Nozzle

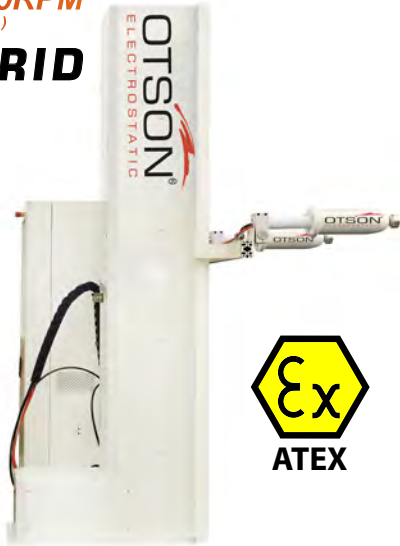


OTS-9000

Auto Electrostatic Spray Bell System

MAX 60000RPM
(no loading spray Cup)

HYBRID

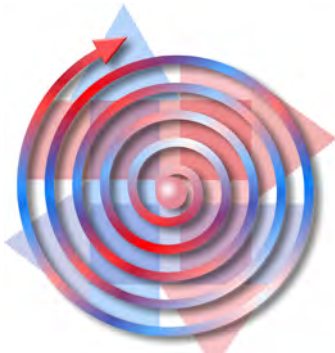


Solvent

Waterborne

DUAL Coating

H.E.T
High Efficiency Technology



The Spray Direction of High Atomized Nozzle

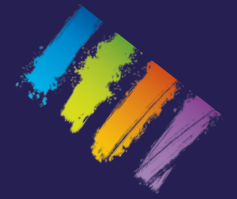
Special Design Bell Cup for all Spray Object



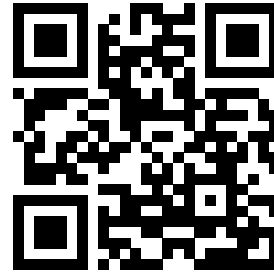
Features

- Dual Coating- Solvent and Waterborne Paint
- Improve Coating Quality
- Reduce Air Pollutions
- Reduce Water Pollutions
- High Transfer Efficiency - Spray Painting
- High Atomized Bell Nozzle
- Easy Handle for Long Term Operation
- Long Life Operation
- Low VOC Emissions
- Low Failure Rate and Easy





OTS-3000⁺



MANUAL
LIQUID ELECTROSTATIC SPRAY GUN

HYBRID



- * New Design Model
- * New LCD Panel
- * Adaptive Electrostatic Power
- * More Safety, Low Maintenance
- * High Transfer Efficiency
- * High Quality Finishing
- * Light Weight Gun



Solvent

Waterborne

DUAL
Coating

H.E.T
High Efficiency Technology

Innovative Technologies of

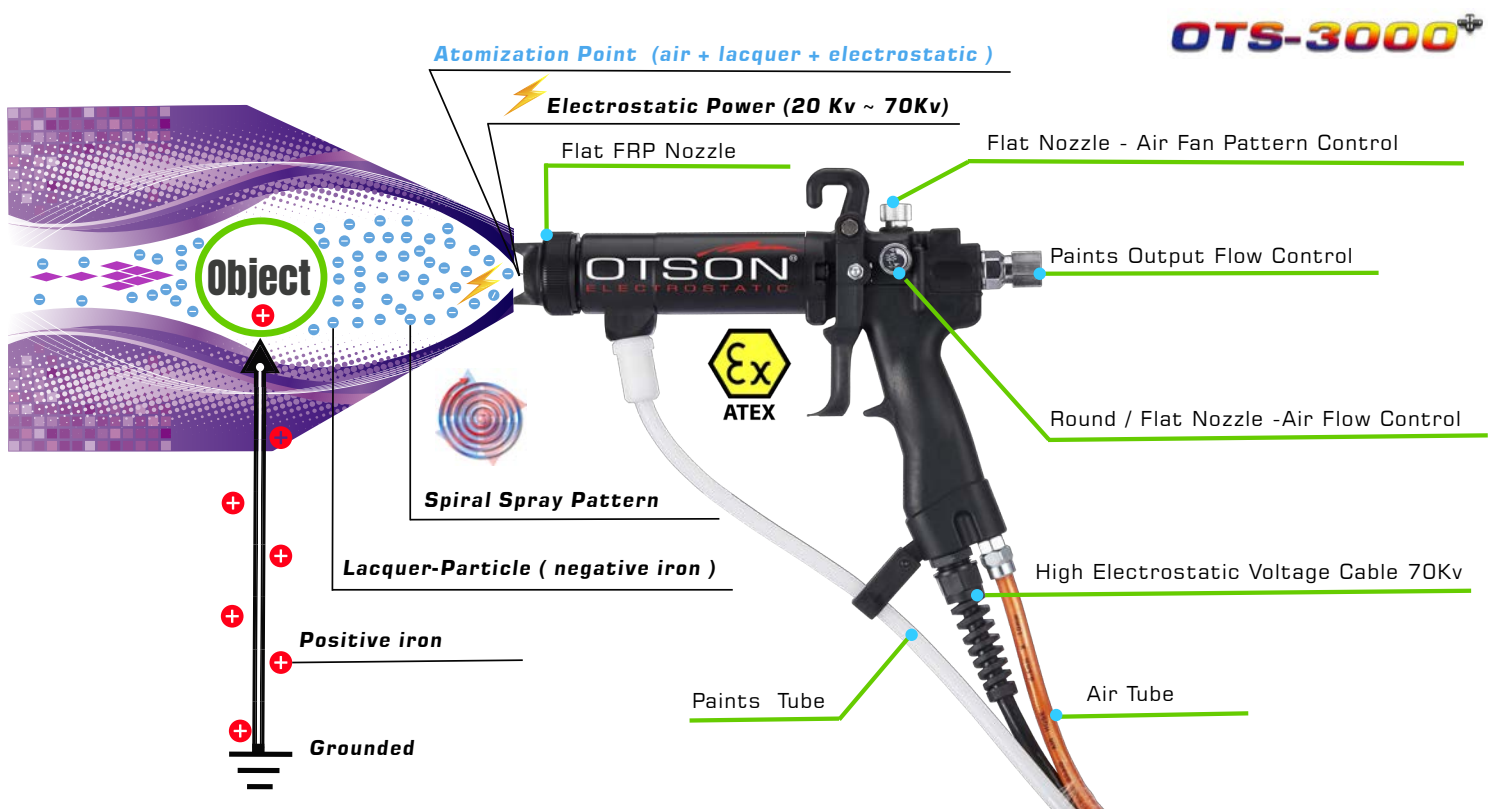
Liquid Electrostatic Coating Solutions

Overview

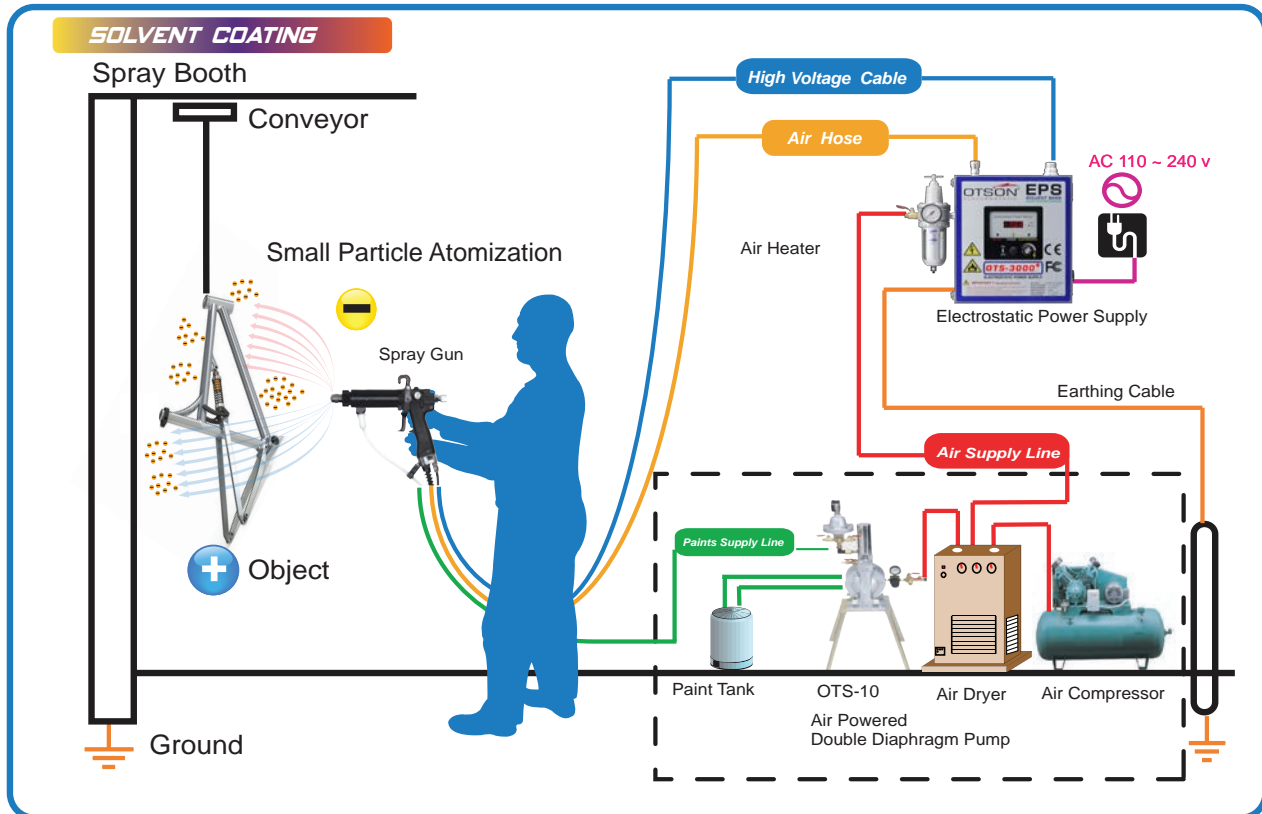
Manual liquid electrostatic spray guns, just like conventional spraying equipment, rely on air or high-pressure to atomize the lacquer. The particles of lacquer are then charged as they exit the nozzle. Different air nozzles cap and material, which create different spiral spray pattern, are available for OTSON liquid electrostatic spray guns.

These spiral effect reduces lacquer-particle velocity. Therefore the lacquer will be atomized. The technique involves applying a charge, usually negative, to the coating material as it is atomised. The negatively charged spray droplets are attracted to any earthed surface; if the workpiece is earthed, the negatively charged droplets are attracted preferentially to it.

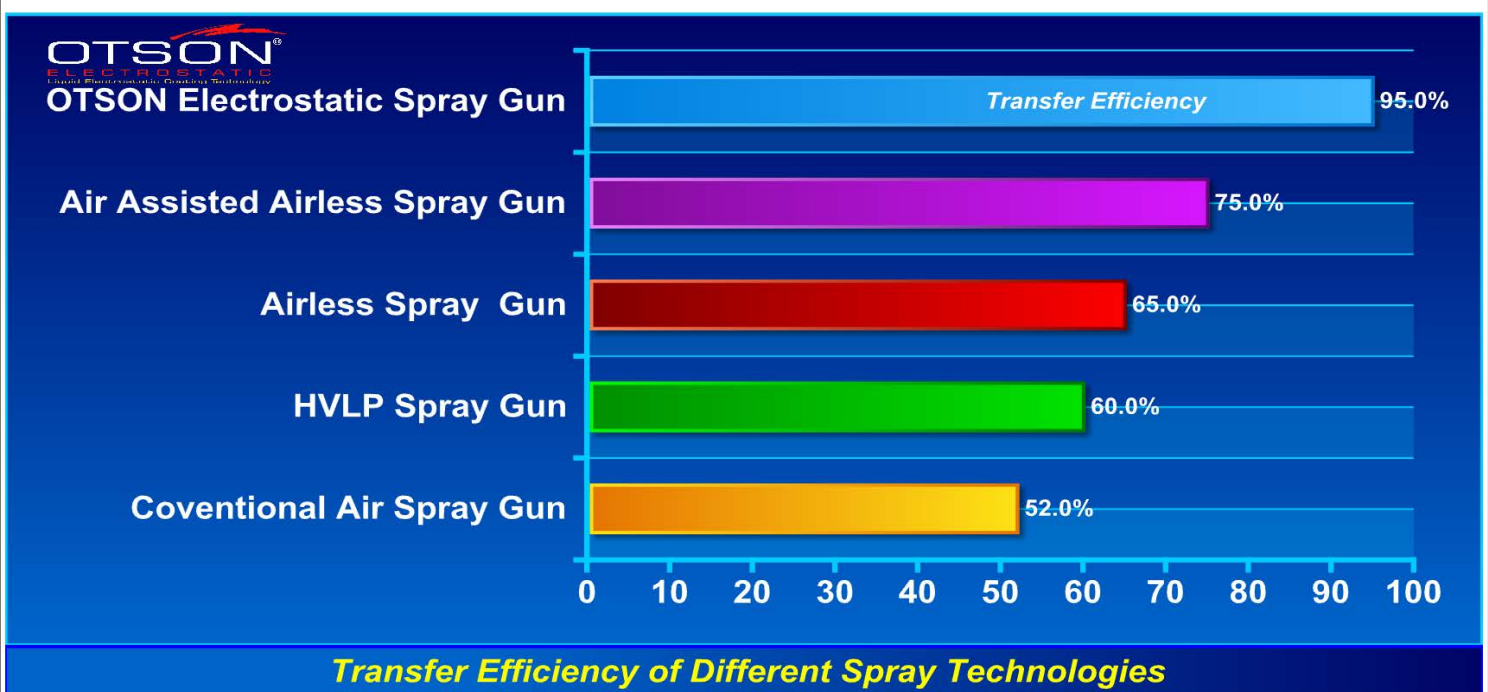
This effect is so powerful that, with some objects, coating spray can be observed to 'wrap around'. In this way, the purpose of the electrostatic coating is achieved which can offer transfer efficiency up to 95% and minimize the over spraying phenomenon obviously. OTSON is keeping researchs and developments in electrostatic equipment in last 40 years, the technologies of OTSON electrostatic can now also be used for waterborne paints ,solvent paints and lacquers.



OTS - 3000+ Manual Liquid Electrostatic Spray Gun contains the required standard equipment such as an air regulating valve, electrostatic power supply, electrostatic spray gun and Round (TIN) nozzle, one set each (Round (FRP) and Flat (FRP) nozzle are available for the customer's option). The above-said electrostatic spray gun in conjunction with the paints tank, double diaphragm pump, paint filter, paint stabilizing valve, air dryer and air compressor forms one complete set of manual liquid electrostatic spraying equipment for improving finishing quality and transfer efficiency.



OTS-3000+ Manual Liquid Electrostatic Spray System



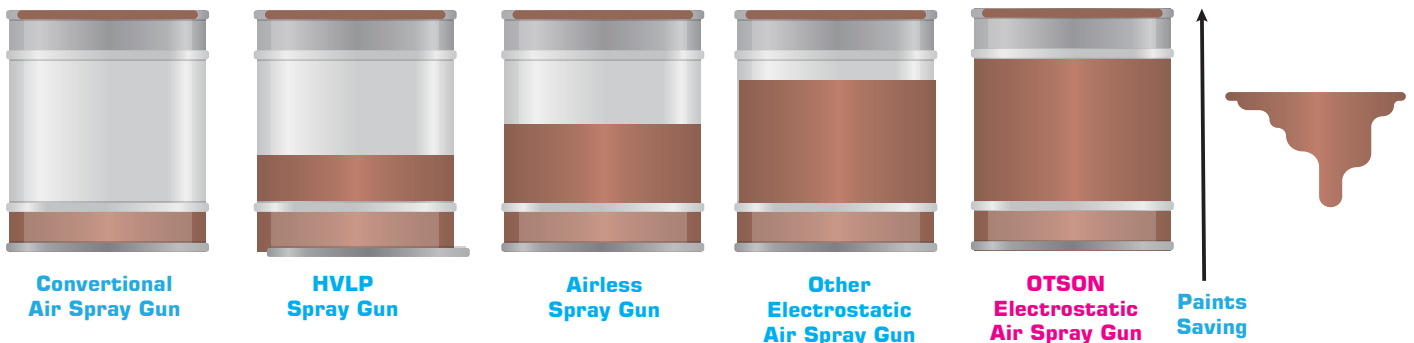
Benefits of Electrostatic Spray Technology

- Improve Finishing Quality
- Reduce Refinishing Work
- Time Savings
- Reduce Paint Wastage
- Material Savings



Reduce Paints Costs

OTSON
ELECTROSTATIC



Return-on-Investment (ROI)

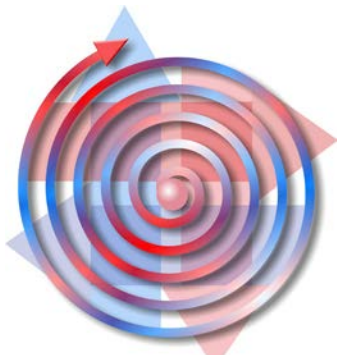
By replacing Conventional Air Spray gun with Auto Electrostatic Spray Bell System

	Typical	Calculate Your Own Application
Paint price per litre	USD 10	
	X	X
Litre Used per Day	100 litres	
	X	X
Business Days per Year	220 days	
Electrostatic Transfer Efficiency	95%	
Annual Savings	USD 209,000.00	

Features

HYBRID

- Dual Coating- *Solvent and Waterborne Paint*
- Improve Finishing Quality
- Reduce Air and Water Pollutions
- High Transfer Efficiency - *Spray Painting*
- High Atomized Nozzle
- Easy Handle for Long Term Operation
- Long Life Operation
- Low VOC Emissions
- Low Failure Rate and Easy Maintenance
- Light Weight Gun- *470g Only*



The Spray Direction of High Atomized Nozzle



Round Tin Nozzle(K)



Round Tin Nozzle(P)



Round (FRP) Nozzle



Flat (FRP) Nozzle

New Round Nozzles - All in One



1

**Small Spray
Round Pattern**



2

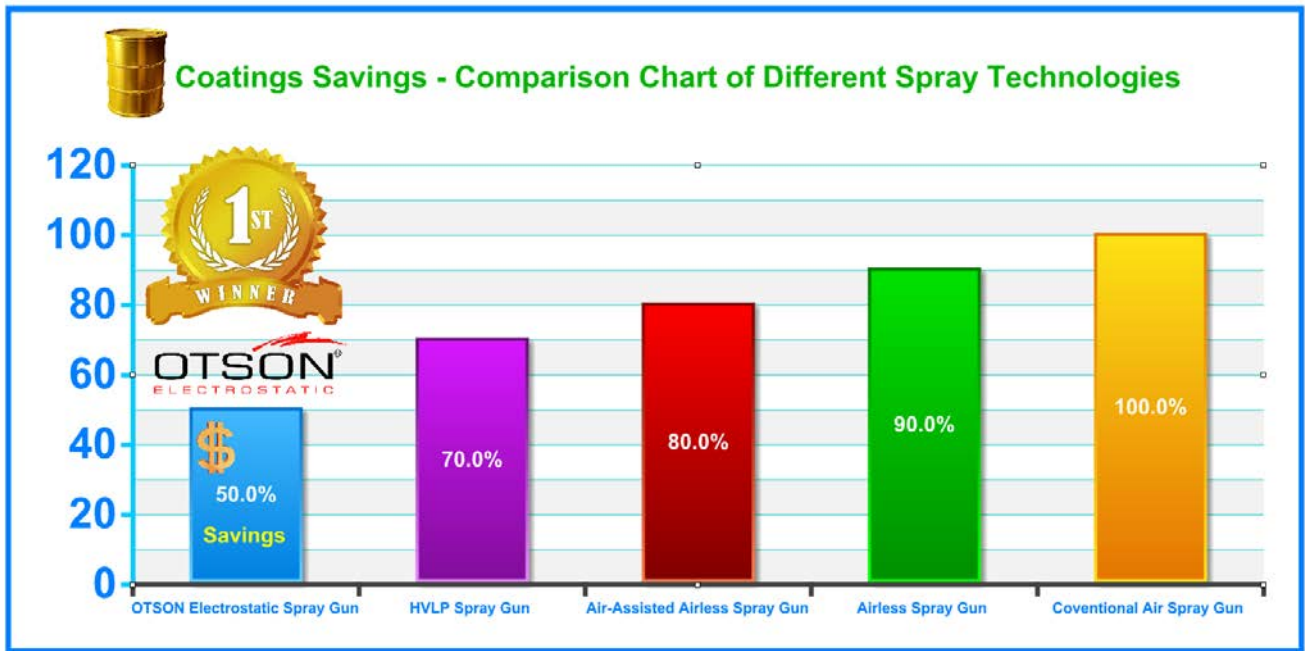
**Medium Spray
Round Pattern**



3

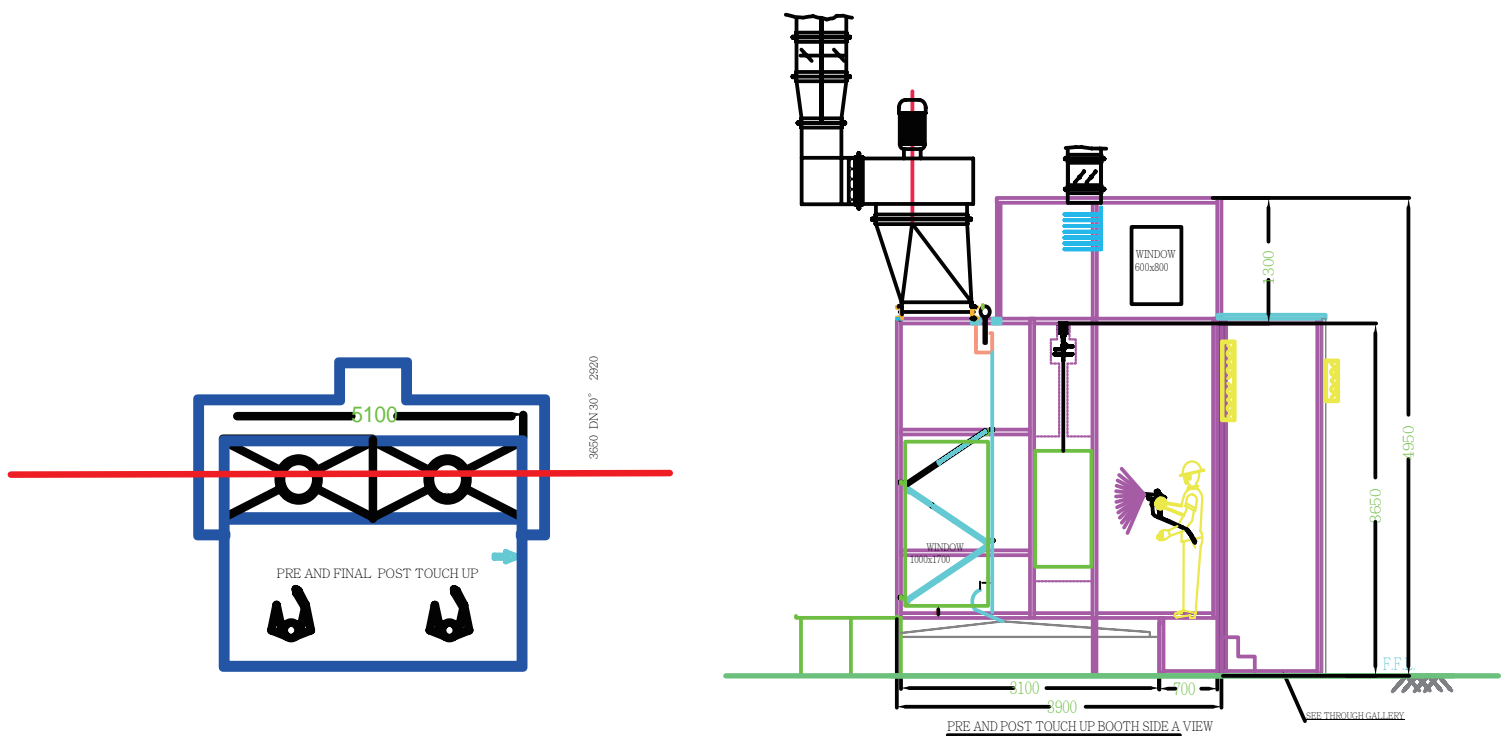
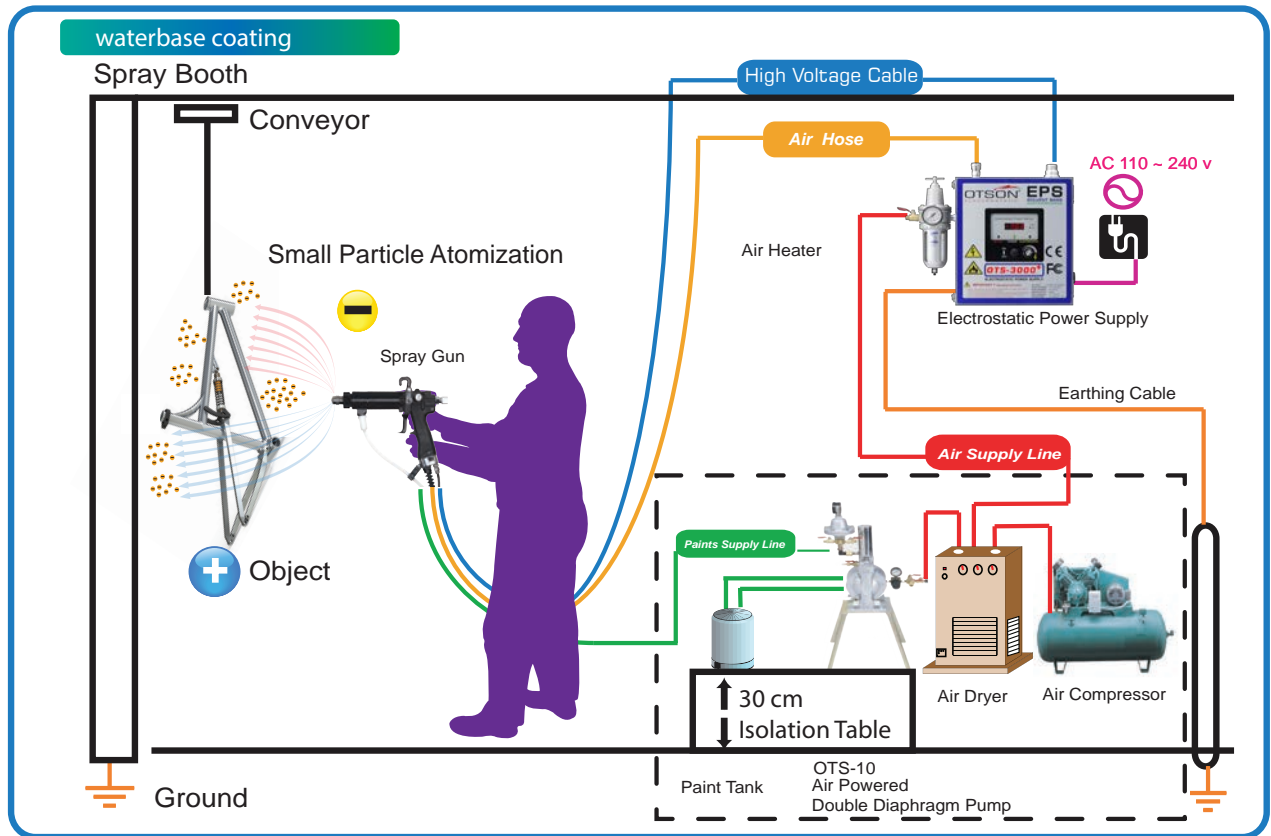
**Large Spray
Round Pattern**





Dual Coating for Solvent and Waterborne Paints







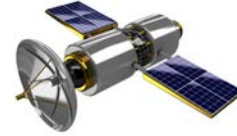
Dry Spray Booth



Water Curtin Spray Booth



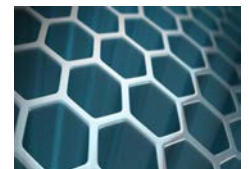
Application - Industry



*Meeting the requirements
of each industry....*



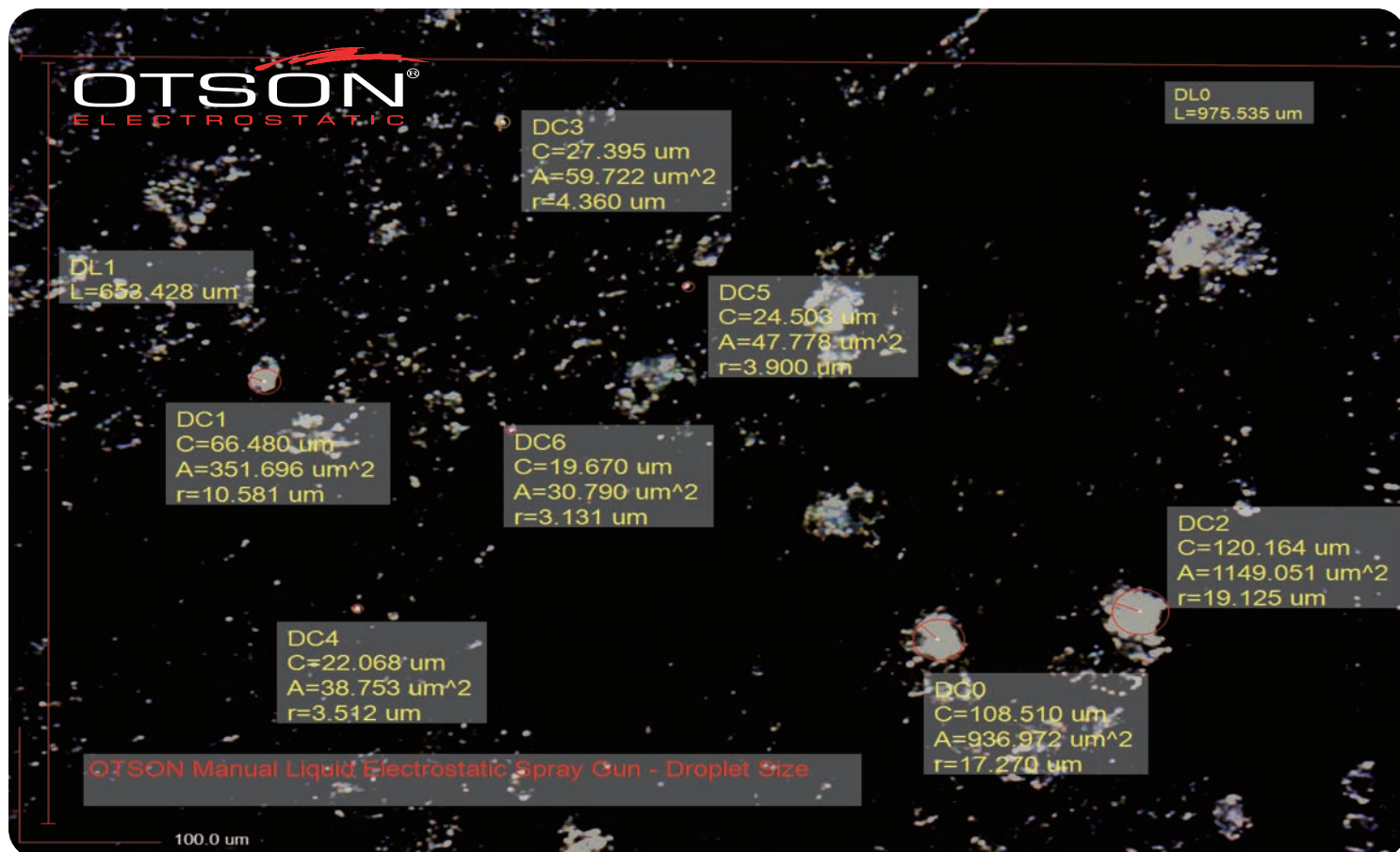
OTS - 3000+
Manual Liquid Electrostatic Spray Gun

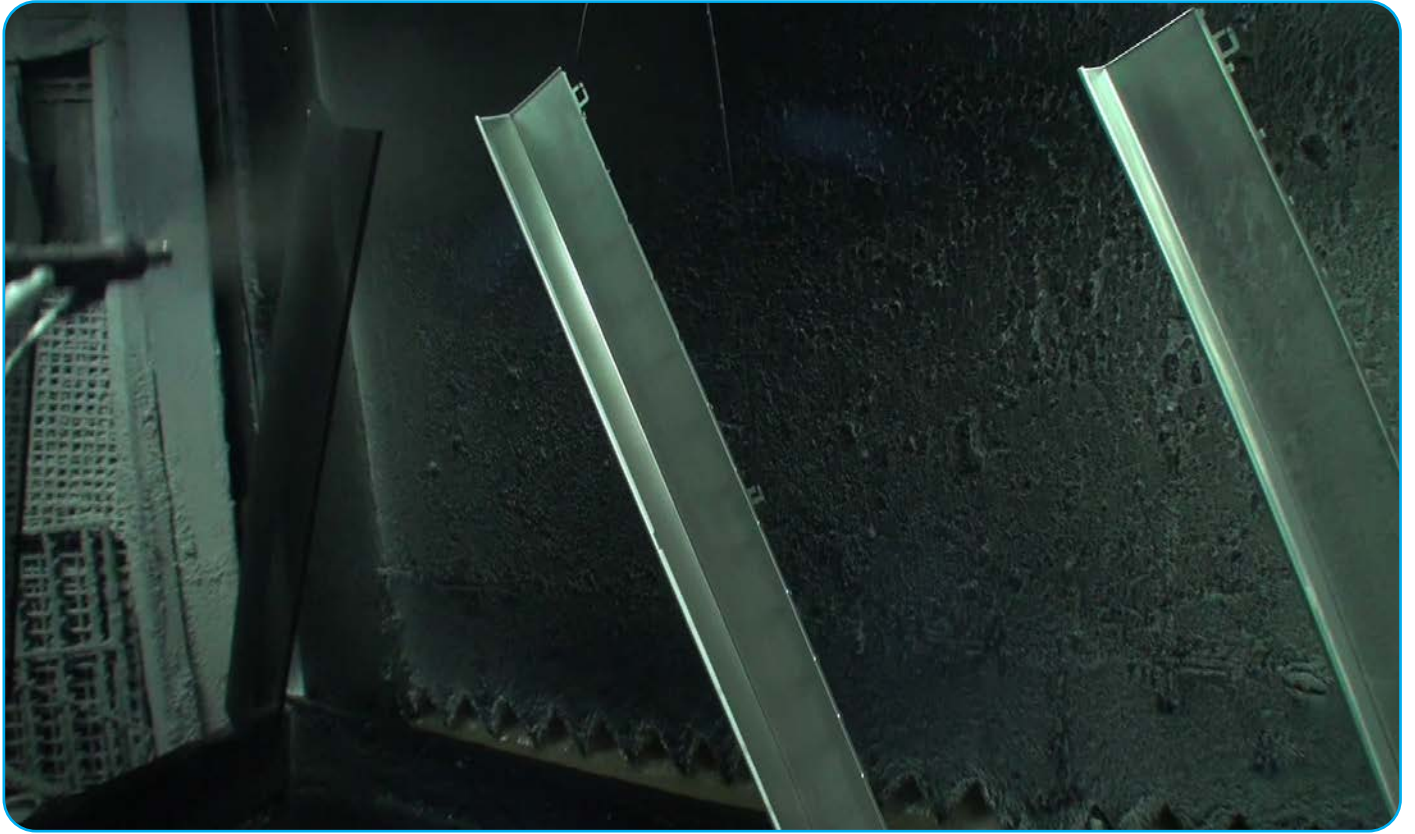


Metallic Spray Painting



Waterborne Spray Painting





Home Theater Speaker Mesh Cover



Windows Fences



Air Compressor Tank



Wood Chair



Application - Spray Range



Specification

Liquid Electrostatic Spray Gun

Input Voltage	0~70KV DC(-)
Gun Length	225 mm
Gun Weight *(no nozzle , hv cable ,spraying tube and air tube)	470 g
Fluid and Air Pressure	0 ~ 7 kg/cm ² (6.86 bar) (0~100) psi
Operating Pressure	Air Supply
Coatings	Solvent-base & Waterborne Coatings



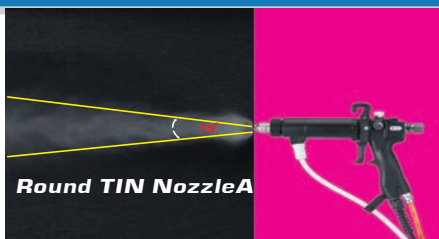
Electrostatic Power Supply

Out Voltage	0~70KV DC(-)
Out Current	50 microamperes
Input Voltage	110 V~240 V AC (50/60 Hz)
Intercepting current	20~150 microamperes
Weight	12 kg
Dimensions	300(L)x120(W)x350(H) mm



Round (TIN) Nozzle - K type

Gauge :	12 mm
Atomization air pressure :	4 ~ 6 Bar
Flow Rate :	20 ~ 300 ml/min
Fan pattern width :	40 ~150 mm
Air :	180 NI / min



Round (TIN) Nozzle - P type

Gauge :	22 mm
Atomization air pressure :	4 ~ 6 Bar
Flow Rate :	20 ~ 300 ml/min
Fan pattern width :	70 mm
Air :	180 NI / min



Round (FRP) Nozzle

Gauge :	12 mm
Atomization air pressure :	4 ~ 6 Bar
Flow Rate :	50 ~ 300 ml/min
Fan pattern width :	160 mm
Air :	180 NI / min



Flat (FRP) Nozzle

Gauge :	3 mm
Atomization air pressure :	4 ~ 6 Bar
Flow Rate :	100 ~ 400 ml/min
Fan pattern width :	300 mm
Air :	180 NI / min



Support Equipment



OTS-10

AIR

POWERED DOUBLE DIAPHRAGM PUMP



Insulation Box for water based paints



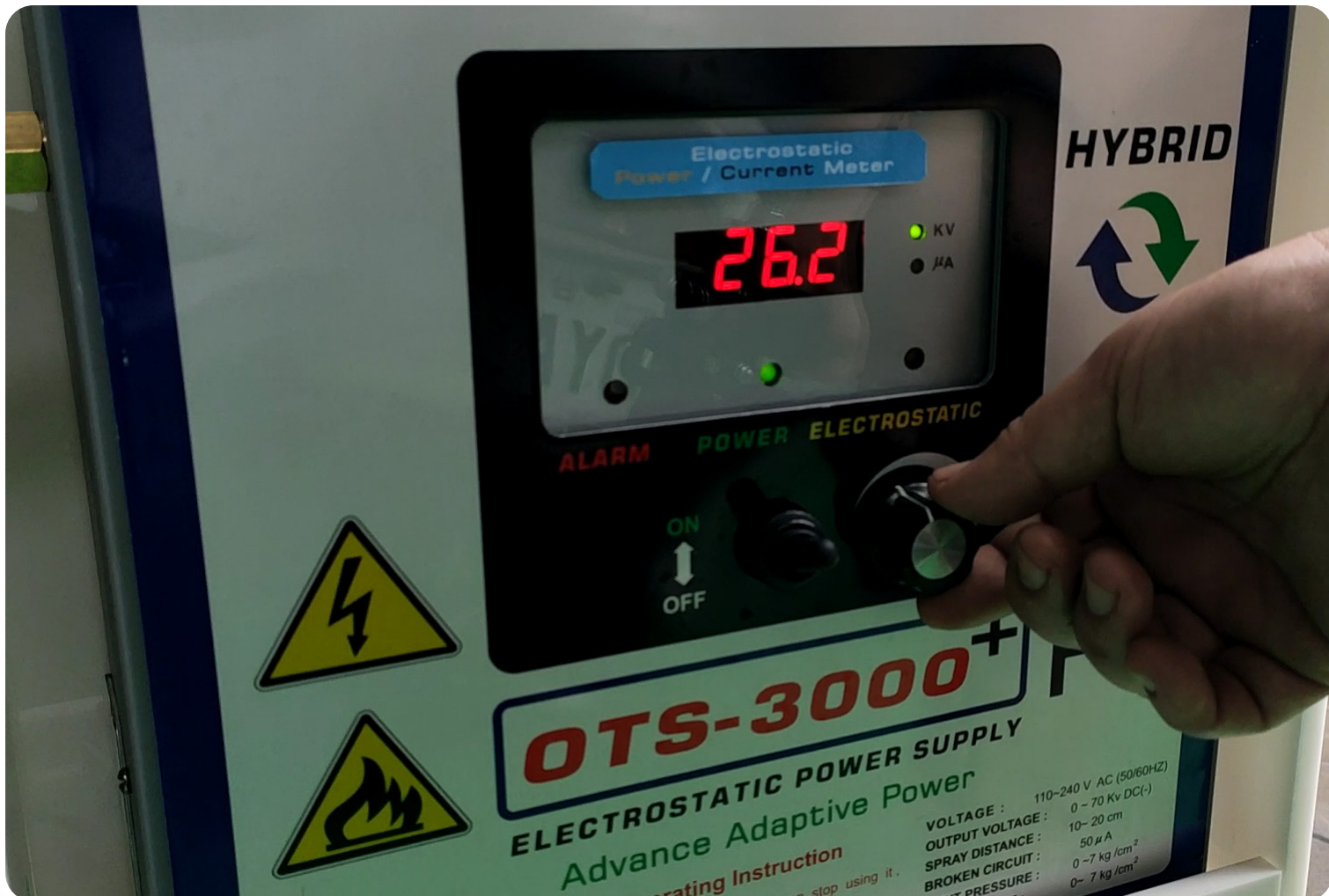
Big Type A



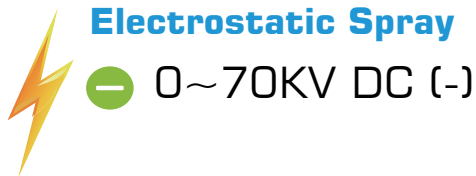
Small Type B



Adjustable Electrostatic (0 ~ 70 KV) (-) DC



OTSON
ELECTROSTATIC



Electrostatic Spray

0~70KV DC (-)



*High quality Air Compressor

1.5 hp ~ 10 hp
3 ~ 30 Gallons / 11 ~ 111 Liters Tank
100 PSI ~ 175 PSI

Air Filter (Stage 2) for Electrostatic Sprayer

H: 835 mm / 32.87 inch

Electrostatic Spray Gun

Electrostatic Power Supply

Air Powered Double Diaphragm Pump

High-strength Handcart



*Paint Tank (20 liters / 5.28 Gallons)

*Air Filter (Stage 1) for Air Compressor

L: 1200 mm / 47.24 inch

Transformer

Polypropylene Dolly- Max 200 kg / 400 lb Capacity x 2 pcs

8 x Wheels -Easy Move

W: 405 mm / 15.94 inch

Solvent

Waterborne

**DUAL
Coating**

**H.E.T
High Efficiency Technology**

OTS-3000-G7

Liquid Electrostatic Spray Gun

Note: OTSON does not offer an air compressor, paint tank, and stage 1 air filter, the customer can buy from the local distributor or online store. It will help the customer get secure service and spare parts of air compressor and filter.

OTS-3000-G7

Liquid Electrostatic Spray Gun

H: 835 mm / 32.87 inch

Air Filter (Stage 2) for Electrostatic Sprayer



Electrostatic Sprayer

0~70KV DC (-)

Electrostatic Spray Gun

Electrostatic Power Supply

Air Powered Double Diaphragm Pump

High-strength Handcart

*Paint Tank (20 liters / 5.28 Gallons)

*Air Filter (Stage 1) for Air Compressor

*High quality Air Compressor

1.5 hp ~ 10 hp
3 ~ 30 Gallons / 11 ~ 111 Liters Tank
100 PSI ~ 175 PSI

L: 600 mm / 23.62 inch

Transformer

Polypropylene Dolly- Max 200 kg / 400 lb Capacity x 2 pcs



ATEX

W: 910 mm / 35.82 inch

8 x Wheels -Easy Move

Note: OTSON does not offer an air compressor, disinfection tank, and stage 1 air filter, the customer can buy from the local distributor or online store. It will help the customer get secure service and spare parts of air compressor and filter.



Ordering Information

OTS-3000+ G7 Manual Liquid Electrostatic Spray Gun

Model	Manual Spray Gun (70kv)	Electrostatic Power Supply	Round TIN (K) Nozzle	Round TIN (P) Nozzle	Round FRP Nozzle	Flat FRP Nozzle	H.V Cable (5.0 m - 70kv) Teflon Spraying Tube (6.0 m) PU Air Tube (5.0 m)	H.V Cable (6.5 m - 70kv) Teflon Spraying Tube (7.5 m) PU Air Tube (6.5 m)	H.V Cable (10.0 m - 70kv) Teflon Spraying Tube (11.0 m) PU Air Tube (10.0 m)	Tool box
Standard										
OTS-3000+G7-SF	⊙	⊙			⊙		⊙			⊙
OTS-3000+G7-SF-A	⊙	⊙			⊙			⊙		⊙
OTS-3000+G7-SF-B	⊙	⊙			⊙				⊙	⊙
OTS-3000+G7-STP	⊙	⊙		⊙			⊙			⊙
OTS-3000+G7-STP-A	⊙	⊙		⊙				⊙		⊙
OTS-3000+G7-STP-B	⊙	⊙		⊙					⊙	⊙
OTS-3000+G7-STK	⊙	⊙	⊙				⊙			⊙
OTS-3000+G7-STK-A	⊙	⊙	⊙					⊙		⊙
OTS-3000+G7-STK-B	⊙	⊙	⊙						⊙	⊙
OTS-3000+G7-SL	⊙	⊙				⊙	⊙			⊙
OTS-3000+G7-SL-A	⊙	⊙				⊙		⊙		⊙
OTS-3000+G7-SL-B	⊙	⊙				⊙			⊙	⊙
Accessories										
OTS-14-B	Isolation Box for water base coating									
OTS-14-A	Isolation Box for water base coating									
OTS-12	Air Powered Double Diaphragm Pump 1/2"									
OTS-10	Air Powered Double Diaphragm Pump 3/8"									
OTS-7	Electrostatic Power Meter									
OTS-3	Conductivity Meter									
OTS-5	Ground Rod									

Options HV Cable ,Teflon Spraying Tube and Air Tube Lengths : 15m, 20m, 25m, 30m, 35m and 40m

Round (FRP) Nozzle	Round (TIN)Nozzle -K	Round (TIN)Nozzle -P	Flat (FRP)Nozzle
			
Part No : 3000AF	Part No : 3000ATK	Part No : 3000ATP	Part No : 3000AL

*The appearance of all products, detail, figure and specification are subject to change at any time without notice.

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Tel : 886+2+2659-7162 Fax : 886+2+8192-6058

Series 5000

DISK ELECTROSTATIC
AUTO COATING SYSTEM

MAX 60000RPM
(no loading spray disk)

HYBRID

2K/3K WATERBASED

2K/3K SOLVENT



AUTOMATION



INTERNET OF
THINGS



SMART
PRODUCTION



GREEN ENERGY



SMART
FACTORY



CYBER SECURITY



ARTIFICIAL
INTELLIGENCE

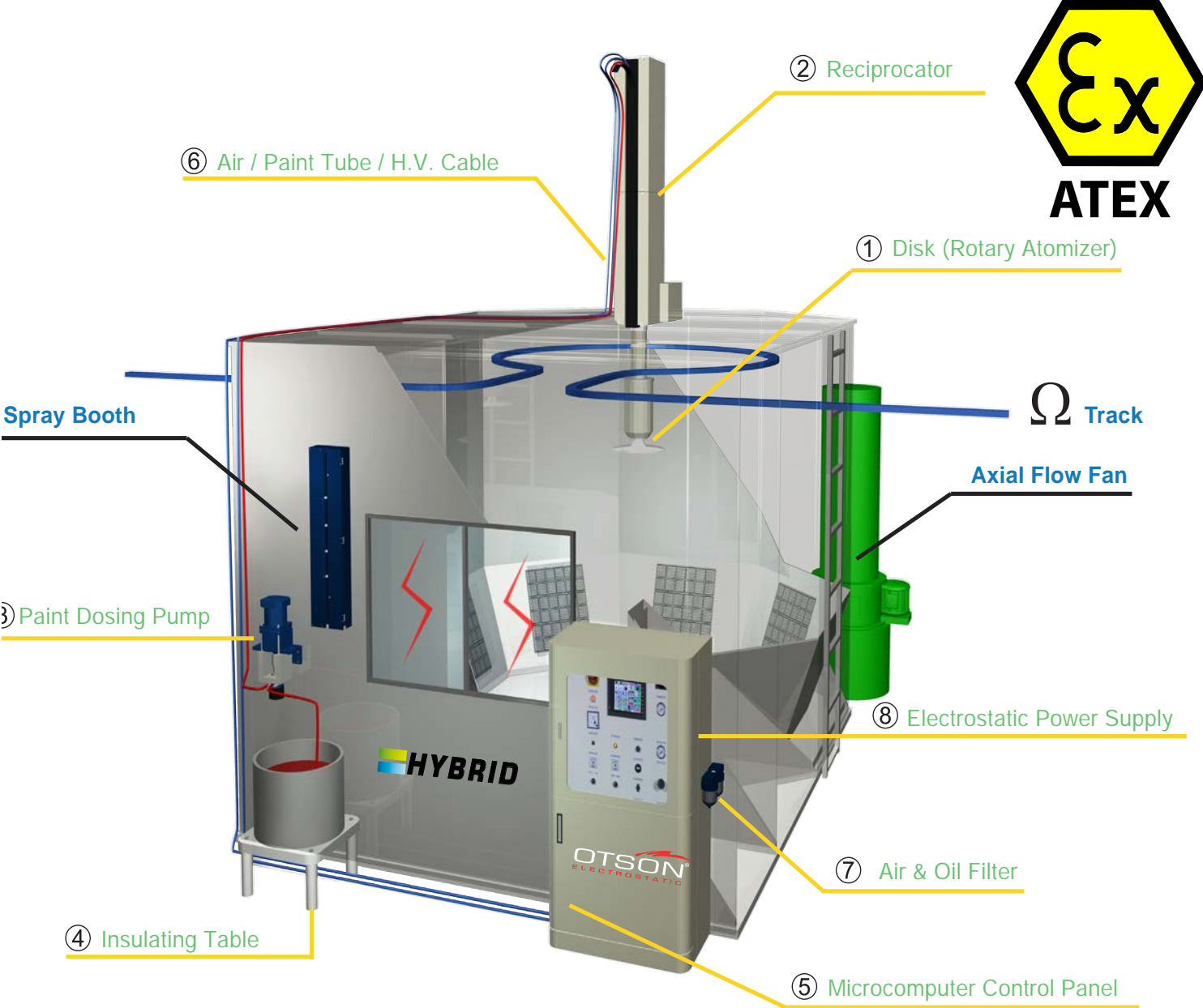


MACHINE
LEARNING

Overview

OTSON auto electrostatic Disk (Disc) spray system is a cutting-edge solution for applying coatings and paints in potentially explosive environments. As a manufacturer of OTSON auto electrostatic Disk (Disc) spray system, it is important to highlight the unique benefits and advantages of your product to potential customers. The system is designed to be safe and compliant, and it is certified by ATEX, which is the standard for equipment and protective systems intended for use in potentially explosive atmospheres.

One of the key benefits of OTSON auto electrostatic Disk (Disc) spray system is its ability to cover a larger area in a shorter amount of time than traditional electrostatic spray guns, which can result in increased production rates for your customers. Additionally, the system is designed with easy maintenance in mind, making it a reliable choice for busy industrial environments.



**Dual Coating for
Solvent and Waterborne Paint**

2K/3K WATERBASED

2K/3K SOLVENT



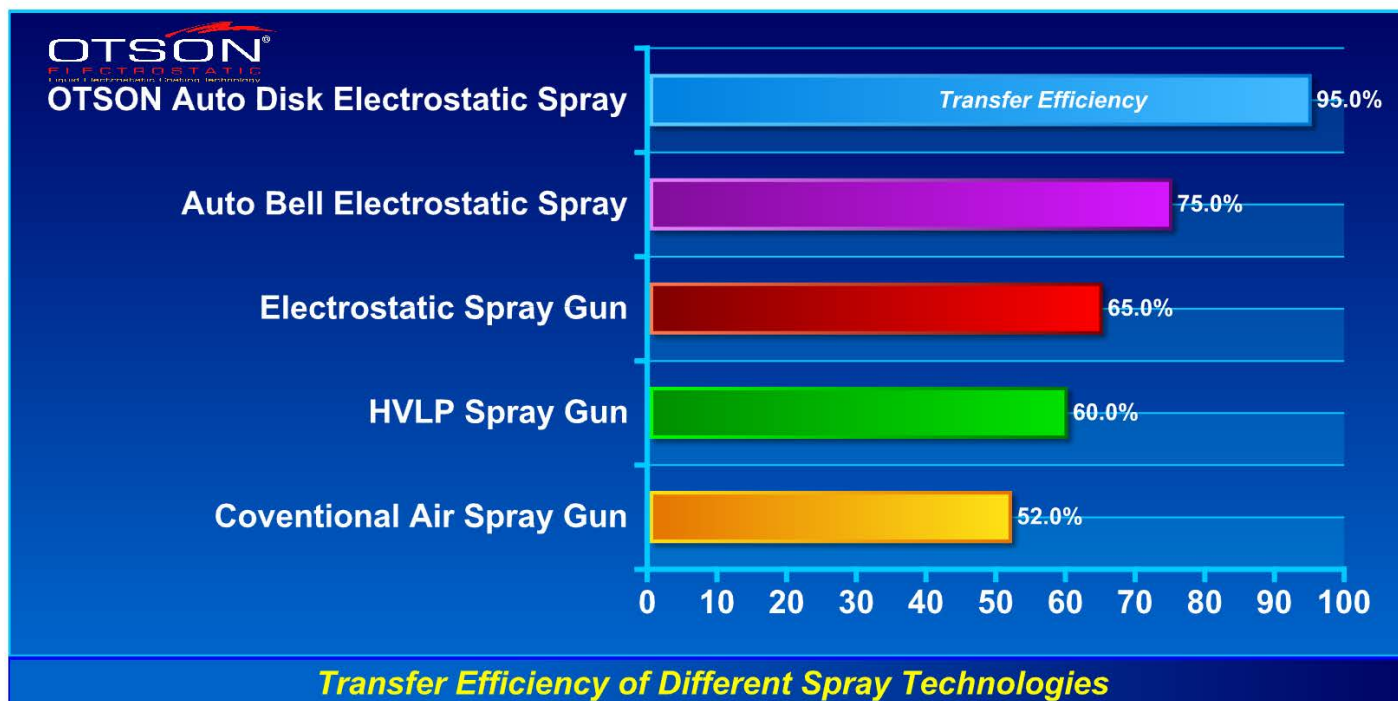
Our system can handle a wide range of coatings and paints, including 2K and water-based paints, which can open up new possibilities for your customers. Furthermore, the OTSON auto electrostatic Disk (Disc) spray system is designed to reduce CO2 emissions and overspray, which can help to save cost and be more environmentally friendly.

The system includes the Twin Turbine Atomizer, which is designed to provide uniform coating thickness and fine atomization, which can reduce overspray and paint waste. The quick-disconnect features of the atomizer and the disks allow for easy maintenance and reduced downtime. The system also includes a fully automated control panel that provides high production rates and reduces labor cost. The control panel gives operators total control flexibility and allows the operator to change process parameters, not only between batches, but also within the same part. The simplified user interface control panel is capable of recording ten different coating parameters which is beneficial to apply in various objects easily and efficiently.

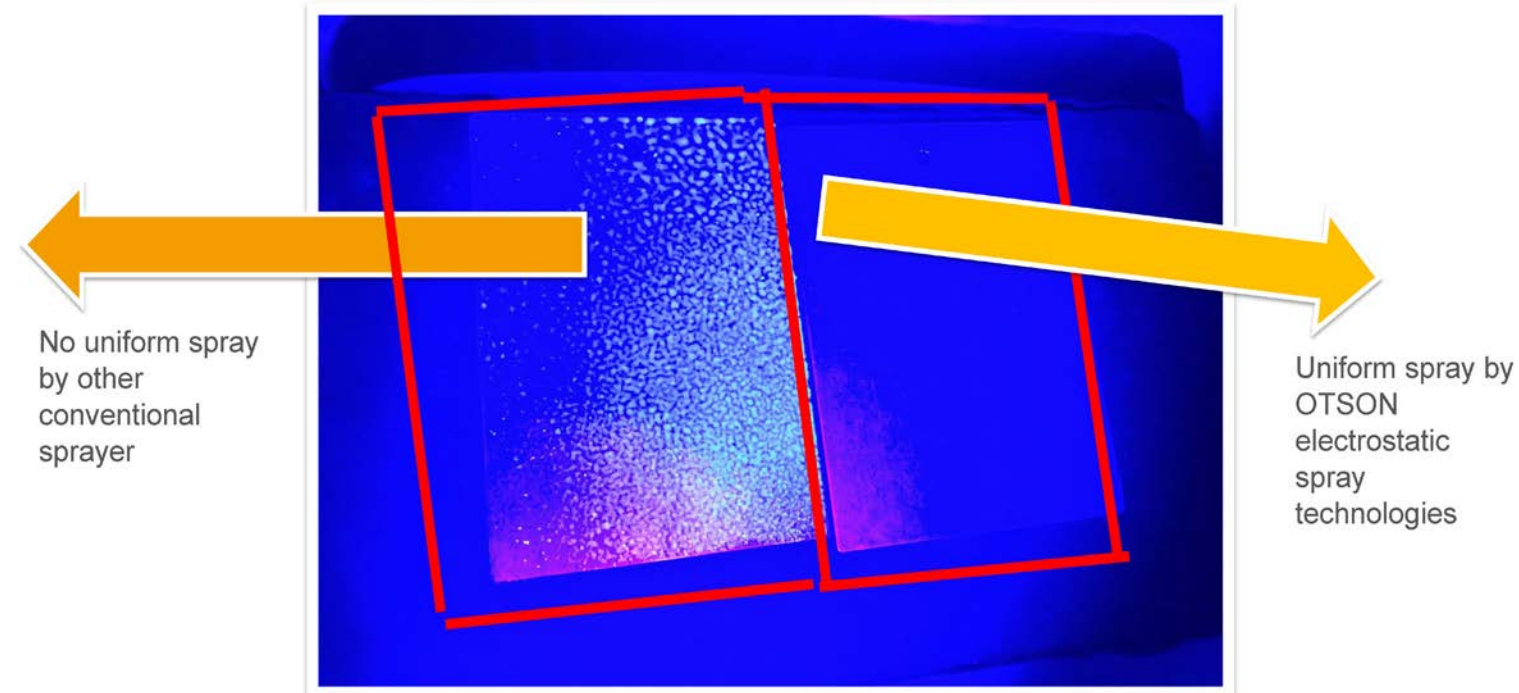


Features

- **Dual Coating-** Solvent and Waterborne Paint
- **Improving Coating Quality-** Uniform Film Thickness
- **Good Edge Cover-** High quality atomisation and coating finish
- **Reducing Coatings Cost-** High Transfer Efficiency
- **Good Wraparound-** Very little over spray and no bounce back
- **Low VOC** (volatile organic compounds) **Emissions** - Reducing Air Pollutions
- **Reducing Water Pollutions**
- **High Production Rates.**
- **Long Life Operation**
- **Low Failure Rate**
- **Easy Maintenance**



The OTSON Disk (Disc) electrostatic spray system can significantly improve the spraying quality and production while reducing the paint consumption, the waste discharge and the maintenance cost. Because of the highly atomized live paint grains, the film is uniformly and smoothly coated on the workplace which has reduced the orange tissue effect and improved the coating layer quality.



Uniform Coating Quality



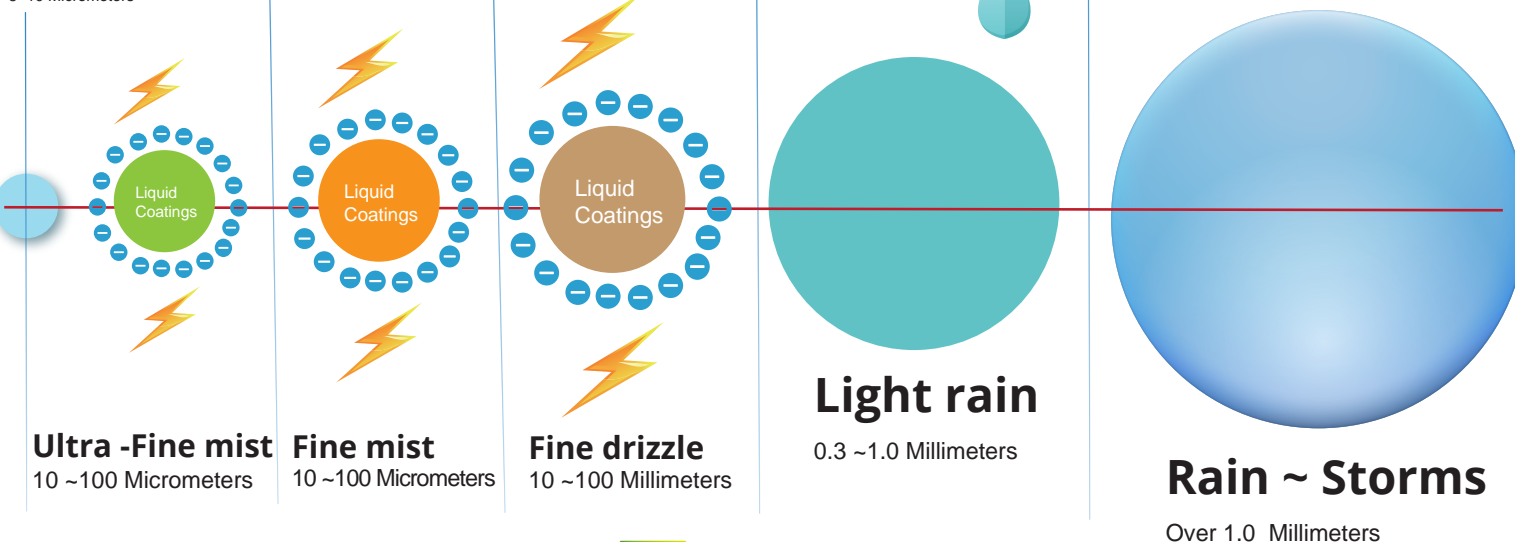


Different coatings thicknesses by OTSON Electrostatic Spray System

Classification of Electrostatic Spray Droplet / Particle Size

5 Micrometers 10 Micrometers 100 Micrometers 300 Micrometers 1000 Micrometers

Aerosol
5~10 Micrometers



5.0~ 300.0 Micrometers **HYBRID**

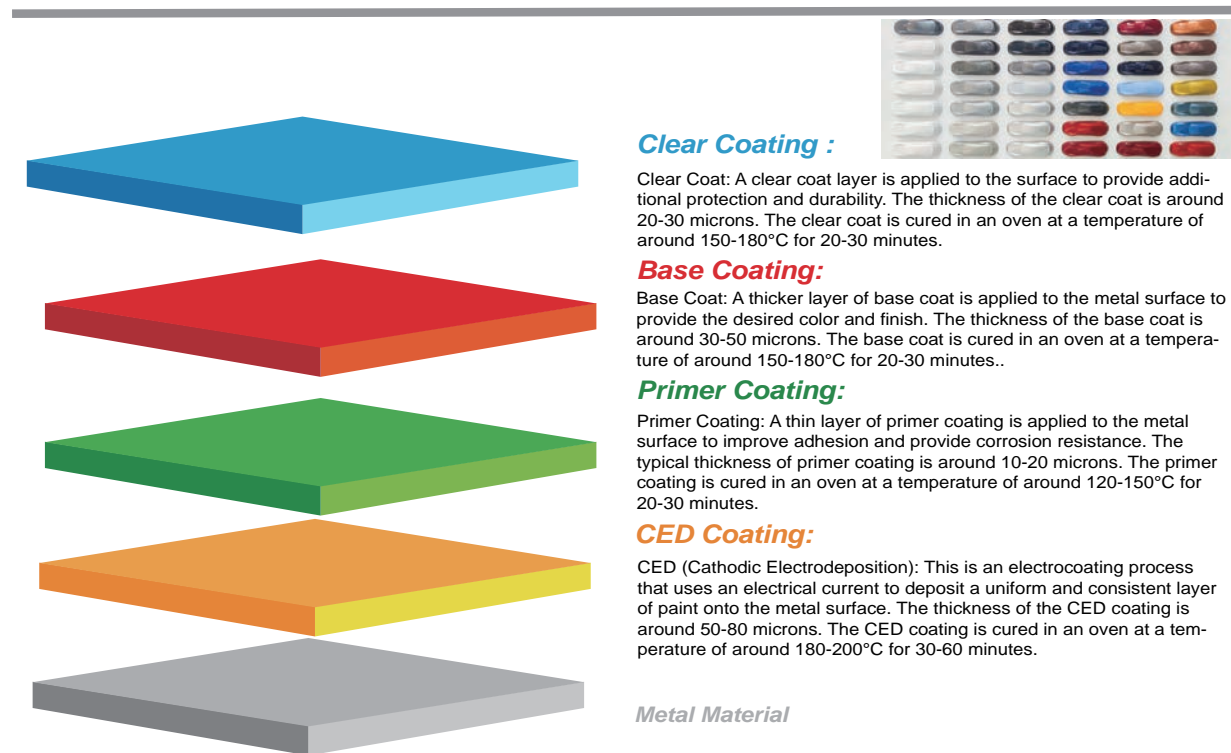
Waterbase Coatings

Solvent Coatings

Auto DISK (Disc) Electrostatic Spray

Series 5000

The metal industry typically requires a multi-layer liquid coating system to provide protection and enhance the appearance of metal surfaces. The thickness of each layer depends on the specific requirements of the metal surface, but a typical sequence of layers for metal industry would include the following:



Clear Coating :

Clear Coat: A clear coat layer is applied to the surface to provide additional protection and durability. The thickness of the clear coat is around 20-30 microns. The clear coat is cured in an oven at a temperature of around 150-180°C for 20-30 minutes.

Base Coating:

Base Coat: A thicker layer of base coat is applied to the metal surface to provide the desired color and finish. The thickness of the base coat is around 30-50 microns. The base coat is cured in an oven at a temperature of around 150-180°C for 20-30 minutes..

Primer Coating:

Primer Coating: A thin layer of primer coating is applied to the metal surface to improve adhesion and provide corrosion resistance. The typical thickness of primer coating is around 10-20 microns. The primer coating is cured in an oven at a temperature of around 120-150°C for 20-30 minutes.

CED Coating:

CED (Cathodic Electrodeposition): This is an electrocoating process that uses an electrical current to deposit a uniform and consistent layer of paint onto the metal surface. The thickness of the CED coating is around 50-80 microns. The CED coating is cured in an oven at a temperature of around 180-200°C for 30-60 minutes.

Metal Material

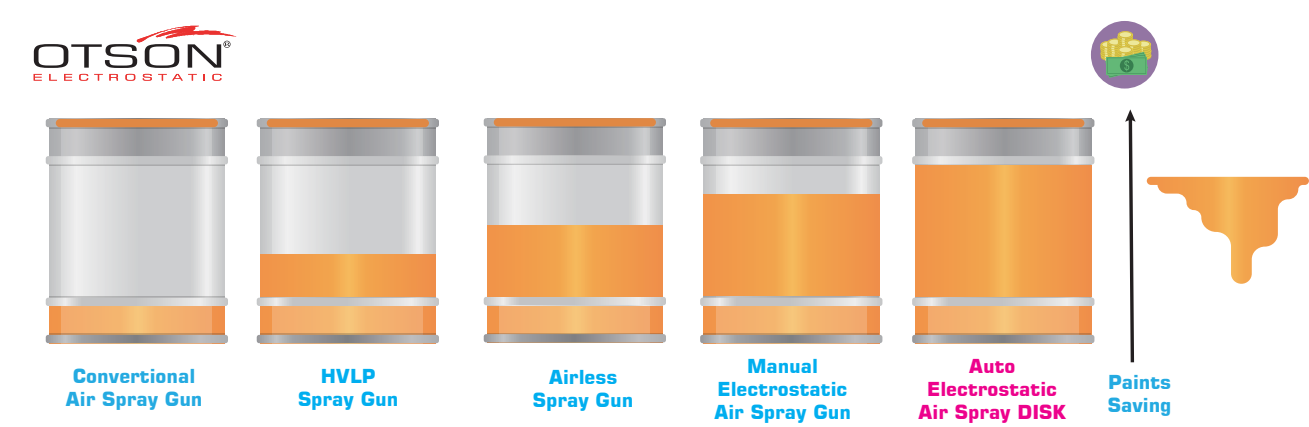
- **Surface Preparation:** The metal surface is cleaned and treated to remove any dirt, oil, or other contaminants that may affect the adhesion of the coating. The surface may be sandblasted, degreased, or chemically cleaned
- **CED (Cathodic Electrodeposition):** This is an electrocoating process that uses an electrical current to deposit a uniform and consistent layer of paint onto the metal surface. The thickness of the CED coating is around 50-80 microns. Curing time and temperature: The CED coating is typically cured in an oven at a temperature of around 80-120°C for 15-30 minutes.
- **Primer Coating:** A thin layer of primer coating is applied to the metal surface to improve adhesion and provide corrosion resistance. The typical thickness of primer coating is around 10-20 microns. Curing time and temperature: The primer coating is typically cured in an oven at a temperature of around 80-120°C for 15-30 minutes.
- **Base Coat:** A thicker layer of base coat is applied to the metal surface to provide the desired color and finish. The thickness of the base coat is around 30-50 microns. Curing time and temperature: The base coat is typically cured in an oven at a temperature of around 80-120°C for 15-30 minutes.
- **Clear Coat:** A clear coat layer is applied to the surface to provide additional protection and durability. The thickness of the clear coat is around 20-30 microns. Curing time and temperature: The clear coat is typically cured in an oven at a temperature of around 80-120°C for 15-30 minutes.
- **Final Inspection:** The coated metal parts are inspected to ensure they meet quality standards and customer specifications.

These layers are applied using liquid electrostatic spray equipment, which is capable of atomizing the coating materials into fine particles for precise and efficient application. The thickness of each layer can be adjusted based on the specific requirements of the metal surface and the desired end result.

Benefits of Electrostatic Spray Technology

- Improve Finishing Quality
- Reduce Refinishing Work
- Time Savings
- Reduce Paint Wastage
- Material Savings

Reduce Paints Costs

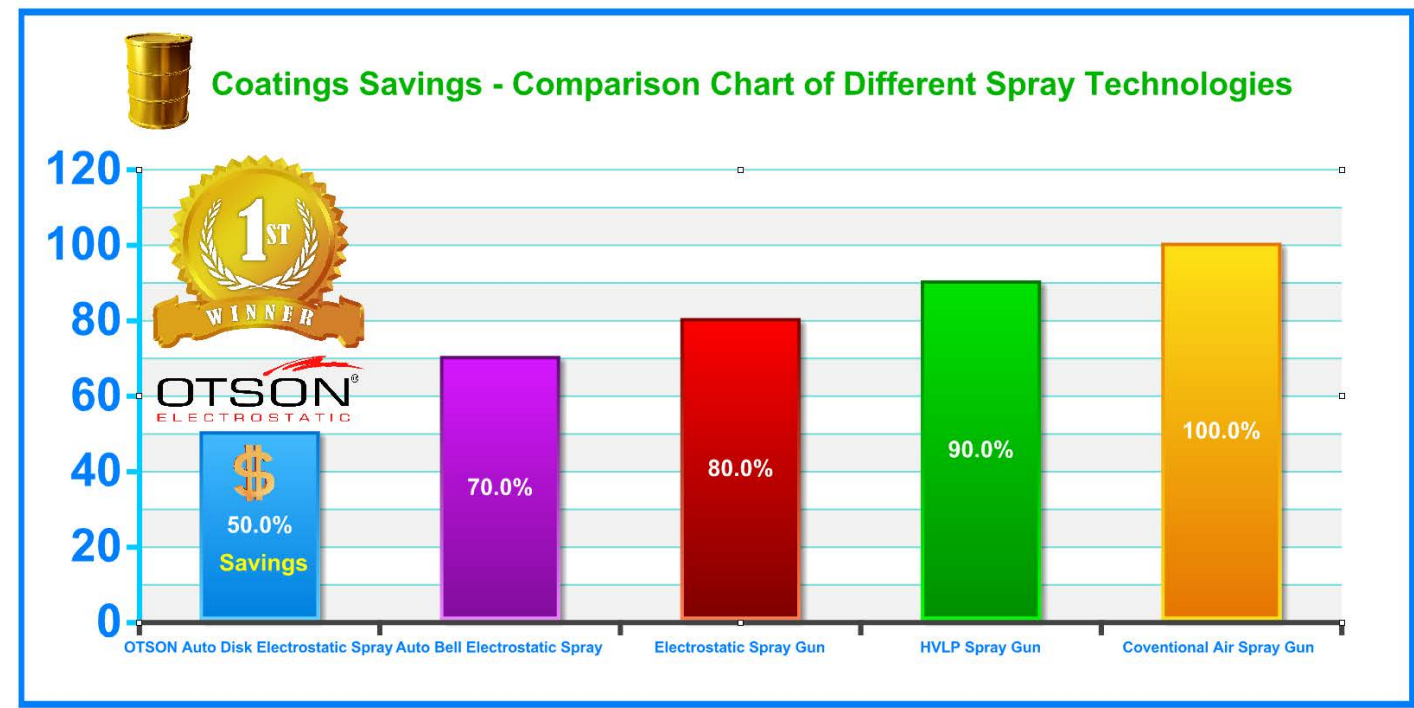


Return-on-Investment (ROI)

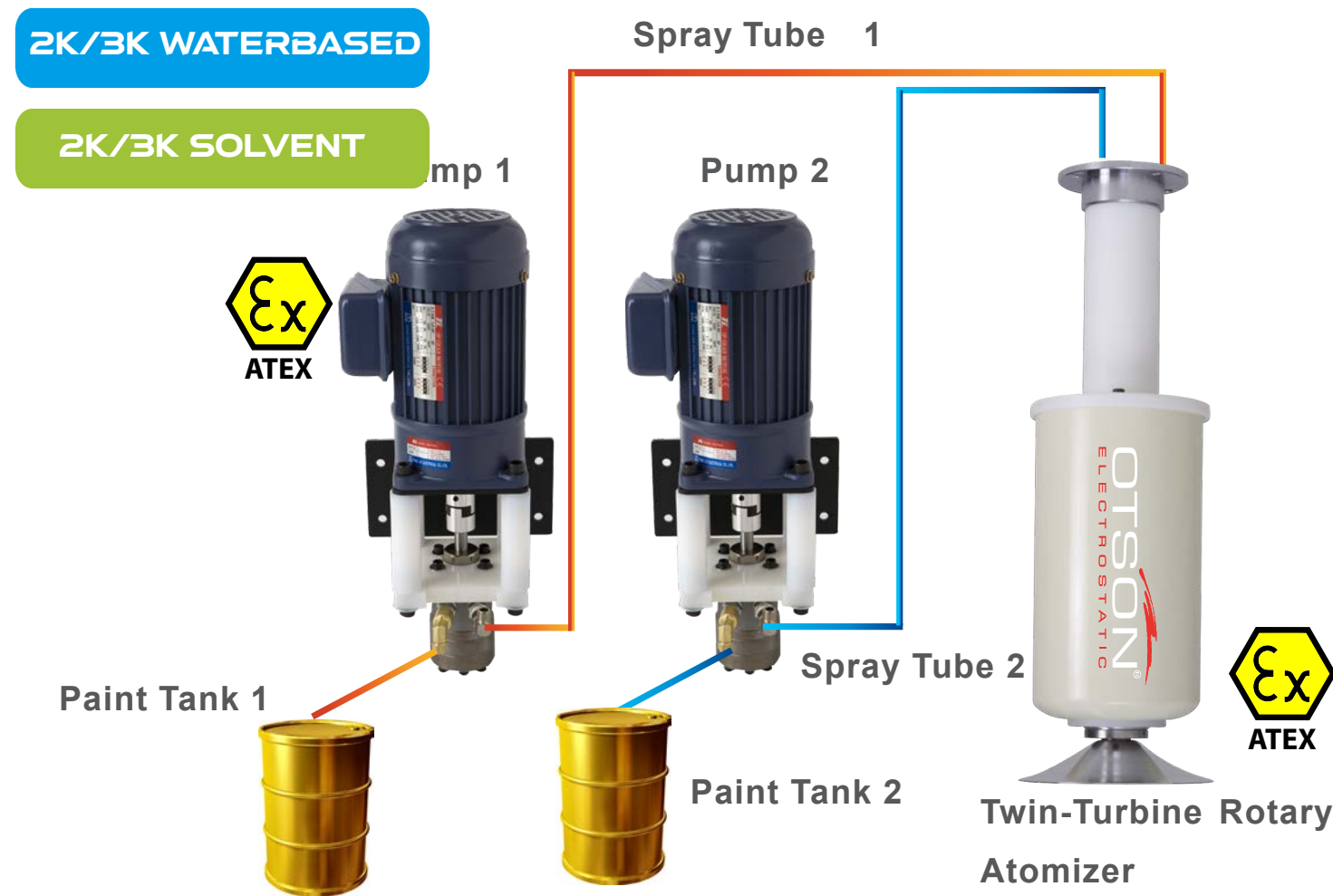
By replacing Conventional Air Spray gun with Auto Electrostatic Spray Disk (Disc) System

	Typical	Calculate Your Own Application
Paint price per litre	USD 10	
	X	X
Litre Used per Day	100 litres	
	X	X
Business Days per Year	220 days	
Electrostatic Transfer Efficiency	95%	
Annual Savings	USD 209,000.00	

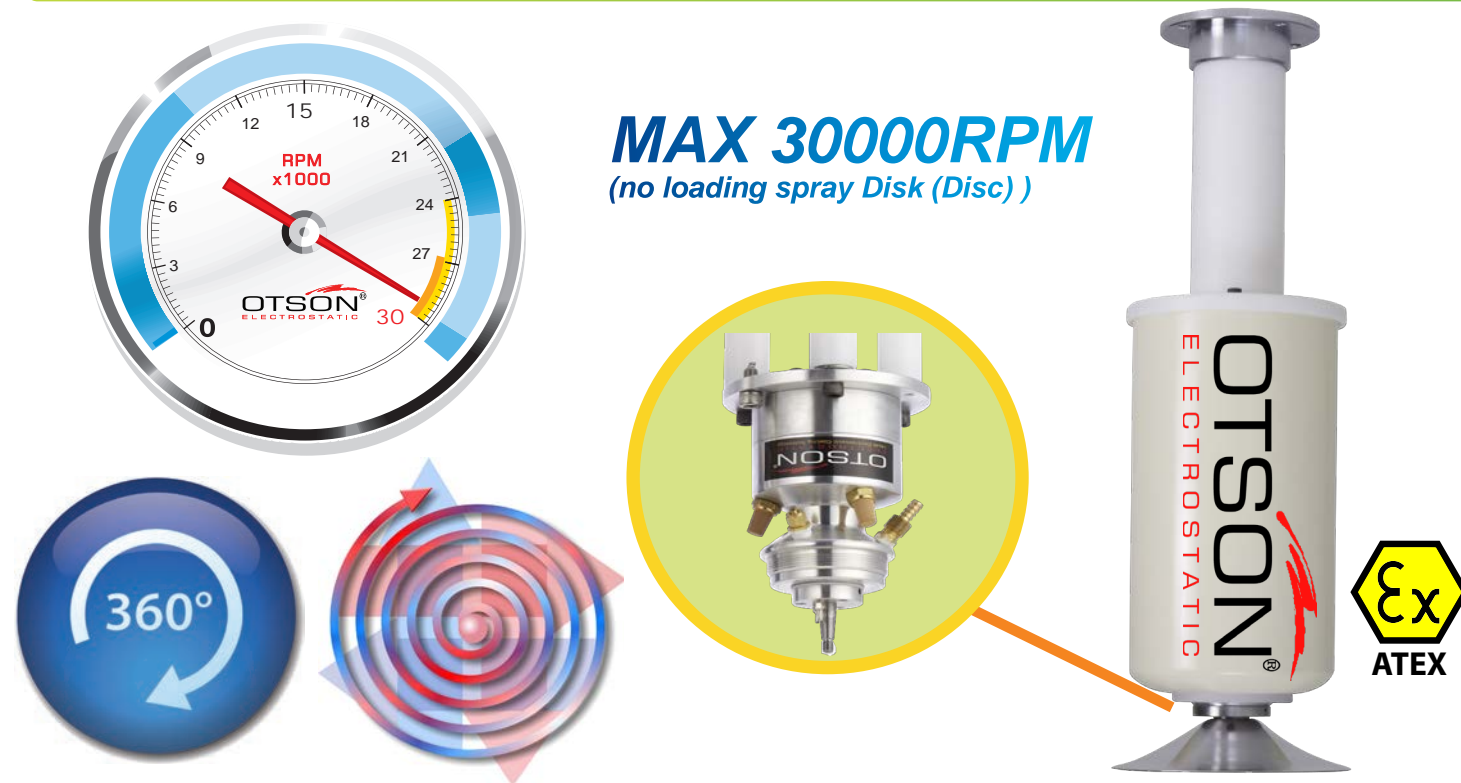
Coating Savings



Fast Colour Change Solution (1 sec)



Turbo Rotary Atomizer



The Spray Direction of OTSON Turbo Rotary Atomizer

At OTSON Technologies, we are proud to offer the advanced Turbo Rotary Atomizer for your coating needs. This innovative machine is designed to deliver a high-quality finish, with speeds that can reach up to 30,000 RPM, ensuring even high viscosity coatings are atomized into fine particles.

High-Quality Results:

With the Turbo Atomizer's fine atomization capabilities, you can expect a uniform coating thickness on all surfaces. This reduces over spray and minimizes paint waste, saving you time and money in the long run.

Ease of Use and Maintenance:

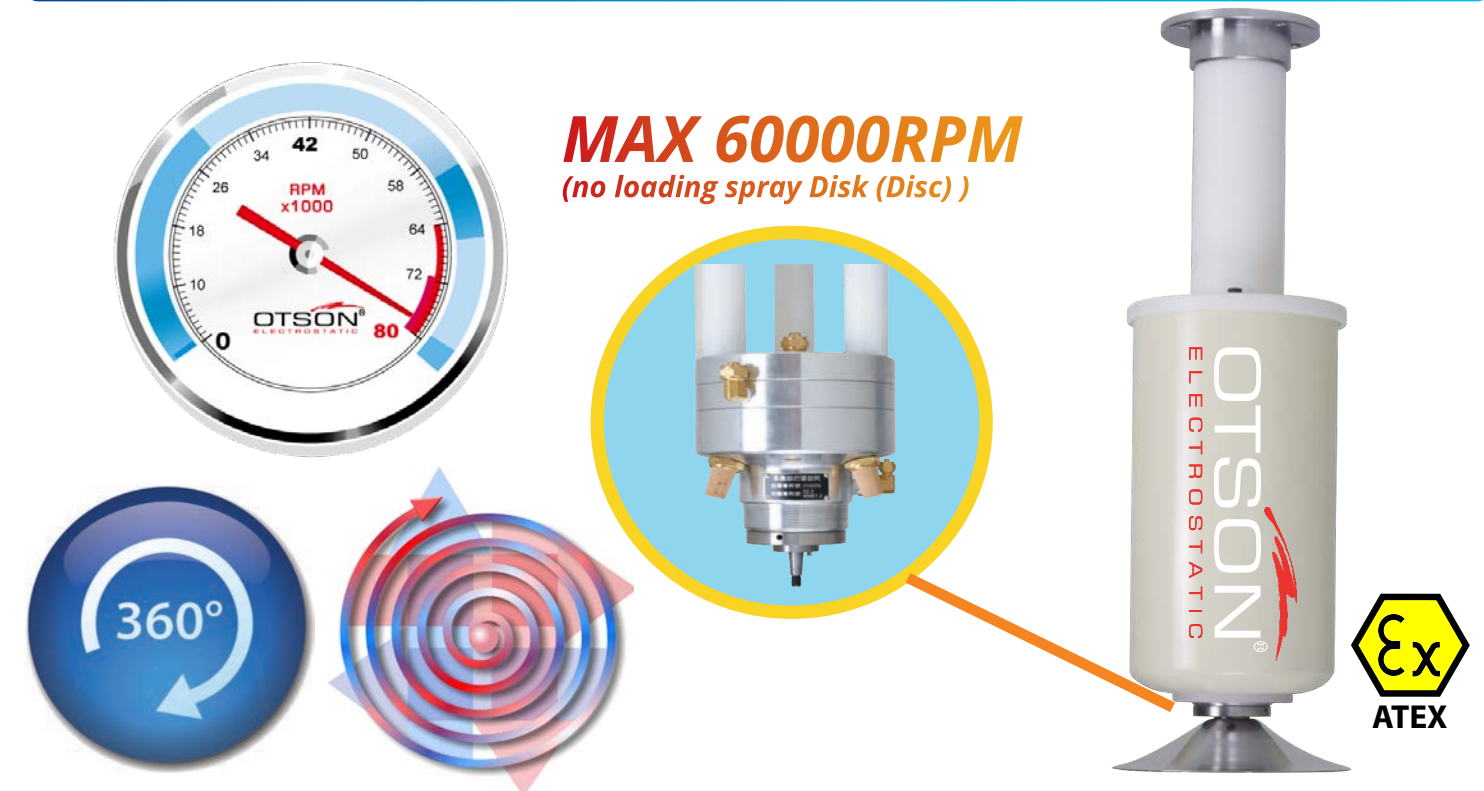
The quick-disconnect features of the turbo atomizer and disks allow for easy maintenance and reduced downtime. This means you can spend less time dealing with machine maintenance and more time producing high-quality results.

Automatic Production:

The OTSON Turbo Rotary Atomizer is fully automated, providing high production rates and reducing labor costs. This machine is designed to meet the demands of today's modern production environments, delivering efficient and reliable results every time.

In conclusion, the OTSON Turbo Rotary Atomizer is an innovative and advanced coating solution that offers high-quality results, ease of use, and low maintenance costs. Contact us today to find out how this machine can help improve your coating process.

Twin-Turbine Rotary Atomizer



The Spray Direction of OTSON Twin-Turbine Rotary Atomizer

The OTSON Twin-Turbine Rotary Atomizer is a cutting-edge coating solution designed to deliver a high-quality finish every time. With speeds that can reach up to 60,000 RPM, this atomizer can handle even the thickest of coatings, producing fine particles for a flawless finish.

Uniform Coating:

Thanks to the fine atomization capabilities of the Twin-Turbine Rotary Atomizer, you can expect a uniform coating thickness on all surfaces. This minimizes over spray and reduces paint waste, helping you achieve optimal results with every use.

Ease of Maintenance:

With quick-disconnect features for both the twin turbine atomizer and disks, maintenance and downtime are reduced, ensuring you can get back to coating quickly and efficiently.

Automated Production:

The OTSON Twin-Turbine Rotary Atomizer is fully automated, providing high production rates and reducing labor costs. This machine is designed to meet the demands of modern production environments, delivering reliable and efficient results every time.

In conclusion, the OTSON Twin-Turbine Rotary Atomizer is a high-performance coating solution that offers superior atomization, ease of maintenance, and low labor costs. Contact us today to see how this machine can improve your coating process.

Single DISK (Disc) Booth Layout

Auto Single Disk (Disc) Electrostatic Spray System by OTSON Technologies:

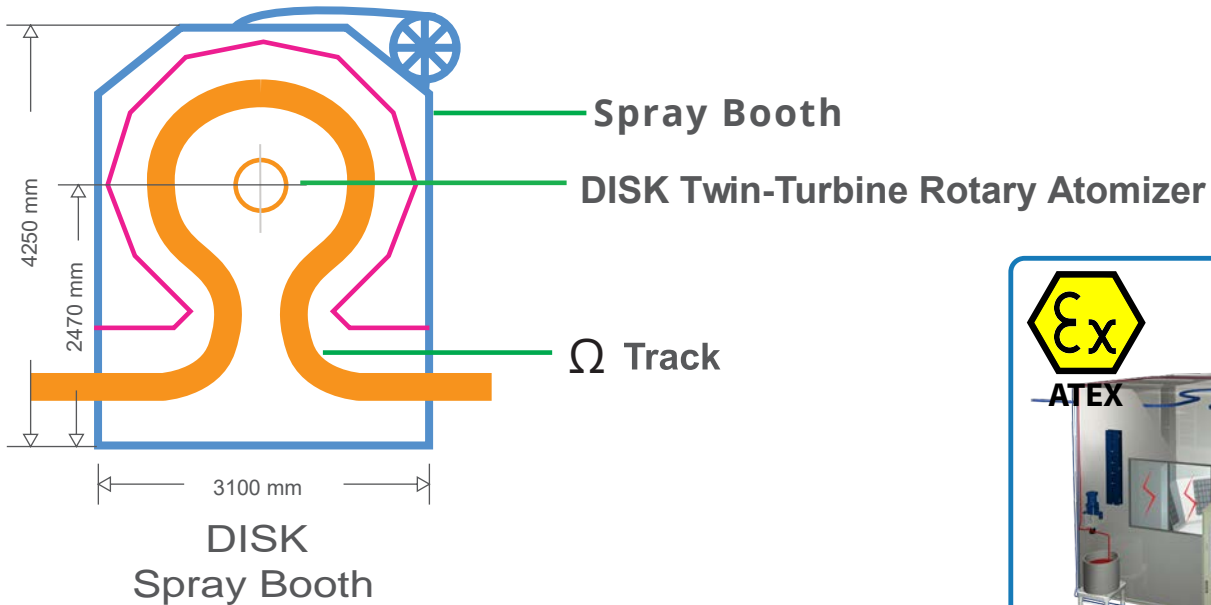
Our Auto Single Disk (Disc) Electrostatic Spray System uses a spinning Disk (Disc) to create a fine mist of the liquid coating material, which is then charged electrostatically for improved attraction to the surface being coated. With automated control, this system delivers consistent and precise results, making it an efficient solution for smaller and simpler objects.

Advantages:

- **Cost-effective:** Our Auto Single Disk (Disc) system is a budget-friendly option for your coating needs.
- **Good coating quality:** You can expect a well-coated surface with our Auto Single Disk (Disc) system.
- **Automated control:** The computerized control eliminates operator error for consistent results every time.



■ Single Type Disk (Disc) (MAX Conveyor Speed :5 meters/min)



S-type DISK (Disc) Booth Layout

Auto S-Type Electrostatic Spray System by OTSON Technologies:

Our Auto S-Type Electrostatic Spray System combines a spinning Disk (Disc) and an electrode to produce a fine mist of the liquid coating material, charged electrostatically for maximum attraction to the surface being coated. With greater precision and control, this system is ideal for larger or more complex objects.

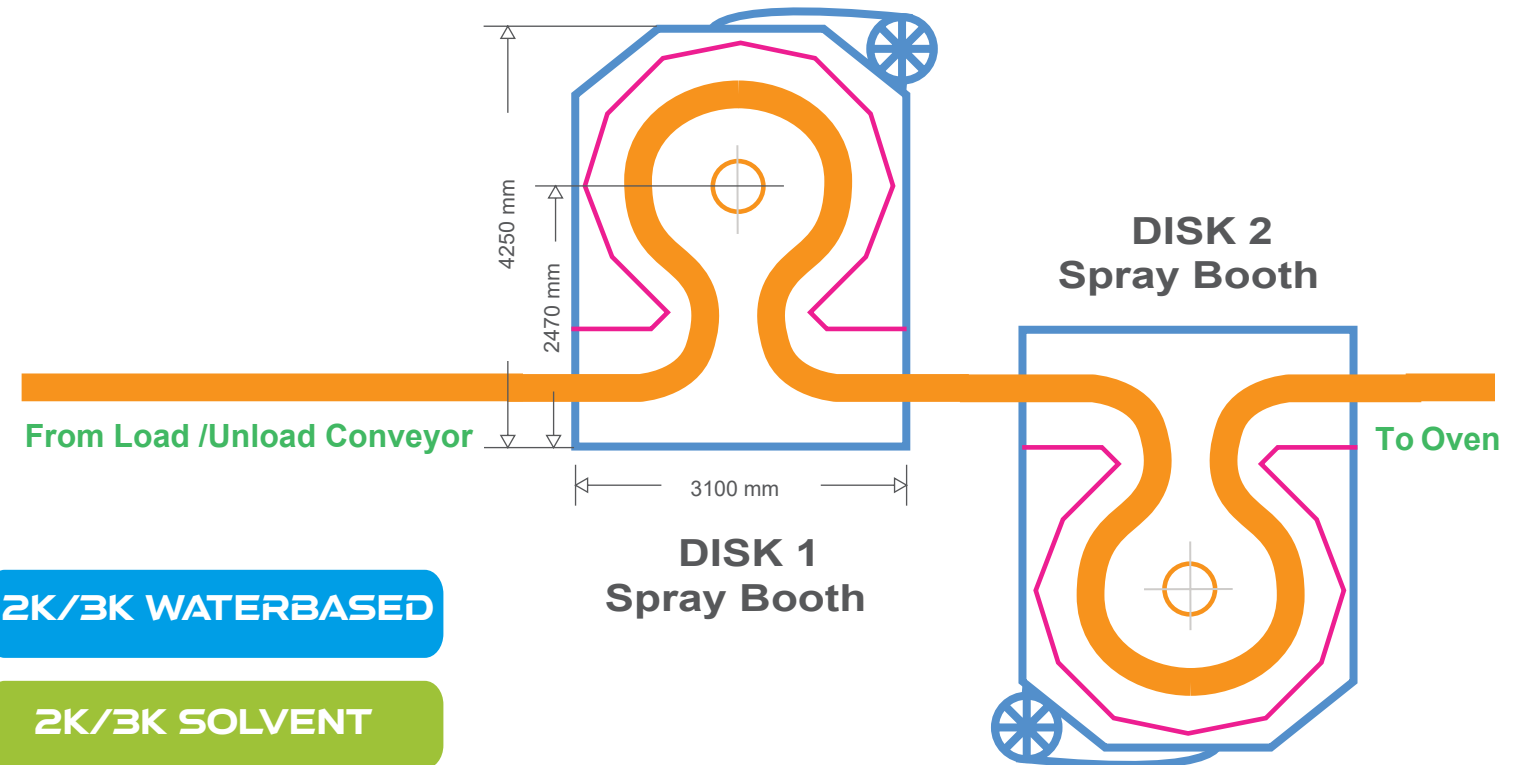
Advantages:

- **Precision and control:** The electrode enhances the precision and control of the coating process.
- **High transfer efficiency:** Our Auto S-Type system boasts a transfer efficiency of up to 90%, leading to improved coating uniformity and reduced material waste.
- **Automated control:** Just like our Auto Single Disk (Disc) system, our Auto S-Type system is automated for consistent and precise results.

Choose the Right System for Your Needs:

Whether you need to coat smaller or simpler objects or larger and more complex objects, OTSON Technologies has you covered. Our Auto Single Disk (Disc) and Auto S-Type Electrostatic Spray Systems are both automated and controlled by a computer, offering reliable and efficient results. Let us help you choose the right system for your specific needs.

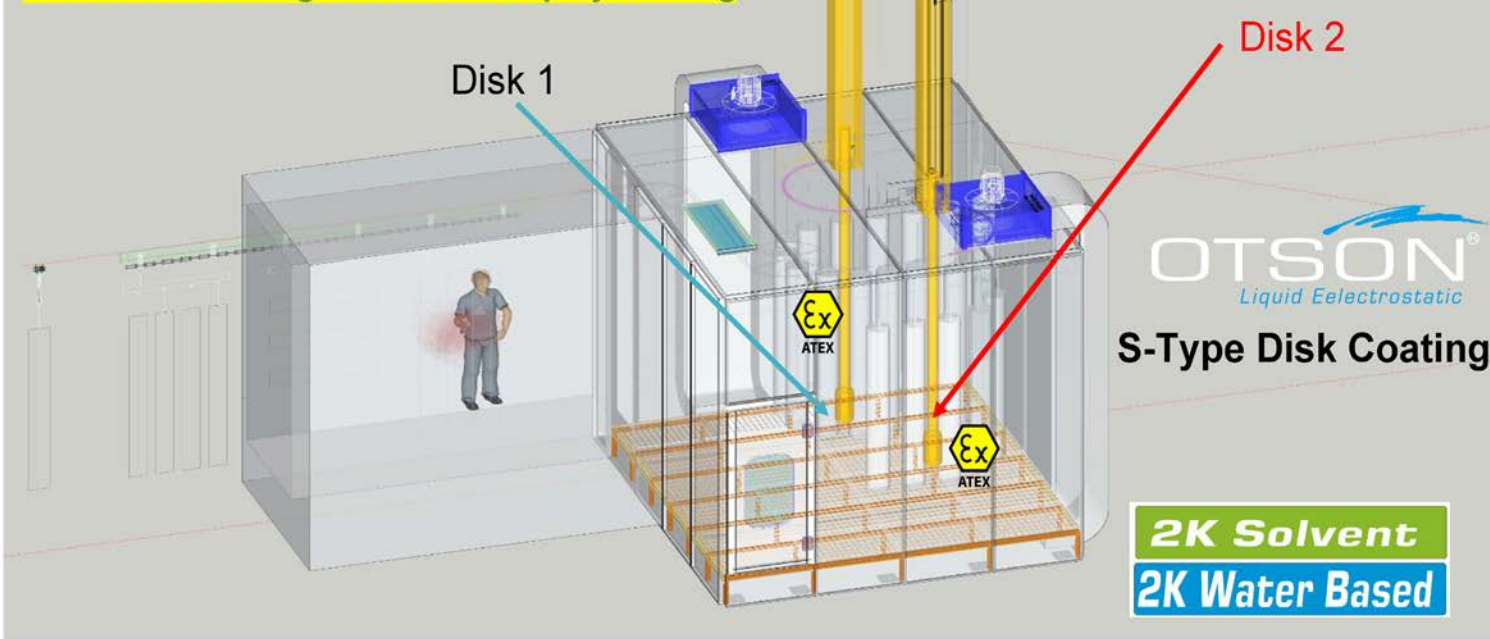
■ S-Type Disk (Disc) (MAX Conveyor Speed :10 meters /min)



2K/3K WATERBASED

2K/3K SOLVENT

Big or Complex Objects Coating – Base and Finishing Electrostatic Spray Coating



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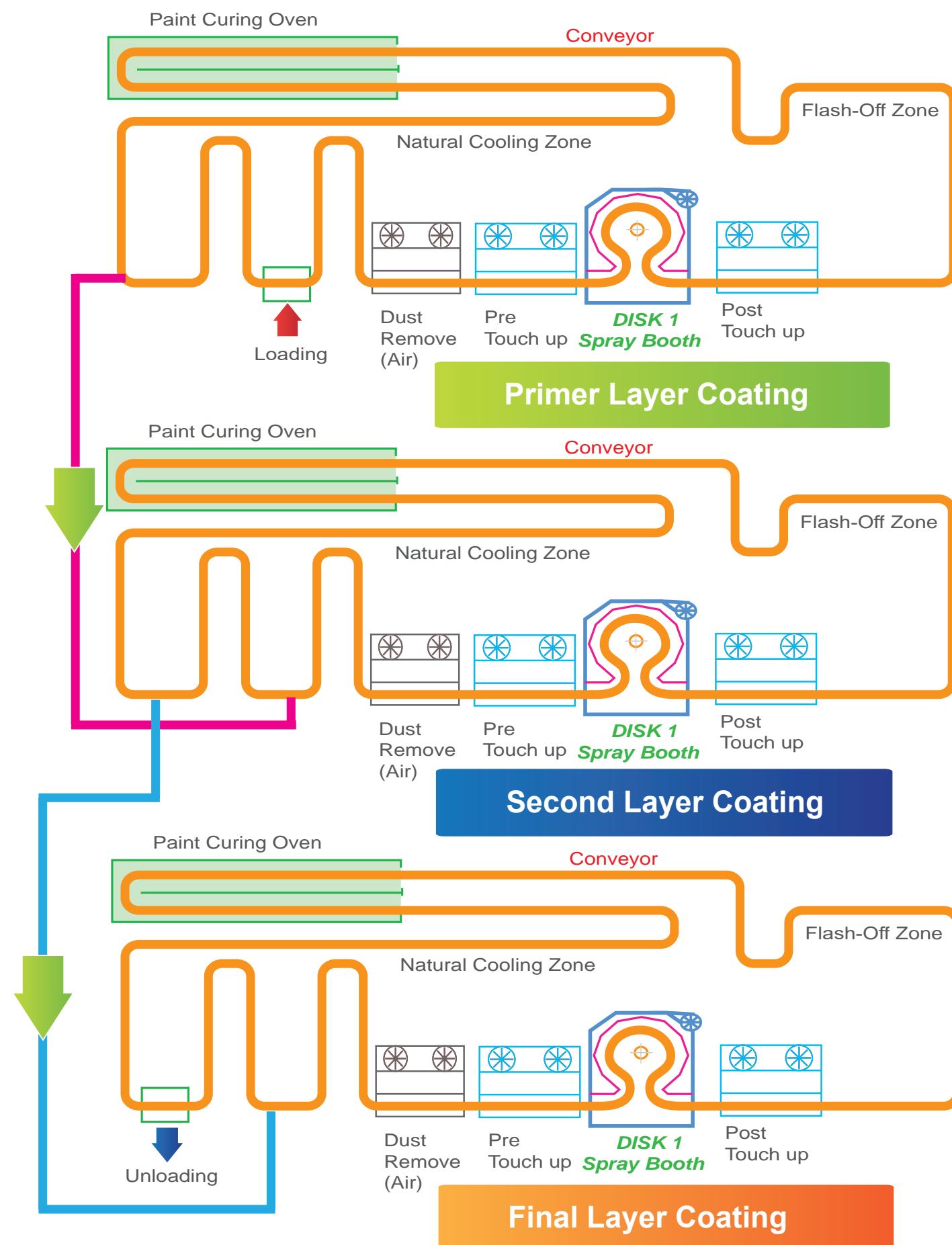
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A comparison of Single Disk (Disc) and S-Type liquid electrostatic spray systems in terms of the following aspects:

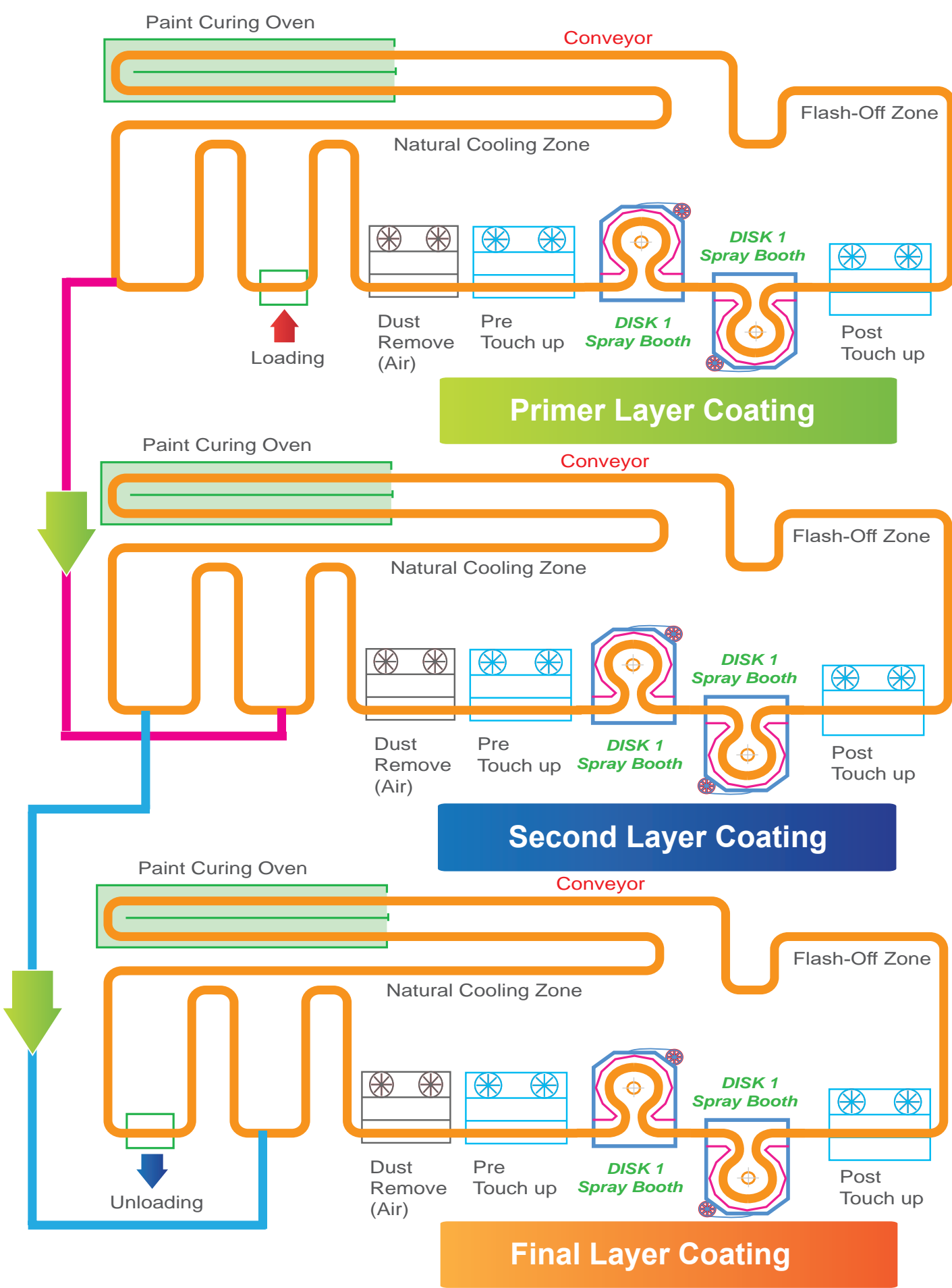
- **Atomization:** Single Disk (Disc) systems use a spinning Disk (Disc) to atomize the liquid coating material and create an electrostatic charge on the coating particles, while S-Type systems use a spinning Disk (Disc) in combination with an electrode to charge the atomized particles.
- **Precision and Control:** S-Type systems are considered more precise and controlled in terms of coating application, making them better suited for larger or complex-shaped objects.
- **Transfer Efficiency:** S-Type systems have a higher transfer efficiency, typically around 85-97%, compared to Single Disk (Disc) systems which have transfer efficiencies of around 80-90%. This can lead to improved coating uniformity and reduced material waste, resulting in increased production rates.
- **Cost:** Single Disk (Disc) systems are typically less expensive to purchase and maintain than S-Type systems. However, the cost savings from reduced material waste and increased production rates provided by S-Type systems may offset the initial cost.
- **Suitable Applications:** Single Disk (Disc) systems may be a cost-effective solution for certain liquid coating applications, and can provide good coating quality, but may not be as precise as S-Type systems, and may not be suitable for larger or complex-shaped objects. S-Type systems are suitable for larger or complex-shaped objects and will provide a higher precision and controlled coating application.

It's important to note that both Single Disk (Disc) and S-Type systems use electrostatic power to attract the liquid coating material to the surface being coated. The main difference is in the atomization process and the level of precision and control in the coating application, with S-Type systems being more precise and controlled.

Single Type DISK (DISC) Layout



S-Type DISK (DISC) Layout



Application - Bicycle



Primer Coating

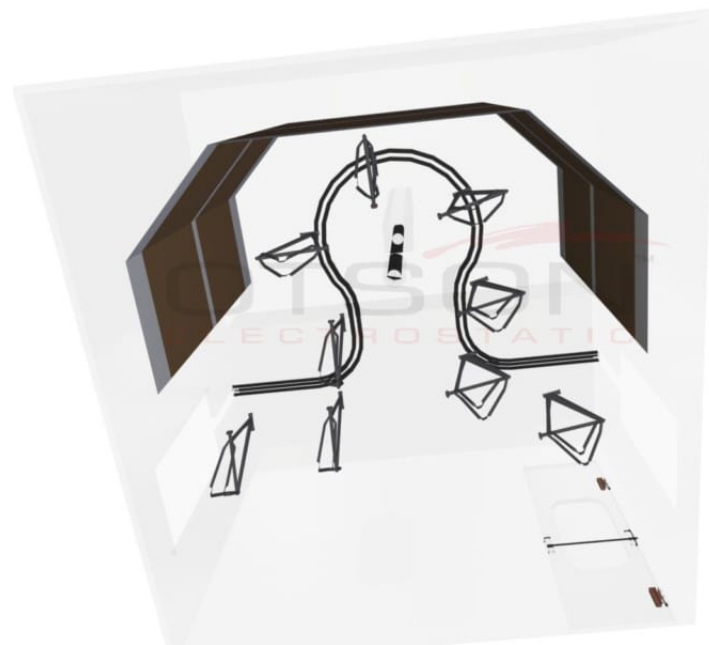


Final Coating

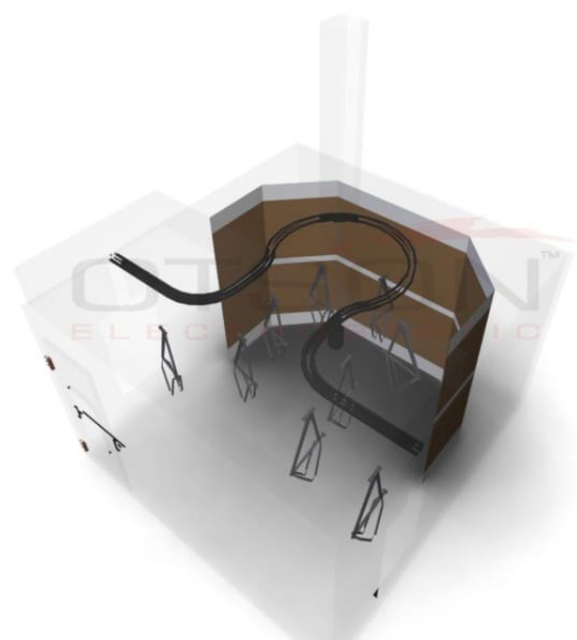
Application- Bicycle Painting -3D



Primer Coating



Final Coating



Application- Box & Baking Tray



Primer Coating

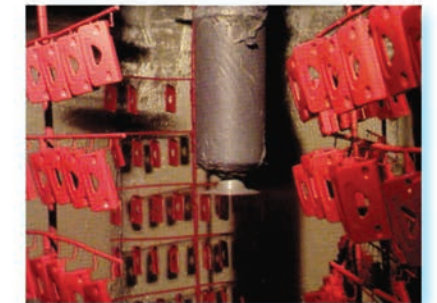
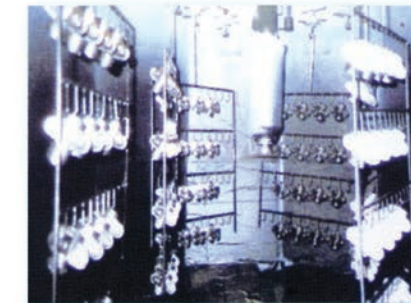
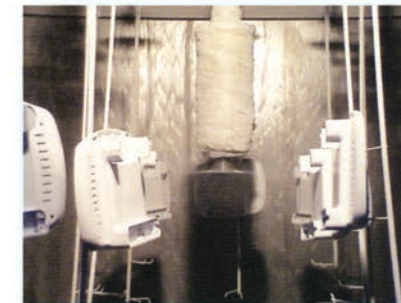
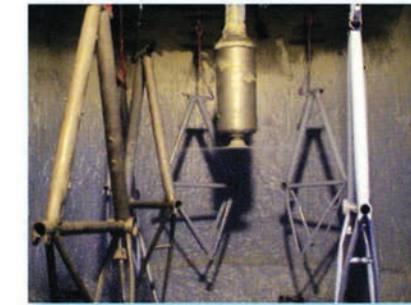
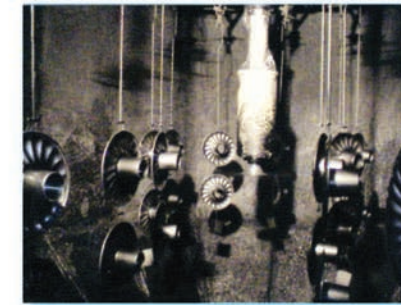


Final Coating

Application- Glass Bottle -Baseball Bat - Exhaust Pipe



Application - Industries



- Small parts
- Bicycle
- Application
- Small parts
- Bicycle
- Computer Housing
- Stationery
- Wooden Furniture
- Hardware
- Lockers
- Freezers
- Iron Railing
- Display Cases

- Office Partitions
- Medical Equipment
- Rest room Partitions
- Roller Bars
- Metal Doors
- Decorative Lamps
- Electrical Home Appliances
- Car Accessories, Teflon Pot
- Sports Equipment
- Handcraft
- Files
- Desks

- Sports Equipment
- Handcraft Computer
- Housing
- Stationery
- Wooden Furniture
- Hardware
- Lockers
- Freezers
- Iron Railing
- Display Cases
- Refrigerators
- Heavy Machinery
- Office Equipment

2K/3K Mixer and Color Change System- Disk Electrostatic Spray

Color change valves, also known as paint dispensers, are a valuable investment for any business in the painting industry. These devices are used in paint shops to mix and dispense paint quickly and accurately, reducing waste and cleanup time.

One of the key benefits of a color change valve is its ability to automatically switch between different paint colors, which can save time and increase efficiency. This feature is especially useful for businesses that work on multiple projects and need to switch between colors frequently.

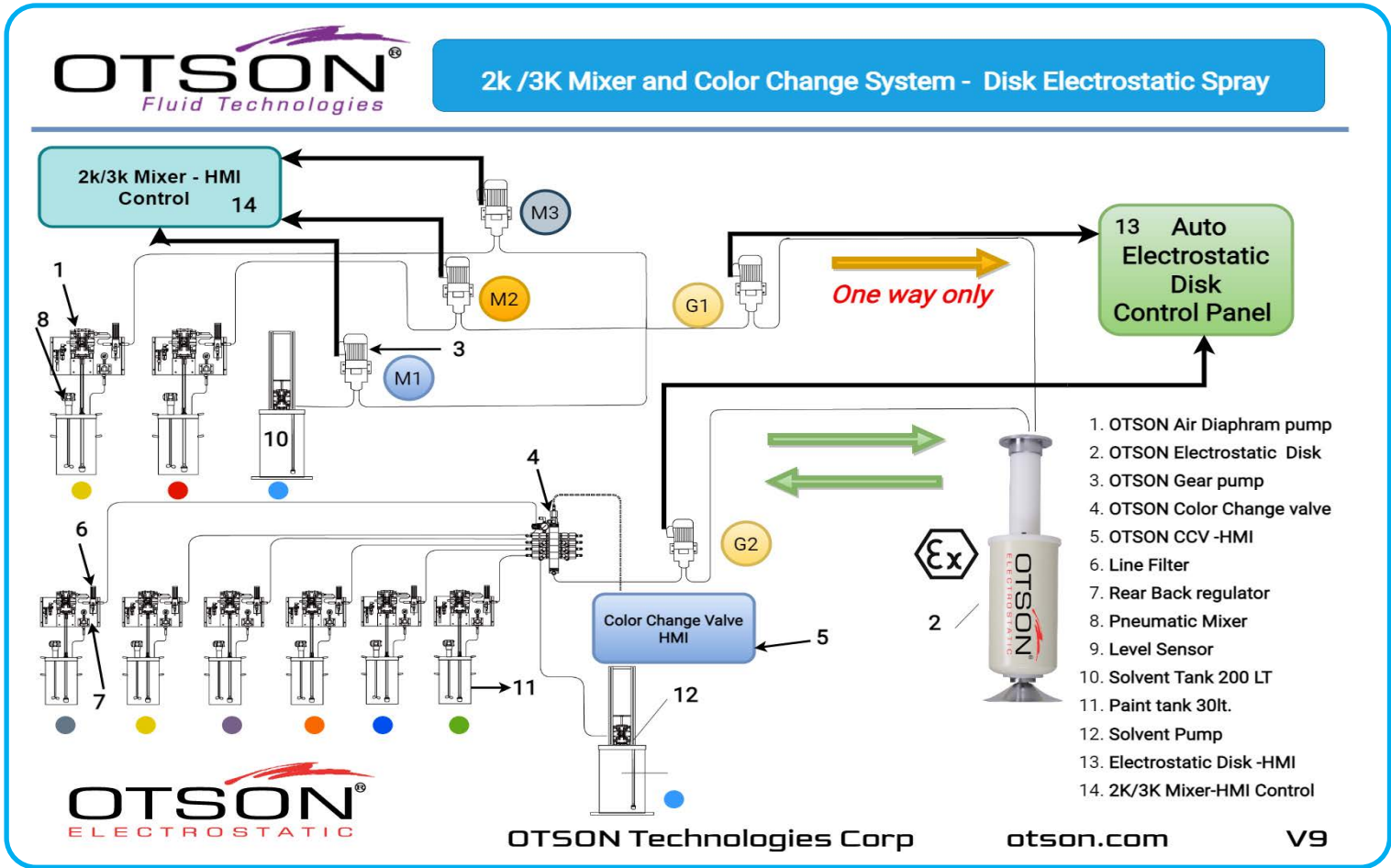
Another advantage of color change valves is their mixing capabilities. These devices can mix the paint with hardeners, reducers, or other additives as it is dispensed, ensuring that the paint is properly mixed and ready to use, which can help improve the quality of the paint job.

In terms of market view, the use of color change valves is prevalent in industrial paint application such as automotive, aerospace, and wood finishing industries. Many companies are investing in color change valves to improve their production efficiency and reduce cost.

Overall, color change valves are an essential component of any paint shop, providing accurate and efficient paint dispensing and color change capabilities. Investing in a high-quality color change valve can help businesses in the painting industry to increase productivity, improve the quality of their paint jobs and save money in the long run.

2K/3K WATERBASED

2K/3K SOLVENT



The 2K-3K Electronic Mixing & Dosing System is an advanced system designed for use in a liquid electrostatic spray system. It is used to control the mixing and dosing of two or three liquid components in a precise and accurate manner. The system uses electronic sensors and controls to measure and adjust the flow rate of each component, ensuring that the correct proportion of liquids are mixed and sprayed. The end result is a more uniform and efficient application of the sprayed liquid, resulting in improved product quality and increased



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The 2K-3K Electronic Mixing & Dosing System typically comprises of the following components:

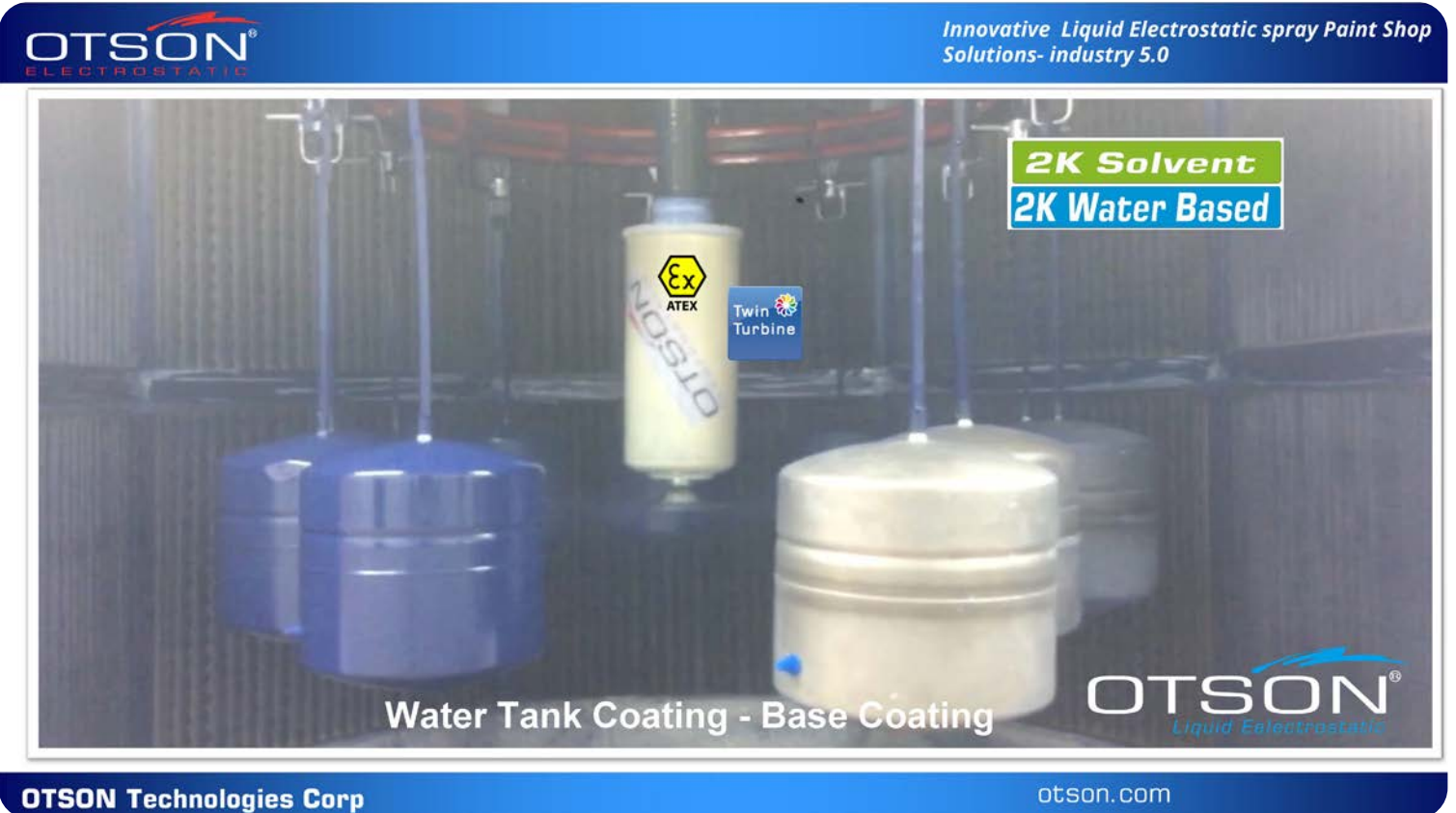
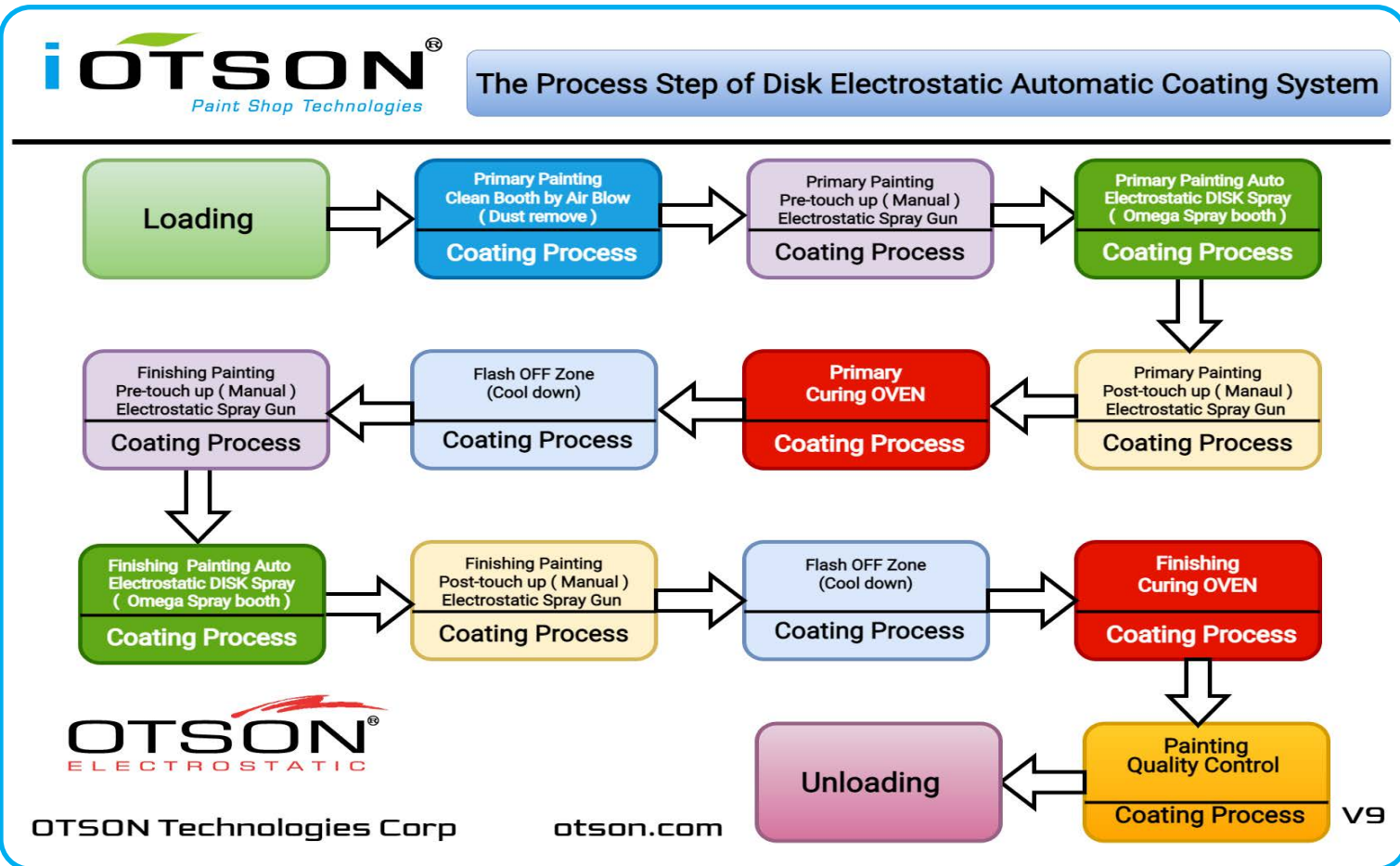
- **Metering Pumps:** These pumps are used to accurately control the flow rate of each component, ensuring that the correct proportion is mixed and sprayed.
- **Mixing Chamber:** The mixing chamber is where the two or three liquid components are combined and mixed together.
- **Control Unit:** The control unit is the heart of the system and is responsible for monitoring and adjusting the flow rate of each component. It may use electronic sensors, computer control and software to manage the mixing and dosing process.
- **Display Unit:** A display unit is used to show the operator the current status of the system, including the flow rate of each component, total amount of liquid mixed and any alarms or faults that may arise.

The system may also be equipped with additional features such as automatic cleaning, continuous monitoring, and alarms for low level and low pressure, to ensure the reliable and consistent operation of the mixing and dosing process.

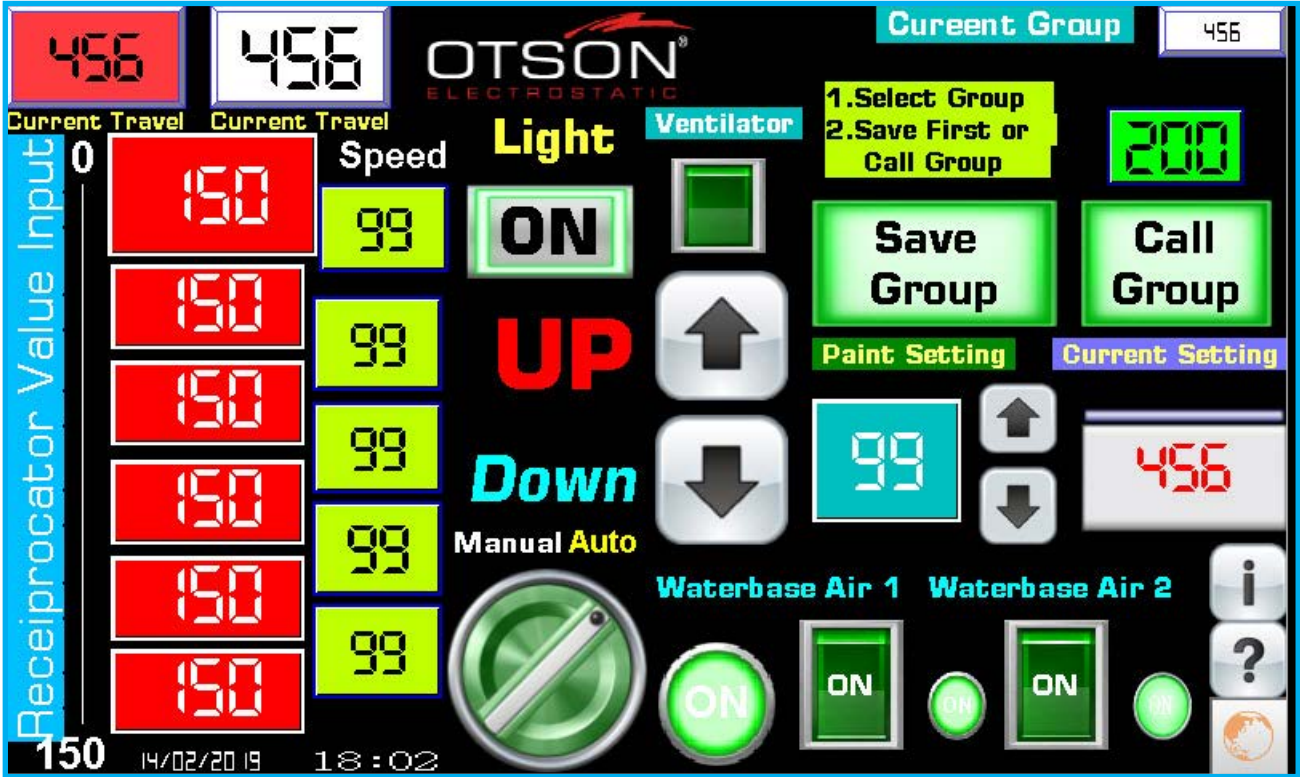
Overall, the 2K-3K Electronic Mixing & Dosing System provides precise control over the mixing and dosing of two or three liquid components, which results in a more efficient, consistent and uniform application of the sprayed liquid.

The Process Steps of Disk Electrostatic Automatic Coating System

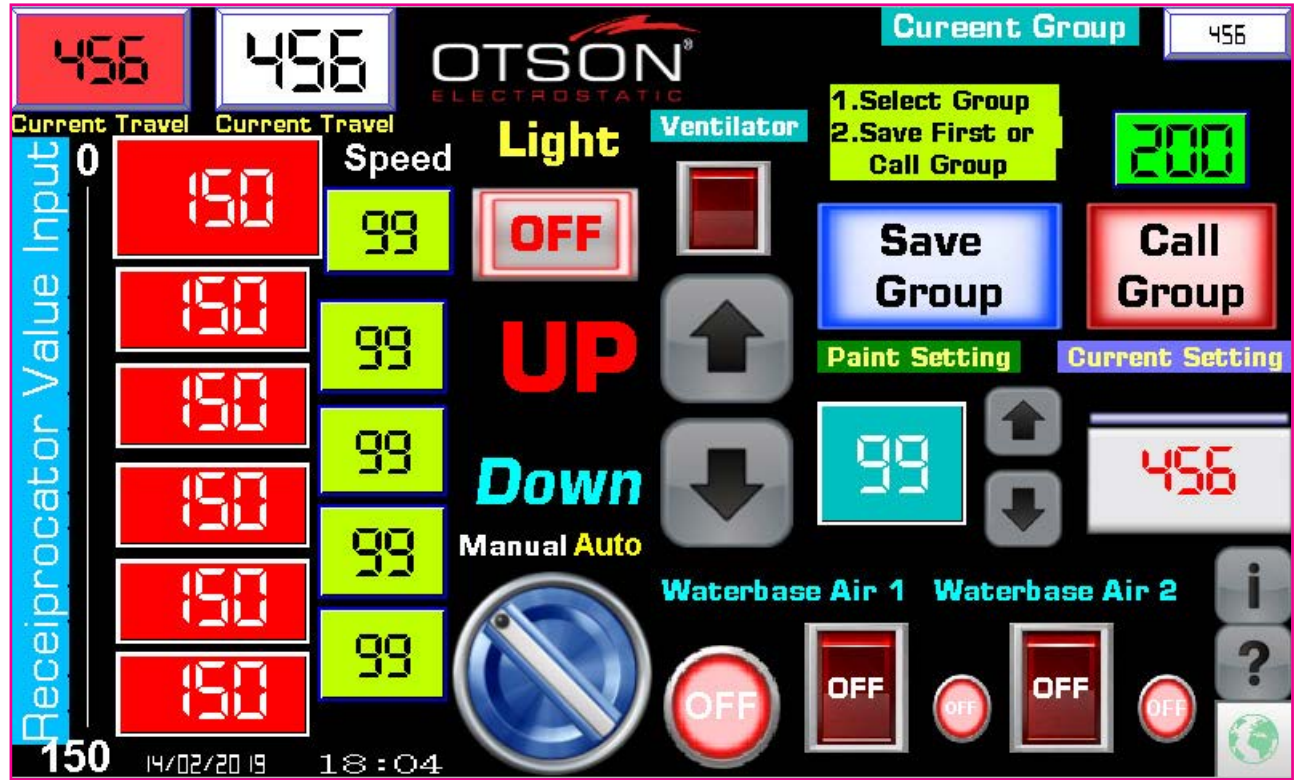
Application - Industry



Application - Spray Range



10.1" Touch Panel Industrial (HMI)



Electrostatic Current UMA

Electrostatic Voltage KV



Specification

OTS-5700 /5300 Microcomputer Control Panel (10" Man-Machine Interface)

- **Input Voltage:** AC 200V ~ 415V 50hz / 60hz (3 phase) ± 5%
 - **Power Consumption :** 2.5 KVA
 - **Dimension :** 420 (L) x 730 (w) x 1710 (H) mm
 - **Weight :** 110 kg
 - **Servo Motor Controlled Reciprocator.**
 - **Touch Panel Interface by using 10" Color Screen.**
 - **Memory Capacity up to 200 sets of Operation.**
 - **Color Change Control (2 colors) Interlocking**
 - **Door-in-Door Design to Achieve Efficient Anti-Dust Effect.**
- Coatings: Solvent-base & Waterborne Coatings



OTS-5100 / 5500 Microcomputer Control Panel (10" Man-Machine Interface)

- **Input Voltage:** AC 200V ~ 415V 50hz / 60hz (3 phase) ± 5%
 - **Power Consumption :** 2.5 KVA
 - **Dimension :** 420 (L) x 730 (w) x 1710 (H) mm
 - **Weight :** 110 kg
 - **Servo Motor controlled reciprocator.**
 - **Touch Panel interface by using 10" colour screen.**
 - **Memory capacity up to 200 sets of operation.**
 - **Door-in-Door design to achieve efficient anti-dust effect.**
- Coatings: Solvent-base Coatings



OTS-5000 Microcomputer Control Panel

- **Input Voltage:** AC 200V ~ 415V 50hz / 60hz (3 phase) ± 5%
 - **Power Consumption :** 2.5 KVA
 - **Dimension :** 420 (L) x 730 (w) x 1710 (H) mm
 - **Weight :** 110 kg
 - **Japan's Fuji Frequency Converter.**
 - **German's EAO push button panel.**
 - **Door-in-Door design to achieve efficient anti-dust effect.**
 - **Ergonomic design. Digital control.**
- Coatings: Solvent-base Coatings



Specification

Twin-Turbine Rotary Atomizer

- **Air Pressure :** 1.0 ~8.0 kg/cm² .
- **Air Consumption :** 68 m³/Hr. (40 SCFM)
- **Speed :** max 60000 RPM (no-load) -Type A
- **Viscosity :** Max 300cp =300 mPs=96 secs (NK2 Cup)
- **Twin-Turbine design in providing high torque and atomization effect.**



Turbo Rotary Atomizer

- **Air Pressure :** 1.0 ~4.0 kg/cm² .
- **Air Consumption :** 34 m³/Hr. (20 SCFM)
- **Speed :** max 30000 RPM (no-load)
- **Viscosity :** Max 60cp =60 mPs=20 secs (NK2 Cup)
- **Turbo design in providing high torque and atomization effect.**



High Atomization Spray Disk (Disc)

- **Spray Disk (Disc) size :** Φ170mm, Φ 230mm, Φ300mm.
- **Twin-Turbine pneumatic nozzle achieves superb atomization effect even for high-viscosity paint.**
- **High-speed balance calibration, providing excellent stability of atomization Disk (Disc) .**



Specification

OTS-5000 & OTS-5100 Liquid Electrostatic Power Supply

Out Voltage	0~70 KV DC(-) -OTS-5000 0~100 KV DC(-)-OTS-5100
Out Current	50 microamperes
Intercepting Current	20~150 microampere
Input Voltage	220V AC (50Hz)
Weight	12 kg
Dimensions	300(L)x120(W)x350(H) mm
Coatings	Solvent-base Coatings



OTS-5300 ,OTS-5500 ,OTS-5700 Liquid Electrostatic Power Supply

Out Voltage	0~110 KV DC(-)
Out Current	50 microamperes
Intercepting Current	20~150 microampere
Input Voltage	220V AC (50Hz)
Weight	12 kg
Dimensions	300(L)x120(W)x350(H) mm
Coatings	Solvent-base & Waterborne Coatings



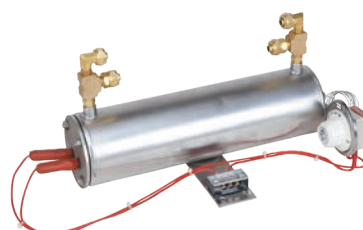
Gear Pump

Input Voltage : AC 220 V ~ 380 V ±10% 3 Phase
Horsepower : 1/4 HP
Dimension : 130 (L) x 600 (w) x 30 (H) mm
Weight : 13 kg
Output : 3cc or 6cc / rev 200 cc ~ 3000 cc / min (digital control)
Spray Hose : Double-layer Teflon paint hose
Pump Material : Hardened Steel CMoWCrVCo HRC = over 63)
Titanium plated for durable use and wearing resistance.



Air Heater

Dimension : 410 (L) x 170 (w) x 150 (H) mm
Weight : 5 kg
Input Voltage : AC220V , 500W
Temperature : 0 degree C ~ 120 degree C



Water Filter & Oil Filter

Dimension: 170 (L) x 340 (w) x 90 (H) mm
Weight : 3 kg
Water Filter : 3650 l/s
Oil Filter : 1900 l/s
MAX Operation Pressure : 150psi



Specification

IOT (Internet of Things) Sensor System

- Air Flow
- Paint flow
- Paint Pressure
- Air Pressure
- Environment VOC Detect Sensor
- Monitor motor
- Smoke Sensor
- Air Temperature and humidity
- AI Dashboard System
- Power Consumption Monitor



Remote Digital Video Monitor System

- **Video Input:** 8 channels
- **Video Output:** HDMI, VGA
- **Compression Format:** H.265/H.264
- **Recording Resolution:** up to 8MP (4K)
- **Playback Resolution:** up to 8MP (4K)
- **Hard Drive Capacity:** up to 6TB (depending on the model)
- **Network Interface:** RJ45, 10M/100M/1000M Ethernet with PoE support
- **Remote Access:** Yes, via PC, smartphone or tablet
- **Audio Input/Output:** 1 channel input, 1 channel output
- **USB:** 2 USB ports (1 USB 2.0, 1 USB 3.0)
- **PoE Ports:** 8 ports with PoE support
- **Power Supply:** DC 48V/1.25A



Reciprocator

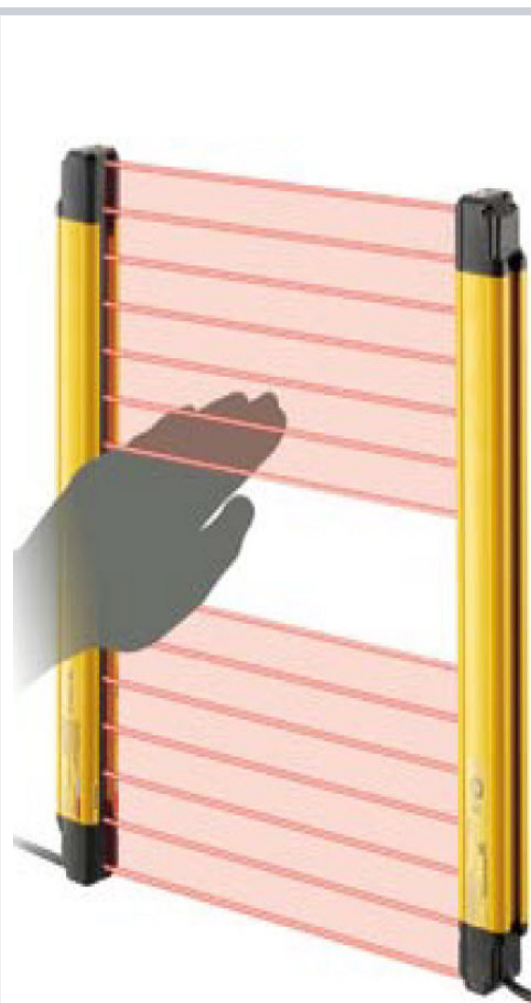
- **Length:** 1200mm~ 3000mm.
- **Single travel, multi-speed shifting.**
- **Control Method:**
 1. Frequency Converter for speed control.
 2. Man-machine interface control panel is controlled by servo motor for regulating the travel speed.



Specification

Safety Light Curtains

- Safety light curtain Type 4.
- Suitable for detection of operators.
- Consists of an emitter and receiver.
- In combination with a safety guard monitor for protection up to safety level PLe per EN ISO 13849-1 or up to SIL 3 per EN 62061.
- 14mm resolution for finger detection.
- Available in various protective field heights: 200, 400, 600, 800, 1000 and 1200mm.
- Detection range 0.5m to 6m.
- Can be connected to GLM1 safety controller.
- Gasealed to IP65.
- Fitted with quick disconnecter.
- Supplied with mounting brackets as standard



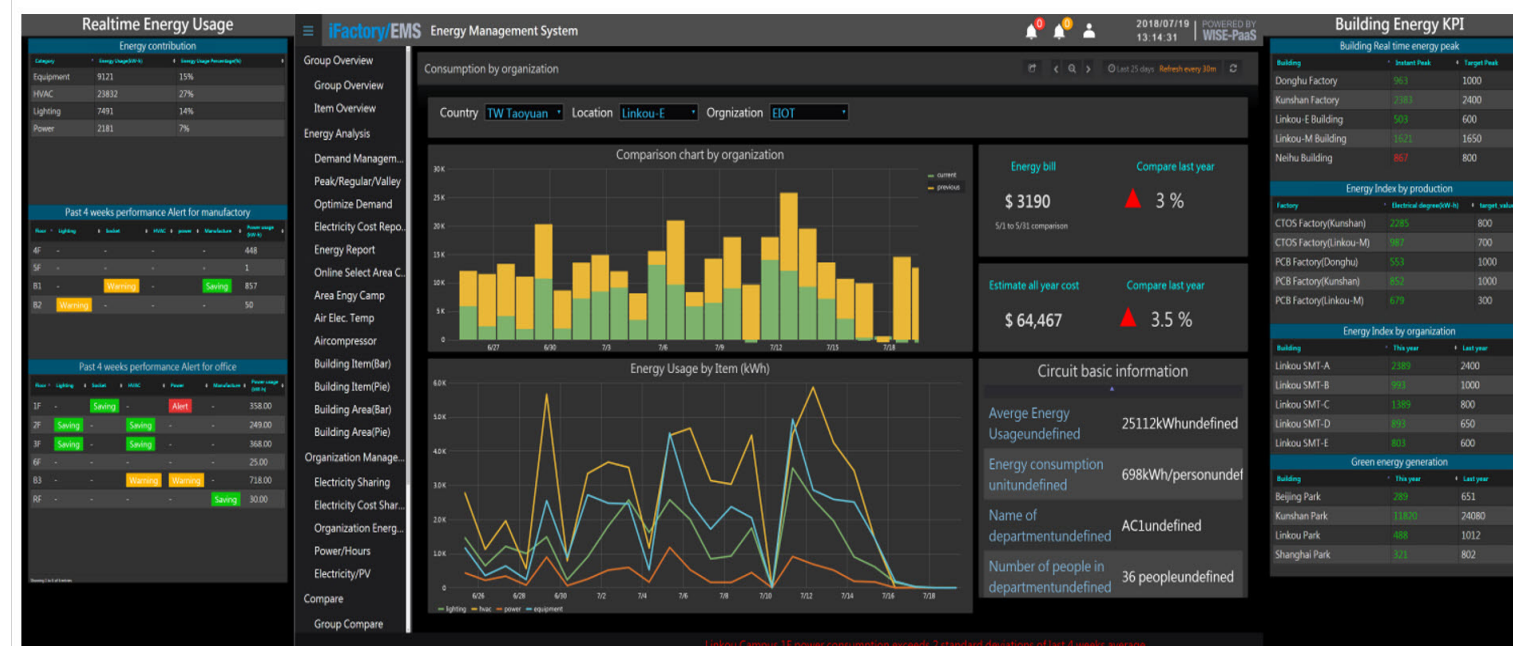
iOTSON[®] Paint Shop Technologies

Dashboard of Electrostatic Spray Coating – Paint Shop



iOTSON[®] Paint Shop Technologies

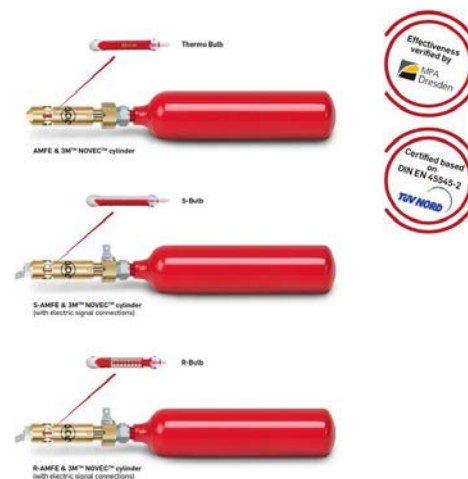
Energy & Environment-Dashboard of Paint Shop



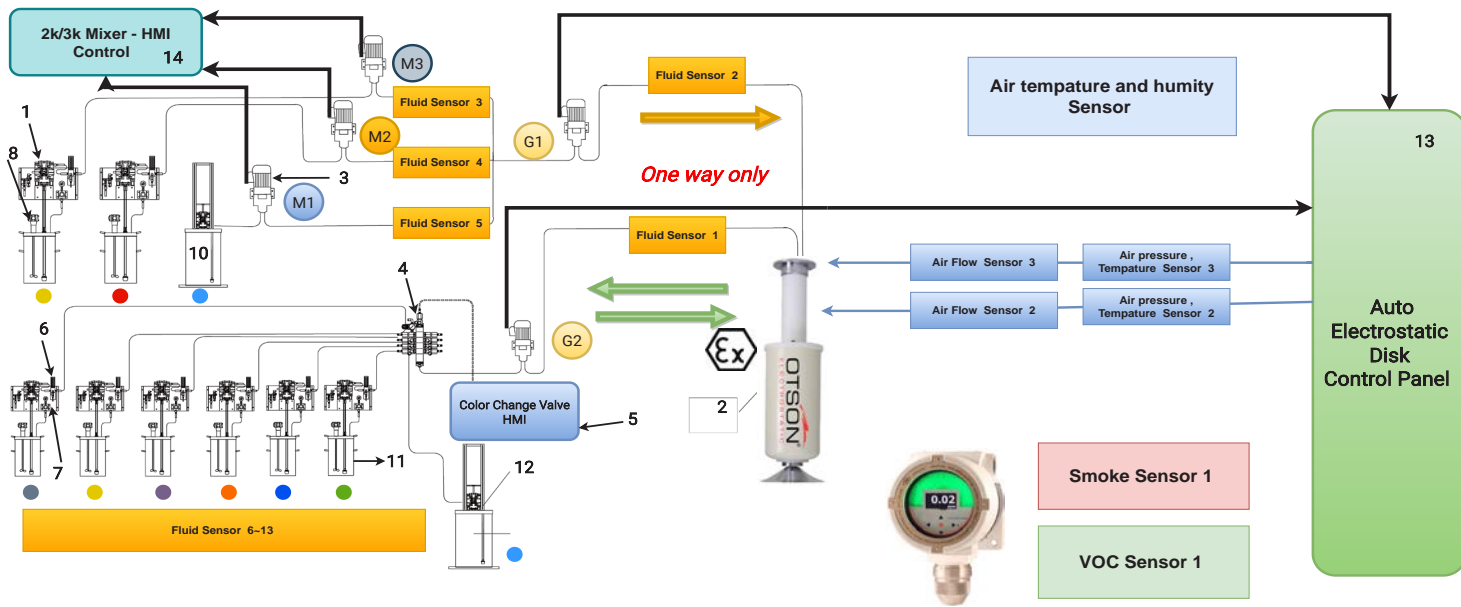
Linkou Campus 1F power consumption exceeds 2 standard deviations of last 4 weeks average

AMFE - AUTOMATIC MINIATURE FIRE EXTINGUISHER

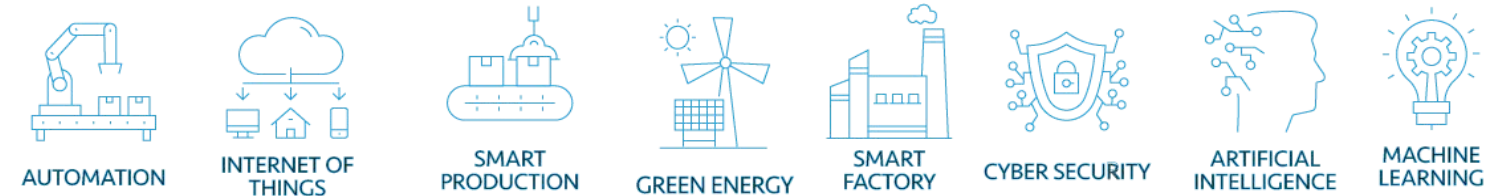
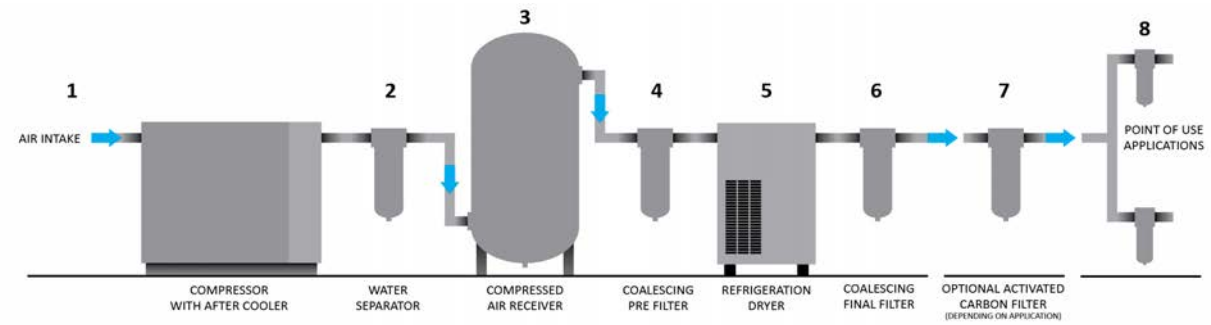
- Dimensions (without cylinder):
ø 16 mm x 64 mm/0,63" x 2,52"
- Minimum installation depth: 20 mm/0,79" (w/o cylinders)
- Activation temperature: 57°C – 260°C/134,6° F - 500° F
- Extinguishing agents: 3MTM NOVECTM, CO2,
- Lifetime: 9 years + (for the cylinders)
- Maintenance free
- Lifetime: for release mechanism (see manual for details)



2k /3K Mixer and Color Change System - OTS-5100 Auto Disk (DISC) Electrostatic Spray System - IOT System



1. OTSON Air Diaphragm pump
2. OTSON Electrostatic Disk
3. OTSON Gear pump
4. OTSON Color Change valve
5. OTSON CCV -HMI
6. Line Filter
7. Rear Back regulator
8. Pneumatic Mixer
9. Level Sensor
10. Solvent Tank 200 LT
11. Paint tank 30lt.
12. Solvent Pump
13. Electrostatic Disk -HMI
14. 2K/3K Mixer-HMI Control



OTSON Technologies Corp. Innovative Technology of Powder and Liquid Electrostatic Spray Coating Solution. OTSON.com P.154

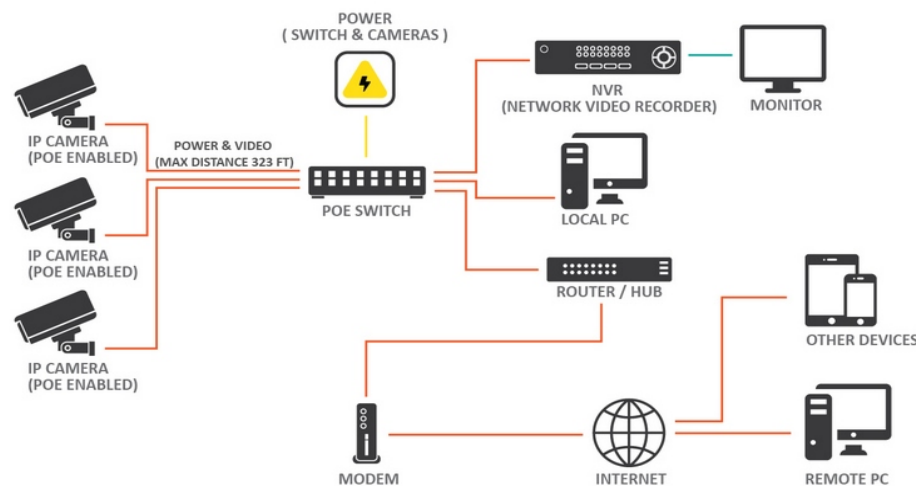


OTSON Technologies Corp. Innovative Liquid Electrostatic spray Paint Shop Solutions- Industry 5.0

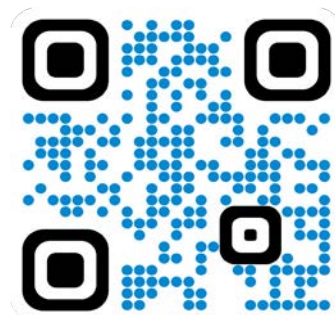


OTSON Technologies Corp

otson.com



CAT 5 OR 6 CABLE COAX POWER



OTSON
ELECTROSTATIC



Easy Paint Kitchen for Waterbase and Solvent Paints



Dimension: 76x43 x170 cm Weight : 80 Kg

Easy Paint Kitchen for Waterbase and Solvent Paints - Gear Pump



2K/3K WATERBASED

2K/3K SOLVENT

MAX 60000RPM
(no loading Disk (Disc))

**Twin-Turbine
Rotary
Atomizer**

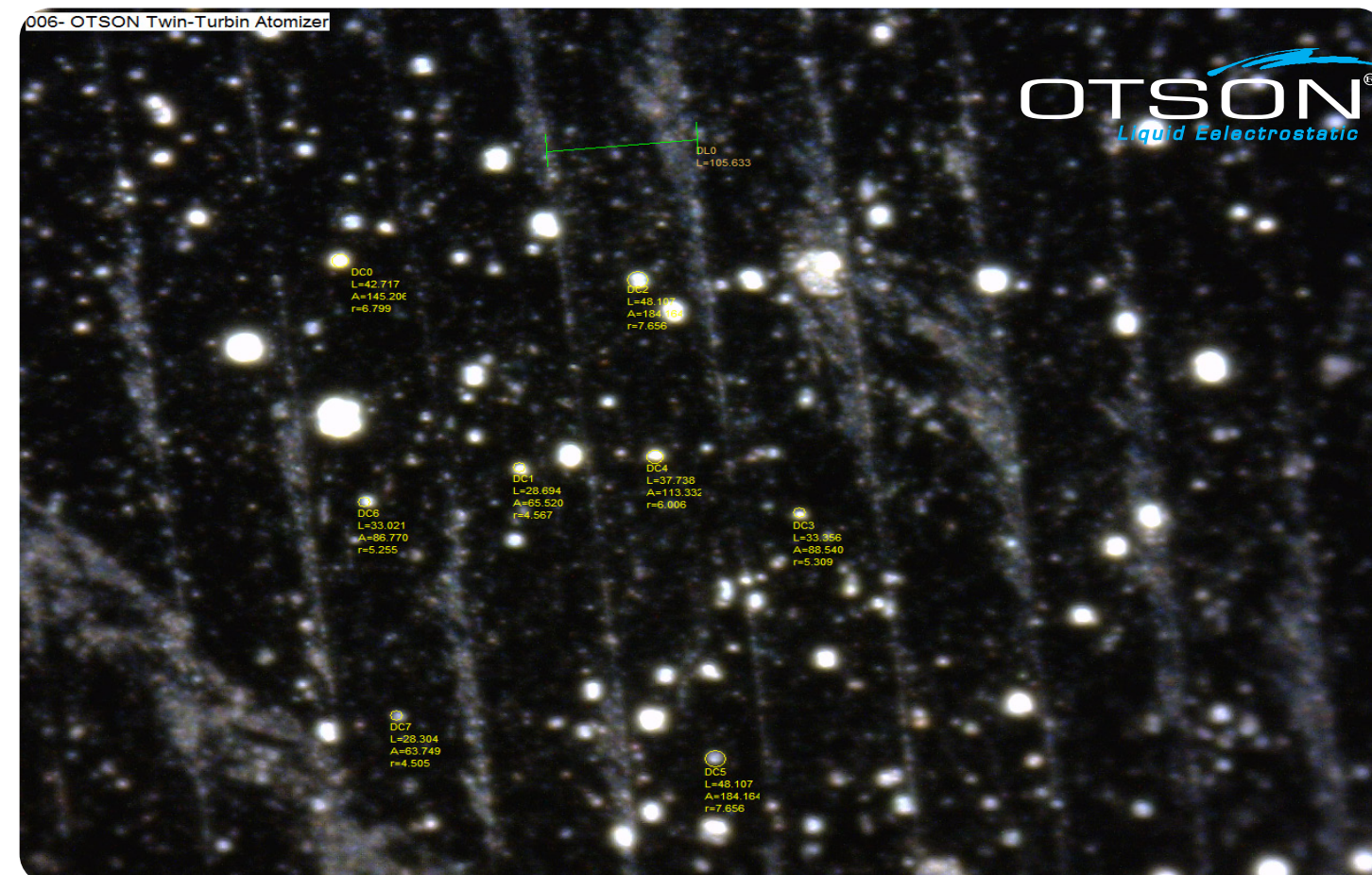


300 mm
Spray Disk (Disc)

230 mm
Spray Disk (Disc)

170 mm
Spray Disk (Disc)

The microscope picture (500X) of atomization droplet which is done by our atomizer , the droplet diameter between 1.0- 5.0um.



Model /Function	OTS-5700+G2	OTS-5500+G2	OTS-5300+G2	OTS-5100+G2	OTS-5000+G2
a. Microcomputer Control Subsystem					
Microcomputer Control Panel (HMI) x 1 set	10"	10"	10"	10"	
Memory Capacity for Storage Coating Parameters	199 sets	199 sets	199 sets	199 sets	
Air Flow Control x 1 set	Manual	Manual	Manual	Manual	Manual
Paints Flow Control (A) x 1 set	Auto / Manual	Auto / Manual	Auto / Manual	Auto / Manual	Manual
Paint Flow Control (B) x 1 set	Auto / Manual	Auto / Manual	Auto / Manual	Auto / Manual	Manual
Color Change Control (2 colors) x 1 set	Manual	Manual	Manual	Manual	Manual
Reciprocator Stoke 5 stages control x 1 set	Auto / Manual	Auto / Manual	Auto / Manual	Auto / Manual	Manual
Reciprocator Speed Control x 1 set	Auto / Manual	Auto / Manual	Auto / Manual	Auto / Manual	Manual
Atomizer Speed (RPM) Control x 1 set	Manual	Manual	Manual	Manual	Manual
Electrostatic Power Supply Control x 1 set	0~110KV	0~110KV	0~110KV	0~110KV	0~70 KV
Electrostatic Power Display x 1 set	LED	LED	LED	LED	LED
Electrostatic Current Display x 1 set	LED	LED	LED	LED	LED
Electrostatic Spark Protection System x 1 set	YES	YES	YES	YES	YES
Paints,Coatings	Solvent-base & Waterborne	Solvent-base	Solvent-base & Waterborne	Solvent-base	Solvent-base
b.Spray Subsystem					
High Rotary Atomizer x 1 set (no loading spray Disk (Disc))	60000 rpm	60000 rpm	60000 rpm	60000 rpm	30000 rpm
High Atomization Spray Disk (Disc) x 1 set	170 mm ~300 mm	170 mm ~300 mm	170 mm ~300 mm	170 mm ~300 mm	170 mm ~300 mm
H.V Cable x 1 set	11m ~ 40m	11m ~ 40m	11m ~ 40m	11m ~ 40m	11m ~ 40m
Teflon Spraying Tube x 1 set	11m ~ 40m	11m ~ 40m	11m ~ 40m	11m ~ 40m	11m ~ 40m
PU Air Tube x 2 sets	11m ~ 40m	11m ~ 40m	11m ~ 40m	11m ~ 40m	11m ~ 40m
c.High Voltage Electrostatic Power Subsystem					
Electrostatic Power Supply x 1 set	Max 110KV	Max 110KV	Max 100KV	Max 100KV	Max 70KV
d. Reciprocator Subsystem					
Reciprocator x 1 set (Stroke Length 1.6 Meters ~7.0 Meters)	1.6 M ~7.0 M	1.6 M ~7.0 M	1.6 M ~3.0 M	1.6 M ~3.0 M	1.6 M ~3.0 M
Safety Sensor x 1 set	Yes	Yes	Yes	Yes	Yes

Model /Function	OTS-5700+G2	OTS-5500+G2	OTS-5300+G2	OTS-5100+G2	OTS-5000+G2
e.Paint Supply Subsystem					
OTS-4000 (optional) Colour Change Valve +HMI	2~20 Colours (Auto Clean)	2~20 Colours (Auto Clean)	2 ~ 20 Colours (Manual Clean)	2~20 Colours (Manual Clean)	2 Colours
OTS-4200 (optional) 2K and 3K Mixer system +HMI	2K and 3K	2K and 3K	2K and 3K	2K and 3K	2K and 3K
Gear Pump + Motor (A) x 1 set (optional) 3cc / rev 200cc~1500 cc /mim	3cc / rev	3cc / rev	3cc / rev	3cc / rev	3cc / rev
Gear Pump + Motor (B) x 1 set (optional) 6cc / rev 200 cc ~ 3000 cc / min	6cc / rev	6cc / rev	6cc / rev	6cc / rev	6cc / rev
f . Air Supply Subsystem					
Air Heater -Air Temperature Control x 1 set	Manual	Manual	Manual	Manual	Manual
Air Filter (screening oil and water) x 1 set	Auto	Auto	Auto	Auto	Auto
g. Smart Monitor Sensor Subsystem (optional)					
Air Flow	Local / Remote monitor	Local / Remote monitor			
Paint flow	Local / Remote monitor	Local / Remote monitor			
Paint Pressure	Local / Remote monitor	Local / Remote monitor			
Air Pressure	Local / Remote monitor	Local / Remote monitor			
Environment VOC Detect Sensor	Local / Remote monitor	Local / Remote monitor			
Monitor motor	Local / Remote monitor	Local / Remote monitor			
Smoke Sensor	Local / Remote monitor	Local / Remote monitor			
Air Temperature and Humidity	Local / Remote monitor	Local / Remote monitor			
AI Dashboard System	Local / Remote monitor	Local / Remote monitor			
Power Consumption monitor	Local / Remote monitor	Local / Remote monitor			
h. Safety Subsystem (optional)					
Safety Light Curtains Interlocking with disc system	Auto	Auto			
Fire Fighting System (For DISK control panel system and atomizer only)	Auto	Auto			
I. Security System (optional)					
Remote Digital Video Monitor System (RDVRS)	Local / Remote monitor	Local / Remote monitor			
j. Small water-borne -Paint kitchen					
Special Isolation paint kitchen with 2 gear pump and air allegator	Yes		Yes		

OTS-8000

Auto Electrostatic Spray Gun System



OTS-9000

Auto Electrostatic Spray Bell System



*The appearance of all products, detail, figure and specification are subject to change at any time without notice.

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OTS-7800

Electrostatic Spray Gun System-Robot Arm

HYBRID

2K/3K WATERBASED

2K/3K SOLVENT



ABB

YASKAWA

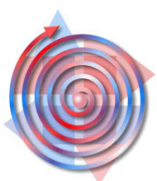
KUKA

FANUC

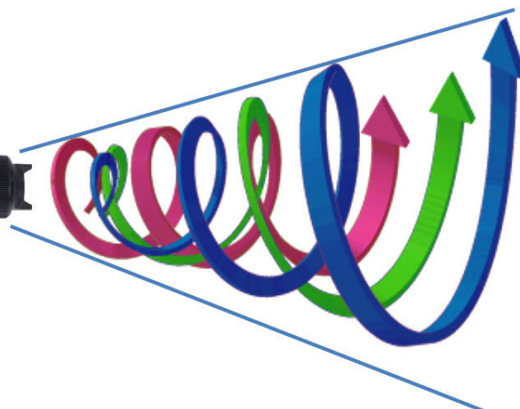
Kawasaki

EPSON

STÄUBLI



OTSON[®]
Liquid Electrostatic



Round Tin Nozzle(A) Round Tin Nozzle(B) Round (FRP) Nozzle Flat (FRP) Nozzle

Solvent

Waterborne

DUAL
Coating

H.E.T
High Efficiency Technology



AUTOMATION



INTERNET OF
THINGS



SMART
PRODUCTION



GREEN ENERGY



SMART
FACTORY



CYBER SECURITY



ARTIFICIAL
INTELLIGENCE

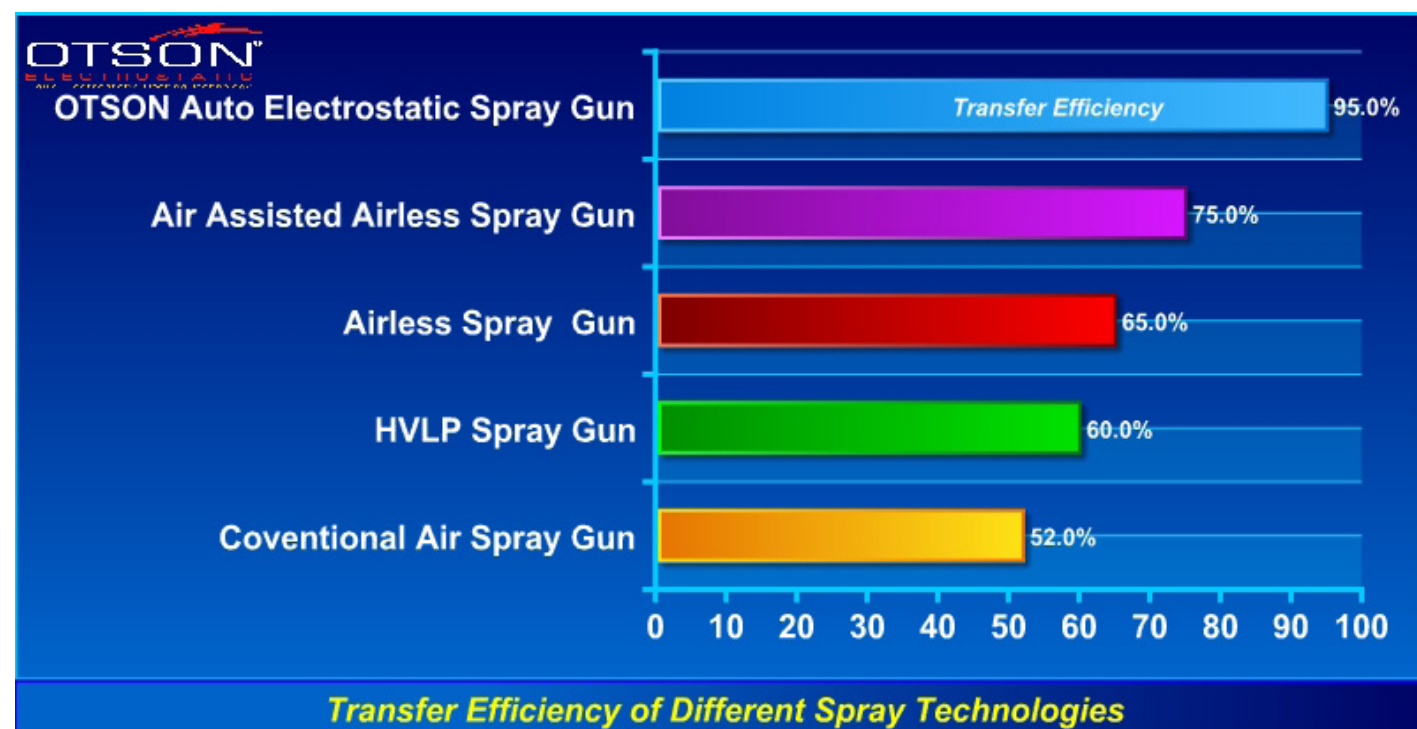


MACHINE
LEARNING

Overview

The OTS-7800 Auto Electrostatic Spray Gun -Robot Arm Kit is a highly efficient and cost-effective solution for applying coatings and paints in various industrial settings. The system utilizes electrostatic technology and special nozzle structures, such as tin Round nozzle, frp Round nozzle and frp flat nozzle, to produce smaller droplets that are more easily attracted to the grounded object, resulting in a consistent and high-quality finish.

One of the key benefits of the OTS-7800 Auto Electrostatic Spray Gun -Robot Arm Kit is its ability to cover a large surface area in a short amount of time, which can lead to increased production rates and ultimately a higher return on investment for your customers. The special nozzle structures and the electrostatic technology of the system provide the ability to handle a wide range of coatings and paints, including 2K and water-based paints, making it a versatile solution for various industrial applications. The system is also designed for easy maintenance, ensuring minimal downtime and increased reliability.



Dual Coating for Solvent and Waterborne Paint



2K/3K WATERBASED

2K/3K SOLVENT

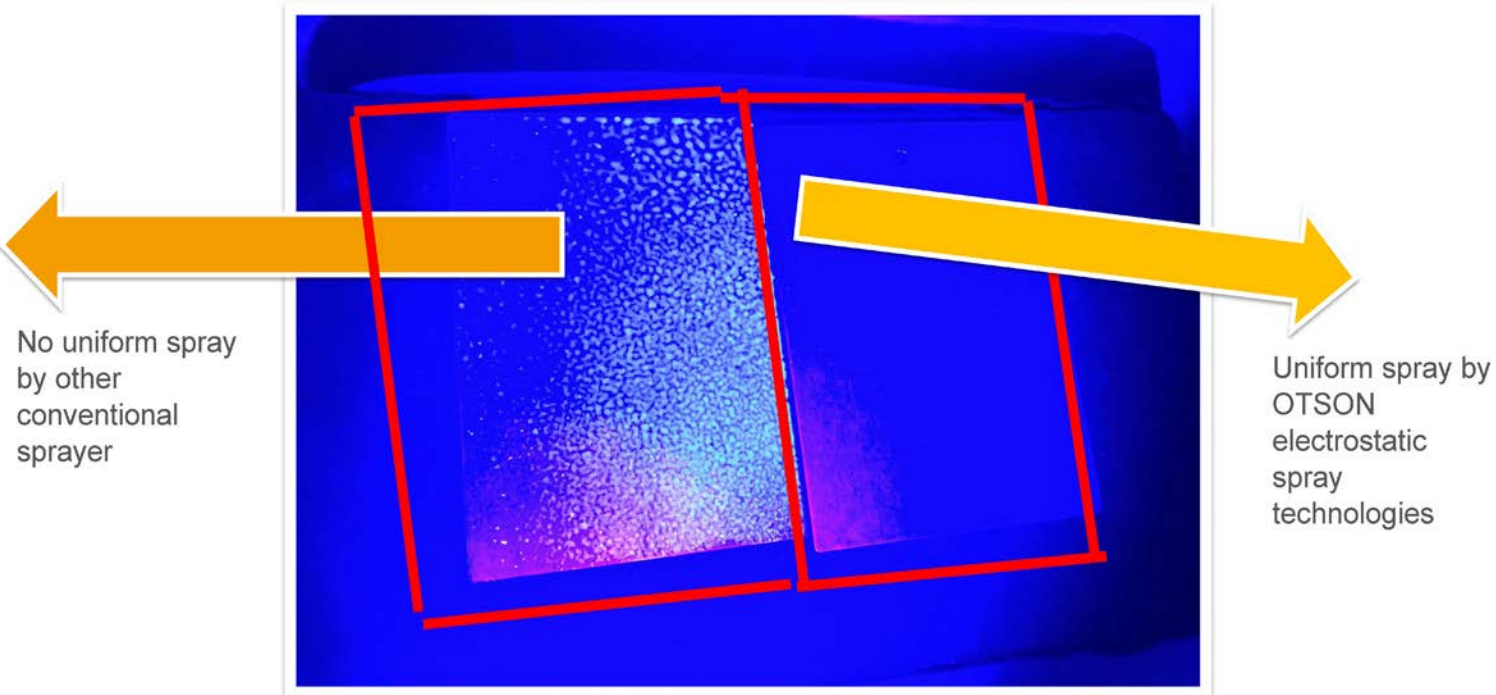


Additionally, the OTS-7800 Auto Electrostatic Spray Gun -Robot Arm Kit is designed to reduce CO2 emissions and overspray, which can help to save cost and be more environmentally friendly, ultimately leading to cost savings for your customers.

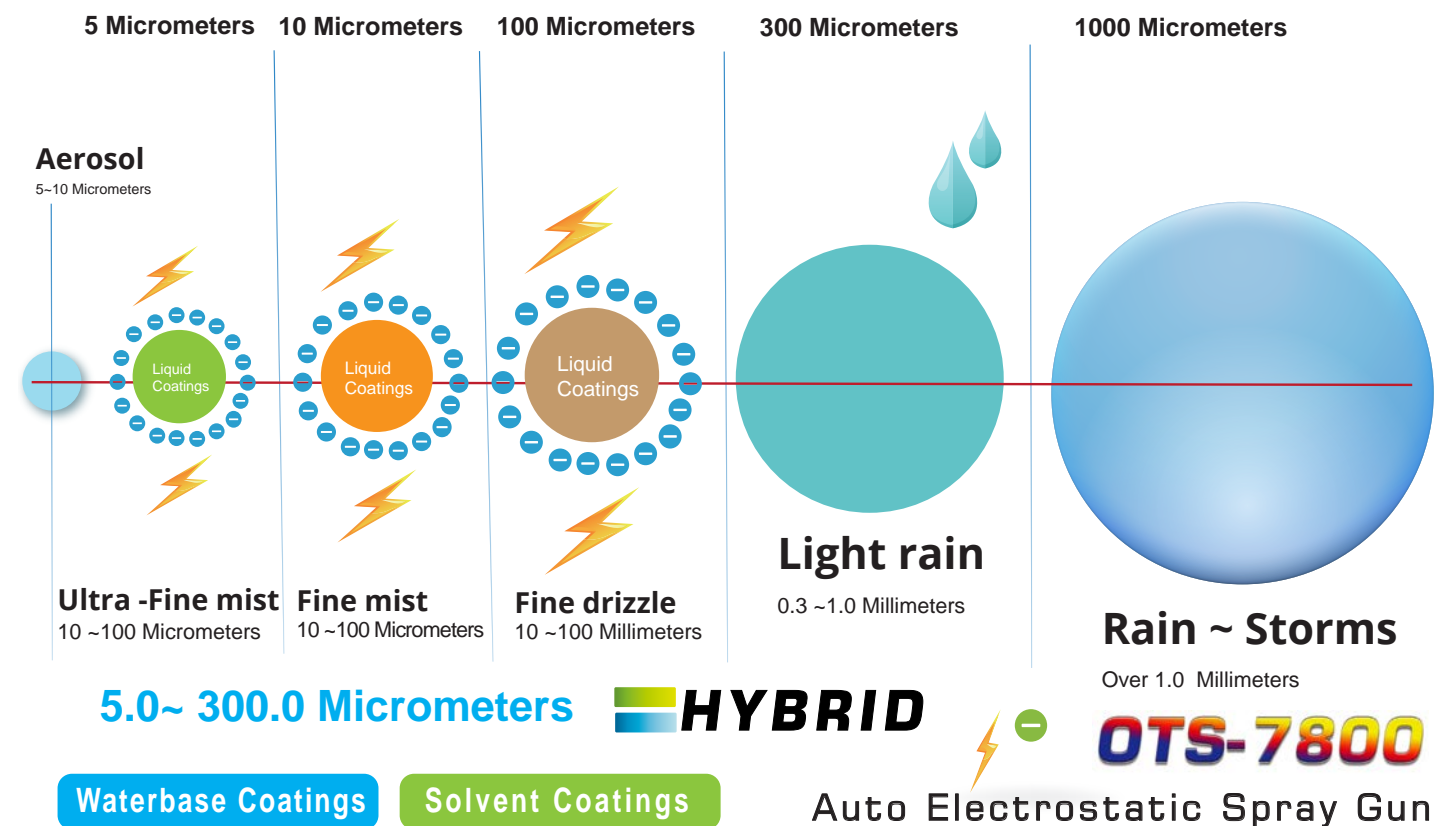
The system includes a fully automated control panel that provides high production rates and reduces labor cost. The control panel gives operators total control flexibility and allows the operator to change process parameters, not only between batches, but also within the same part. The simplified user interface control panel is capable of recording ten different coating parameters which is beneficial to apply in various objects easily and efficiently.



The OTS-7800 Auto Electrostatic Spray Gun -Robot Arm Kit is safe and compliant for use in various industrial settings, including potentially explosive atmospheres. It is certified by ATEX, the standard for equipment and protective systems in these environments. We provide customized solutions to meet our customers' needs, including integration of electrostatic high rotary atomizer technology and special nozzle structures for 2K and water-based paints. Our system increases production rates and cost savings for a high return on investment.



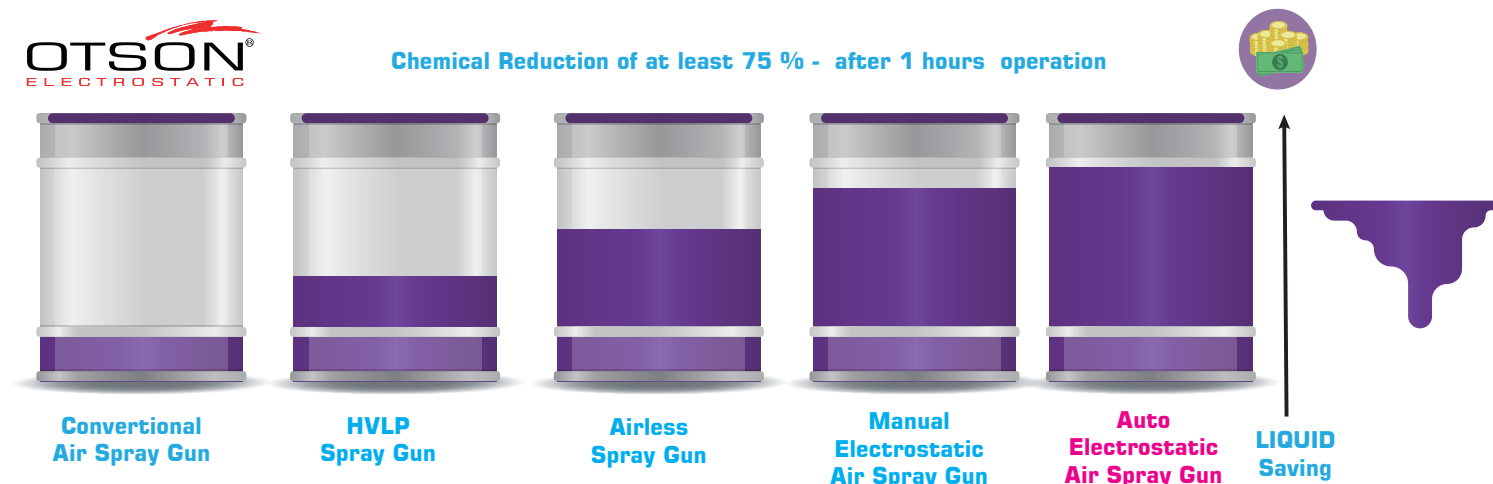
Different coatings thicknesses by OTSON Electrostatic Spray System



Benefits of Electrostatic Spray Technology

- **Improve Finishing Quality**
- **Reduce Refinishing Work**
- **Time Savings**
- **Reduce Paint Wastage**
- **Material Savings**

Reduce Paints Costs



Return-on-Investment (ROI)

By replacing Conventional Air Spray gun with Auto Electrostatic Spray Bell System

	Typical	Calculate Your Own Application
Paint price per litre	USD 10	
	X	X
Litre Used per Day	100 litres	
	X	X
Business Days per Year	220 days	
Electrostatic Transfer Efficiency	95%	
Annual Savings	USD 209,000.00	

Features

- **Dual Coating- Solvent and Waterborne Paint**
- **Improve Coating Quality**
- **Reduce Air Pollution**
- **Reduce Water Pollution**
- **High Transfer Efficiency - Spray Painting**
- **High Atomized Nozzle**
- **Easy Handle for Long Term Operation**
- **Long Life Operation**
- **Low VOC Emissions**
- **Low Failure Rate and Easy Maintenance**
- **Light Weight Gun - 470g Only**



The Spray Direction of High Atomized Nozzle



Round Tin Nozzle(A)



Round Tin Nozzle(B)



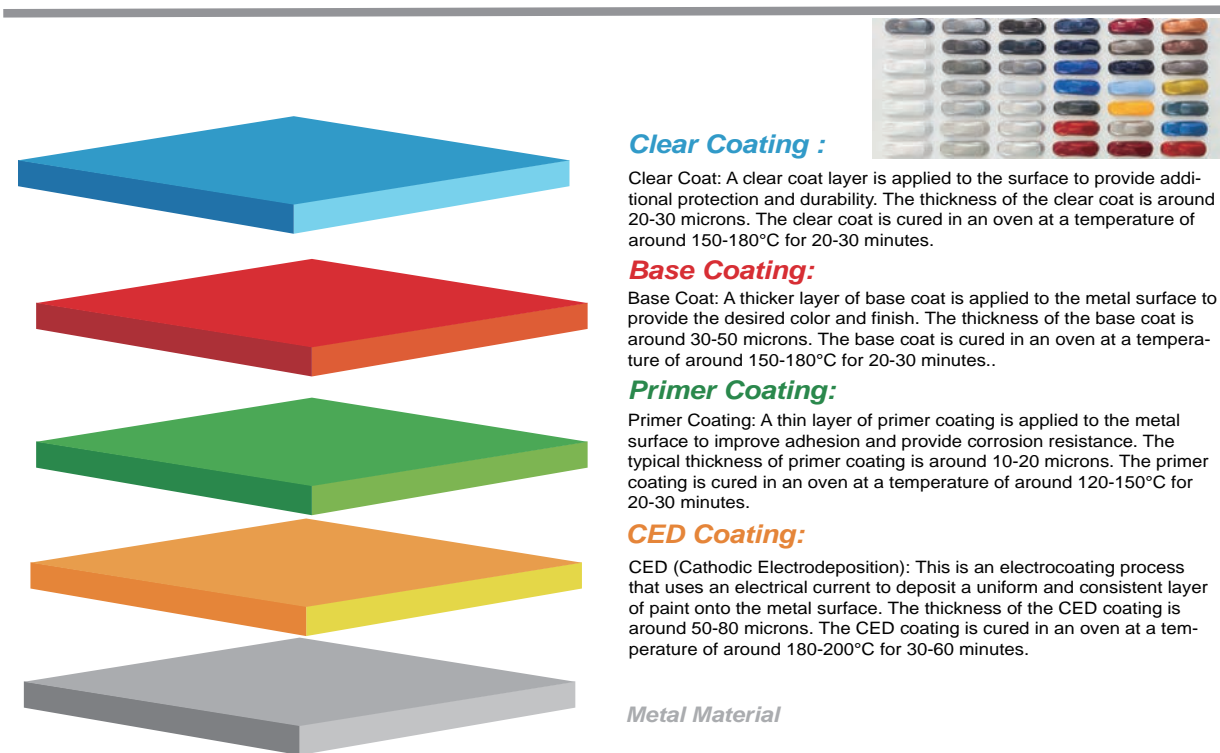
Round (FRP) Nozzle



Flat (FRP) Nozzle

The metal industry typically requires a multi-layer liquid coating system to provide protection and enhance the appearance of metal surfaces. The thickness of each layer depends on the specific requirements of the metal surface, but a typical sequence of layers for metal industry would include the following:

OTSON
ELECTROSTATIC Pretreatment and coating process of metal parts in the metal industry



- **Surface Preparation:** The metal surface is cleaned and treated to remove any dirt, oil, or other contaminants that may affect the adhesion of the coating. The surface may be sandblasted, degreased, or chemically cleaned
- **CED (Cathodic Electrodeposition):** This is an electrocoating process that uses an electrical current to deposit a uniform and consistent layer of paint onto the metal surface. The thickness of the CED coating is around 50-80 microns. Curing time and temperature: The CED coating is typically cured in an oven at a temperature of around 80-120°C for 15-30 minutes.
- **Primer Coating:** A thin layer of primer coating is applied to the metal surface to improve adhesion and provide corrosion resistance. The typical thickness of primer coating is around 10-20 microns. Curing time and temperature: The primer coating is typically cured in an oven at a temperature of around 80-120°C for 15-30 minutes.
- **Base Coat:** A thicker layer of base coat is applied to the metal surface to provide the desired color and finish. The thickness of the base coat is around 30-50 microns. Curing time and temperature: The base coat is typically cured in an oven at a temperature of around 80-120°C for 15-30 minutes.
- **Clear Coat:** A clear coat layer is applied to the surface to provide additional protection and durability. The thickness of the clear coat is around 20-30 microns. Curing time and temperature: The clear coat is typically cured in an oven at a temperature of around 80-120°C for 15-30 minutes.
- **Final Inspection:** The coated metal parts are inspected to ensure they meet quality standards and customer specifications.

These layers are applied using liquid electrostatic spray equipment, which is capable of atomizing the coating materials into fine particles for precise and efficient application. The thickness of each layer can be adjusted based on the specific requirements of the metal surface and the desired end result.

2K/3K Mixer and Color Change System- Disk Electrostatic Spray

Color change valves, also known as paint dispensers, are a valuable investment for any business in the painting industry. These devices are used in paint shops to mix and dispense paint quickly and accurately, reducing waste and cleanup time.

One of the key benefits of a color change valve is its ability to automatically switch between different paint colors, which can save time and increase efficiency. This feature is especially useful for businesses that work on multiple projects and need to switch between colors frequently.

Another advantage of color change valves is their mixing capabilities. These devices can mix the paint with hardeners, reducers, or other additives as it is dispensed, ensuring that the paint is properly mixed and ready to use, which can help improve the quality of the paint job.

In terms of market view, the use of color change valves is prevalent in industrial paint application such as automotive, aerospace, and wood finishing industries. Many companies are investing in color change valves to improve their production efficiency and reduce cost.

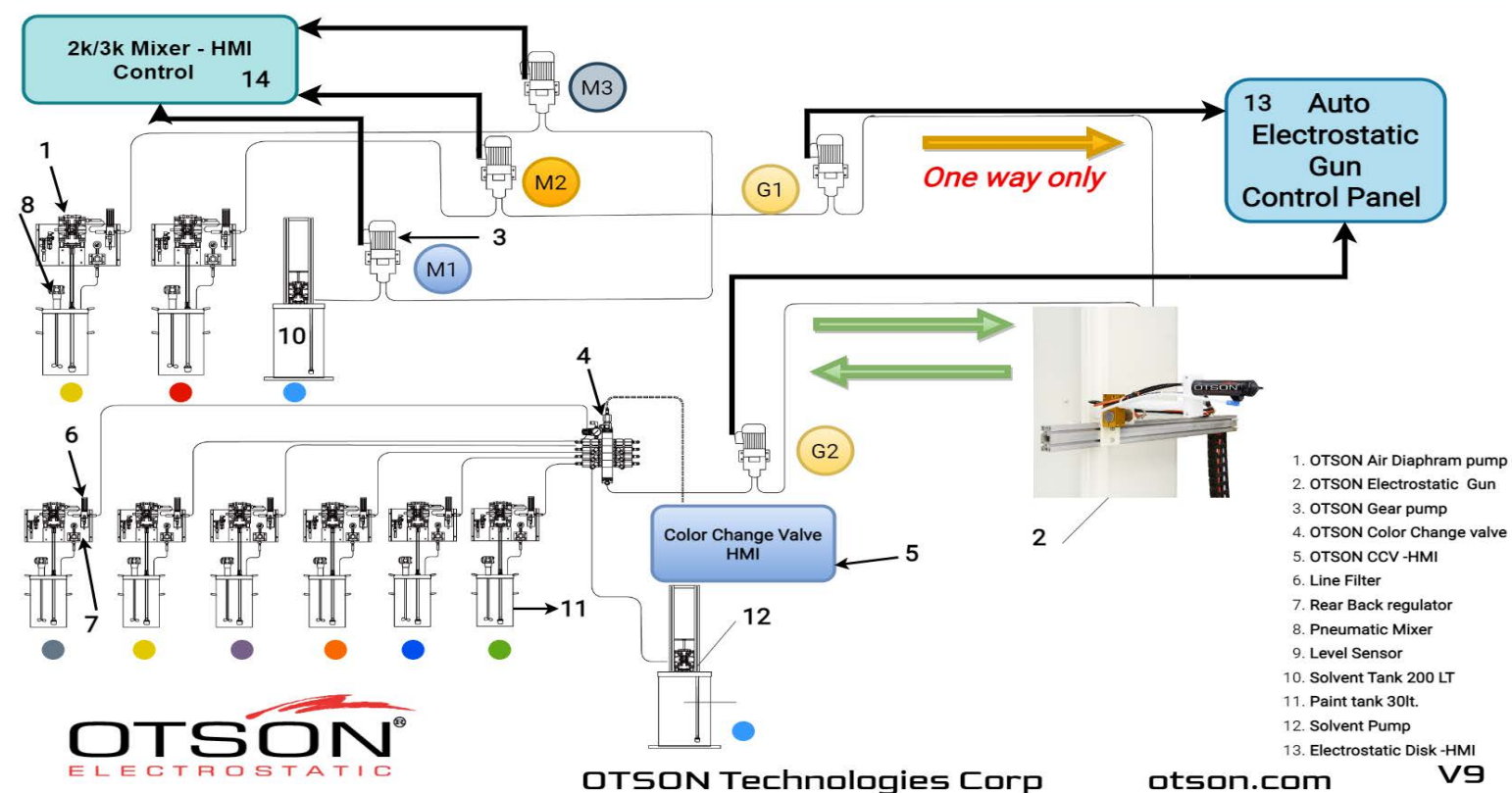
Overall, color change valves are an essential component of any paint shop, providing accurate and efficient paint dispensing and color change capabilities. Investing in a high-quality color change valve can help businesses in the painting industry to increase productivity, improve the quality of their paint jobs and save money in the long run.

2K/3K WATERBASED

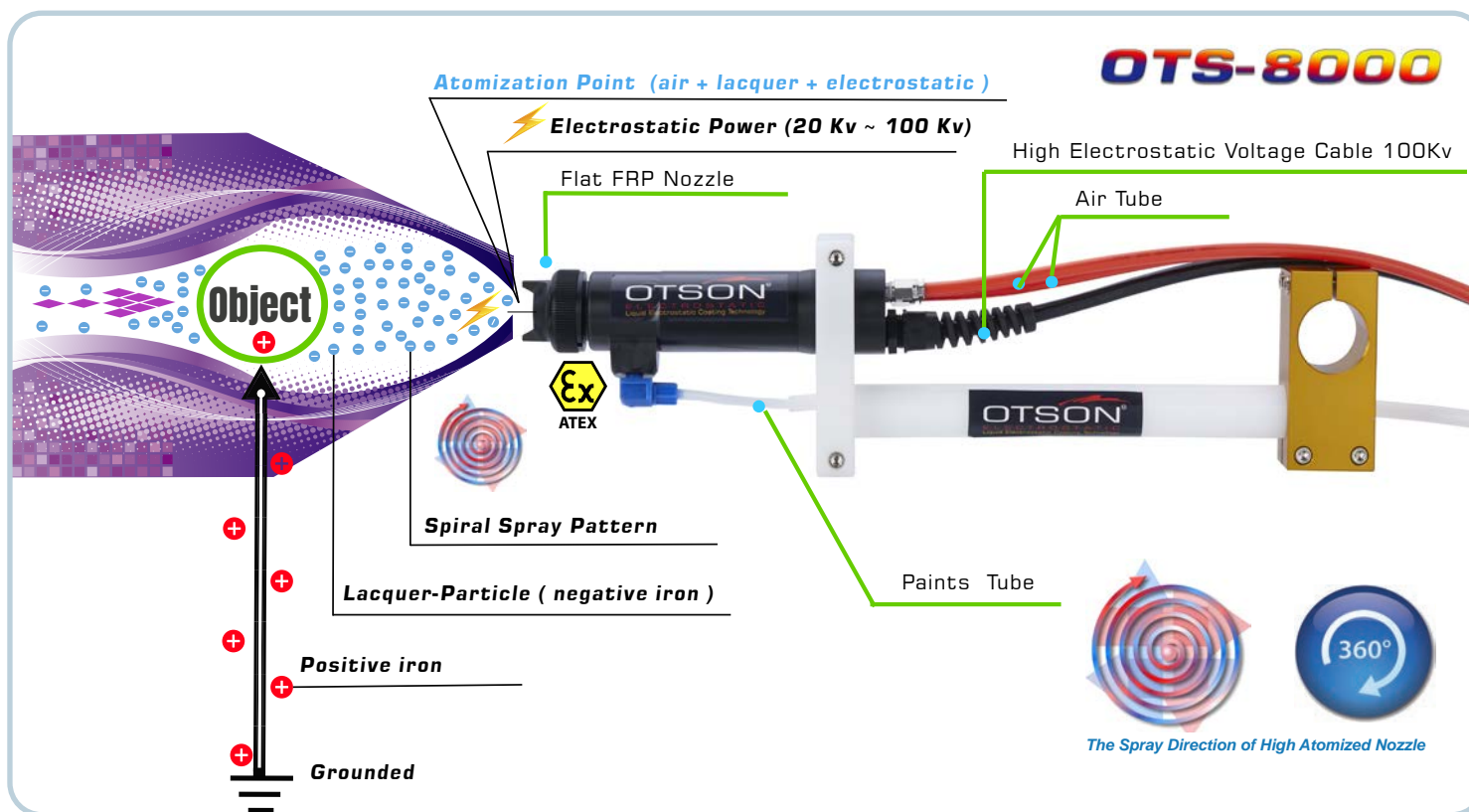
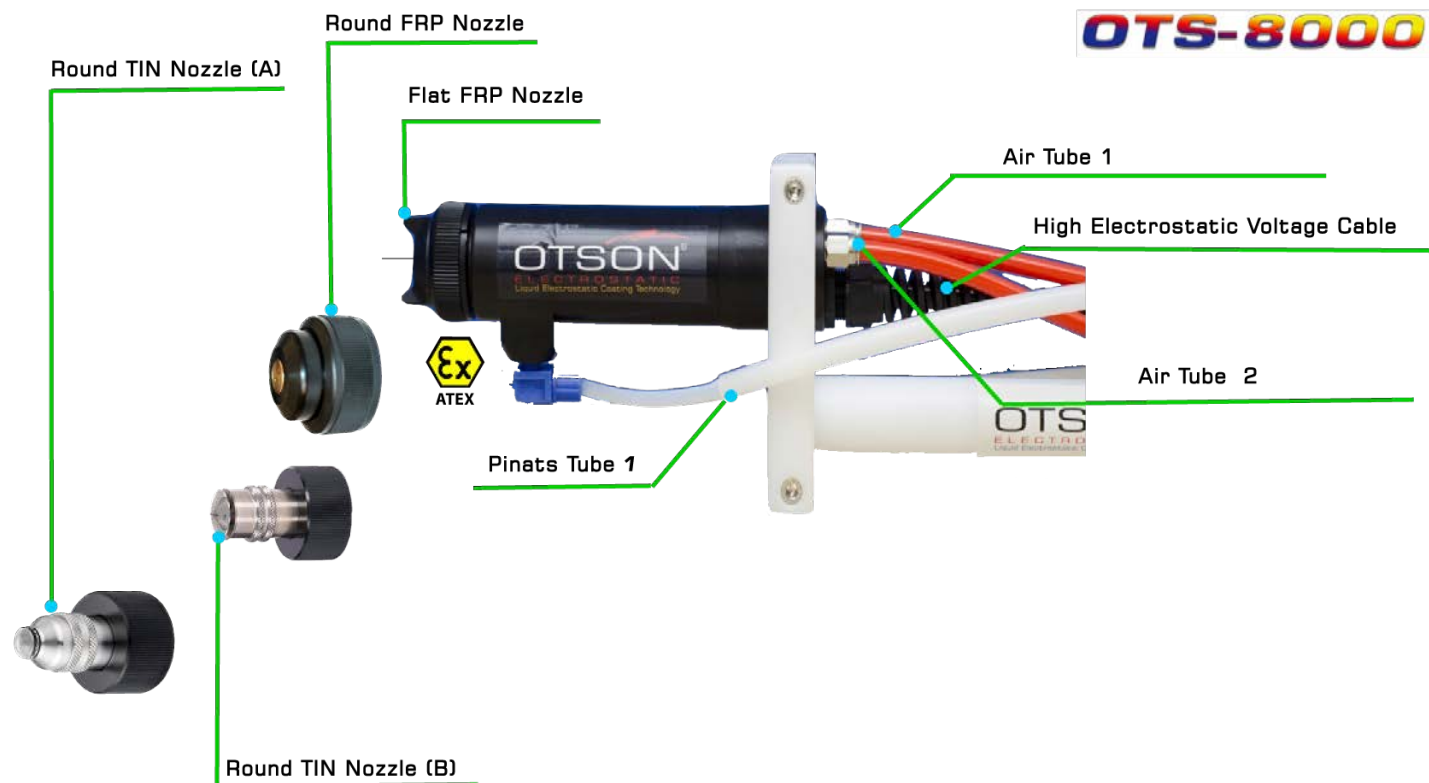
2K/3K SOLVENT

OTSON
Fluid Technologies

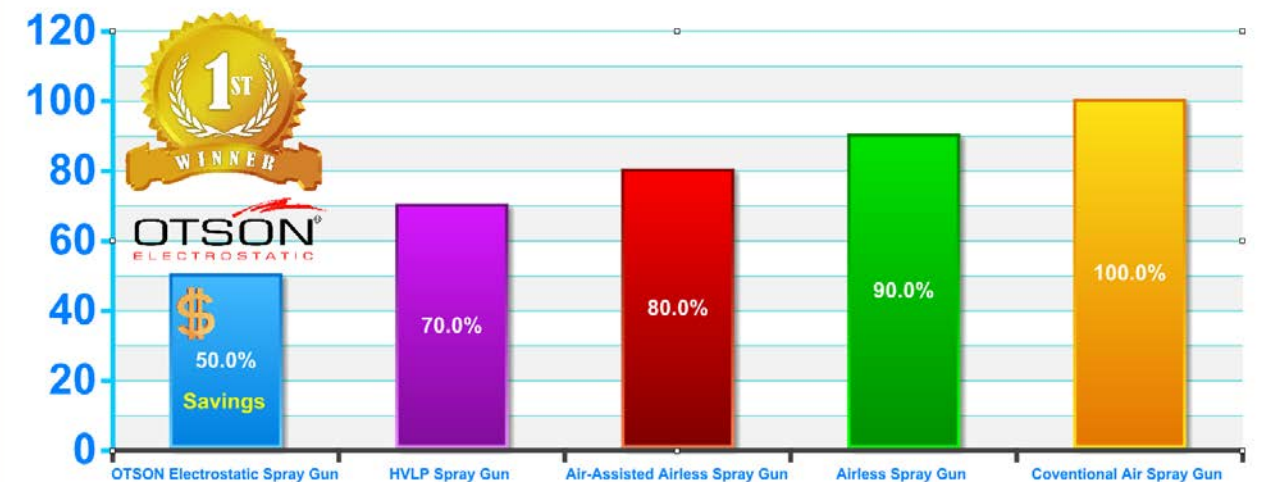
2k /3K Mixer and Color Change System - Electrostatic Spray Gun



Features



Coatings Savings - Comparison Chart of Different Spray Technologies



OTS-7800 Auto Liquid Electrostatic Spray System



The OTS-7800 Auto Liquid Electrostatic Spray Gun from OTSON comes equipped with standard accessories, including an air regulating valve, electrostatic power supply, and a round (TIN) nozzle, with an additional set available as an option. Customers may choose from a set that includes a round (FRP) and flat (FRP) nozzle. When combined with a paint tank, gear pump, paint filter, paint stabilizing valve, air dryer, and air compressor, this electrostatic spray gun forms a complete set of liquid electrostatic spraying equipment. The customer can carry out spray operations easily by pouring paint into the bucket.

The 2K-3K Electronic Mixing & Dosing System is an advanced system designed for use in a liquid electrostatic spray system. It is used to control the mixing and dosing of two or three liquid components in a precise and accurate manner. The system uses electronic sensors and controls to measure and adjust the flow rate of each component, ensuring that the correct proportion of liquids are mixed and sprayed. The end result is a more uniform and efficient application of the sprayed liquid, resulting in improved product quality and increased



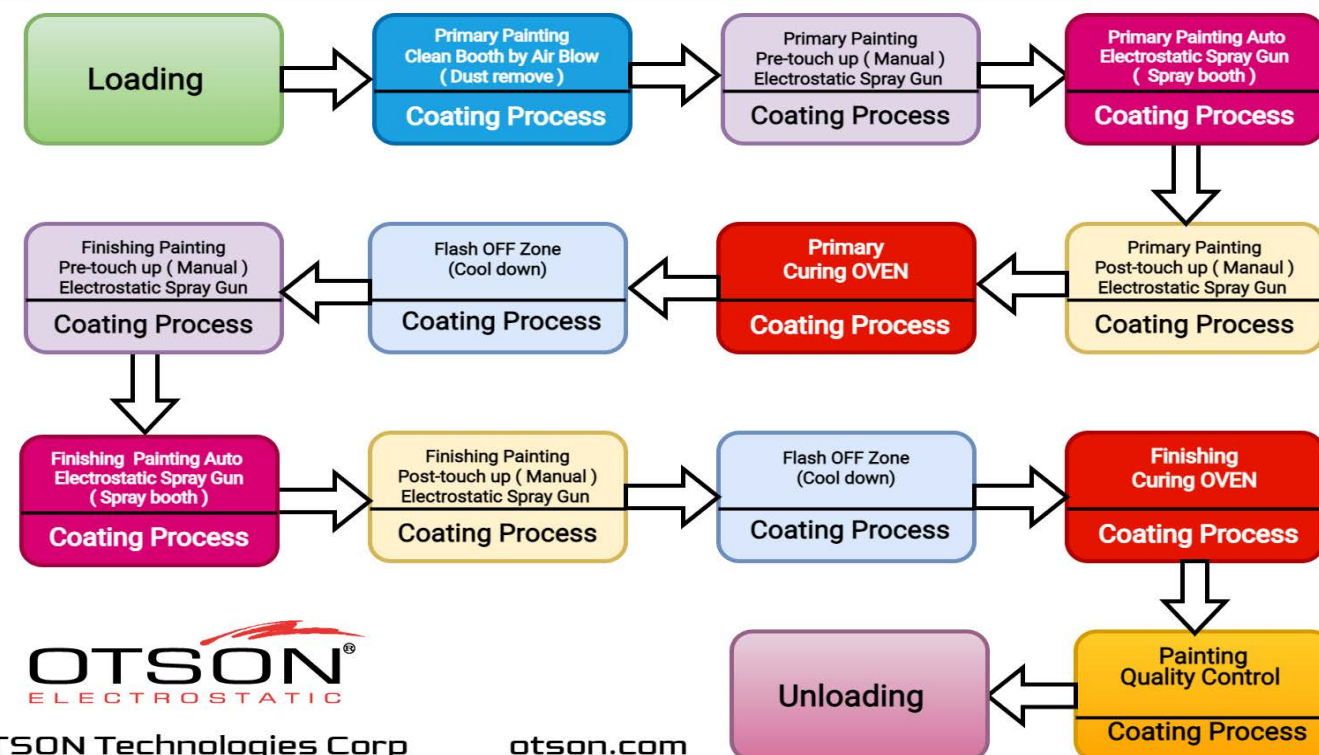
The 2K-3K Electronic Mixing & Dosing System typically comprises of the following components:

- **Metering Pumps:** These pumps are used to accurately control the flow rate of each component, ensuring that the correct proportion is mixed and sprayed.
- **Mixing Chamber:** The mixing chamber is where the two or three liquid components are combined and mixed together.
- **Control Unit:** The control unit is the heart of the system and is responsible for monitoring and adjusting the flow rate of each component. It may use electronic sensors, computer control and software to manage the mixing and dosing process.
- **Display Unit:** A display unit is used to show the operator the current status of the system, including the flow rate of each component, total amount of liquid mixed and any alarms or faults that may arise.

The system may also be equipped with additional features such as automatic cleaning, continuous monitoring, and alarms for low level and low pressure, to ensure the reliable and consistent operation of the mixing and dosing process.

Overall, the 2K-3K Electronic Mixing & Dosing System provides precise control over the mixing and dosing of two or three liquid components, which results in a more efficient, consistent and uniform application of the sprayed liquid.

The Process Steps of Auto Electrostatic Spray Gun Coating System



**Round TIN
Nozzle - B**



OTS-7800 Auto Electrostatic Spray Gun

Specification

OTS-7873 /7833 Microcomputer Control Panel (10" Man-Machine Interface)

- **Input Voltage:** AC 200V ~ 415V 50hz / 60hz (3 phase) ± 5%
 - **Power Consumption :** 2.5 KVA
 - **Dimension :** 420 (L) x 730 (w) x 1710 (H) mm
 - **Weight :** 110 kg
 - **Servo Motor Controlled Reciprocator.**
 - **Touch Panel Interface by using 10" Color Screen.**
 - **Memory Capacity up to 200 sets of Operation.**
 - **Color Change Control (2 colors) Interlocking**
 - **Door-in-Door Design to Achieve Efficient Anti-Dust Effect.**
- Coatings:** Solvent-base & Waterborne Coatings



OTS-7853 / 7813 Microcomputer Control Panel (10" Man-Machine Interface)

- **Input Voltage:** AC 200V ~ 415V 50hz / 60hz (3 phase) ± 5%
 - **Power Consumption :** 2.5 KVA
 - **Dimension :** 420 (L) x 730 (w) x 1710 (H) mm
 - **Weight :** 110 kg
 - **Servo Motor controlled reciprocator.**
 - **Touch Panel interface by using 10" colour screen.**
 - **Memory capacity up to 200 sets of operation.**
 - **Door-in-Door design to achieve efficient anti-dust effect.**
- Coatings:** Solvent-base Coatings



6 Axis Robot Arm - for painting

Maximum Load of Robot: 20 kg

Number of axis: 6
Maximum horizontal reach: 2,779 mm
Maximum vertical reach: 4,582 mm
Repeatability: ±0.5 mm
Controller: NX100
Motion range (°)

Maximum speed (°/s) :2.0 m/s

Robot applications: Coating and paintings



Specification

OTS-7813 & OTS-7833 Liquid Electrostatic Power Supply

Out Voltage	0~70 KV DC(-) -OTS-7800 0~100 KV DC(-)-OTS-8100
Out Current	50 microamperes
Intercepting Current	20~150 microamperes
Input Voltage	220V AC (50Hz)
Weight	12 kg
Dimensions	300(L)x120(W)x350(H) mm
Coatings	Solvent-base Coatings



OTS-7873 ,OTS-7853 Liquid Electrostatic Power Supply

Out Voltage	0~110 KV DC(-)
Out Current	50 microamperes
Intercepting Current	20~150 microamperes
Input Voltage	220V AC (50Hz)
Weight	12 kg
Dimensions	300(L)x120(W)x350(H) mm
Coatings	Solvent-base & Waterborne Coatings



Gear Pump

Input Voltage : AC 220 V ~ 380 V ±10% 3 Phase

Horsepower : 1/4 HP

Dimension : 130 (L) x 600 (w) x 30 (H) mm

Weight : 13 kg

Output : 3cc or 6cc / rev 200 cc ~ 3000 cc / min (digital control)

Spray Hose : Double-layer Teflon paint hose

Pump Material : Hardened Steel CMoWCrVCo HRC = over 63)

Titanium plated for durable use and wearing resistance.



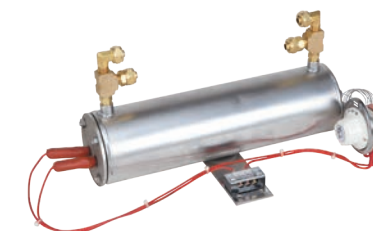
Air Heater

Dimension : 410 (L) x 170 (w) x 150 (H) mm

Weight : 5 kg

Input Voltage : AC220V , 500W

Temperature : 0 degree C ~ 120 degree C



Water Filter & Oil Filter

Dimension: 170 (L) x 340 (w) x 90 (H) mm

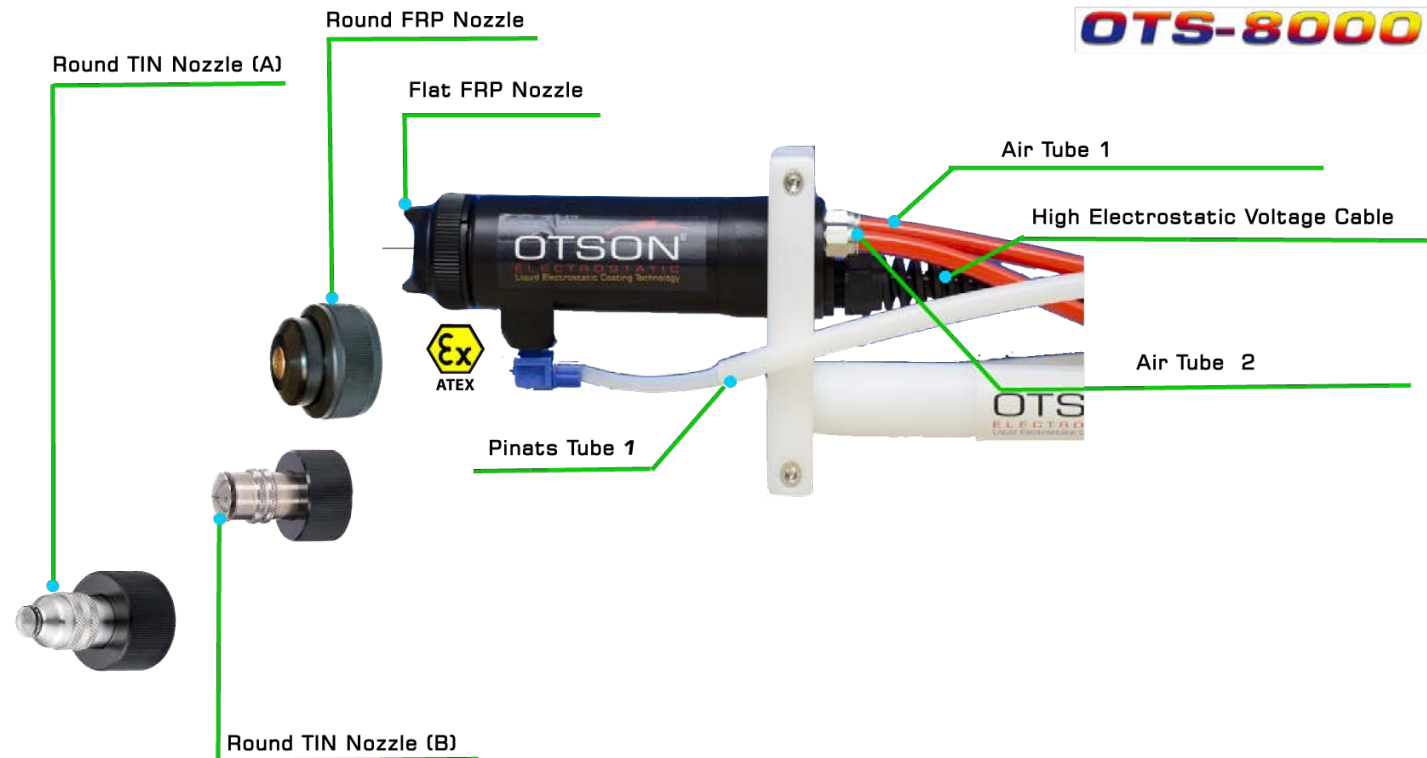
Weight : 3 kg

Water Filter : 3650 l/s

Oil Filter : 1900 l/s

MAX Operation Pressure : 150psi





OTS-8000

Model Number	OTS-8000
Spare atomizer, without cable or hose	0.5 kg
Material of Auto Liquid Electrostatic spray gun	FRP (no magnetic)
Life cycles (valves/bell /bearings/couplings) depend on air quality and Maintenance	1~5 years

Pneumatic supply	
Maximum air pressure	6 bar (87 psi)
air consumption	From 7 - 40 (4 - 23) m3/h (cfm)

Paint supply	
Maximum Fluid Pressure	6 bar (87 psi)
Maximum Fluid Outlet	800 (27) cc/min (oz/min)
Minimum Fluid Outlet	100 (3) cc/min (oz/min)
Viscosity scale (for minimum results)	8 to 30 seconds NK-2 Cup

(2): with a product density < 1.1 gr/cm3 and/or of the combination bell and air shroud being used

Performances	
Transfer Efficiency	85% ~98%

Color change	
Paint consumption	25 cm ³ (paint circuit) & 25 cm ³ (pump circuit)
Paint feeding	OTSON GEAR PUMP (2 color change)
Rinsing product consumption	300 cm ³ (not included rinsing box)
Standard process time	10 sec (with REVERSE FLUSH)
Optimized process time	5 sec (with REVERSE FLUSH on circuit 1 & 2)

Same Color (head rinsing + Nozzles)	
Time	6 sec.
Rinsing product consumption	50 cm ³

High Electrostatic Voltage	
Voltage maxi.	110 kV
Current maxi.	50 μA

Specification

Liquid Electrostatic Spray Gun

Input Voltage	0~110KV DC(-)
Gun Length	225 mm
Gun Weight *(no nozzle , hv cable ,spraying tube and air tube)	470 g
Fluid and Air Pressure	0 ~ 7 kg/cm ² (6.86 bar) (0~100) psi
Operating Pressure	Air Supply
Coatings	Solvent-base & Waterborne Coatings



Round (TIN) Nozzle - A type

Gauge :	12 mm
Atomization air pressure :	4 ~ 6 Bar
Flow Rate :	20 ~ 300 ml/min
Fan pattern width :	40 ~150 mm
Air :	180 NI / min



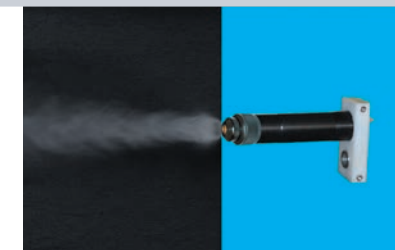
Round (TIN) Nozzle - B type

Gauge :	22 mm
Atomization air pressure :	4 ~ 6 Bar
Flow Rate :	20 ~ 300 ml/min
Fan pattern width :	70 mm
Air :	180 NI / min



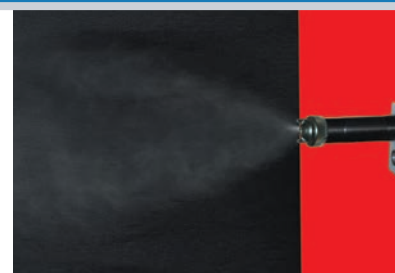
Round (FRP) Nozzle

Gauge :	12 mm
Atomization air pressure :	4 ~ 6 Bar
Flow Rate :	50 ~ 300 ml/min
Fan pattern width :	160 mm
Air :	180 NI / min



Flat (FRP) Nozzle

Gauge :	3 mm
Atomization air pressure :	4 ~ 6 Bar
Flow Rate :	100 ~ 400 ml/min
Fan pattern width :	300 mm
Air :	180 NI / min



iOTSON[®]

Paint Shop Technologies

Dashboard of Electrostatic Spray Coating – Paint Shop



Round FRP Nozzle



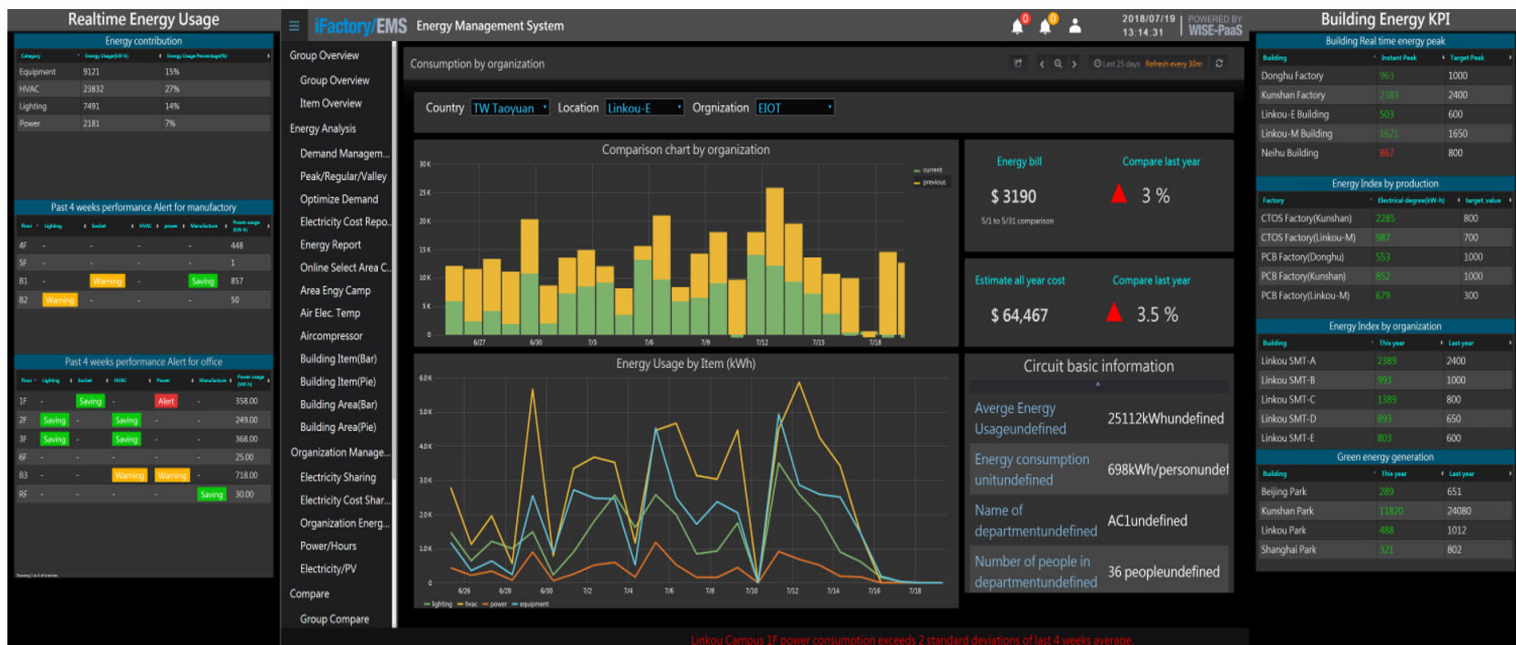
OTSON Technologies Corp

otson.com

iOTSON[®]

Paint Shop Technologies

Energy & Environment-Dashboard of Paint Shop



Flat FRP Nozzle



OTSON Technologies Corp

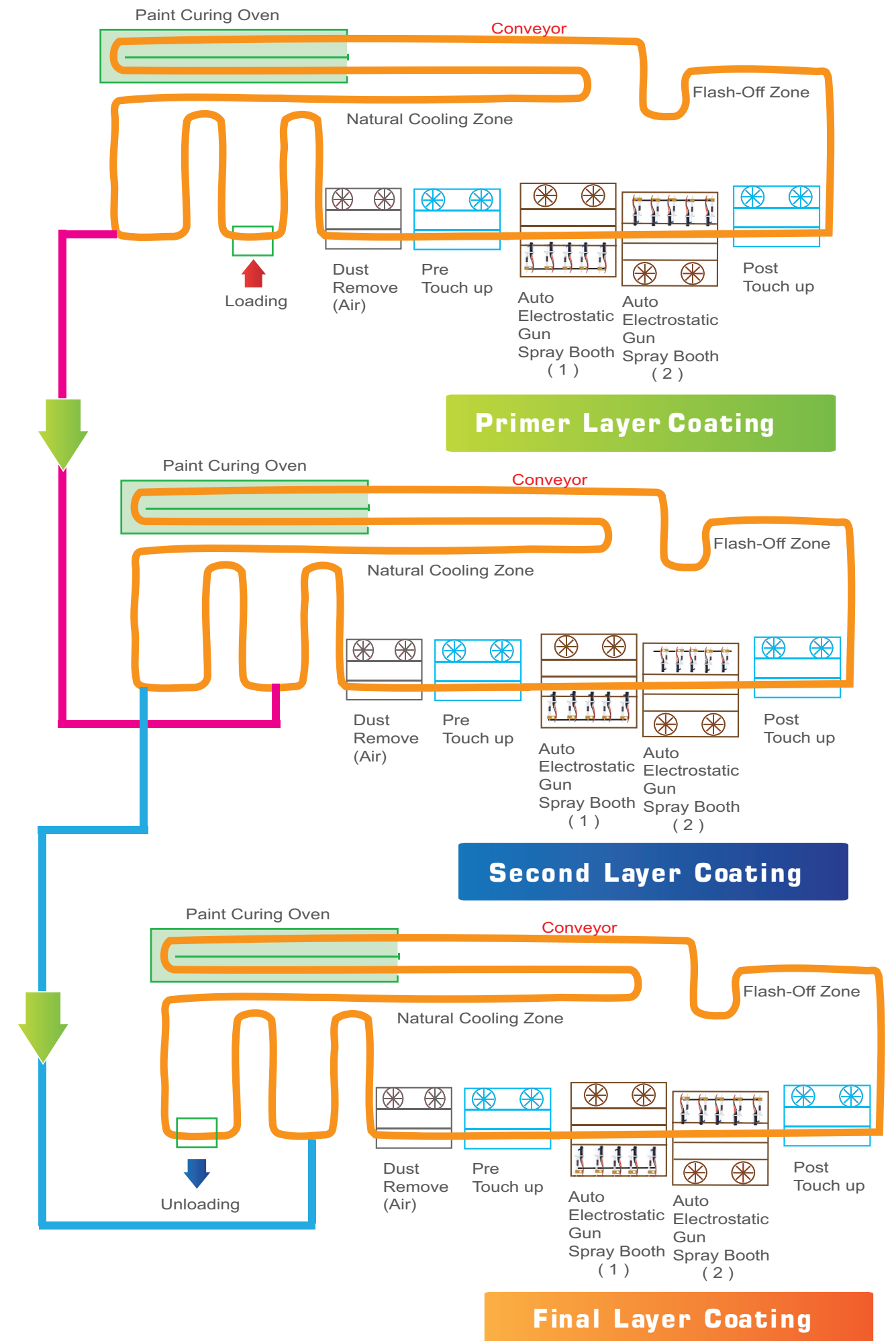
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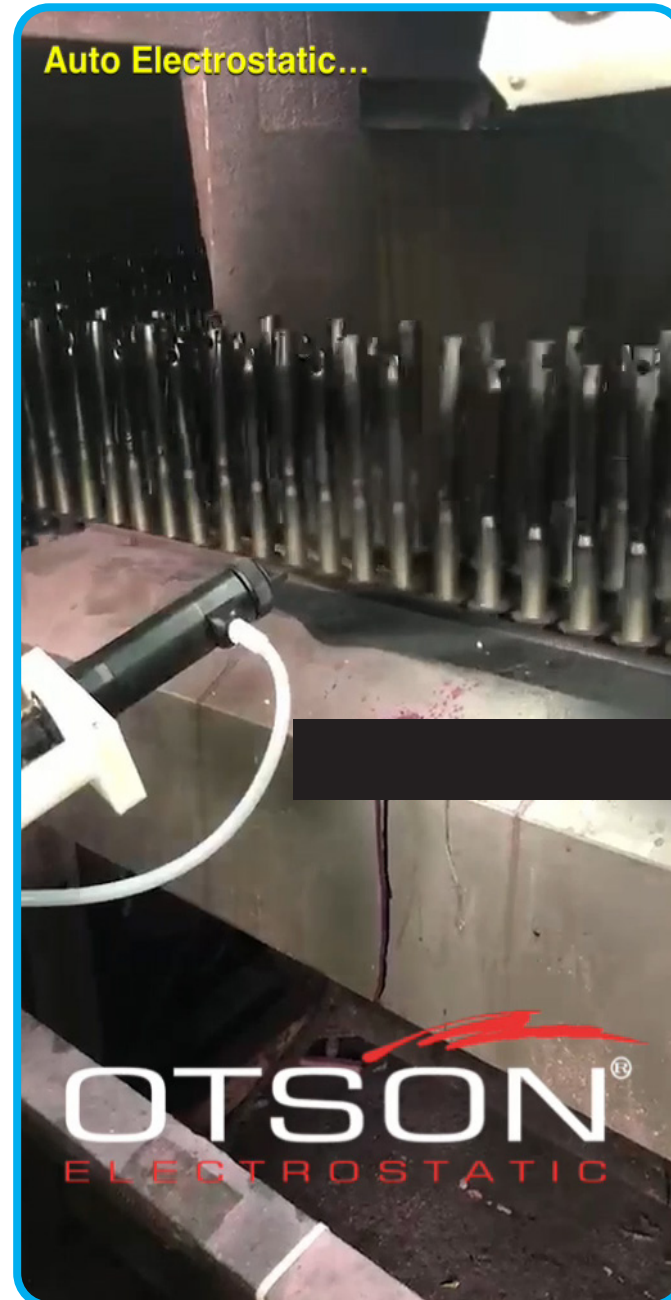
Application - Industries



- Small parts
- Bicycle
- Application
- Small parts
- Bicycle
- Computer Housing
- Stationery
- Wooden Furniture
- Hardware
- Lockers
- Freezers
- Iron Railing
- Display Cases
- Office Partitions
- Medical Equipment
- Rest room Partitions
- Roller Bars
- Metal Doors
- Decorative Lamps
- Electrical Home Appliances
- Car Accessories, Teflon Pot
- Sports Equipment
- Handcraft
- Files
- Desks

- Sports Equipment
- Handcraft Computer
- Housing
- Stationery
- Wooden Furniture
- Hardware
- Lockers
- Freezers
- Iron Railing
- Display Cases
- Refrigerators
- Heavy Machinery
- Office Equipment



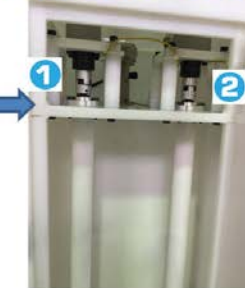


Easy Paint Kitchen for Waterbase and Solvent Paints



Dimension: 76x43 x170 cm Weight : 80 Kg

Easy Paint Kitchen for Waterbase and Solvent Paints - Gear Pump



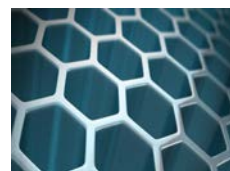
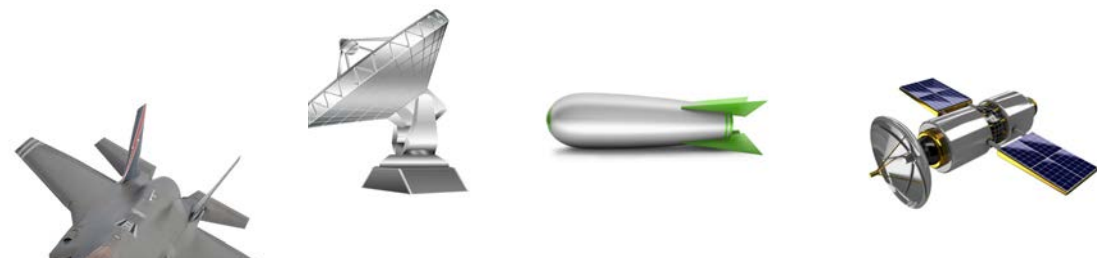
3cc ~6cc/rev
Gear Pump

Gear Pump
Motor

Model /Function	OTS-7873+G2	OTS-7853+G2	OTS-7833+G2	OTS-7813+G2	OTS-7803+G2
a. Microcomputer Control Subsystem					
Microcomputer Control Panel (HMI) x 1 set	10"	10"	10"	10"	
Memory Capacity for Storage Coating Parameters	199 sets	199 sets	199 sets	199 sets	
Air Flow Control x 1 set	Manual	Manual	Manual	Manual	Manual
Paints Flow Control (A) x 1 set	Auto / Manual	Auto / Manual	Auto / Manual	Auto / Manual	Manual
Paint Flow Control (B) x 1 set	Auto / Manual	Auto / Manual	Auto / Manual	Auto / Manual	Manual
Color Change Control (2 colors) x 1 set	Manual	Manual	Manual	Manual	Manual
Atomizer Control x 1 set	Manual	Manual	Manual	Manual	Manual
Electrostatic Power Supply Control x 1 set	0~110KV	0~110KV	0~110KV	0~110KV	0~70KV
Electrostatic Power Display x 1 set	LED	LED	LED	LED	LED
Electrostatic Current Display x 1 set	LED	LED	LED	LED	LED
Electrostatic Spark Protection System x 1 set	YES	YES	YES	YES	YES
Paints,Coatings	Solvent-base & Waterborne	Solvent-base	Solvent-base & Waterborne	Solvent-base	Solvent-base
b.Spray Subsystem					
High KV Electrostatic Spray Gun x 3 sets	Yes	Yes	Yes	Yes	Yes
High Atomization Spray Nozzle x 3 sets	Round , Flat	Round , Flat	Round , Flat	Round , Flat	Round , Flat
H.V Cable x 3 sets	11m ~ 40m	11m ~ 40m	11m ~ 40m	11m ~ 40m	11m ~ 40m
Teflon Spraying Tube x 3 sets	11m ~ 40m	11m ~ 40m	11m ~ 40m	11m ~ 40m	11m ~ 40m
PU Air Tube x 6 sets	11m ~ 40m	11m ~ 40m	11m ~ 40m	11m ~ 40m	11m ~ 40m
c.High Voltage Electrostatic Power Subsystem					
Electrostatic Power Supply x 1 set	Max 110KV	Max 110KV	Max 100KV	Max 100KV	Max 70KV
d. 6 Axis Robot Arm					
6 Axis Robot Arm x 3 sets	Yes	Yes	Yes	Yes	Yes
Safety Sensor x 1 set	Yes	Yes	Yes	Yes	Yes

Model /Function	OTS-7873+G2	OTS-7853+G2	OTS-7833+G2	OTS-7813+G2	OTS-7803+G2
e.Paint Supply Subsystem					
OTS-4000 (optional) Colour Change Valve +HMI	2~20 Colours (Auto Clean)	2~20 Colours (Auto Clean)	2 ~ 20 Colours (Manual Clean)	2~20 Colours (Manual Clean)	2 Colours
OTS-4200 (optional) 2K and 3K Mixer system +HMI	2K and 3K	2K and 3K	2K and 3K	2K and 3K	2K and 3K
Gear Pump + Motor +controler (A) x 1 set (optional) 3cc / rev 200cc~1500 cc /mim	3cc / rev	3cc / rev	3cc / rev	3cc / rev	3cc / rev
Gear Pump + Motor (B) x 1 set (optional) 6cc / rev 200 cc ~ 3000 cc / min	6cc / rev	6cc / rev	6cc / rev	6cc / rev	6cc / rev
f . Air Supply Subsystem					
Air Heater -Air Temperature Control x 1 set	Manual	Manual	Manual	Manual	Manual
Air Filter (screening oil and water) x 1 set	Auto	Auto	Auto	Auto	Auto
g. Smart Monitor Sensor Subsystem (optional)					
Air Flow	Local / Remote monitor	Local / Remote monitor			
Paint flow	Local / Remote monitor	Local / Remote monitor			
Paint Pressure	Local / Remote monitor	Local / Remote monitor			
Air Pressure	Local / Remote monitor	Local / Remote monitor			
Environment VOC Detect Sensor	Local / Remote monitor	Local / Remote monitor			
Monitor motor	Local / Remote monitor	Local / Remote monitor			
Smoke Sensor	Local / Remote monitor	Local / Remote monitor			
Air Temperature and Humidity	Local / Remote monitor	Local / Remote monitor			
AI Dashboard System	Local / Remote monitor	Local / Remote monitor			
Power Consumption monitor	Local / Remote monitor	Local / Remote monitor			
h. Safety Subsystem (optional)					
Safety Light Curtains Interlocking with disc system	Auto	Auto			
Automatic Miniature Fire Extinguisher (For Spray Gun and Control Panel system Only)	Auto	Auto			
I. Security System (optional)					
Remote Digital Video Monitor System (RDVRS)	Local / Remote monitor	Local / Remote monitor			
j. Small water-borne -Paint kitchen					
Special Isolation paint kitchen with 2 gear pump and air allegator	Yes		Yes		

Application - Industry



*Meeting the requirements
of each industry....*

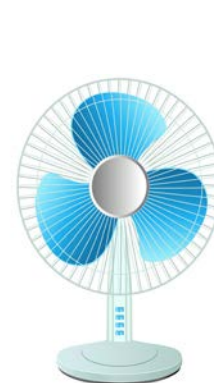


OTS-7800

Auto Liquid Electrostatic Spray Gun



Application - Spray Range



*.....With the widest
industrial spray range*

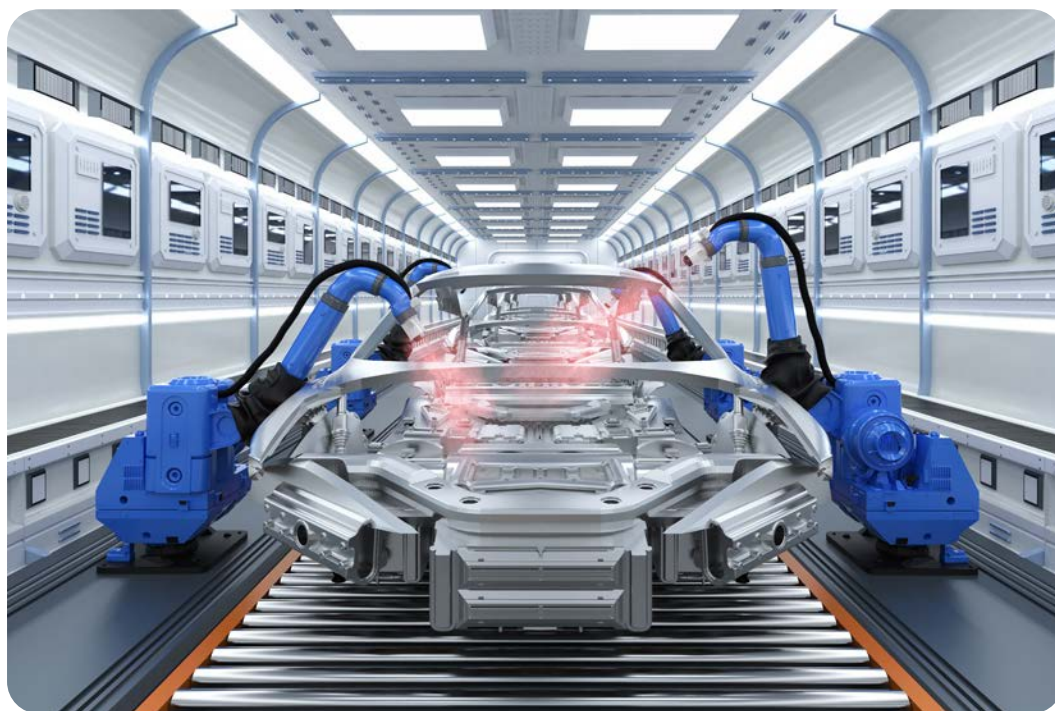


OTS-7800

Auto Liquid Electrostatic Spray Gun



10" Touch Panel Industrial (HMI)



Electrostatic Current UMA

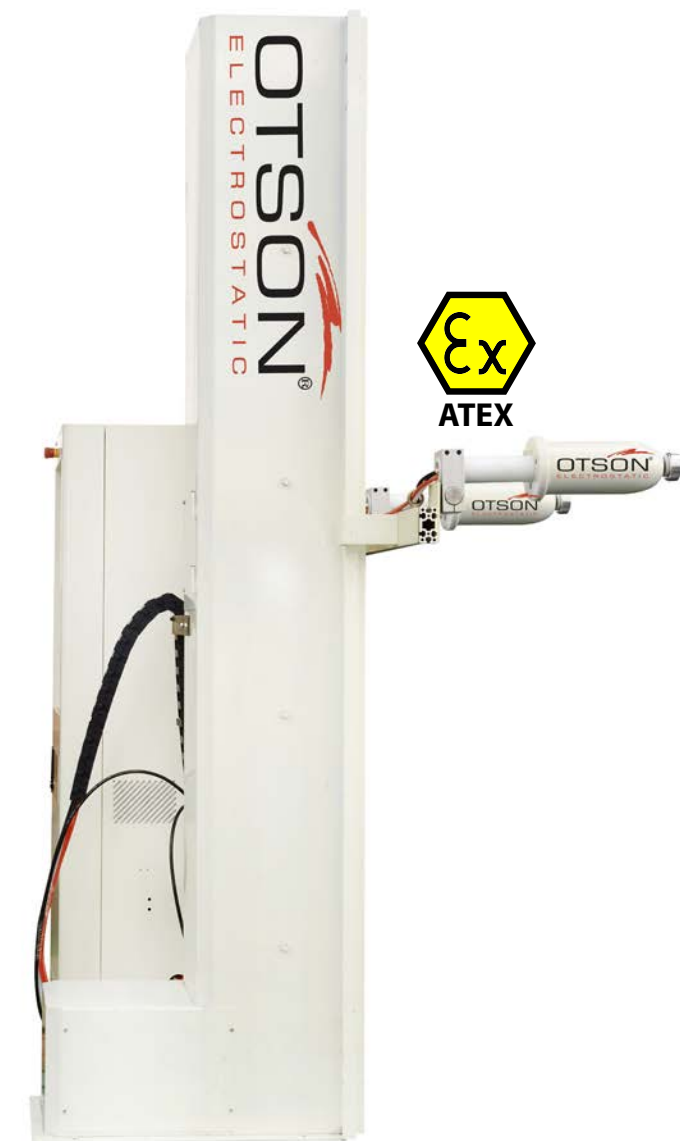
054

Electrostatic Voltage KV

-79.8



OTS-9000 Auto Electrostatic Spray Bell System



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OTS-7900

Electrostatic Spray Bell System-Robot Arm

MAX 60000RPM
(no loading spray Cup)

HYBRID

2K/3K WATERBASED

2K/3K SOLVENT



ABB

YASKAWA

KUKA

FANUC

Kawasaki

EPSON

STÄUBLI



Multi Bell Cup for differeft application

Solvent

Waterborne

DUAL
Coating

H.E.T
High Efficiency Technology



AUTOMATION



INTERNET OF THINGS



SMART PRODUCTION



GREEN ENERGY



SMART FACTORY



CYBER SECURITY



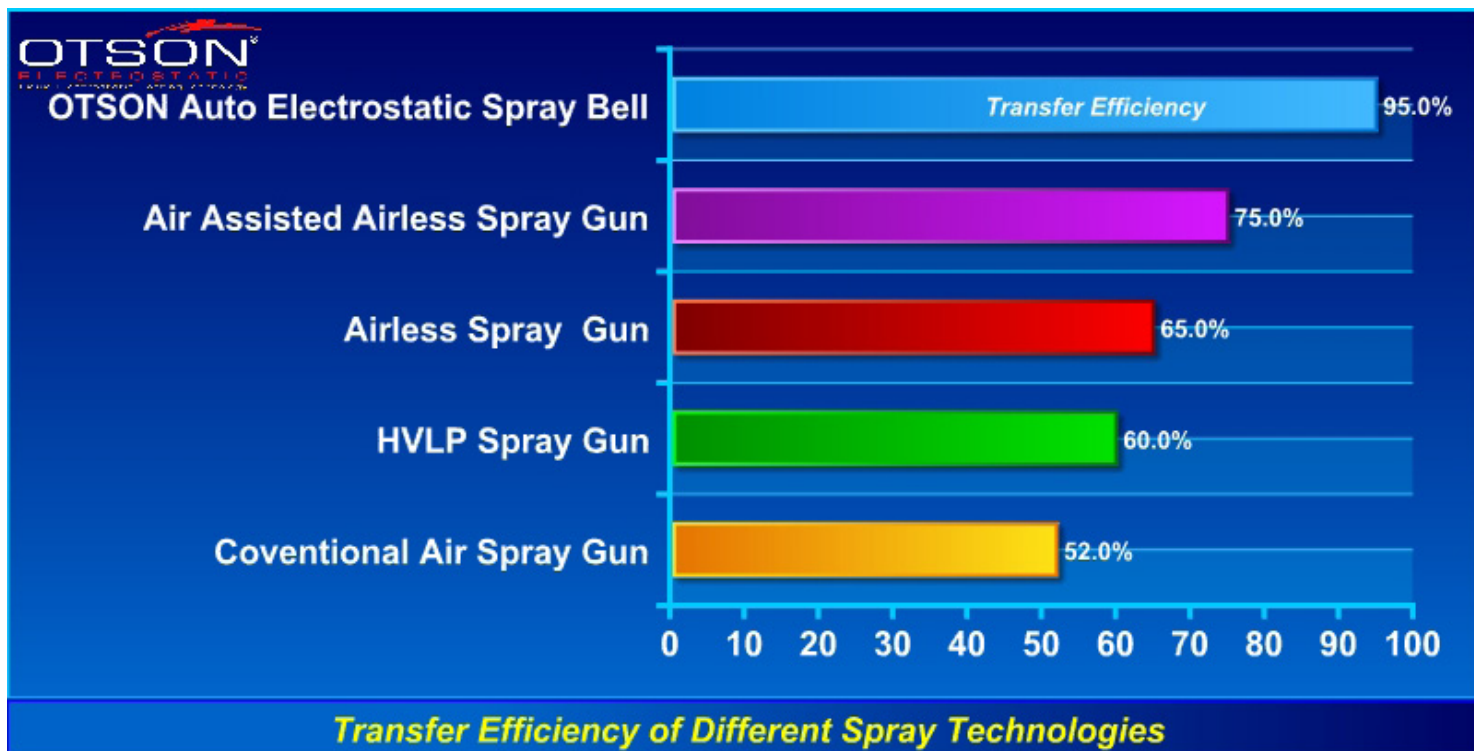
ARTIFICIAL INTELLIGENCE



MACHINE LEARNING

Overview

The Liquid Electrostatic Spray Bell - Robot Arm Kit, model number OTS-7900, is a state-of-the-art technology for electrostatic coating that achieves a transfer efficiency of up to 95%. Unlike traditional methods, this spray bell atomizes paint with low pressure using a special bell cup, minimizing the risk of paint being thrown away. The atomized paint is then charged with negative electrostatic energy and attracted to the object being sprayed, which significantly reduces overspray. The kit offers precision, flexibility, and superior transfer efficiency, making it ideal for various industries. The Liquid Electrostatic Spray Bell - Robot Arm Kit is an incredibly effective tool for achieving high-quality finishes with electrostatic coating technology, and it offers several advantages over traditional methods. Its precision and flexibility, coupled with its superior transfer efficiency, make it an ideal solution for a wide range of industries, including automotive, aerospace, and manufacturing. Say goodbye to messy and inefficient spraying and hello to consistent, high-quality results with the OTS-7900 model.



**Dual Coating for
Solvent and Waterborne Paint**

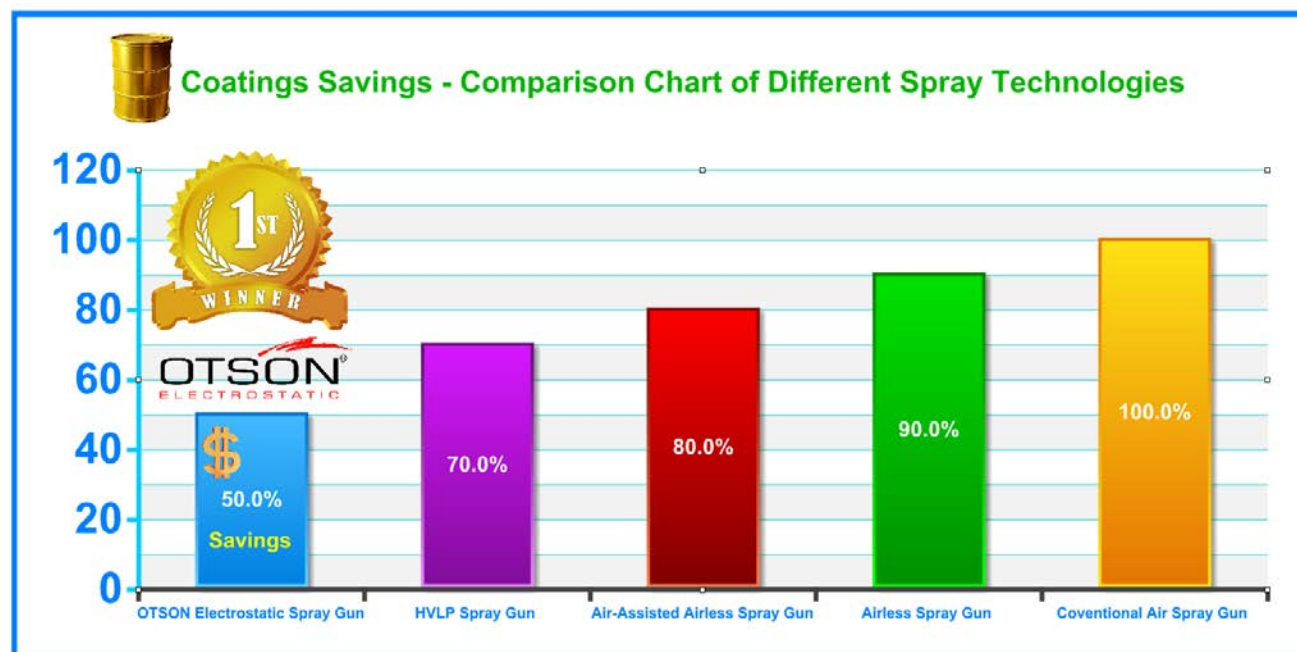


Additionally, the Liquid Electrostatic Spray Bell - Robot Arm Kit, model number OTS-7900 is designed to reduce CO2 emissions and overspray, which can help to save cost and be more environmentally friendly, ultimately leading to cost savings for your customers.

The system includes a fully automated control panel that provides high production rates and reduces labor cost. The control panel gives operators total control flexibility and allows the operator to change process parameters, not only between batches, but also within the same part. The simplified user interface control panel is capable of recording ten different coating parameters which is beneficial to apply in various objects easily and efficiently.



The OTS-7900 Liquid Electrostatic Spray Bell - Robot Arm Kit is safe and compliant for use in various industrial settings, including potentially explosive atmospheres. It is certified by ATEX, the standard for equipment and protective systems in these environments. We provide customized solutions to meet our customers' needs, including integration of electrostatic high rotary atomizer technology and special nozzle structures for 2K and water-based paints. Our system increases production rates and cost savings for a high return on investment.



OTS-7900 Auto Liquid Electrostatic Spray System



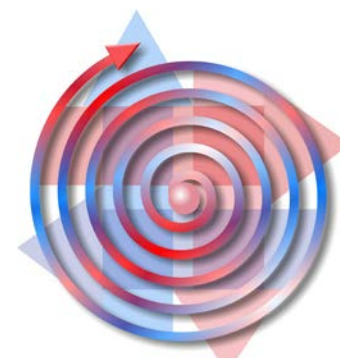
The Liquid Electrostatic Spray Bell - Robot Arm Kit, model number OTS-7900, is an advanced electrostatic coating technology tool that offers high-quality finishes with its automated control and flexibility. The kit includes a robot arm, electrostatic power supply, electrostatic spray unit, and different bell cups to suit various industries such as oil and gas, petrochemicals, pharmaceuticals, automotive, aerospace, and manufacturing.

With its fully automated control panel, the kit provides high production rates and reduces labor costs. The simplified user interface control panel can record ten different coating parameters, allowing operators to change process parameters not only between batches but also within the same part. The kit achieves a transfer efficiency of up to 95%, significantly reducing over-spraying and generating a surrounding electrostatic effect that draws lost paint back to the workplace.

The Liquid Electrostatic Spray Bell - Robot Arm Kit is environmentally friendly, with its ATEX certification and compliance with international safety standards. It is a highly effective tool for achieving high-quality finishes in various industries, providing cost savings for customers and reducing CO2 emissions.

Features

- Dual Coating- **Solvent and Waterborne Paint**
- Improve Coating Quality
- Reduce Air Pollutions
- Reduce Water Pollutions
- High Transfer Efficiency - **Spray Painting**
- High Atomized Bell Nozzle
- Easy Handle for Long Term Operation
- Long Life Operation
- Low VOC Emissions
- Low Failure Rate and Easy

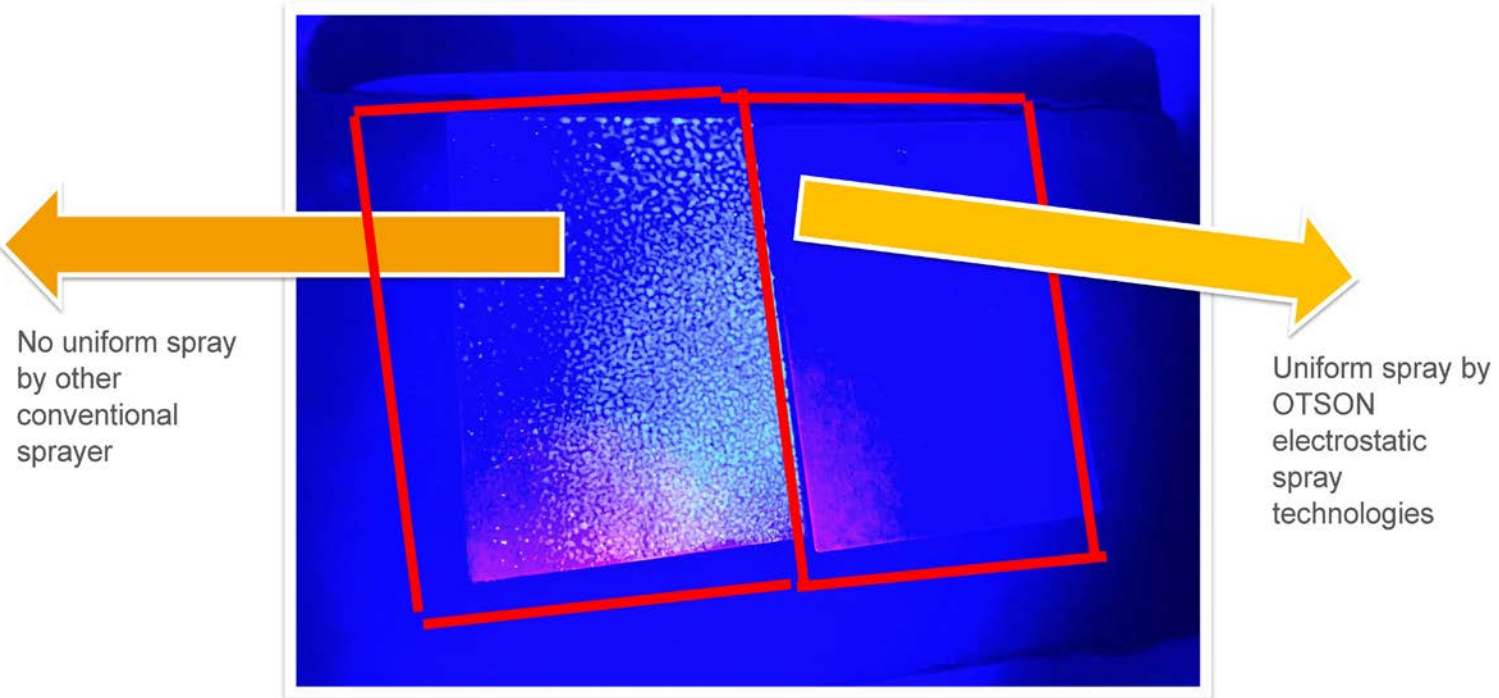


The Spray Direction of High Atomized Nozzle



Speical Design Bell Cup for all Spray Object

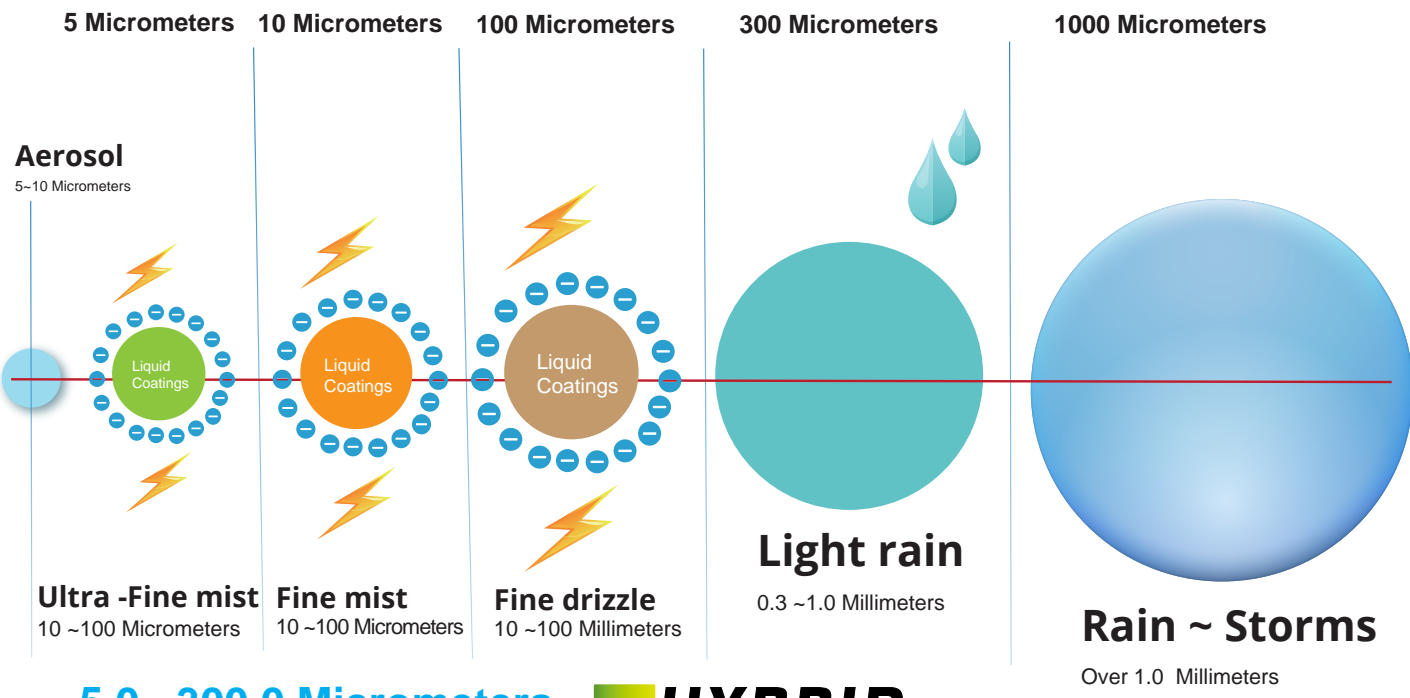




Different coatings thicknesses by OTSON Electrostatic Spray System



Classification of Electrostatic Spray Droplet / Particle Size



5.0~ 300.0 Micrometers

HYBRID

OTS-7900

Waterbase Coatings

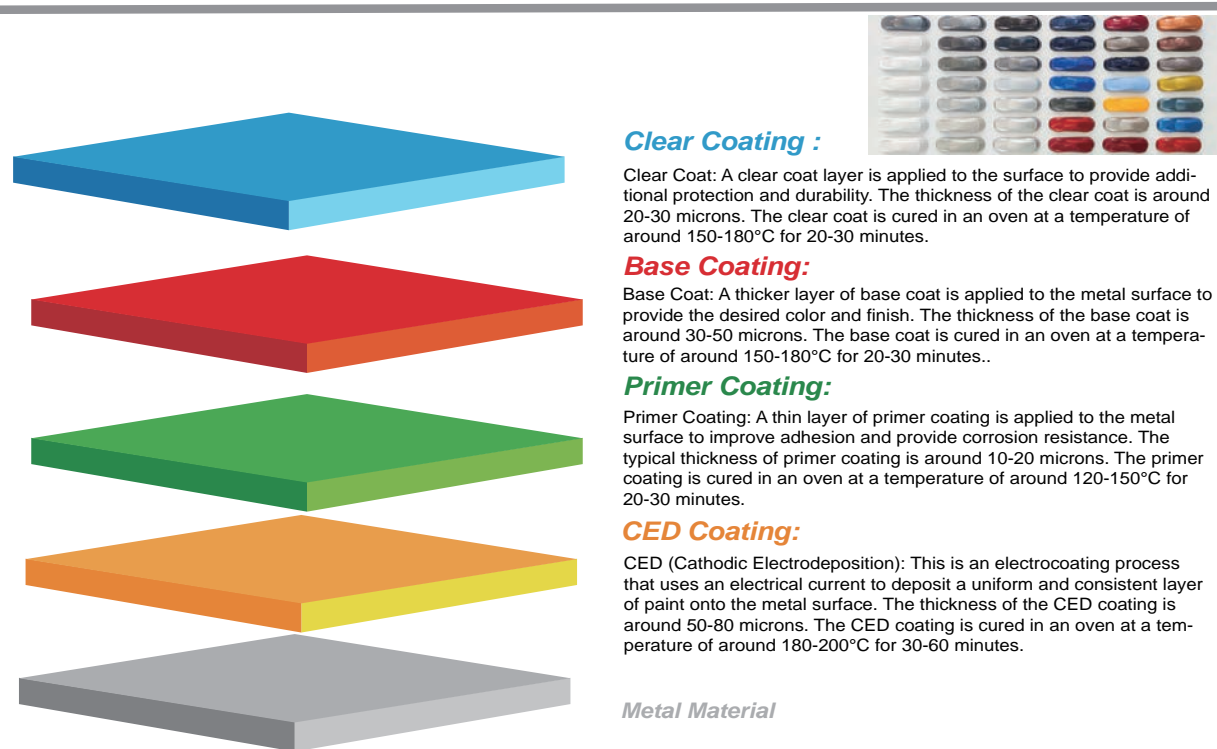
Solvent Coatings

Auto Electrostatic Spray Bell

The metal industry typically requires a multi-layer liquid coating system to provide protection and enhance the appearance of metal surfaces. The thickness of each layer depends on the specific requirements of the metal surface, but a typical sequence of layers for metal industry would include the following:



Pretreatment and coating process of metal parts in the metal industry



- **Surface Preparation:** The metal surface is cleaned and treated to remove any dirt, oil, or other contaminants that may affect the adhesion of the coating. The surface may be sandblasted, degreased, or chemically cleaned
- **CED (Cathodic Electrodeposition):** This is an electrocoating process that uses an electrical current to deposit a uniform and consistent layer of paint onto the metal surface. The thickness of the CED coating is around 50-80 microns. Curing time and temperature: The CED coating is typically cured in an oven at a temperature of around 80-120°C for 15-30 minutes.
- **Primer Coating:** A thin layer of primer coating is applied to the metal surface to improve adhesion and provide corrosion resistance. The typical thickness of primer coating is around 10-20 microns. Curing time and temperature: The primer coating is typically cured in an oven at a temperature of around 80-120°C for 15-30 minutes.
- **Base Coat:** A thicker layer of base coat is applied to the metal surface to provide the desired color and finish. The thickness of the base coat is around 30-50 microns. Curing time and temperature: The base coat is typically cured in an oven at a temperature of around 80-120°C for 15-30 minutes.
- **Clear Coat:** A clear coat layer is applied to the surface to provide additional protection and durability. The thickness of the clear coat is around 20-30 microns. Curing time and temperature: The clear coat is typically cured in an oven at a temperature of around 80-120°C for 15-30 minutes.
- **Final Inspection:** The coated metal parts are inspected to ensure they meet quality standards and customer specifications.

These layers are applied using liquid electrostatic spray equipment, which is capable of atomizing the coating materials into fine particles for precise and efficient application. The thickness of each layer can be adjusted based on the specific requirements of the metal surface and the desired end result.

2K/3K Mixer and Color Change System- Disk Electrostatic Spray

Color change valves, also known as paint dispensers, are a valuable investment for any business in the painting industry. These devices are used in paint shops to mix and dispense paint quickly and accurately, reducing waste and cleanup time.

One of the key benefits of a color change valve is its ability to automatically switch between different paint colors, which can save time and increase efficiency. This feature is especially useful for businesses that work on multiple projects and need to switch between colors frequently.

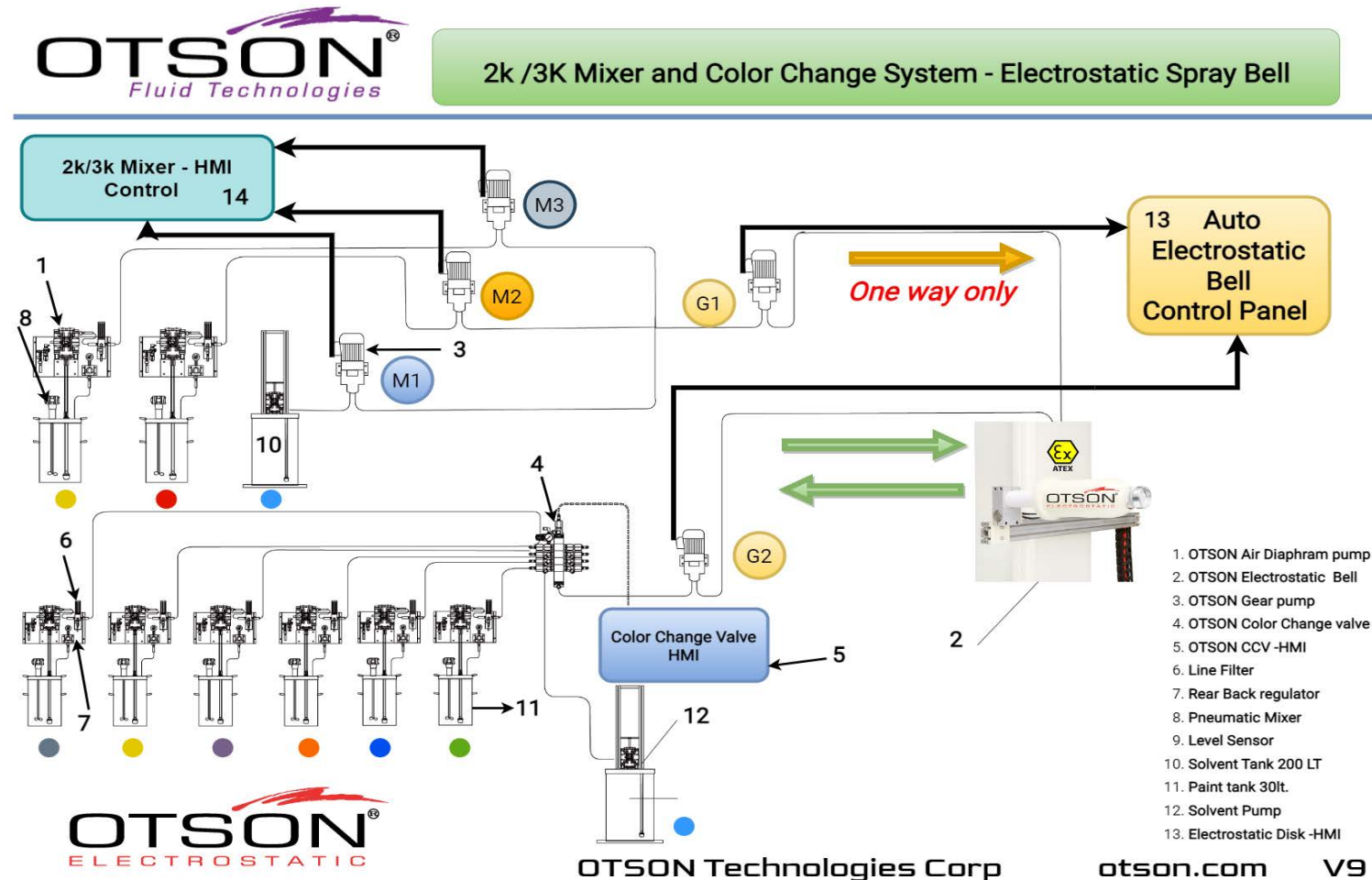
Another advantage of color change valves is their mixing capabilities. These devices can mix the paint with hardeners, reducers, or other additives as it is dispensed, ensuring that the paint is properly mixed and ready to use, which can help improve the quality of the paint job.

In terms of market view, the use of color change valves is prevalent in industrial paint application such as automotive, aerospace, and wood finishing industries. Many companies are investing in color change valves to improve their production efficiency and reduce cost.

Overall, color change valves are an essential component of any paint shop, providing accurate and efficient paint dispensing and color change capabilities. Investing in a high-quality color change valve can help businesses in the painting industry to increase productivity, improve the quality of their paint jobs and save money in the long run.

2K/3K WATERBASED

2K/3K SOLVENT



The 2K-3K Electronic Mixing & Dosing System is an advanced system designed for use in a liquid electrostatic spray system. It is used to control the mixing and dosing of two or three liquid components in a precise and accurate manner. The system uses electronic sensors and controls to measure and adjust the flow rate of each component, ensuring that the correct proportion of liquids are mixed and sprayed. The end result is a more uniform and efficient application of the sprayed liquid, resulting in improved product quality and increased



The 2K-3K Electronic Mixing & Dosing System typically comprises of the following components:

- Metering Pumps:** These pumps are used to accurately control the flow rate of each component, ensuring that the correct proportion is mixed and sprayed.
- Mixing Chamber:** The mixing chamber is where the two or three liquid components are combined and mixed together.
- Control Unit:** The control unit is the heart of the system and is responsible for monitoring and adjusting the flow rate of each component. It may use electronic sensors, computer control and software to manage the mixing and dosing process.
- Display Unit:** A display unit is used to show the operator the current status of the system, including the flow rate of each component, total amount of liquid mixed and any alarms or faults that may arise.

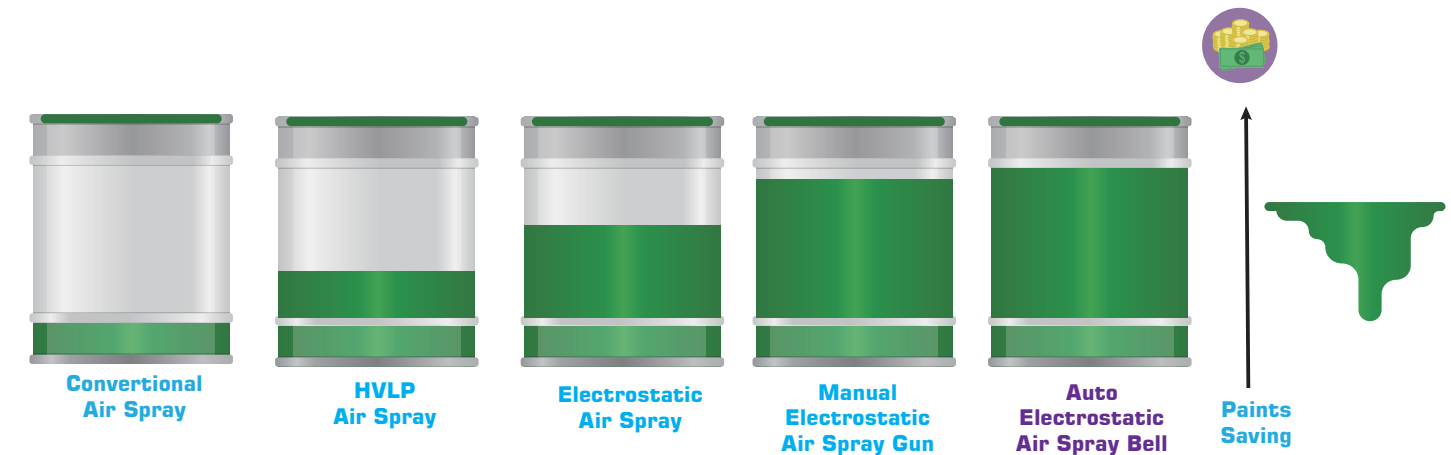
The system may also be equipped with additional features such as automatic cleaning, continuous monitoring, and alarms for low level and low pressure, to ensure the reliable and consistent operation of the mixing and dosing process.

Overall, the 2K-3K Electronic Mixing & Dosing System provides precise control over the mixing and dosing of two or three liquid components, which results in a more efficient, consistent and uniform application of the sprayed liquid.

Benefits of Electrostatic Spray Technology

- *Improve Finishing Quality*
- *Reduce Refinishing Work*
- *Time Savings*
- *Reduce Paint Wastage*
- *Material Savings*

Reduce Paints Costs

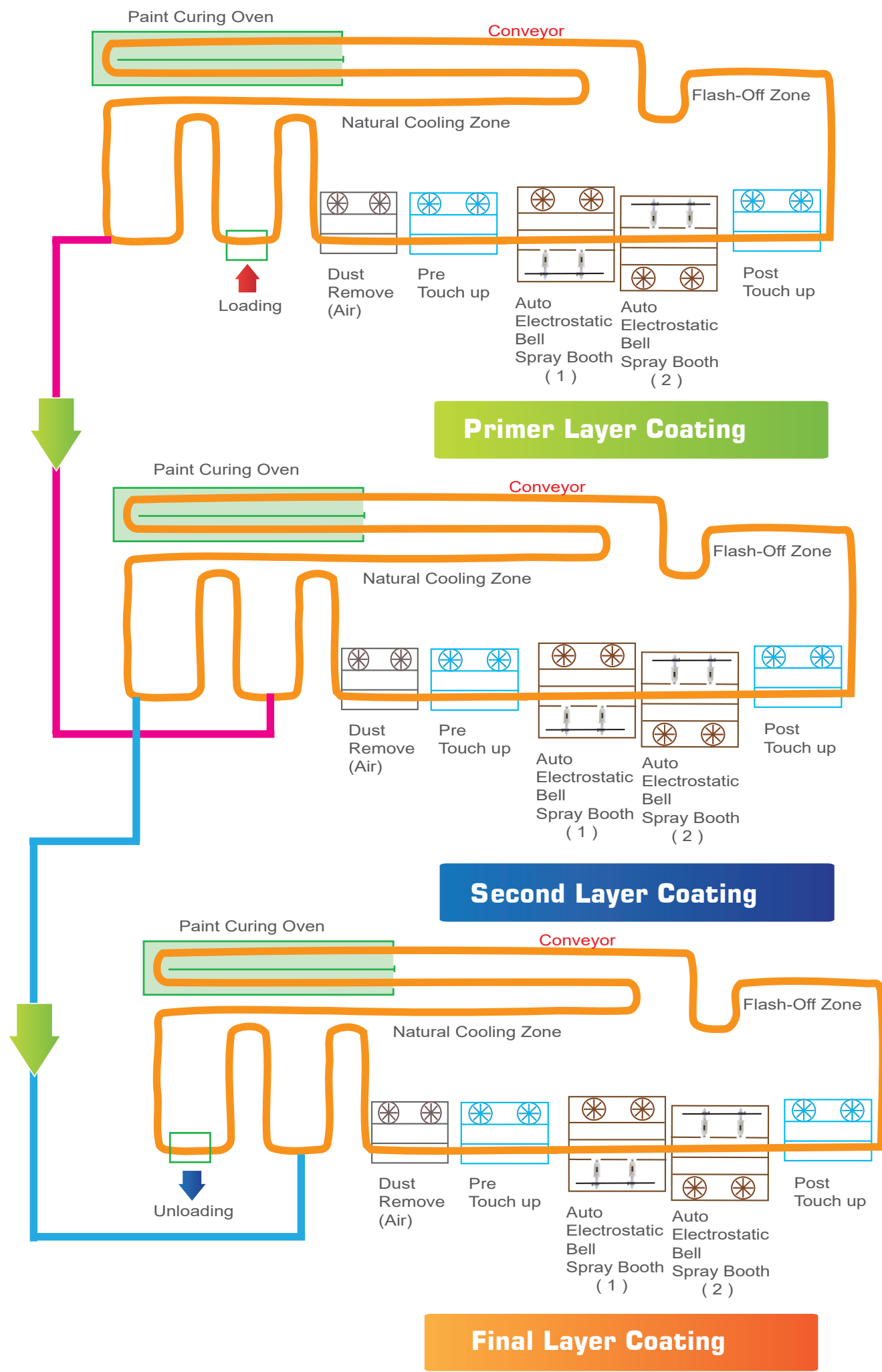
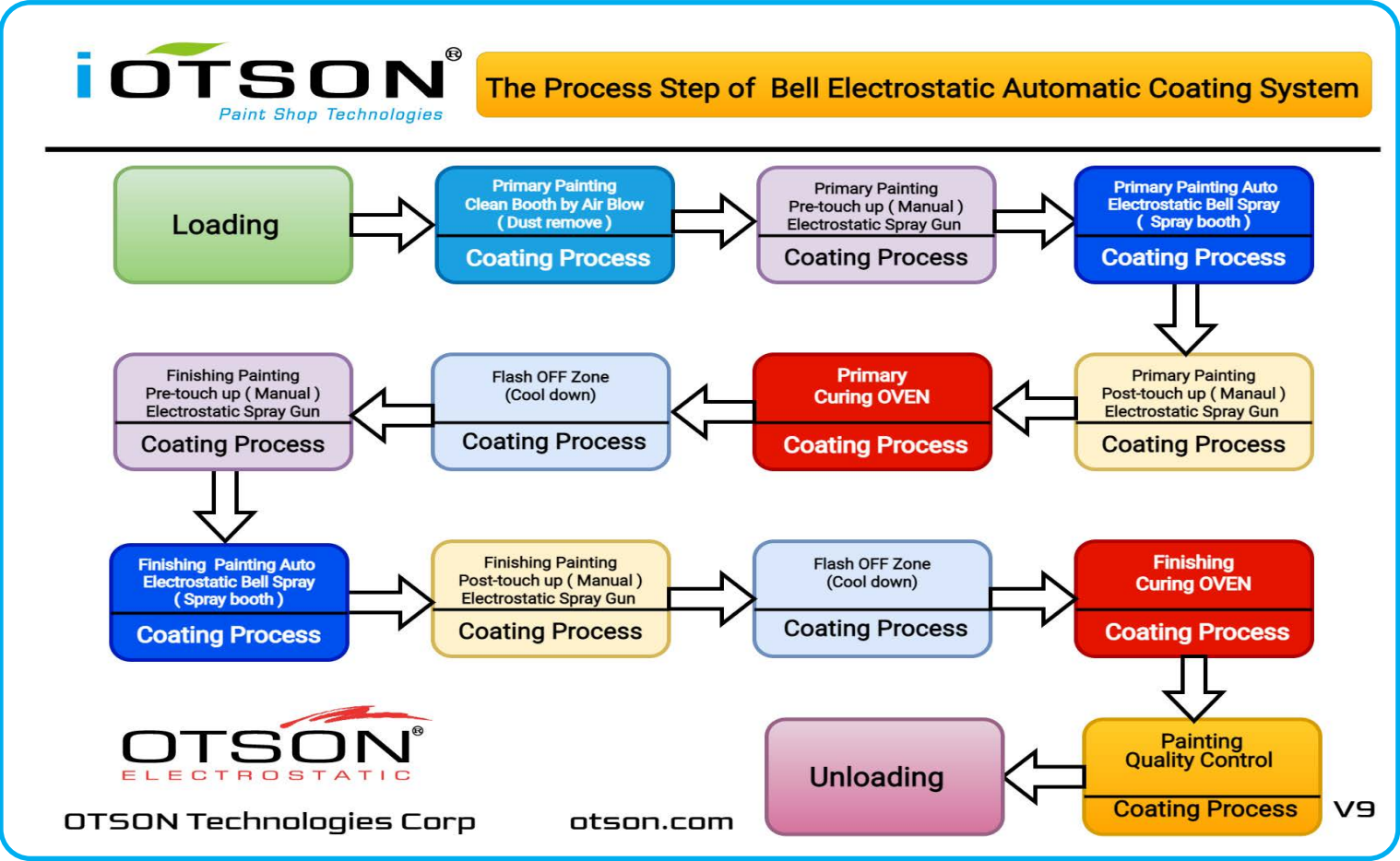


Return-on-Investment (ROI)

By replacing Conventional Air Spray gun with Auto Electrostatic Spray Bell System

	Typical	Calculate Your Own Application
Paint price per litre	USD 10	
	X	X
Litre Used per Day	100 litres	
	X	X
Business Daysper Year	220 days	
Electrostatic Transfer Efficiency	95%	
Annual Savings	USD 209,000.00	

The Process Steps of Auto Electrostatic Spray Bell Coating System



OTSON[®] Innovative Liquid Electrostatic spray Paint Shop Solutions- industry 5.0

OTSON[®] OTS-7900
Rotary Speed Control (Atomization)

OTSON[®] OTS-9000 Auto Electrostatic Spray Bell

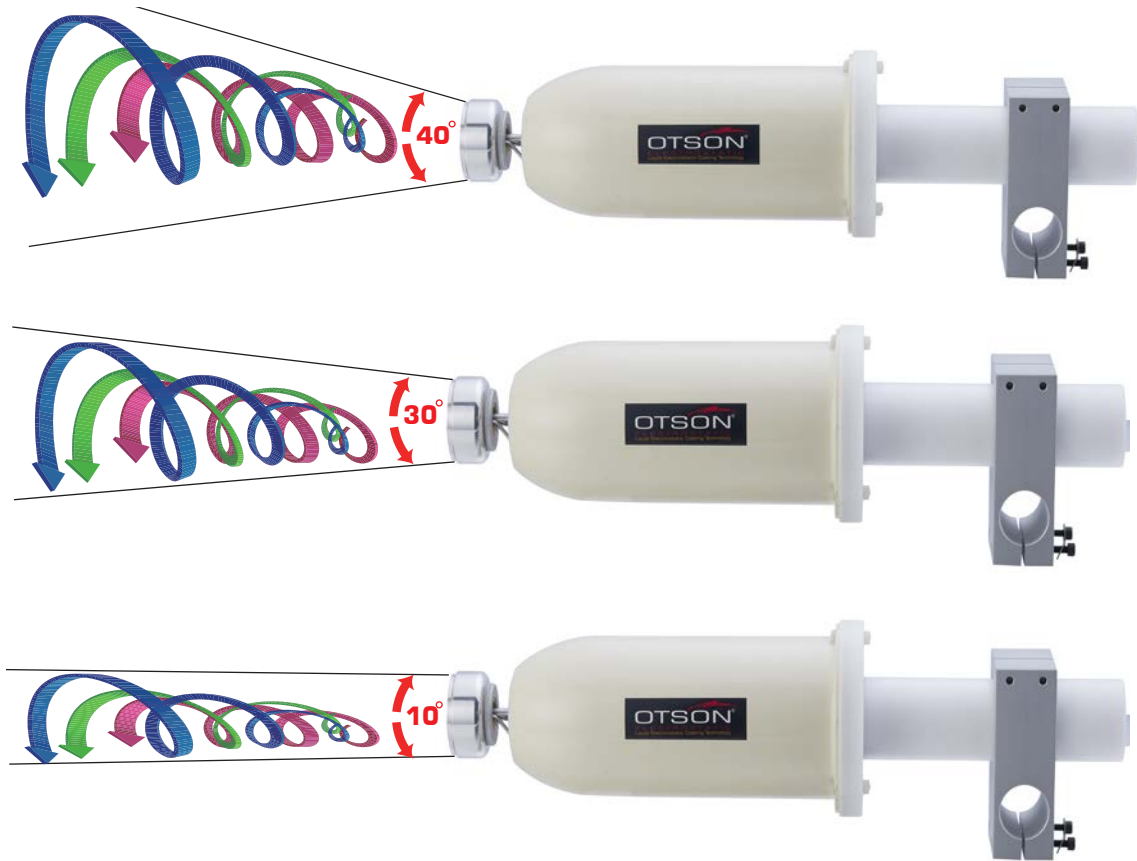
2K Solvent
2K Water Based

OTSON[®] Liquid Electrostatic

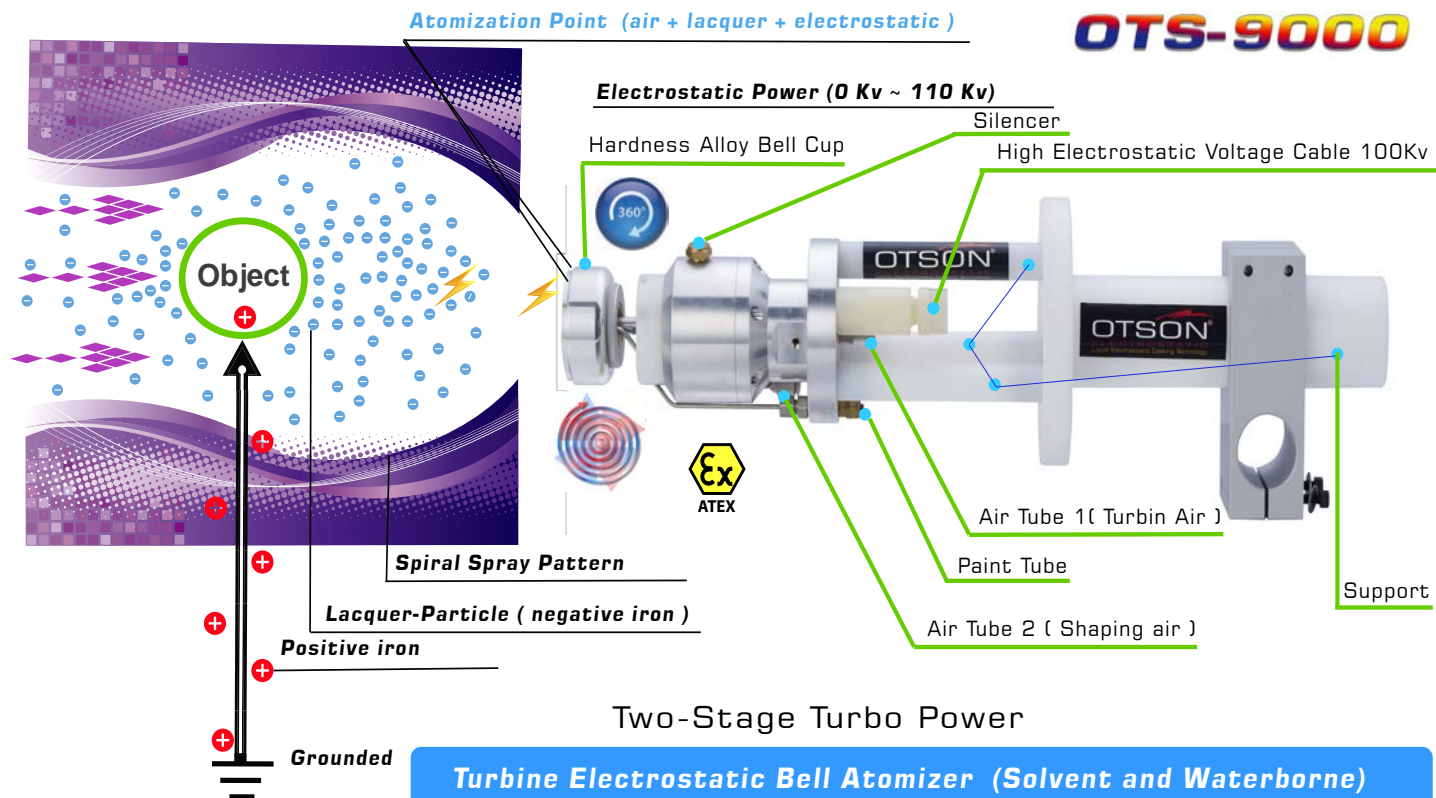
OTSON Technologies Corp otson.com



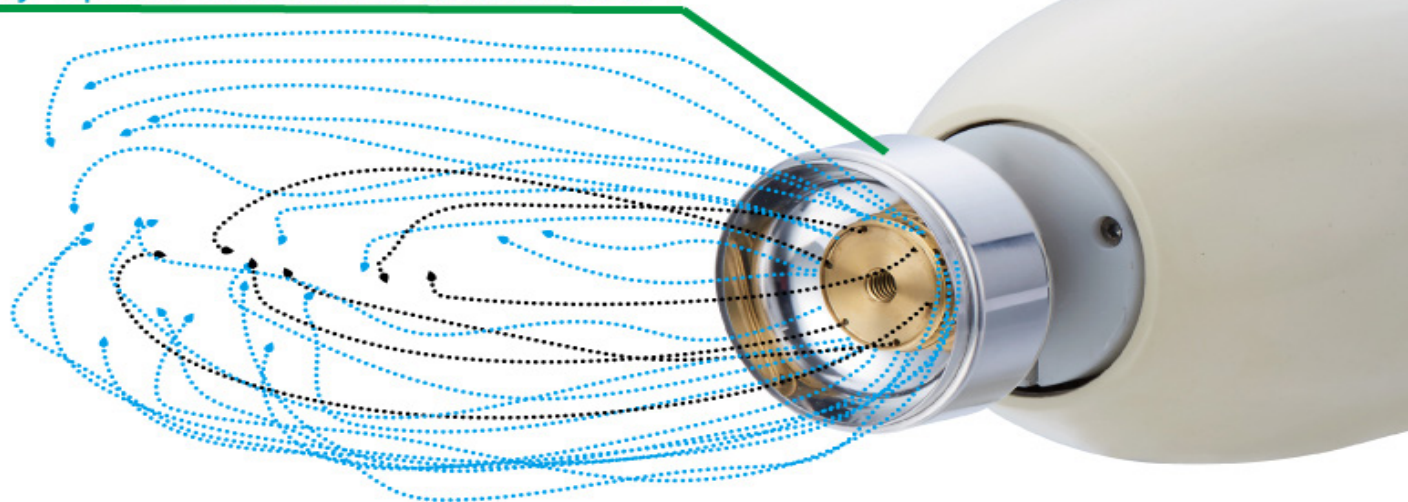
2K Solvent
2K Water Based



Bell Spray Angles



Rotary Speed Control (Atomization)



■ Paint Flow

■ Air Flow Pattern Control

OTS-9000 Auto Electrostatic Spray Bell



Specification

Liquid Electrostatic Spray Bell

Input Voltage	0~110KV DC(-)
Bell Length	250 mm
Bell Weight	900 g
Fluid and Air Pressure	0 ~ 7 kg/cm ² (6.86 bar) (0~100) psi
Operating Pressure	Air Supply
Coatings	Solvent-base & Waterborne Coatings



Electrostatic Power Supply

Out Voltage	0~110KV DC(-)
Out Current	50 microamperes
Input Voltage	110 V~240 V AC (50/60 Hz)
Intercepting current	20~150 microamperes
Weight	12 kg
Dimensions	300(L)x120(W)x350(H) mm



Specification

Model Number	9000A
Spare atomizer, without cable or hose	4 kg
Material of Turbine Atomizer and Bell Cup	Alloy (no magnetic)
Life cycles (valves/bell /bearings/couplings) depend on air quality and Maintenance	1~5 years

Pneumatic supply

Nano-valve drive air pressure	8 bar mini (120psi) - 10 bar max. (150psi)
Magnetic turbine bearing air pressure	5 mini (75psi) - 7 bar max. (105psi) from 130 to 180 L/min
Shaping air pressure	6 bar (90psi) recommended on manifold
Micro air pressure	0.5 mini (7,5psi) at 1 bar maxi. (15psi) from 20 L/min to 40 L/min
Drive air consumption	10 NI/min.
Magnetic turbine bearing air consumption	125 NI/min.
Shaping air consumption (with respect to air shroud and bell being used)	From 100 to 600 NI/min.
Turbine rotation air consumption	From 100 to 700 NI/min. ⁽¹⁾
Safeguard air quantity	25 litres at 6 bar (90 psi)

(1): with respect to sprayed flow and rotation speed

Product supply

Standard product supply pressure	6 (90psi) to 8 bar (120psi)
Maximum product pressure	10 bar (150psi)
Paint flow (depending on paint type)	30 to 3000 cc/min. ⁽²⁾ maxi.
Viscosity scale (for minimum results)	8 to 30 seconds FORD #4 Cup

(2): with a product density < 1.1 gr/cm3 and/or of the combination bell and air shroud being used

Performances

Rotation speed	15 to 60,000 (6.0 bar) 90 psi (upon diameter of bell cup used)
Application speed	up to 900 mm/sec
Transfer Efficiency	85% ~98%

Color change

Paint consumption	25 cm ³ (paint circuit) & 25 cm ³ (pump circuit)
Paint feeding	OTSON GEAR PUMP (2 color change)
Rinsing product consumption	300 cm ³ (not included rinsing box)
Standard process time	10 sec (with REVERSE FLUSH)
Optimized process time	5 sec (with REVERSE FLUSH on circuit 1 & 2)

Same Color (head rinsing + bell cup)

Time	6 sec.
Rinsing product consumption	50 cm ³

High Electrostatic Voltage

Voltage maxi.	110 kV
Current maxi.	50 µA
Bell Cup safety Distance from substrate	30cm

*The appearance of all products, detail, figure and specification are subject to change at any time without notice.

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v4.0

Specification

OTS-7973 /7933 Microcomputer Control Panel (10" Man-Machine Interface)

- **Input Voltage:** AC 200V ~ 415V 50hz / 60hz (3 phase) \pm 5%
 - **Power Consumption :** 2.5 KVA
 - **Dimension :** 420 (L) x 730 (w) x 1710 (H) mm
 - **Weight :** 110 kg
 - **Servo Motor Controlled Reciprocator.**
 - **Touch Panel Interface by using 10" Color Screen.**
 - **Memory Capacity up to 200 sets of Operation.**
 - **Color Change Control (2 colors) Interlocking**
 - **Door-in-Door Design to Achieve Efficient Anti-Dust Effect.**
- Coatings: Solvent-base & Waterborne Coatings



OTS-7953 / 7913 Microcomputer Control Panel (10" Man-Machine Interface)

- **Input Voltage:** AC 200V ~ 415V 50hz / 60hz (3 phase) \pm 5%
 - **Power Consumption :** 2.5 KVA
 - **Dimension :** 420 (L) x 730 (w) x 1710 (H) mm
 - **Weight :** 110 kg
 - **Servo Motor controlled reciprocator.**
 - **Touch Panel interface by using 10" colour screen.**
 - **Memory capacity up to 200 sets of operation.**
 - **Door-in-Door design to achieve efficient anti-dust effect.**
- Coatings: Solvent-base Coatings



6 Axis Robot Arm - for painting

Maximum Load of Robot: 20 kg

Number of axis: 6
 Maximum horizontal reach: 2,779 mm
 Maximum vertical reach: 4,582 mm
 Repeatability: \pm 0.5 mm
 Controller: NX100
 Motion range (°)

Maximum speed (°/s) :2.0 m/s

Robot applications: Coating and paintings



Specification

OTS-7913 & OTS-7933 Liquid Electrostatic Power Supply

Out Voltage	0~70 KV DC(-) -OTS-7800 0~100 KV DC(-)-OTS-8100
Out Current	50 microamperes
Intercepting Current	20~150 microamperes
Input Voltage	220V AC (50Hz)
Weight	12 kg
Dimensions	300(L)x120(W)x350(H) mm
Coatings	Solvent-base Coatings



OTS-7973 ,OTS-7953 Liquid Electrostatic Power Supply

Out Voltage	0~110 KV DC(-)
Out Current	50 microamperes
Intercepting Current	20~150 microamperes
Input Voltage	220V AC (50Hz)
Weight	12 kg
Dimensions	300(L)x120(W)x350(H) mm
Coatings	Solvent-base & Waterborne Coatings



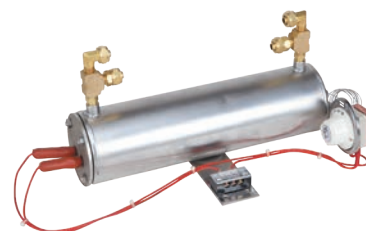
Gear Pump

Input Voltage : AC 220 V ~ 380 V ±10% 3 Phase
Horsepower : 1/4 HP
 Dimension : 130 (L) x 600 (w) x 30 (H) mm
Weight : 13 kg
 Output : 3cc or 6cc / rev 200 cc ~ 3000 cc / min (digital control)
Spray Hose : Double-layer Teflon paint hose
 Pump Material : Hardened Steel CMoWCrVCo HRC = over 63)
 Titanium plated for durable use and wearing resistance.



Air Heater

Dimension : 410 (L) x 170 (w) x 150 (H) mm
Weight : 5 kg
 Input Voltage : AC220V , 500W
Temperature : 0 degree C ~ 120 degree C



Water Filter & Oil Filter

Dimension: 170 (L) x 340 (w) x 90 (H) mm
Weight : 3 kg
 Water Filter : 3650 l/s
 Oil Filter : 1900 l/s
 MAX Operation Pressure : 150psi



Specification

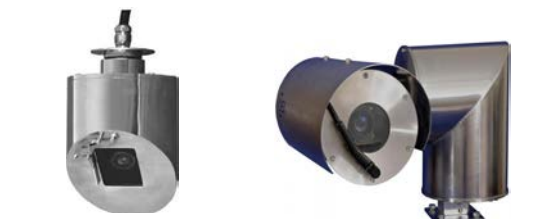
IOT (Internet of Things) Sensor System

- Air Flow
- Paint flow
- Paint Pressure
- Air Pressure
- Environment VOC Detect Sensor
- Monitor motor
- Smoke Sensor
- Air Temperature and humidity
- AI Dashboard System
- Power Consumption Monitor



Remote Digital Video Monitor System

- **Video Input:** 8 channels
- **Video Output:** HDMI, VGA
- **Compression Format:** H.265/H.264
- **Recording Resolution:** up to 8MP (4K)
- **Playback Resolution:** up to 8MP (4K)
- **Hard Drive Capacity:** up to 6TB (depending on the model)
- **Network Interface:** RJ45, 10M/100M/1000M Ethernet with PoE support
- **Remote Access:** Yes, via PC, smartphone or tablet
- **Audio Input/Output:** 1 channel input, 1 channel output
- **USB:** 2 USB ports (1 USB 2.0, 1 USB 3.0)
- **PoE Ports:** 8 ports with PoE support
- **Power Supply:** DC 48V/1.25A



X 8 CH X 8 CH



Specification

Safety Light Curtains

- Safety light curtain Type 4.
- Suitable for detection of operators.
- Consists of an emitter and receiver.
- In combination with a safety guard monitor for protection up to safety level PLe per EN ISO 13849-1 or up to SIL 3 per EN 62061.
- 14mm resolution for finger detection.
- Available in various protective field heights: 200, 400, 600, 800, 1000 and 1200mm.
- Detection range 0.5m to 6m.
- Can be connected to GLM1 safety controller.
- Gesealed tot IP65.
- Fitted with quick disconnecter.
- Supplied with mounting brackets as standard



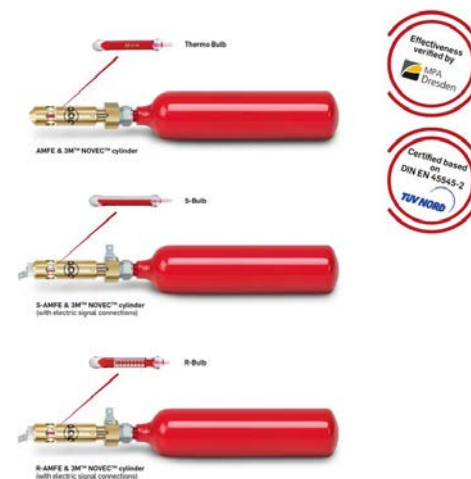
Application - Industries



- | | | |
|---|--|---|
| <ul style="list-style-type: none"> • Small parts • Bicycle • Application • Small parts • Bicycle • Computer Housing • Stationery • Wooden Furniture • Hardware • Lockers • Freezers • Iron Railing • Display Cases | <ul style="list-style-type: none"> • Office Partitions • Medical Equipment • Rest room Partitions • Roller Bars • Metal Doors • Decorative Lamps • Electrical Home Appliances • Car Accessories, Teflon Pot • Sports Equipment • Handcraft • Files • Desks | <ul style="list-style-type: none"> • Sports Equipment • Handcraft Computer • Housing • Stationery • Wooden Furniture • Hardware • Lockers • Freezers • Iron Railing • Display Cases • Refrigerators • Heavy Machinery • Office Equipment |
|---|--|---|

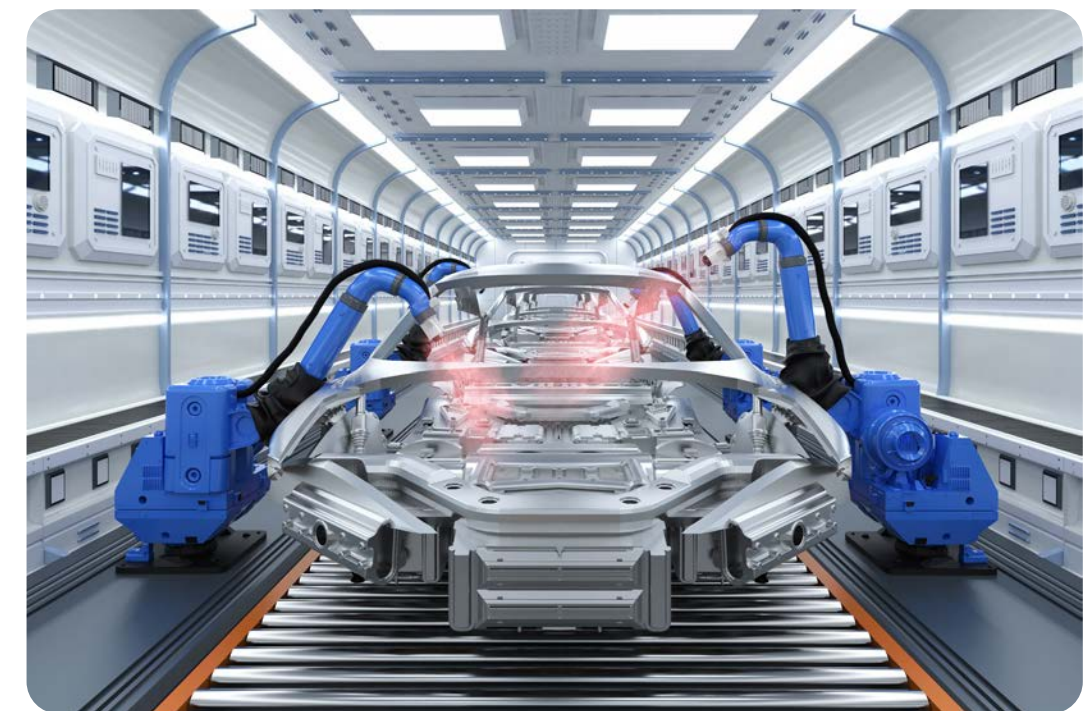
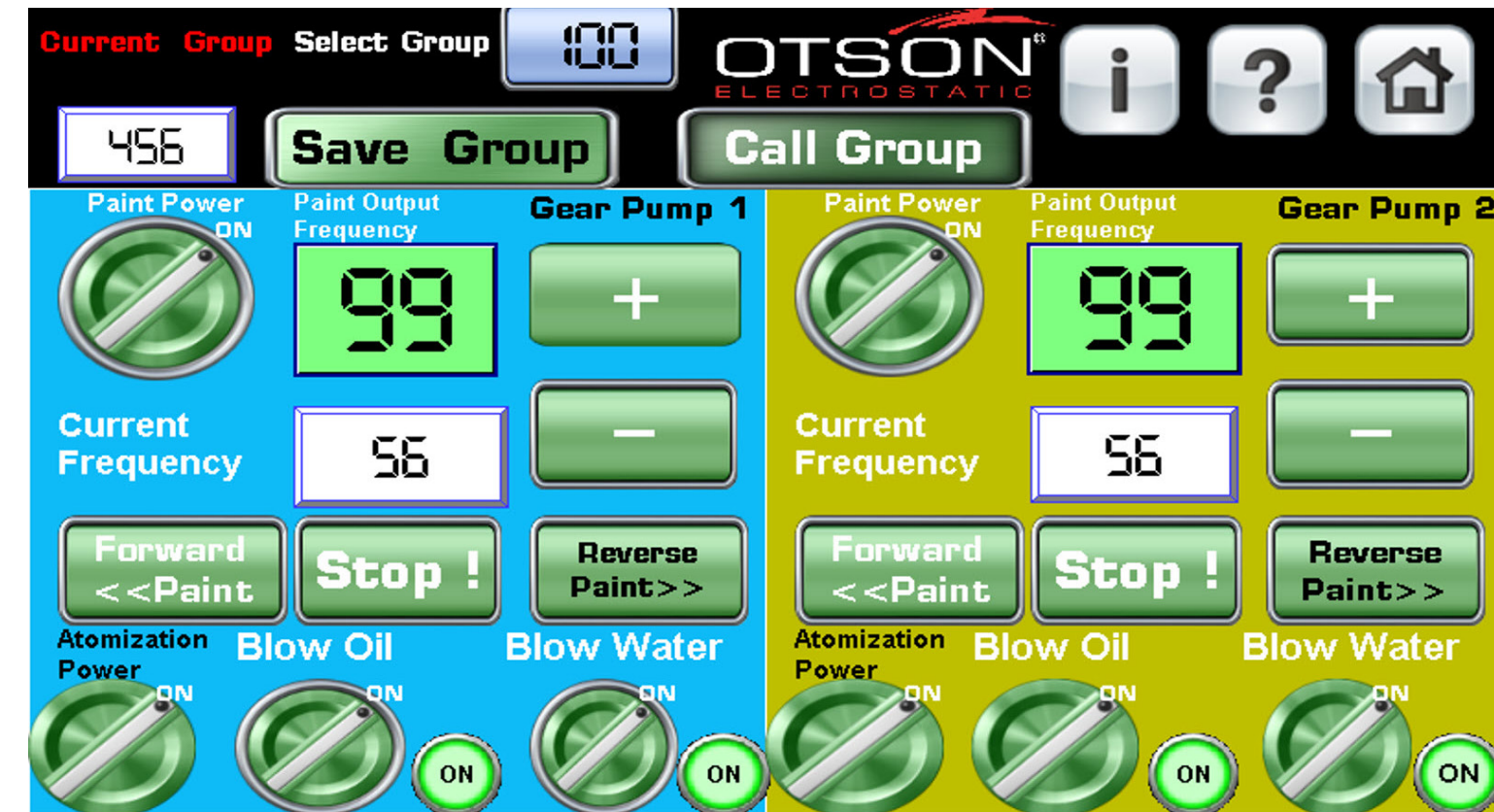
Automatic Miniature Fire Extinguisher

- Dimensions (without cylinder):
ø 16 mm x 64 mm/0,63" x 2,52"
- Minimum installation depth: 20 mm/0,79" (w/o cylinders)
- Activation temperature: 57°C – 260°C/134,6° F - 500° F
- Extinguishing agents: 3MTM NOVECTM, CO2,
- Lifetime: 9 years + (for the cylinders)
- Maintenance free
- Lifetime: for release mechanism (see manual for details)



Application - Industries

10" Touch Panel Industrial (HMI)



Electrostatic Current UMA

Electrostatic Voltage KV

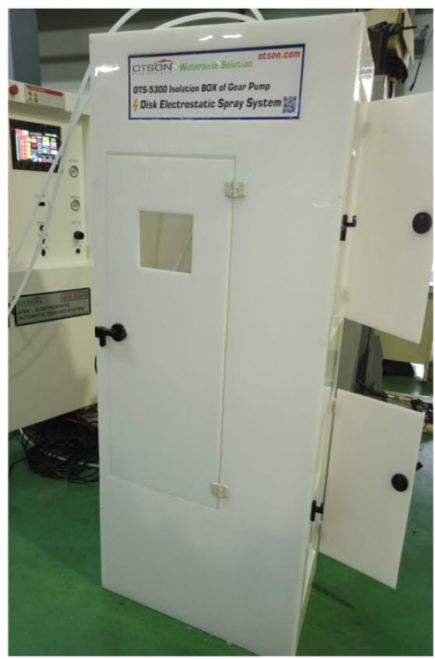
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-79.8

Model /Function	OTS-7973+G2	OTS-7953+G2	OTS-7933+G2	OTS-7913+G2	OTS-7903+G2
a. Microcomputer Control Subsystem					
Microcomputer Control Panel (HMI) x 1 set	10"	10"	10"	10"	
Memory Capacity for Storage Coating Parameters	199 sets	199 sets	199 sets	199 sets	
Air Flow Control x 1 set	Manual	Manual	Manual	Manual	Manual
Paints Flow Control (A) x 1 set	Auto / Manual	Auto / Manual	Auto / Manual	Auto / Manual	Manual
Paint Flow Control (B) x 1 set	Auto / Manual	Auto / Manual	Auto / Manual	Auto / Manual	Manual
Color Change Control (2 colors) x 1 set	Manual	Manual	Manual	Manual	Manual
Atomizer Control x 1 set	Manual	Manual	Manual	Manual	Manual
Electrostatic Power Supply Control x 1 set	0~110KV	0~110KV	0~110KV	0~110KV	0~70KV
Electrostatic Power Display x 1 set	LED	LED	LED	LED	LED
Electrostatic Current Display x 1 set	LED	LED	LED	LED	LED
Electrostatic Spark Protection System x 1 set	YES	YES	YES	YES	YES
Paints,Coatings	Solvent-base & Waterborne	Solvent-base	Solvent-base & Waterborne	Solvent-base	Solvent-base
b.Spray Subsystem					
High KV Electrostatic Spray Bell x 2 sets	Yes	Yes	Yes	Yes	Yes
High Atomization Spray Bell Cup x 2 sets	Yes	Yes	Yes	Yes	Yes
H.V Cable x 2 sets	11m ~ 40m	11m ~ 40m	11m ~ 40m	11m ~ 40m	11m ~ 40m
Teflon Spraying Tube x 2 sets	11m ~ 40m	11m ~ 40m	11m ~ 40m	11m ~ 40m	11m ~ 40m
PU Air Tube x 4 sets	11m ~ 40m	11m ~ 40m	11m ~ 40m	11m ~ 40m	11m ~ 40m
c.High Voltage Electrostatic Power Subsystem					
Electrostatic Power Supply x 1 set	Max 110KV	Max 110KV	Max 100KV	Max 100KV	Max 70KV
d. 6 Axis Robot Arm					
6 Axis Robot Arm x 3 sets	Yes	Yes	Yes	Yes	Yes
Safety Sensor x 1 set	Yes	Yes	Yes	Yes	Yes

Model /Function	OTS-7973+G2	OTS-7953+G2	OTS-7933+G2	OTS-7913+G2	OTS-7903+G2
e.Paint Supply Subsystem					
OTS-4000 (optional) Colour Change Valve +HMI	2~20 Colours (Auto Clean)	2~20 Colours (Auto Clean)	2 ~ 20 Colours (Manual Clean)	2~20 Colours (Manual Clean)	2 Colours
OTS-4200 (optional) 2K and 3K Mixer system +HMI	2K and 3K	2K and 3K	2K and 3K	2K and 3K	2K and 3K
Gear Pump + Motor (A) x 1 set (optional) 3cc / rev 200cc~1500 cc /mim	3cc / rev	3cc / rev	3cc / rev	3cc / rev	3cc / rev
Gear Pump + Motor (B) x 1 set (optional) 6cc / rev 200 cc ~ 3000 cc / min	6cc / rev	6cc / rev	6cc / rev	6cc / rev	6cc / rev
f . Air Supply Subsystem					
Air Heater -Air Temperature Control x 1 set	Manual	Manual	Manual	Manual	Manual
Air Filter (screening oil and water) x 1 set	Auto	Auto	Auto	Auto	Auto
g. Smart Monitor Sensor Subsystem (optional)					
Air Flow	Local / Remote monitor	Local / Remote monitor			
Paint flow	Local / Remote monitor	Local / Remote monitor			
Paint Pressure	Local / Remote monitor	Local / Remote monitor			
Air Pressure	Local / Remote monitor	Local / Remote monitor			
Environment VOC Detect Sensor	Local / Remote monitor	Local / Remote monitor			
Monitor motor	Local / Remote monitor	Local / Remote monitor			
Smoke Sensor	Local / Remote monitor	Local / Remote monitor			
Air Temperature and Humidity	Local / Remote monitor	Local / Remote monitor			
AI Dashboard System	Local / Remote monitor	Local / Remote monitor			
Power Consumption monitor	Local / Remote monitor	Local / Remote monitor			
h. Safety Subsystem (optional)					
Safety Light Curtains Interlocking with disc system	Auto	Auto			
Automatic Miniature Fire Extinguisher (For Spray Gun and Control Panel system Only)	Auto	Auto			
I. Security System (optional)					
Remote Digital Video Monitor System (RDVRS)	Local / Remote moni- tor	Local / Remote moni- tor			
j. Small water-borne -Paint kitchen					
Special Isolation paint kitchen with 2 gear pump and air allegator	Yes		Yes		

Easy Paint Kitchen for Waterbase and Solvent Paints



Dimension: 76x43 x170 cm Weight : 80 Kg

Easy Paint Kitchen for Waterbase and Solvent Paints - Gear Pump

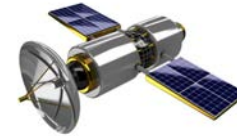


3cc ~6cc/rev
Gear Pump

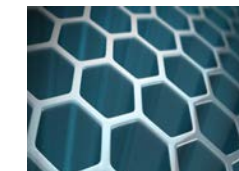


Gear Pump
Motor

Application - Industry



Meeting the requirements
of each industry....



OTS - 7900

Auto Liquid Electrostatic Spray Bell

Application - Spray Range



.....With the widest industrial spray range

OTS - 7900

Auto Liquid Electrostatic Spray Bell

Series 5000

DISK ELECTROSTATIC
AUTO COATING SYSTEM

MAX 60000RPM
(no loading spray disk)

HYBRID

2K/3K WATERBASED

2K/3K SOLVENT



Ex
ATEX

LOW
VOC EMISSIONS

OTS-3000+

MANUAL
LIQUID ELECTROSTATIC SPRAY GUN

HYBRID



- * New Design Model
- * New LED Panel
- * Adaptive Electrostatic Power
- * More Safety, Low Maintenance
- * High Transfer Efficiency
- * High Quality Finishing
- * Light Weight Gun

Ex
ATEX

470g

Solvent

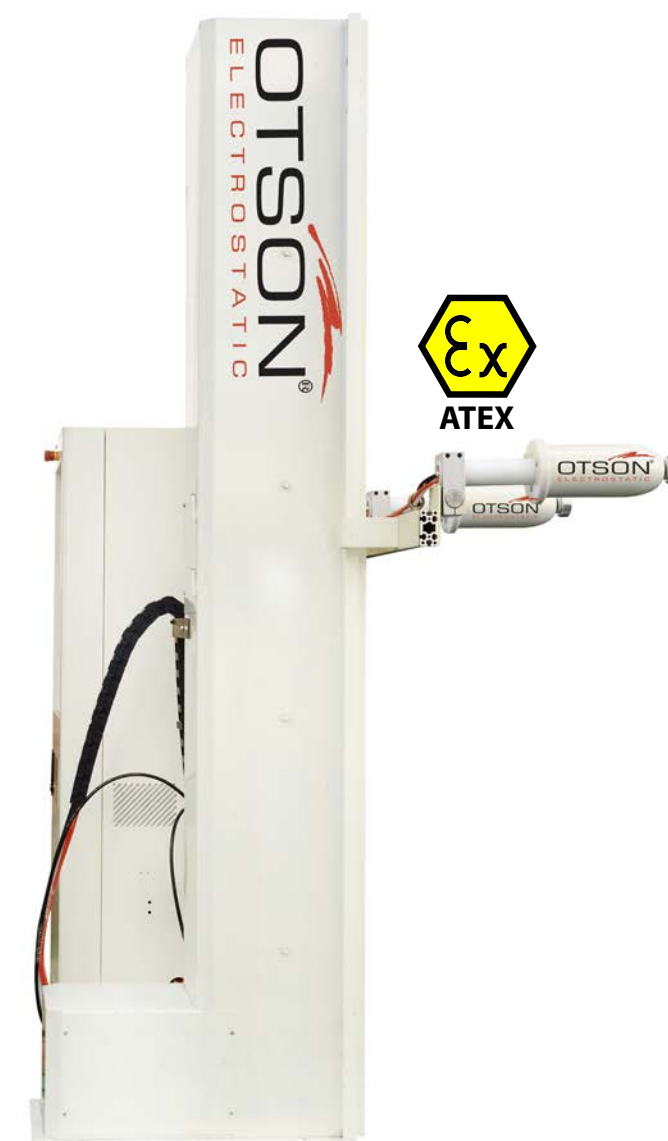
Waterborne

DUAL
Coating

H.E.T.
High Efficiency Technology

OTS-9000

Auto Electrostatic Spray Bell System



Ex
ATEX

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OTS-8000

Auto Electrostatic Spray Gun System



HYBRID

2K/3K WATERBASED

2K/3K SOLVENT



Solvent

Waterborne

DUAL
Coating

H.E.T
High Efficiency Technology



AUTOMATION



INTERNET OF
THINGS



SMART
PRODUCTION



GREEN ENERGY



SMART
FACTORY



CYBER SECURITY



ARTIFICIAL
INTELLIGENCE

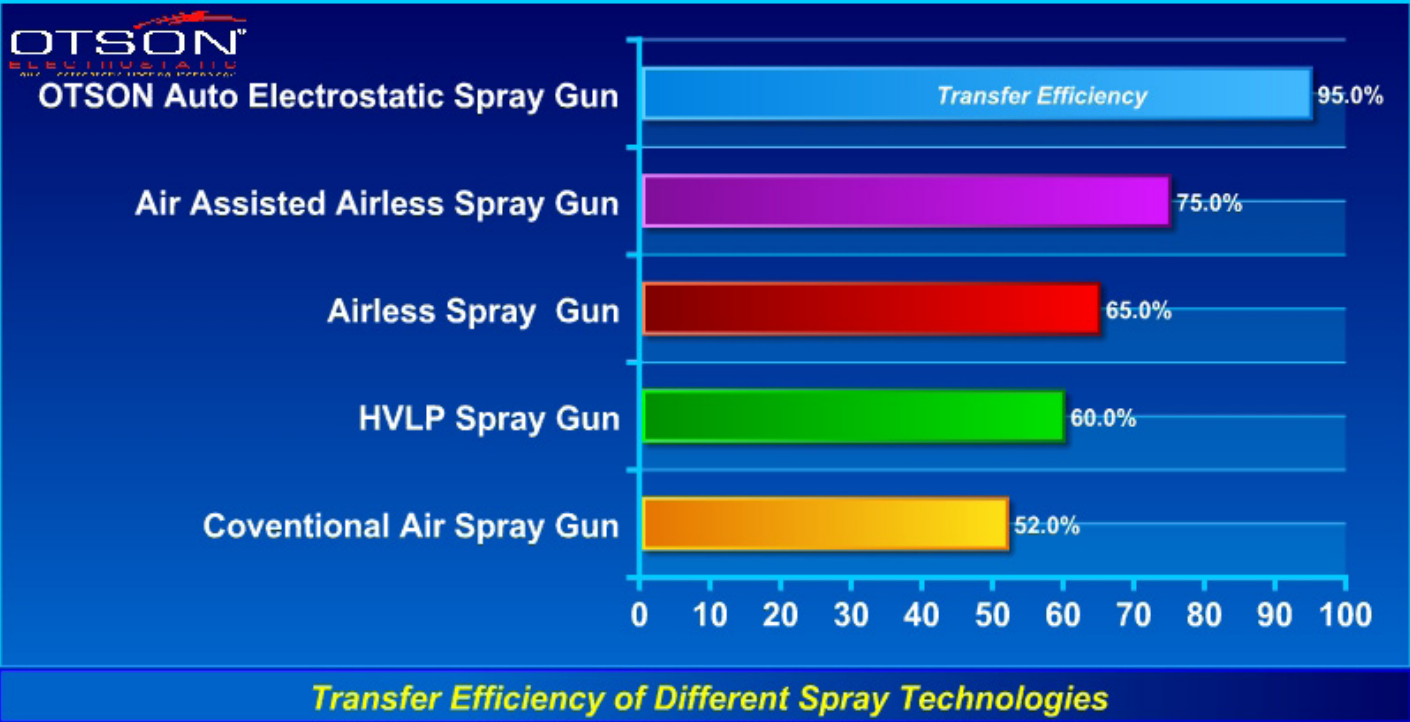


MACHINE
LEARNING

Overview

The OTS-8000 Auto Electrostatic Spray Gun System is a highly efficient and cost-effective solution for applying coatings and paints in various industrial settings. The system utilizes electrostatic technology and special nozzle structures, such as tin Round nozzle, frp Round nozzle and frp flat nozzle, to produce smaller droplets that are more easily attracted to the grounded object, resulting in a consistent and high-quality finish.

One of the key benefits of the OTS-8000 Auto Electrostatic Spray Gun System is its ability to cover a large surface area in a short amount of time, which can lead to increased production rates and ultimately a higher return on investment for your customers. The special nozzle structures and the electrostatic technology of the system provide the ability to handle a wide range of coatings and paints, including 2K and water-based paints, making it a versatile solution for various industrial applications. The system is also designed for easy maintenance, ensuring minimal downtime and increased reliability.



Dual Coating for
Solvent and Waterborne Paint



2K/3K WATERBASED

2K/3K SOLVENT

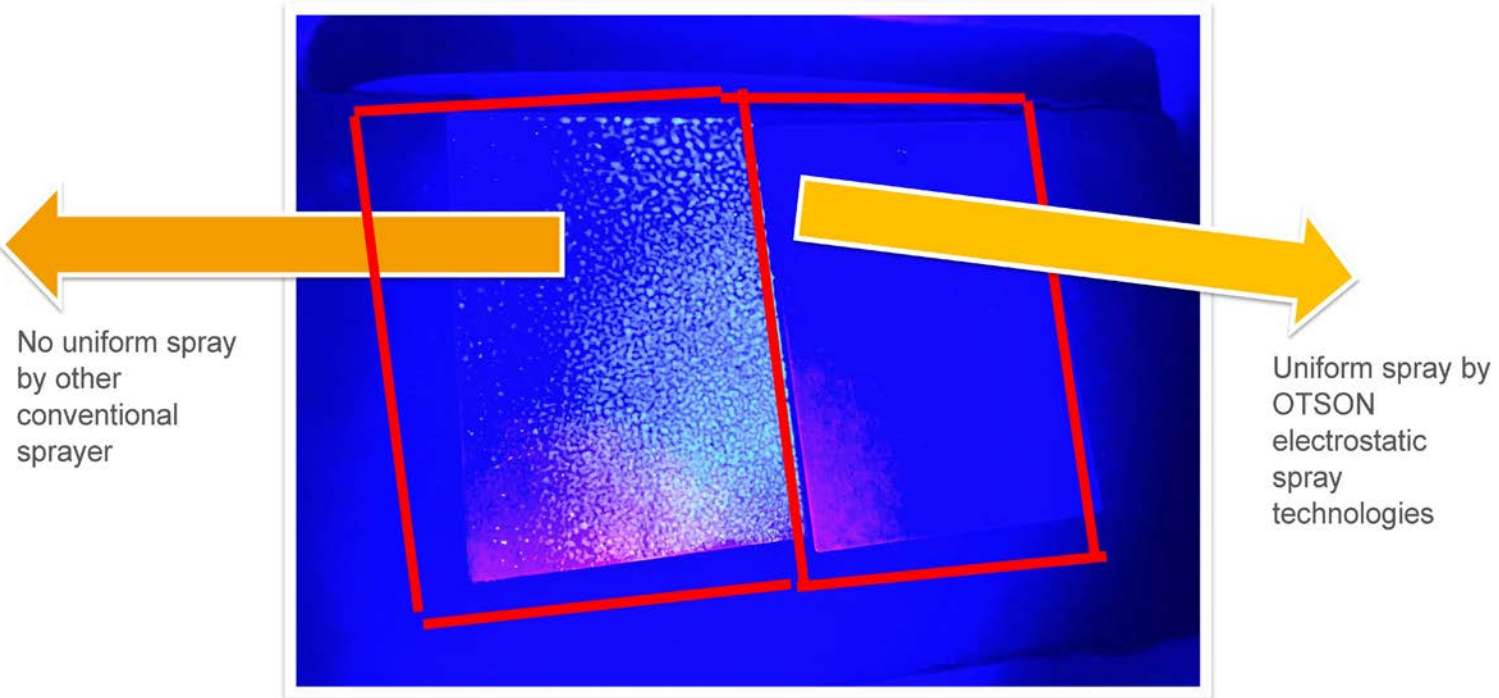


Additionally, the OTS-8000 Auto Electrostatic Spray Gun System is designed to reduce CO2 emissions and overspray, which can help to save cost and be more environmentally friendly, ultimately leading to cost savings for your customers.

The system includes a fully automated control panel that provides high production rates and reduces labor cost. The control panel gives operators total control flexibility and allows the operator to change process parameters, not only between batches, but also within the same part. The simplified user interface control panel is capable of recording ten different coating parameters which is beneficial to apply in various objects easily and efficiently.



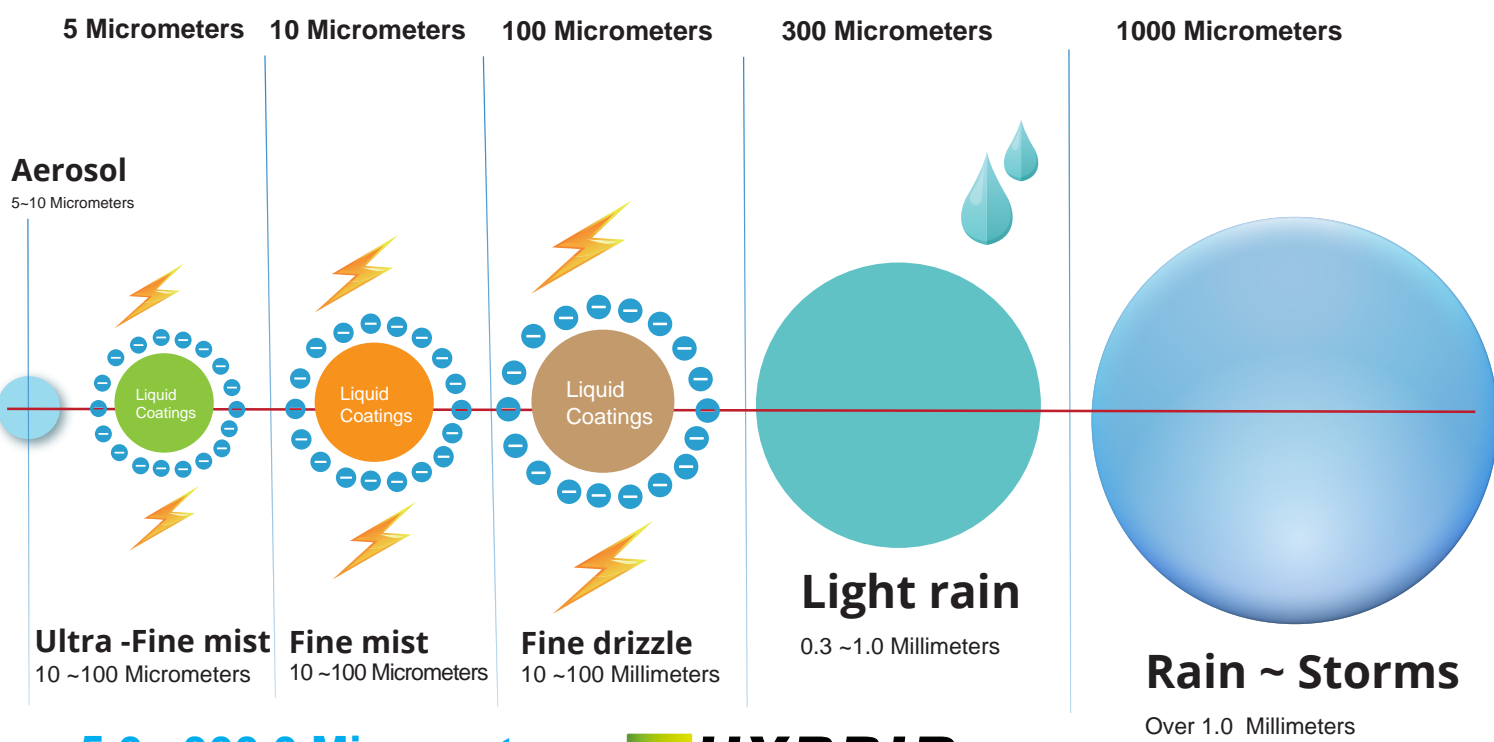
The OTS-8000 Auto Electrostatic Spray Gun System is safe and compliant for use in various industrial settings, including potentially explosive atmospheres. It is certified by ATEX, the standard for equipment and protective systems in these environments. We provide customized solutions to meet our customers' needs, including integration of electrostatic high rotary atomizer technology and special nozzle structures for 2K and water-based paints. Our system increases production rates and cost savings for a high return on investment.



Different coatings thicknesses by OTSON Electrostatic Spray System



Classification of Electrostatic Spray Droplet / Particle Size



5.0~ 300.0 Micrometers **HYBRID**

Waterbase Coatings

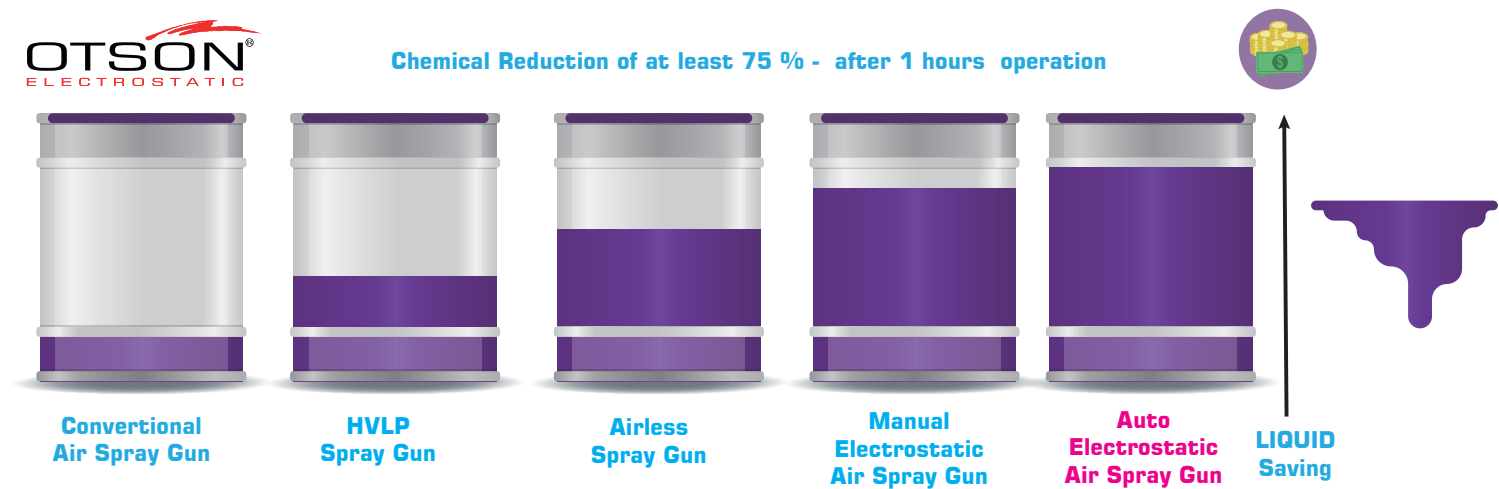
Solvent Coatings

OTS-8000
Auto Electrostatic Spray Gun

Benefits of Electrostatic Spray Technology

- *Improve Finishing Quality*
- *Reduce Refinishing Work*
- *Time Savings*
- *Reduce Paint Wastage*
- *Material Savings*

Reduce Paints Costs



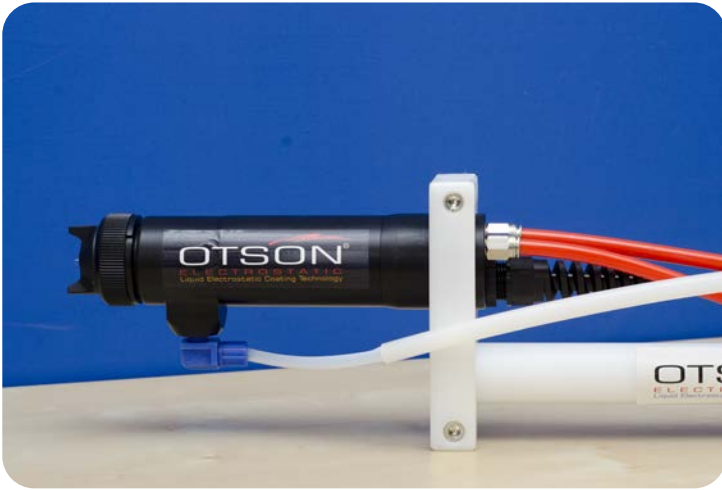
Return-on-Investment (ROI)

By replacing Conventional Air Spray gun with Auto Electrostatic Spray Bell System

	Typical	Calculate Your Own Application
Paint price per litre	USD 10	
	X	X
Litre Used per Day	100 litres	
	X	X
Business Days per Year	220 days	
Electrostatic Transfer Efficiency	95%	
Annual Savings	USD 209,000.00	

Features

- *Dual Coating- Solvent and Waterborne Paint*
- *Improve Coating Quality*
- *Reduce Air Pollution*
- *Reduce Water Pollution*
- *High Transfer Efficiency - Spray Painting*
- *High Atomized Nozzle*
- *Easy Handle for Long Term Operation*
- *Long Life Operation*
- *Low VOC Emissions*
- *Low Failure Rate and Easy Maintenance*
- *Light Weight Gun - 470g Only*



The Spray Direction of High Atomized Nozzle



Round Tin Nozzle(A)



Round Tin Nozzle(B)



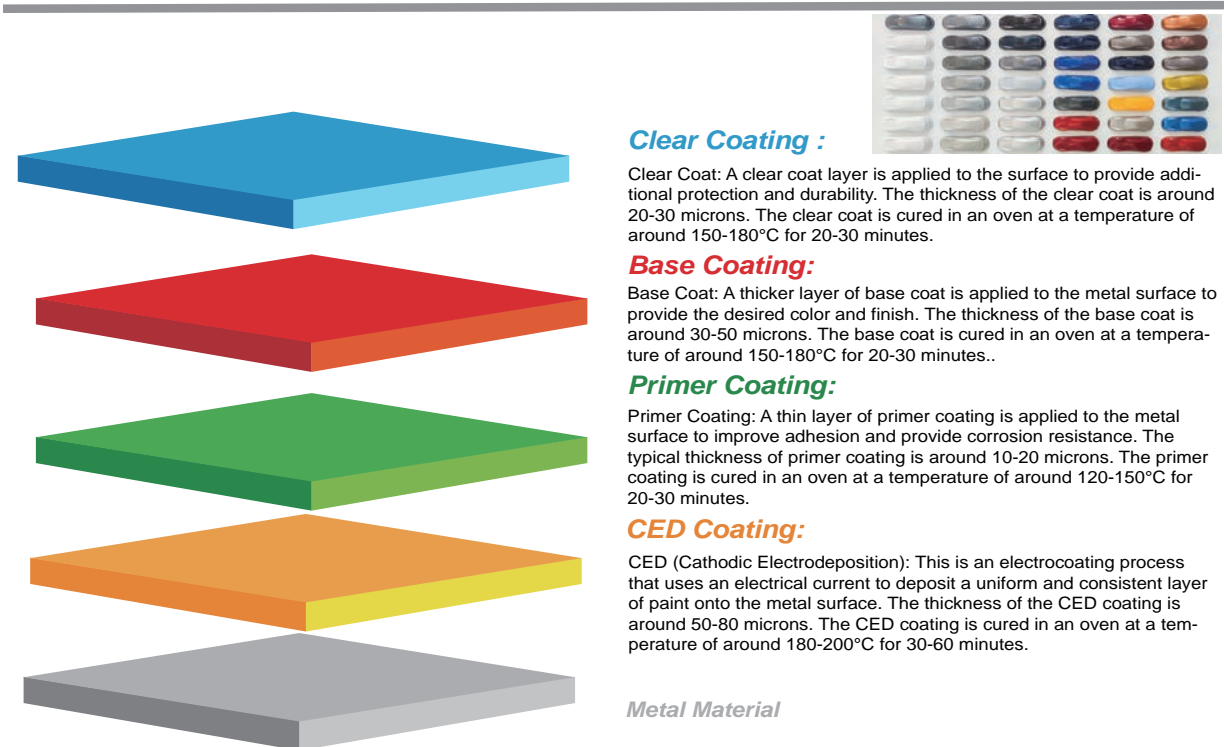
Round (FRP) Nozzle



Flat (FRP) Nozzle

The metal industry typically requires a multi-layer liquid coating system to provide protection and enhance the appearance of metal surfaces. The thickness of each layer depends on the specific requirements of the metal surface, but a typical sequence of layers for metal industry would include the following:

OTSON™ Pretreatment and coating process of metal parts in the metal industry
ELECTROSTATIC



- **Surface Preparation:** The metal surface is cleaned and treated to remove any dirt, oil, or other contaminants that may affect the adhesion of the coating. The surface may be sandblasted, degreased, or chemically cleaned
- **CED (Cathodic Electrodeposition):** This is an electrocoating process that uses an electrical current to deposit a uniform and consistent layer of paint onto the metal surface. The thickness of the CED coating is around 50-80 microns. Curing time and temperature: The CED coating is typically cured in an oven at a temperature of around 80-120°C for 15-30 minutes.
- **Primer Coating:** A thin layer of primer coating is applied to the metal surface to improve adhesion and provide corrosion resistance. The typical thickness of primer coating is around 10-20 microns. Curing time and temperature: The primer coating is typically cured in an oven at a temperature of around 80-120°C for 15-30 minutes.
- **Base Coat:** A thicker layer of base coat is applied to the metal surface to provide the desired color and finish. The thickness of the base coat is around 30-50 microns. Curing time and temperature: The base coat is typically cured in an oven at a temperature of around 80-120°C for 15-30 minutes.
- **Clear Coat:** A clear coat layer is applied to the surface to provide additional protection and durability. The thickness of the clear coat is around 20-30 microns. Curing time and temperature: The clear coat is typically cured in an oven at a temperature of around 80-120°C for 15-30 minutes.
- **Final Inspection:** The coated metal parts are inspected to ensure they meet quality standards and customer specifications.

These layers are applied using liquid electrostatic spray equipment, which is capable of atomizing the coating materials into fine particles for precise and efficient application. The thickness of each layer can be adjusted based on the specific requirements of the metal surface and the desired end result.

2K/3K Mixer and Color Change System- Disk Electrostatic Spray

Color change valves, also known as paint dispensers, are a valuable investment for any business in the painting industry. These devices are used in paint shops to mix and dispense paint quickly and accurately, reducing waste and cleanup time.

One of the key benefits of a color change valve is its ability to automatically switch between different paint colors, which can save time and increase efficiency. This feature is especially useful for businesses that work on multiple projects and need to switch between colors frequently.

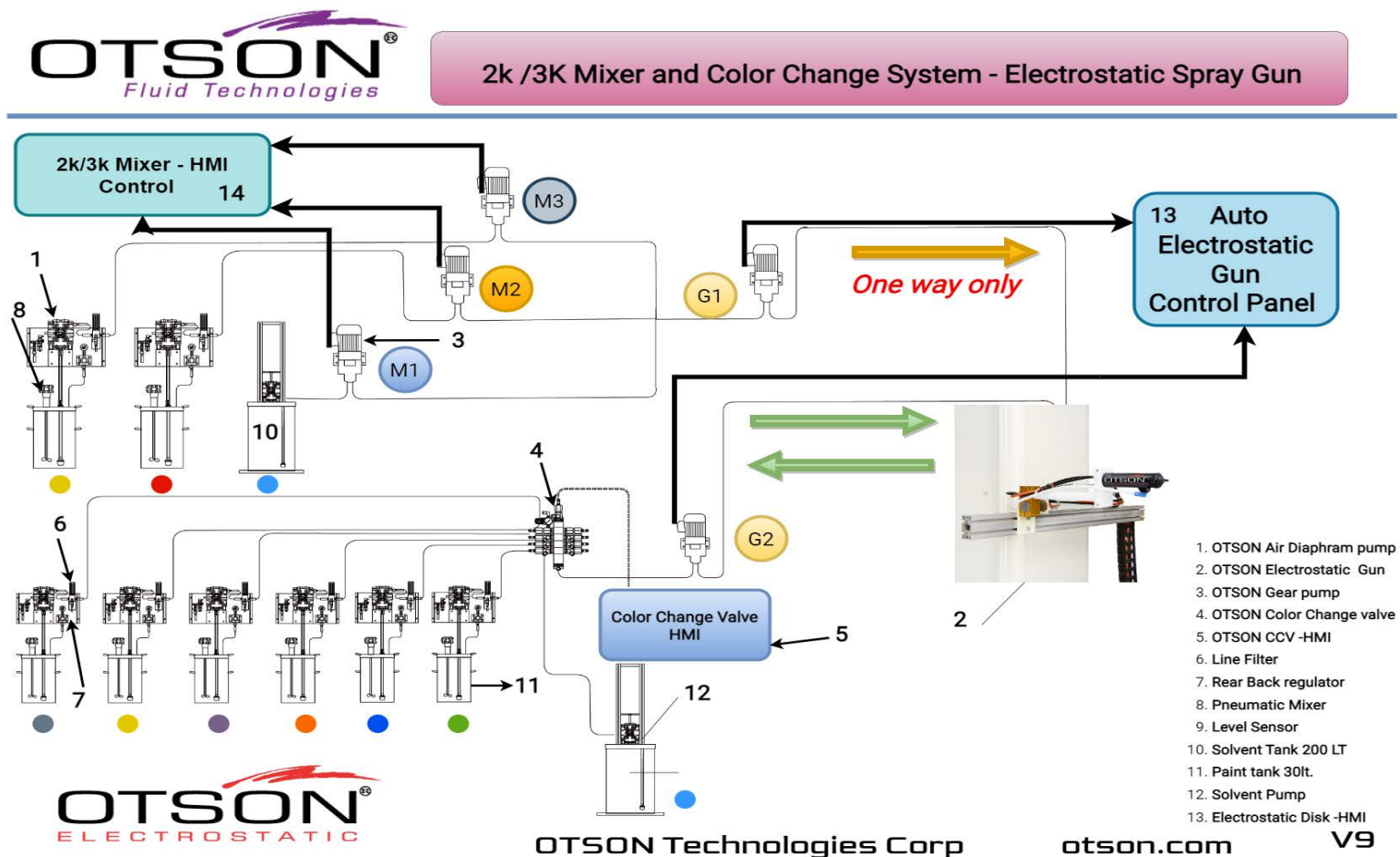
Another advantage of color change valves is their mixing capabilities. These devices can mix the paint with hardeners, reducers, or other additives as it is dispensed, ensuring that the paint is properly mixed and ready to use, which can help improve the quality of the paint job.

In terms of market view, the use of color change valves is prevalent in industrial paint application such as automotive, aerospace, and wood finishing industries. Many companies are investing in color change valves to improve their production efficiency and reduce cost.

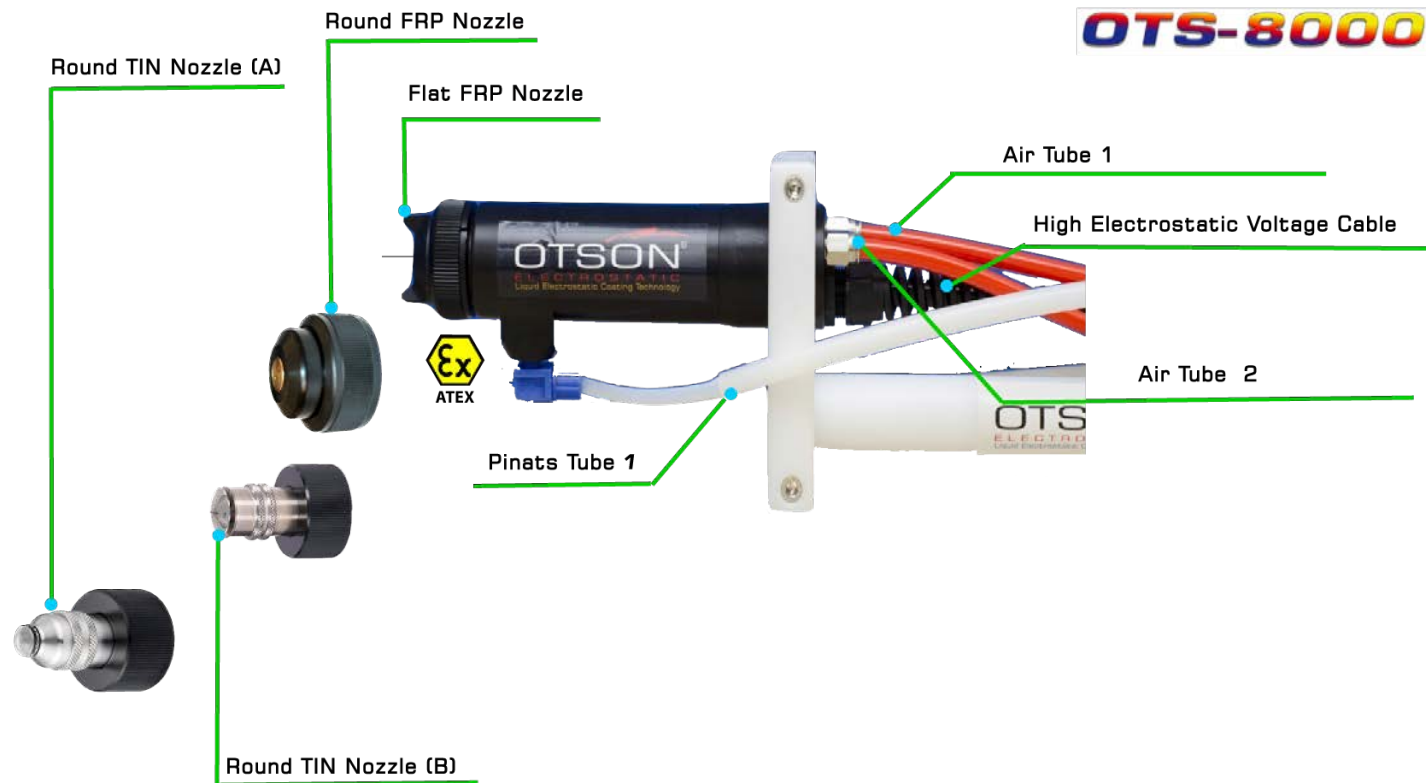
Overall, color change valves are an essential component of any paint shop, providing accurate and efficient paint dispensing and color change capabilities. Investing in a high-quality color change valve can help businesses in the painting industry to increase productivity, improve the quality of their paint jobs and save money in the long run.

2K/3K WATERBASED

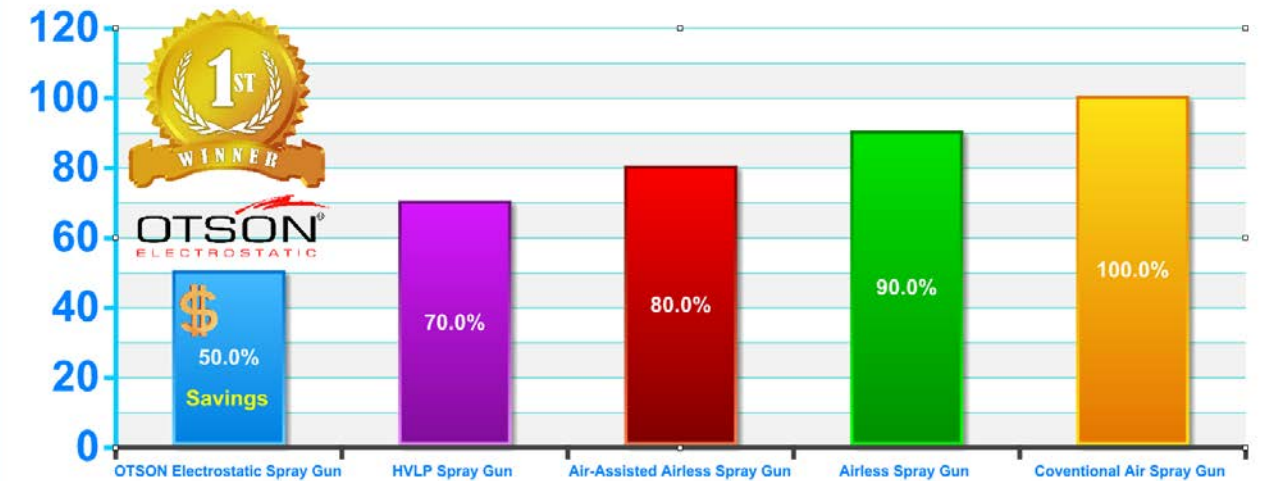
2K/3K SOLVENT



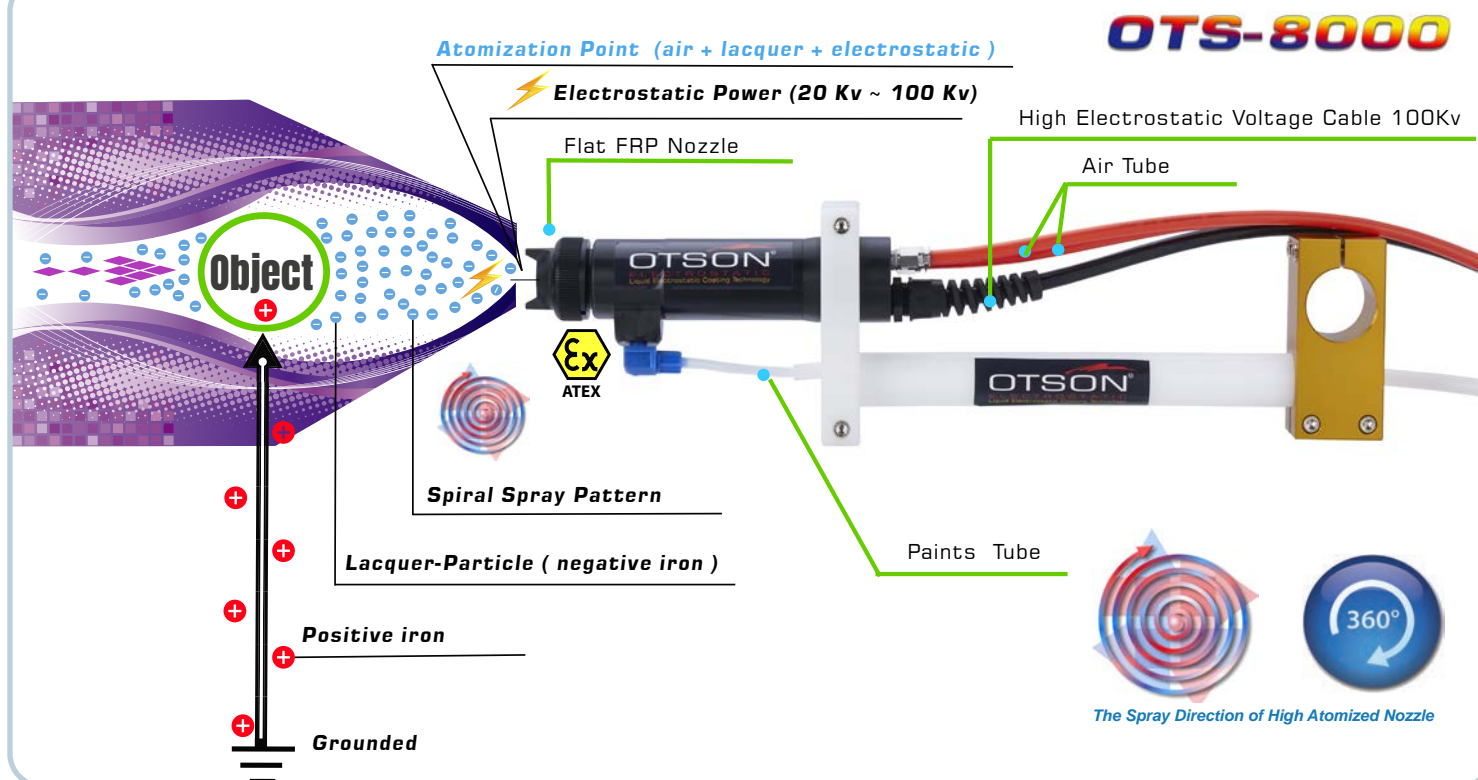
Features



Coatings Savings - Comparison Chart of Different Spray Technologies



OTS-8000 Auto Liquid Electrostatic Spray System



The OTS-8000 Auto Liquid Electrostatic Spray Gun from OTSON comes equipped with standard accessories, including an air regulating valve, electrostatic power supply, and a round (TIN) nozzle, with an additional set available as an option. Customers may choose from a set that includes a round (FRP) and flat (FRP) nozzle. When combined with a paint tank, gear pump, paint filter, paint stabilizing valve, air dryer, and air compressor, this electrostatic spray gun forms a complete set of liquid electrostatic spraying equipment. The customer can carry out spray operations easily by pouring paint into the bucket.

The 2K-3K Electronic Mixing & Dosing System is an advanced system designed for use in a liquid electrostatic spray system. It is used to control the mixing and dosing of two or three liquid components in a precise and accurate manner. The system uses electronic sensors and controls to measure and adjust the flow rate of each component, ensuring that the correct proportion of liquids are mixed and sprayed. The end result is a more uniform and efficient application of the sprayed liquid, resulting in improved product quality and increased



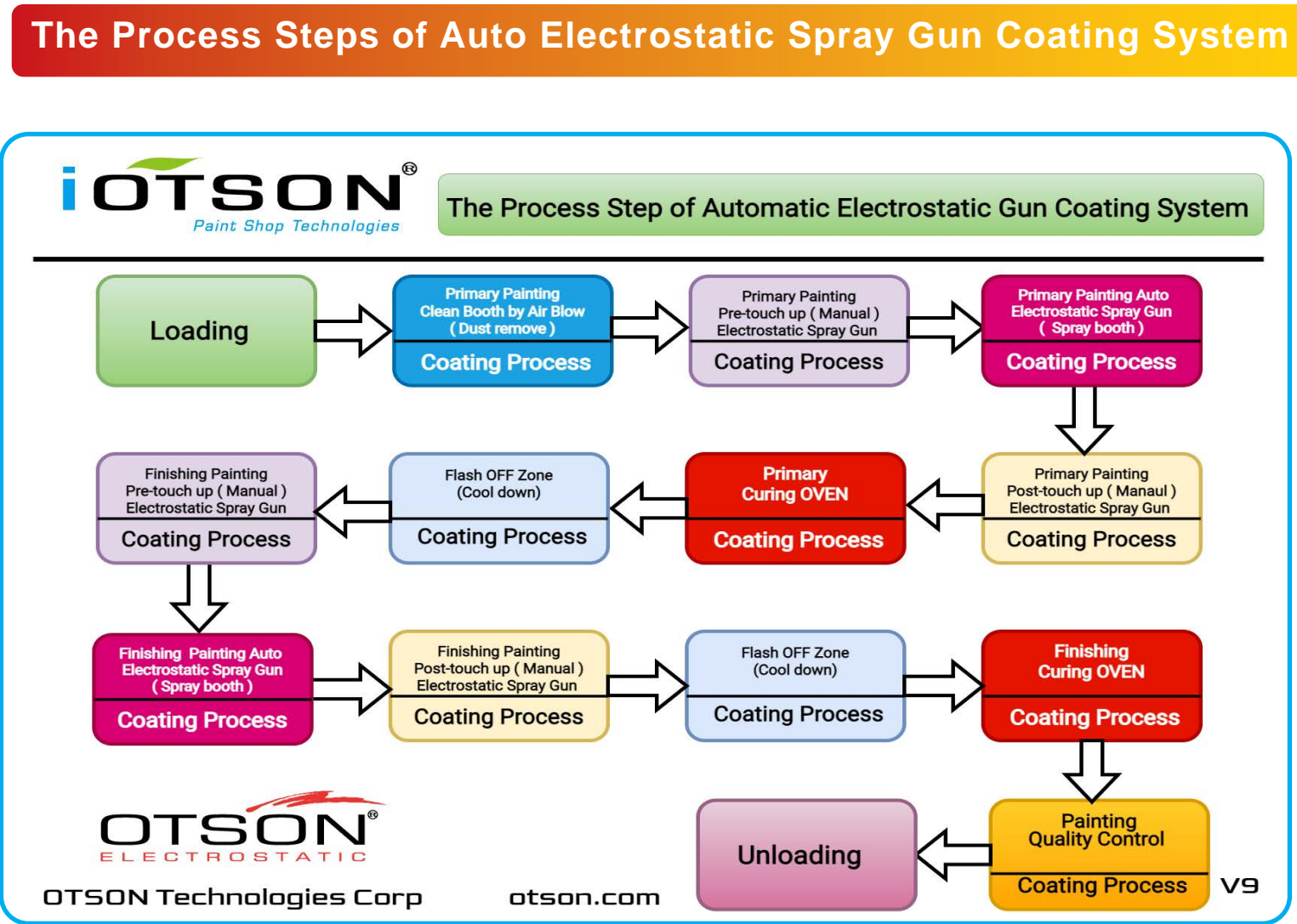
otson.com

The 2K-3K Electronic Mixing & Dosing System typically comprises of the following components:

- Metering Pumps:** These pumps are used to accurately control the flow rate of each component, ensuring that the correct proportion is mixed and sprayed.
- Mixing Chamber:** The mixing chamber is where the two or three liquid components are combined and mixed together.
- Control Unit:** The control unit is the heart of the system and is responsible for monitoring and adjusting the flow rate of each component. It may use electronic sensors, computer control and software to manage the mixing and dosing process.
- Display Unit:** A display unit is used to show the operator the current status of the system, including the flow rate of each component, total amount of liquid mixed and any alarms or faults that may arise.

The system may also be equipped with additional features such as automatic cleaning, continuous monitoring, and alarms for low level and low pressure, to ensure the reliable and consistent operation of the mixing and dosing process.

Overall, the 2K-3K Electronic Mixing & Dosing System provides precise control over the mixing and dosing of two or three liquid components, which results in a more efficient, consistent and uniform application of the sprayed liquid.



Innovative Liquid Electrostatic spray Paint Shop Solutions- industry 5.0

Specification

OTS-8700 /8300 Microcomputer Control Panel (10" Man-Machine Interface)

- **Input Voltage:** AC 200V ~ 415V 50hz / 60hz (3 phase) ± 5%
 - **Power Consumption :** 2.5 KVA
 - **Dimension :** 420 (L) x 730 (w) x 1710 (H) mm
 - **Weight :** 110 kg
 - **Servo Motor Controlled Reciprocator.**
 - **Touch Panel Interface by using 10" Color Screen.**
 - **Memory Capacity up to 200 sets of Operation.**
 - **Color Change Control (2 colors) Interlocking**
 - **Door-in-Door Design to Achieve Efficient Anti-Dust Effect.**
- Coatings: Solvent-base & Waterborne Coatings



OTS-8100 / 8500 Microcomputer Control Panel (10" Man-Machine Interface)

- **Input Voltage:** AC 200V ~ 415V 50hz / 60hz (3 phase) ± 5%
 - **Power Consumption :** 2.5 KVA
 - **Dimension :** 420 (L) x 730 (w) x 1710 (H) mm
 - **Weight :** 110 kg
 - **Servo Motor controlled reciprocator.**
 - **Touch Panel interface by using 10" colour screen.**
 - **Memory capacity up to 200 sets of operation.**
 - **Door-in-Door design to achieve efficient anti-dust effect.**
- Coatings: Solvent-base Coatings



- **Stroke Length:** 1200mm~ 7000mm.
 - **Auto Gun support rod (horizontal Length):** 1000mm~ 2000mm.
 - **Single travel, multi-speed shifting.**
 - **Control Method:**
 - Speed : Max 36 m/min (adjustable)
 - Motor capacity : 1kw (explosion proof)
1. Frequency Converter for speed control.
 2. Man-machine interface control panel is controlled by servo motor for regulating the travel speed.



Specification

OTS-8000 & OTS-8100 Liquid Electrostatic Power Supply

Out Voltage	0~70 KV DC(-) -OTS-8000 0~100 KV DC(-)-OTS-8100
Out Current	50 microamperes
Intercepting Current	20~150 microamperes
Input Voltage	220V AC (50Hz)
Weight	12 kg
Dimensions	300(L)x120(W)x350(H) mm
Coatings	Solvent-base Coatings



OTS-8300 ,OTS-8500 ,OTS-8700 Liquid Electrostatic Power Supply

Out Voltage	0~110 KV DC(-)
Out Current	50 microamperes
Intercepting Current	20~150 microamperes
Input Voltage	220V AC (50Hz)
Weight	12 kg
Dimensions	300(L)x120(W)x350(H) mm
Coatings	Solvent-base & Waterborne Coatings



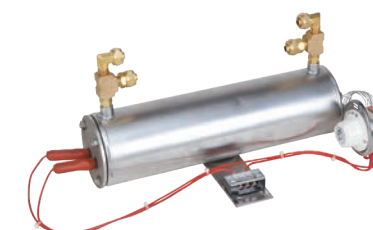
Gear Pump

Input Voltage : AC 220 V ~ 380 V ±10% 3 Phase
Horsepower : 1/4 HP
 Dimension : 130 (L) x 600 (w) x 30 (H) mm
Weight : 13 kg
 Output : 3cc or 6cc / rev 200 cc ~ 3000 cc / min (digital control)
Spray Hose : Double-layer Teflon paint hose
 Pump Material : Hardened Steel CMoWCrVCo HRC = over 63)
 Titanium plated for durable use and wearing resistance.



Air Heater

Dimension : 410 (L) x 170 (w) x 150 (H) mm
Weight : 5 kg
 Input Voltage : AC220V , 500W
 Temperature : 0 degree C ~ 120 degree C



Water Filter & Oil Filter

Dimension: 170 (L) x 340 (w) x 90 (H) mm
Weight : 3 kg
 Water Filter : 3650 l/s
 Oil Filter : 1900 l/s
 MAX Operation Pressure : 150psi



Specification

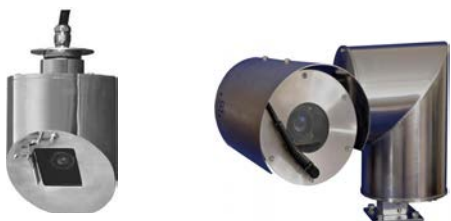
IOT (Internet of Things) Sensor System

- Air Flow
- Paint flow
- Paint Pressure
- Air Pressure
- Environment VOC Detect Sensor
- Monitor motor
- Smoke Sensor
- Air Temperature and humidity
- AI Dashboard System
- Power Consumption Monitor



Remote Digital Video Monitor System

- **Video Input:** 8 channels
- **Video Output:** HDMI, VGA
- **Compression Format:** H.265/H.264
- **Recording Resolution:** up to 8MP (4K)
- **Playback Resolution:** up to 8MP (4K)
- **Hard Drive Capacity:** up to 6TB (depending on the model)
- **Network Interface:** RJ45, 10M/100M/1000M Ethernet with PoE support
- **Remote Access:** Yes, via PC, smartphone or tablet
- **Audio Input/Output:** 1 channel input, 1 channel output
- **USB:** 2 USB ports (1 USB 2.0, 1 USB 3.0)
- **PoE Ports:** 8 ports with PoE support
- **Power Supply:** DC 48V/1.25A



X 8 CH X 8 CH



Specification

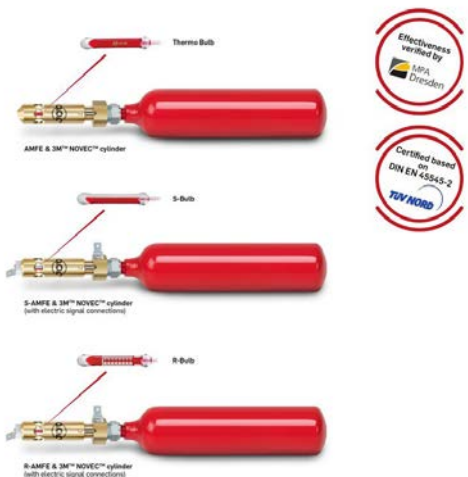
Safety Light Curtains

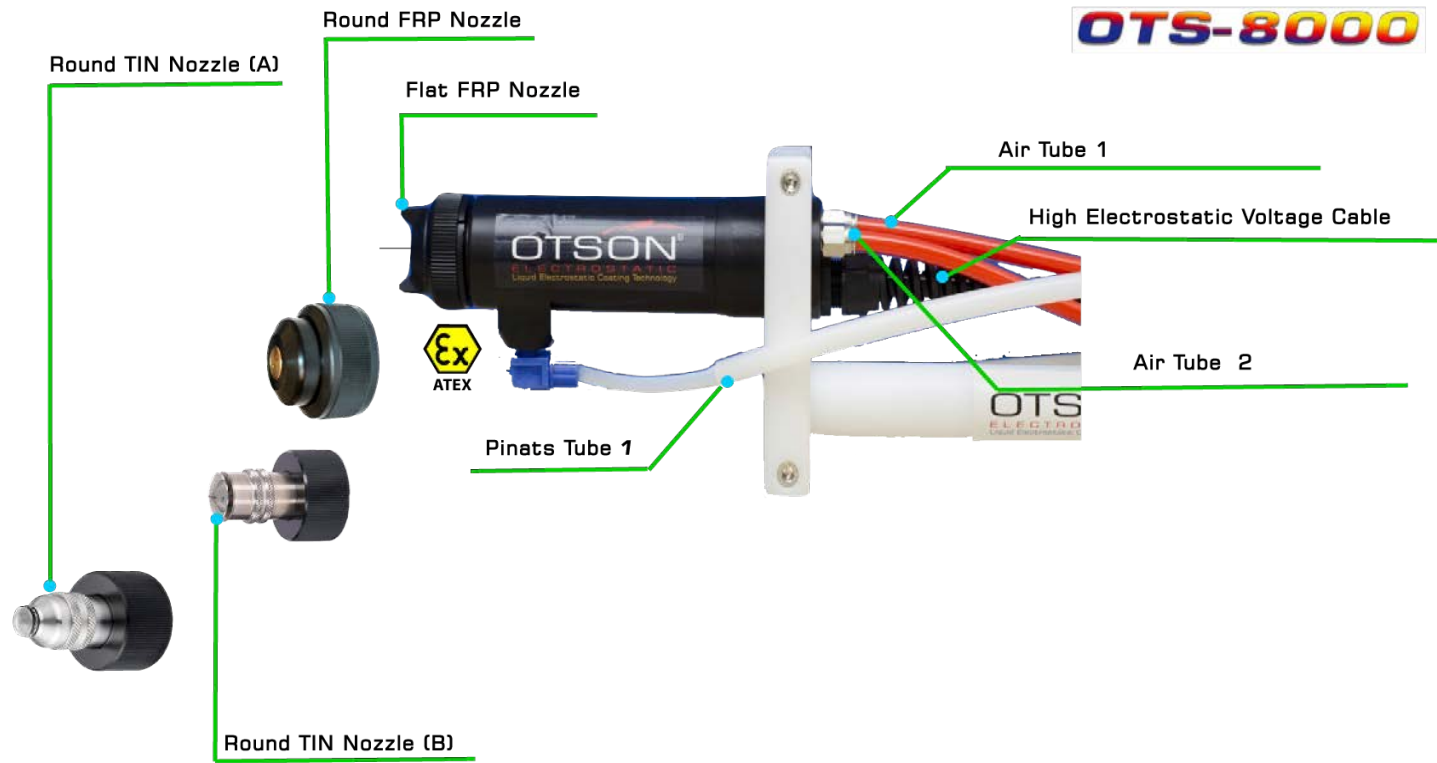
- Safety light curtain Type 4.
- Suitable for detection of operators.
- Consists of an emitter and receiver.
- In combination with a safety guard monitor for protection up to safety level PLe per EN ISO 13849-1 or up to SIL 3 per EN 62061.
- 14mm resolution for finger detection.
- Available in various protective field heights: 200, 400, 600, 800, 1000 and 1200mm.
- Detection range 0.5m to 6m.
- Can be connected to GLM1 safety controller.
- Gesealed tot IP65.
- Fitted with quick disconnecter.
- Supplied with mounting brackets as standard



Automatic Miniature Fire Extinguisher

- Dimensions (without cylinder):
ø 16 mm x 64 mm/0,63“ x 2,52“
- Minimum installation depth: 20 mm/0,79“ (w/o cylinders)
- Activation temperature: 57°C – 260°C/134,6° F - 500° F
- Extinguishing agents: 3MTM NOVECTM, CO2,
- Lifetime: 9 years + (for the cylinders)
- Maintenance free
- Lifetime: for release mechanism (see manual for details)





Model Number	OTS-8000
Spare atomizer, without cable or hose	0.5 kg
Material of Auto Liquid Electrostatic spray gun	FRP (no magnetic)
Life cycles (valves/bell /bearings/couplings) depend on air quality and Maintenance	1~5 years

Pneumatic supply

Maximum air pressure	6 bar (87 psi)
air consumption	From 7 - 40 (4 - 23) m3/h (cfm)

Paint supply

Maximum Fluid Pressure	6 bar (87 psi)
Maximum Fluid Outlet	800 (27) cc/min (oz/min)
Minimum Fluid Outlet	100 (3) cc/min (oz/min)
Viscosity scale (for minimum results)	8 to 30 seconds NK-2 Cup

(2): with a product density < 1.1 gr/cm3 and/or of the combination bell and air shroud being used

Performances

Transfer Efficiency	85% ~98%
---------------------	----------

Color change

Paint consumption	25 cm ³ (paint circuit) & 25 cm ³ (pump circuit)
Paint feeding	OTSON GEAR PUMP (2 color change)
Rinsing product consumption	300 cm ³ (not included rinsing box)
Standard process time	10 sec (with REVERSE FLUSH)
Optimized process time	5 sec (with REVERSE FLUSH on circuit 1 & 2)

Same Color (head rinsing + Nozzles)

Time	6 sec.
Rinsing product consumption	50 cm ³

High Electrostatic Voltage

Voltage maxi.	110 kV
Current maxi.	50 μA

Specification

Liquid Electrostatic Spray Gun

Input Voltage	0~110KV DC(-)
Gun Length	225 mm
Gun Weight *(no nozzle , hv cable ,spraying tube and air tube)	470 g
Fluid and Air Pressure	0 ~ 7 kg/cm ² (6.86 bar) (0~100) psi
Operating Pressure	Air Supply
Coatings	Solvent-base & Waterborne Coatings



Round (TIN) Nozzle - A type

Gauge :	12 mm
Atomization air pressure :	4 ~ 6 Bar
Flow Rate :	20 ~ 300 ml/min
Fan pattern width :	40 ~150 mm
Air :	180 NI / min



Round (TIN) Nozzle - B type

Gauge :	22 mm
Atomization air pressure :	4 ~ 6 Bar
Flow Rate :	20 ~ 300 ml/min
Fan pattern width :	70 mm
Air :	180 NI / min



Round (FRP) Nozzle

Gauge :	12 mm
Atomization air pressure :	4 ~ 6 Bar
Flow Rate :	50 ~ 300 ml/min
Fan pattern width :	160 mm
Air :	180 NI / min



Flat (FRP) Nozzle

Gauge :	3 mm
Atomization air pressure :	4 ~ 6 Bar
Flow Rate :	100 ~ 400 ml/min
Fan pattern width :	300 mm
Air :	180 NI / min





Round FRP
Nozzle



OTS-8000 Auto Electrostatic Spray Gun



Flat FRP
Nozzle



OTS-8000 Auto Electrostatic Spray Gun

OTS-8000 Auto Electrostatic Spray Gun - Round (FRP) Nozzle



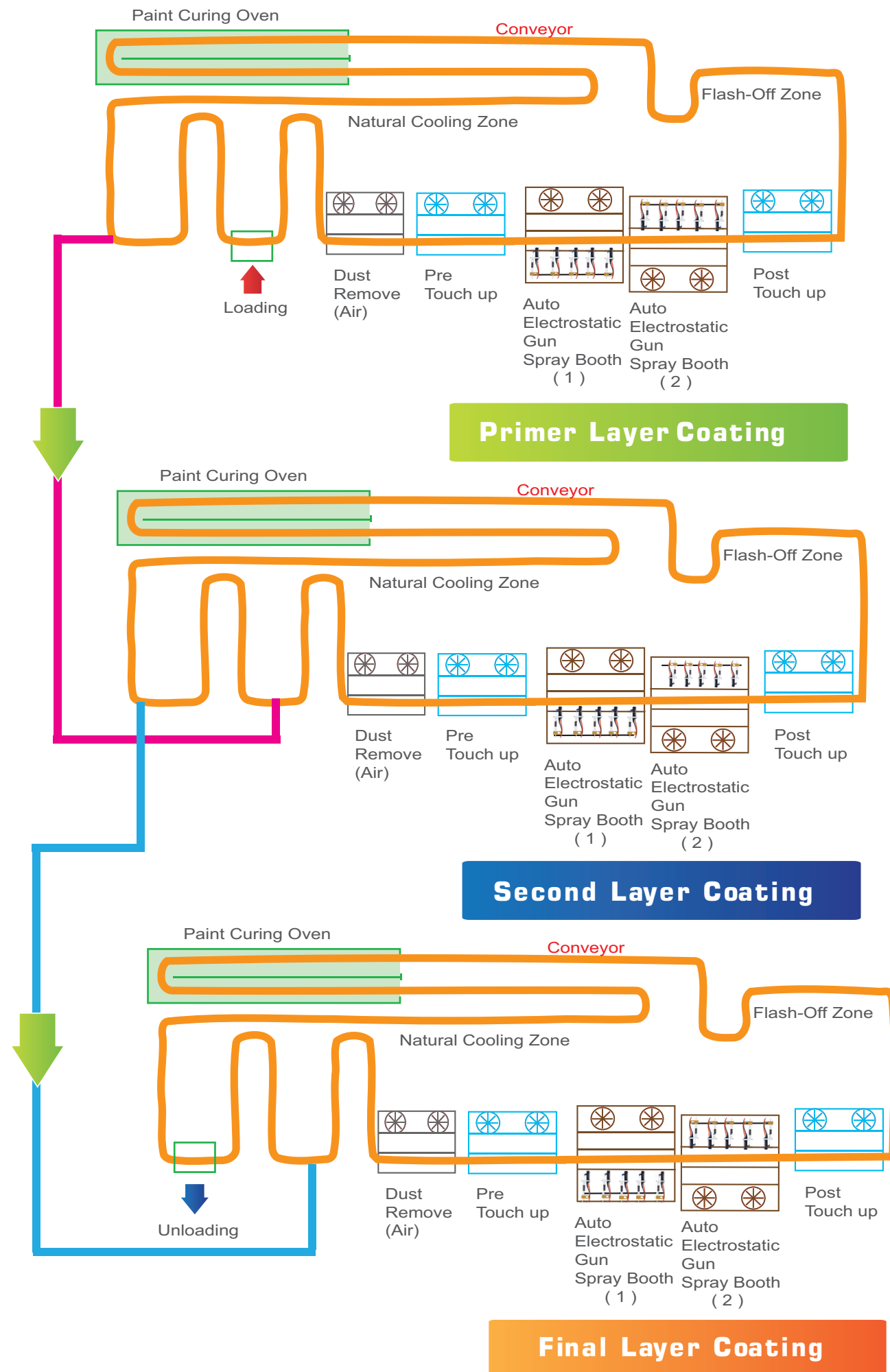
OTS-8000 Auto Electrostatic Spray Gun- Flat (FRP) Nozzle



Application - Industries



- Small parts
- Bicycle
- Application
- Small parts
- Bicycle
- Computer Housing
- Stationery
- Wooden Furniture
- Hardware
- Lockers
- Freezers
- Iron Railing
- Display Cases
- Office Partitions
- Medical Equipment
- Rest room Partitions
- Roller Bars
- Metal Doors
- Decorative Lamps
- Electrical Home Appliances
- Car Accessories, Teflon Pot
- Sports Equipment
- Handcraft
- Files
- Desks
- Sports Equipment
- Handcraft Computer
- Housing
- Stationery
- Wooden Furniture
- Hardware
- Lockers
- Freezers
- Iron Railing
- Display Cases
- Refrigerators
- Heavy Machinery
- Office Equipment



iOTSON[®]

Paint Shop Technologies

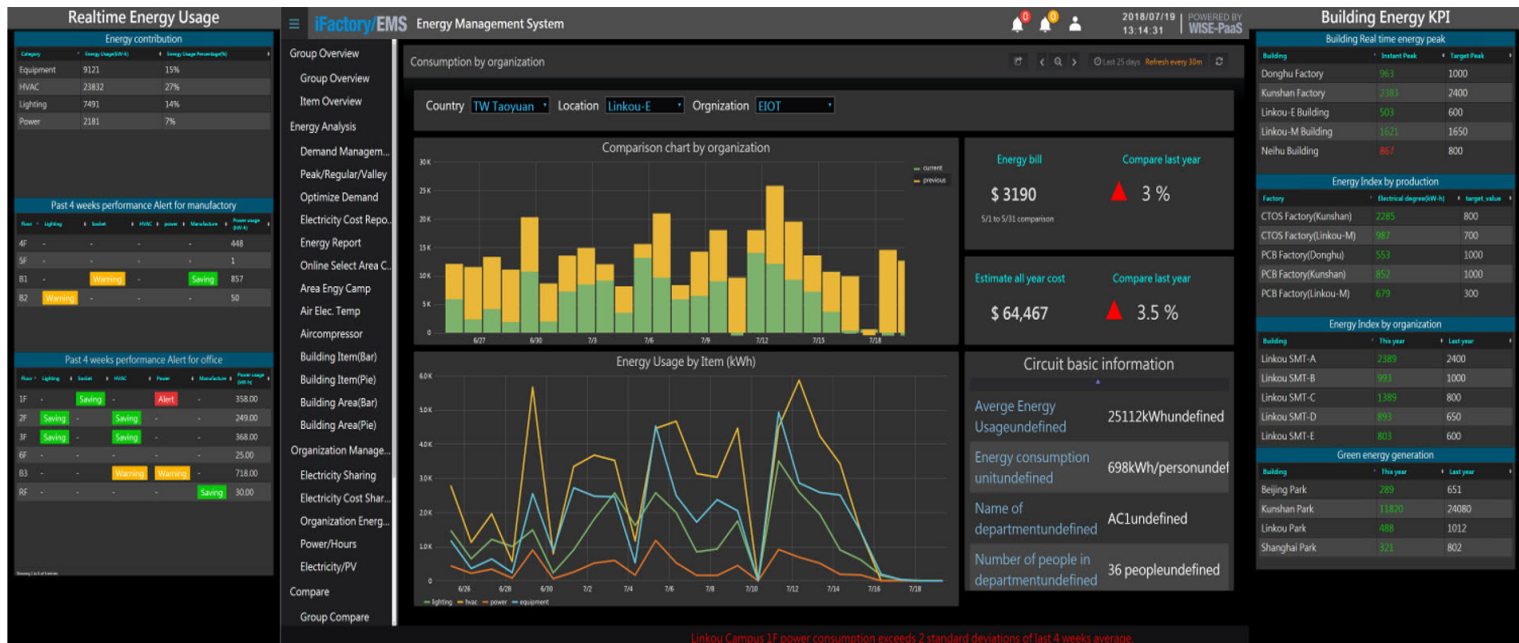
Dashboard of Electrostatic Spray Coating – Paint Shop



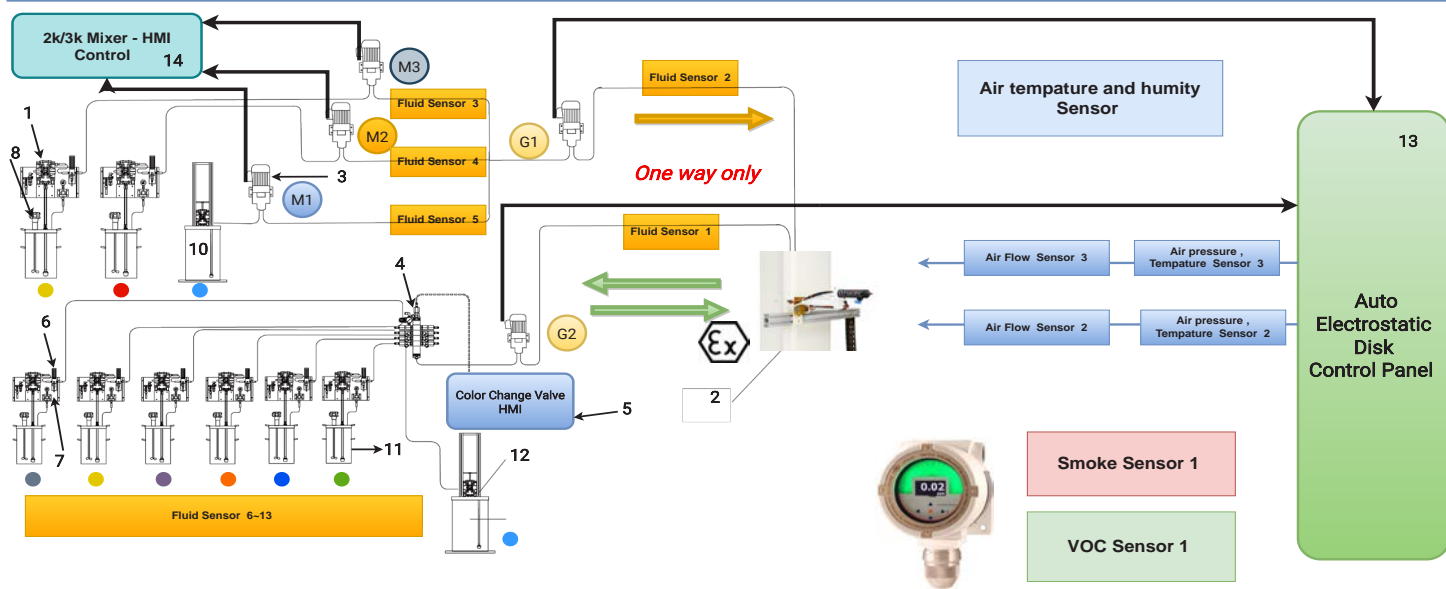
iOTSON[®]

Paint Shop Technologies

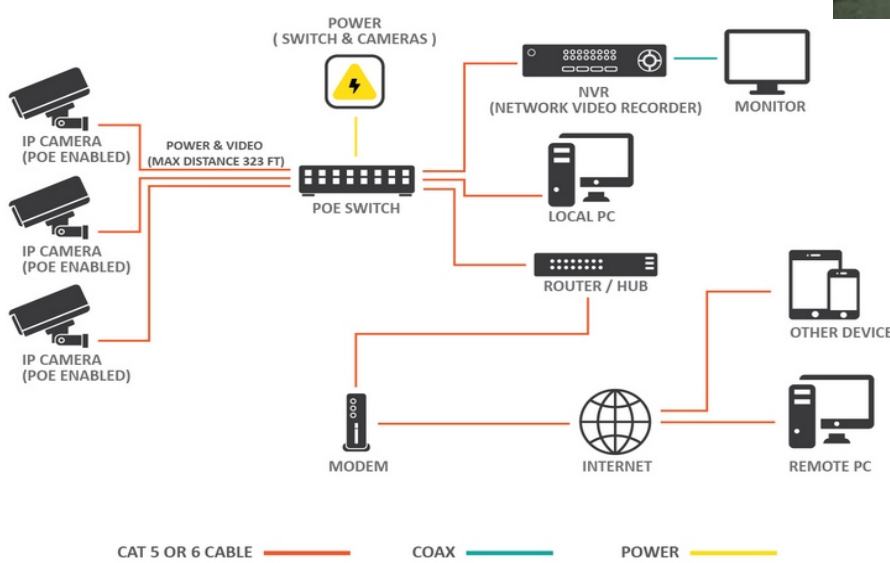
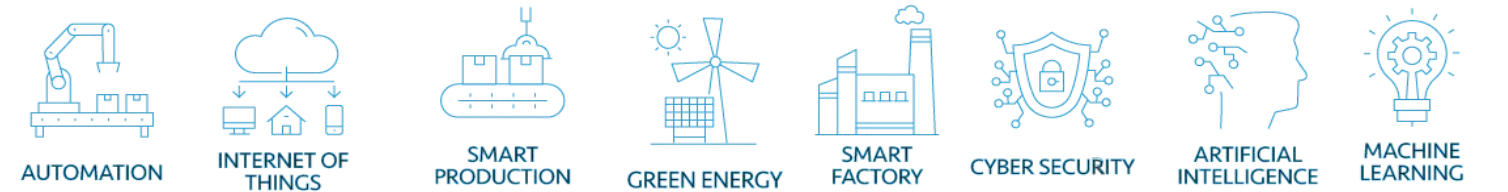
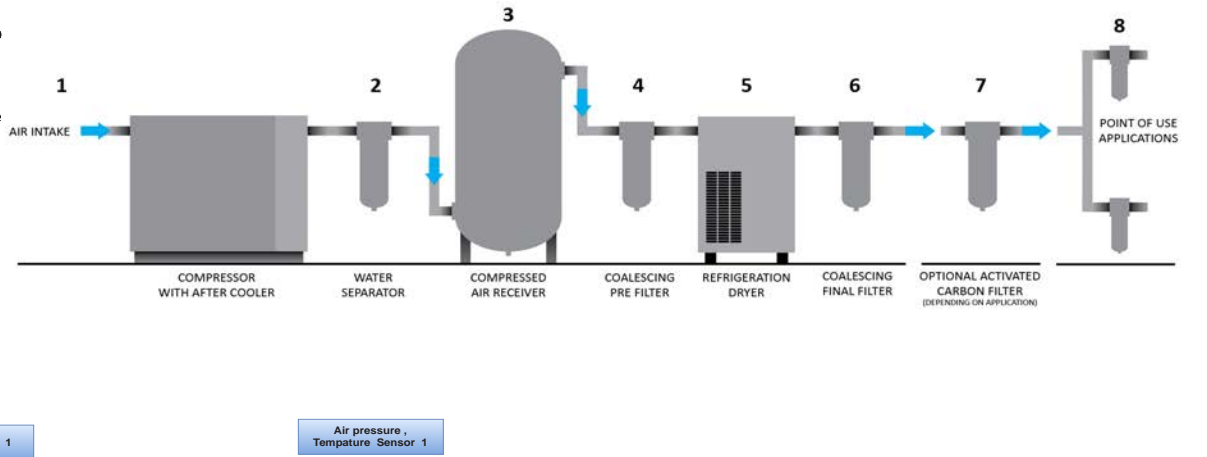
Energy & Environment-Dashboard of Paint Shop



2k /3K Mixer and Color Change System - Electrostatic Spray Gun



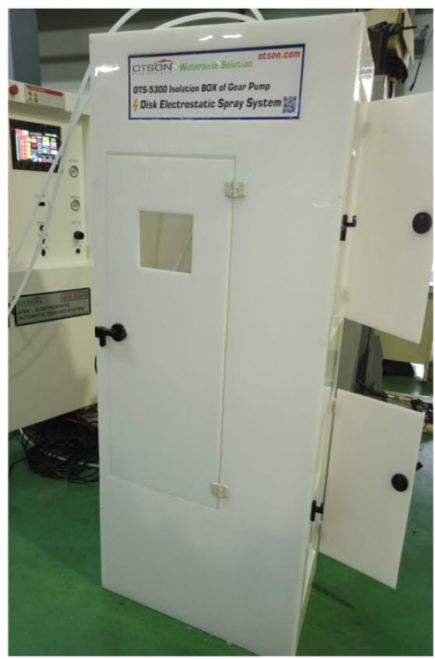
1. OTSON Air Diaphragm pump
2. OTSON Electrostatic Gun
3. OTSON Gear pump
4. OTSON Color Change valve
5. OTSON CCV -HMI
6. Line Filter
7. Rear Back regulator
8. Pneumatic Mixer
9. Level Sensor
10. Solvent Tank 200 LT
11. Paint tank 30lt.
12. Solvent Pump
13. Electrostatic Disk -HMI
14. 2K/3K Mixer-HMI Control



Model /Function	OTS-8700+G2	OTS-8500+G2	OTS-8300+G2	OTS-8100+G2	OTS-8000+G2
a. Microcomputer Control Subsystem					
Microcomputer Control Panel (HMI) x 1 set	10"	10"	10"	10"	
Memory Capacity for Storage Coating Parameters	199 sets	199 sets	199 sets	199 sets	
Air Flow Control x 1 set	Manual	Manual	Manual	Manual	Manual
Paints Flow Control (A) x 1 set	Auto / Manual	Auto / Manual	Auto / Manual	Auto / Manual	Manual
Paint Flow Control (B) x 1 set	Auto / Manual	Auto / Manual	Auto / Manual	Auto / Manual	Manual
Color Change Control (2 colors) x 1 set	Manual	Manual	Manual	Manual	Manual
Reciprocator Stoke 5 stages control x 1 set	Auto / Manual	Auto / Manual	Auto / Manual	Auto / Manual	Manual
Reciprocator Speed Control x 1 set	Auto / Manual	Auto / Manual	Auto / Manual	Auto / Manual	Manual
Atomizer Speed (RPM) Control x 1 set	Manual	Manual	Manual	Manual	Manual
Electrostatic Power Supply Control x 1 set	0~110KV	0~110KV	0~110KV	0~110KV	0~70KV
Electrostatic Power Display x 1 set	LED	LED	LED	LED	LED
Electrostatic Current Display x 1 set	LED	LED	LED	LED	LED
Electrostatic Spark Protection System x 1 set	YES	YES	YES	YES	YES
Paints,Coatings	Solvent-base & Waterborne	Solvent-base	Solvent-base & Waterborne	Solvent-base	Solvent-base
b.Spray Subsystem					
High KV Electrostatic Spray Gun x 3 sets	Yes	Yes	Yes	Yes	Yes
High Atomization Spray Nozzle x 3 sets	Round , Flat	Round , Flat	Round , Flat	Round , Flat	Round , Flat
H.V Cable x 3 sets	11m ~ 40m	11m ~ 40m	11m ~ 40m	11m ~ 40m	11m ~ 40m
Teflon Spraying Tube x 3 sets	11m ~ 40m	11m ~ 40m	11m ~ 40m	11m ~ 40m	11m ~ 40m
PU Air Tube x 6 sets	11m ~ 40m	11m ~ 40m	11m ~ 40m	11m ~ 40m	11m ~ 40m
c.High Voltage Electrostatic Power Subsystem					
Electrostatic Power Supply x 1 set	Max 110KV	Max 110KV	Max 100KV	Max 100KV	Max 70KV
d. Reciprocator Subsystem					
Reciprocator x 1 set (Stroke Length 1.6 Meters ~7.0 Meters)	1.6 M ~7.0 M	1.6 M ~7.0 M	1.6 M ~3.0 M	1.6 M ~3.0 M	1.6 M ~3.0 M
Safety Sensor x 1 set	Yes	Yes	Yes	Yes	Yes

Model /Function	OTS-8700+G2	OTS-8500+G2	OTS-8300+G2	OTS-8100+G2	OTS-8000+G2
e.Paint Supply Subsystem					
OTS-4000 (optional) Colour Change Valve +HMI	2~20 Colours (Auto Clean)	2~20 Colours (Auto Clean)	2 ~ 20 Colours (Manual Clean)	2~20 Colours (Manual Clean)	2 Colours
OTS-4200 (optional) 2K and 3K Mixer system +HMI	2K and 3K	2K and 3K	2K and 3K	2K and 3K	2K and 3K
Gear Pump + Motor (A) x 1 set (optional) 3cc / rev 200cc~1500 cc /mim	3cc / rev	3cc / rev	3cc / rev	3cc / rev	3cc / rev
Gear Pump + Motor (B) x 1 set (optional) 6cc / rev 200 cc ~ 3000 cc / min	6cc / rev	6cc / rev	6cc / rev	6cc / rev	6cc / rev
f . Air Supply Subsystem					
Air Heater -Air Temperature Control x 1 set	Manual	Manual	Manual	Manual	Manual
Air Filter (screening oil and water) x 1 set	Auto	Auto	Auto	Auto	Auto
g. Smart Monitor Sensor Subsystem (optional)					
Air Flow	Local / Remote monitor	Local / Remote monitor			
Paint flow	Local / Remote monitor	Local / Remote monitor			
Paint Pressure	Local / Remote monitor	Local / Remote monitor			
Air Pressure	Local / Remote monitor	Local / Remote monitor			
Environment VOC Detect Sensor	Local / Remote monitor	Local / Remote monitor			
Monitor motor	Local / Remote monitor	Local / Remote monitor			
Smoke Sensor	Local / Remote monitor	Local / Remote monitor			
Air Temperature and Humidity	Local / Remote monitor	Local / Remote monitor			
AI Dashboard System	Local / Remote monitor	Local / Remote monitor			
Power Consumption monitor	Local / Remote monitor	Local / Remote monitor			
h. Safety Subsystem (optional)					
Safety Light Curtains Interlocking with disc system	Auto	Auto			
Automatic Miniature Fire Extinguisher (For Spray Gun and Control Panel system Only)	Auto	Auto			
I. Security System (optional)					
Remote Digital Video Monitor System (RDVRS)	Local / Remote monitor	Local / Remote monitor			
j. Small water-borne -Paint kitchen					
Special Isolation paint kitchen with 2 gear pump and air allegator	Yes		Yes		

Easy Paint Kitchen for Waterbase and Solvent Paints



Dimension: 76x43 x170 cm Weight : 80 Kg

Easy Paint Kitchen for Waterbase and Solvent Paints - Gear Pump

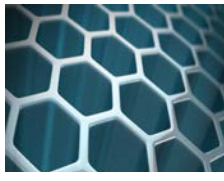
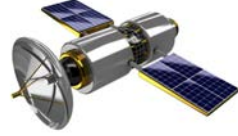


3cc ~6cc/rev
Gear Pump



Gear Pump
Motor

Application - Industry



Meeting the requirements
of each industry....



OTS - 8000
Auto Liquid Electrostatic Spray Gun



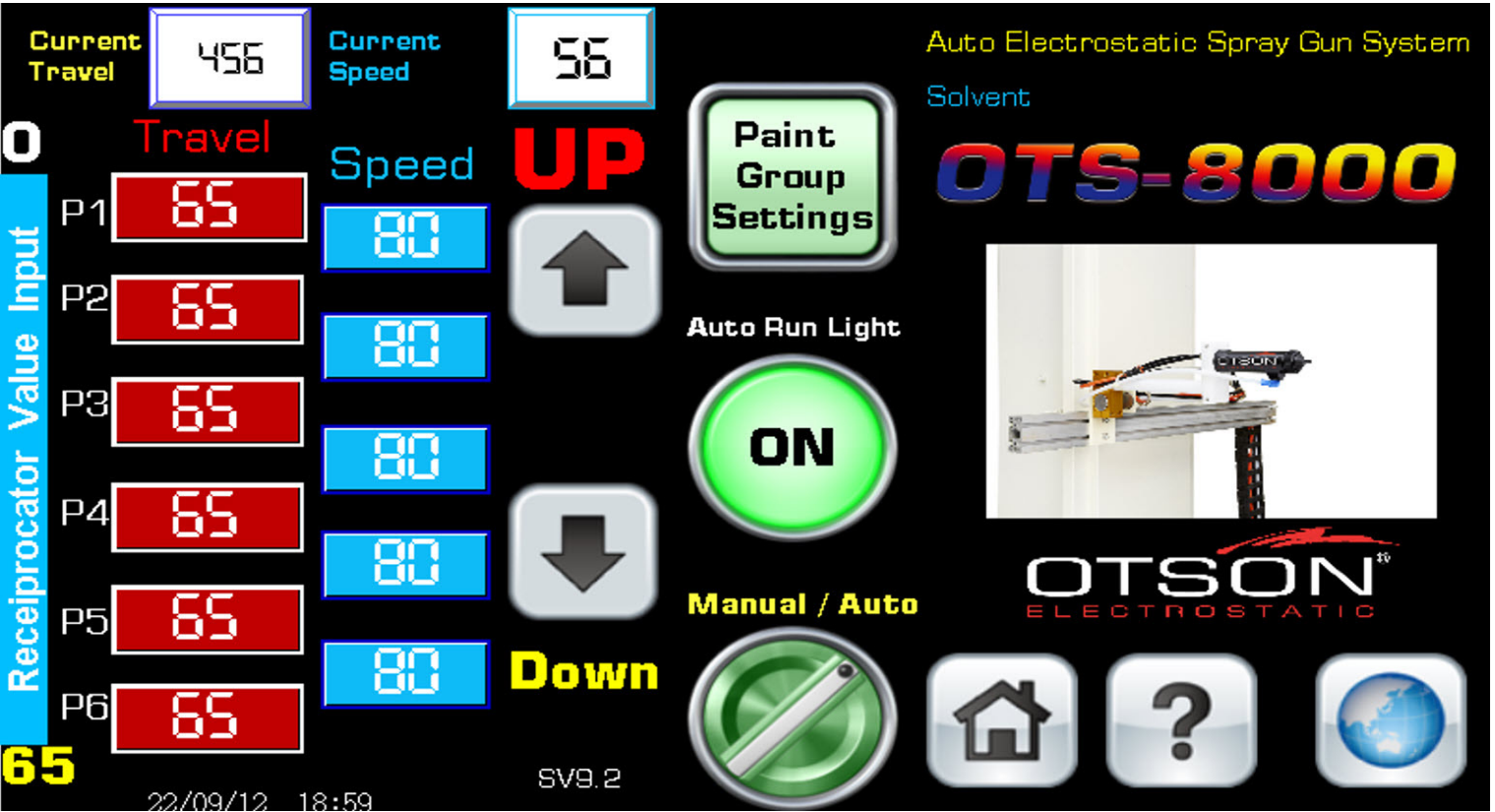
Application - Spray Range



.....With the widest industrial spray range



OTS - 8000
Auto Liquid Electrostatic Spray Gun



10" Touch Panel Industrial (HMI)



Electrostatic Current UMA

Electrostatic Voltage KV



Series 5000

DISK ELECTROSTATIC
AUTO COATING SYSTEM

MAX 60000RPM
(no loading spray disk)

HYBRID

2K/3K WATERBASED

2K/3K SOLVENT



OTS-9000

Auto Electrostatic Spray Bell System



OTS-3000⁺

MANUAL
LIQUID ELECTROSTATIC SPRAY GUN

HYBRID



- * New Design Model
- * New LED Panel
- * Adaptive Electrostatic Power
- * More Safety, Low Maintenance
- * High Transfer Efficiency
- * High Quality Finishing
- * Light Weight Gun

470g



Solvent

Waterborne

DUAL
Coating

H.E.T
High Efficiency Technology

*The appearance of all products, detail, figure and specification are subject to change at any time without notice.

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NEW Taipei City 242, Taiwan (R.O.C.)

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Tel : 886+2+2659-7162

Fax : 886+2+8192-6058

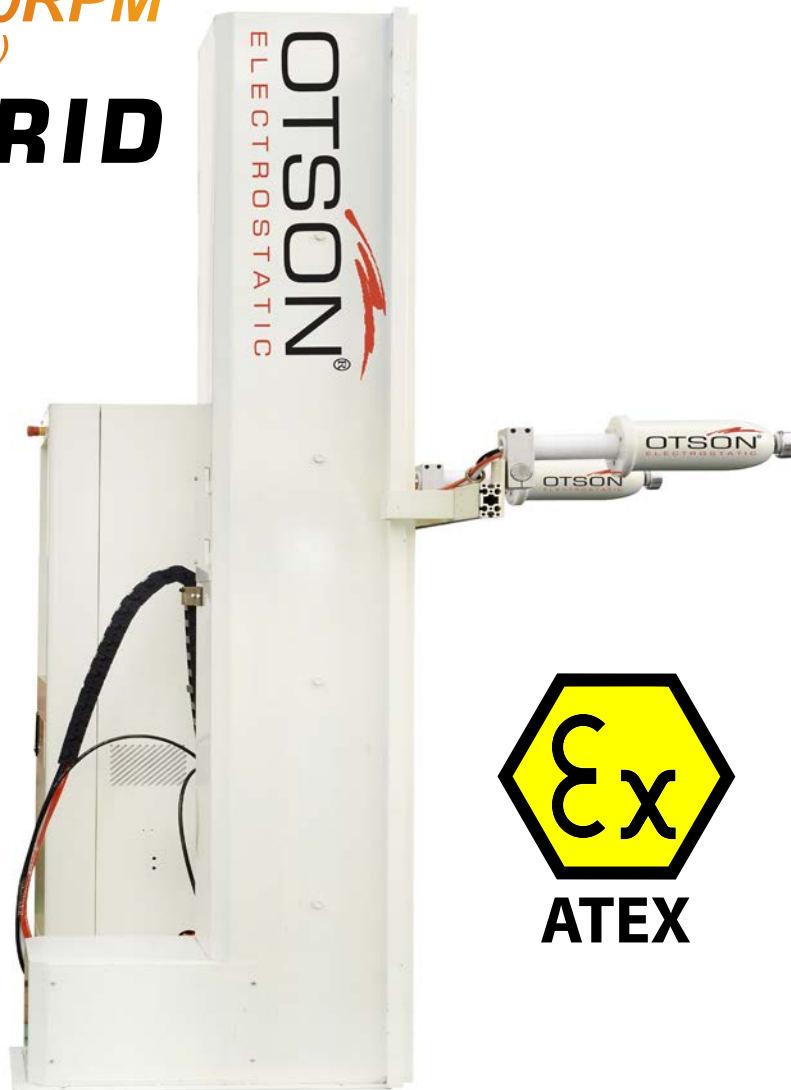


OTS-9000

Auto Electrostatic Spray Bell System

MAX 60000RPM
(no loading spray Cup)

HYBRID



Solvent

Waterborne

DUAL
Coating

H.E.T
High Efficiency Technology



AUTOMATION



INTERNET OF
THINGS



SMART
PRODUCTION



GREEN ENERGY



SMART
FACTORY



CYBER SECURITY



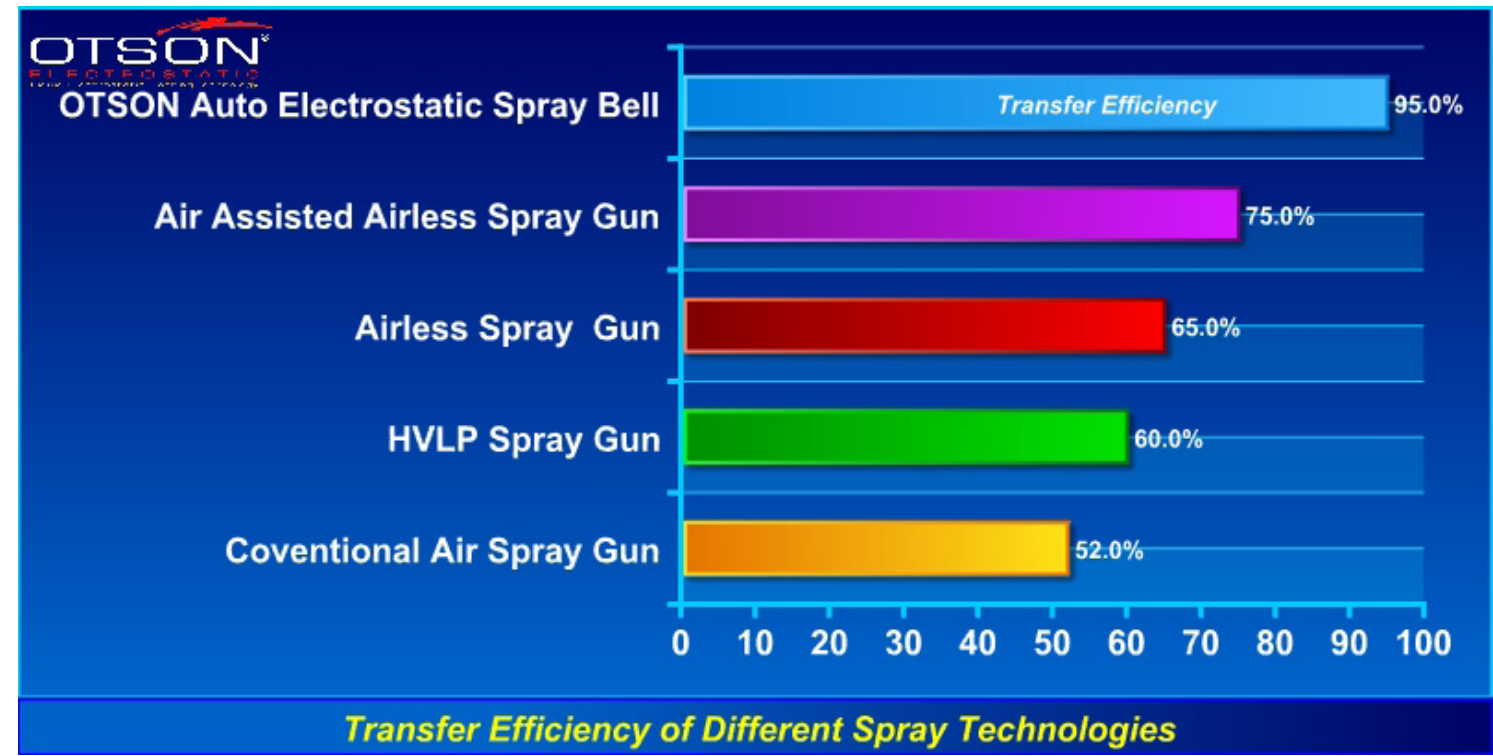
ARTIFICIAL
INTELLIGENCE



MACHINE
LEARNING

Overview

The OTSON Auto Liquid Electrostatic Spray Bell, model number OTS-9000, utilizes high compressed air to atomize paint as it passes through the special nozzle, which can sometimes cause the paint to be thrown away. The atomized paint is then negatively charged and attracted to the object, which has a less negative charge than the paint. The charged objects receive initial momentum from the paint pressure and air pressure, resulting in an expelling effect between the paint carrying electrostatic and the live particles, further atomizing the paint and forming a fine mist. Due to the electrostatic occlusion, any lost paints are drawn back to the workplace, generating a surrounding electrostatic effect. This process achieves the purpose of electrostatic coating, providing a transfer efficiency of up to 95% and significantly reducing the over spraying phenomenon. The OTS-9000 model is a highly effective tool for achieving high-quality finishes with electrostatic coating technology.



Dual Coating for Solvent and Waterborne Paint

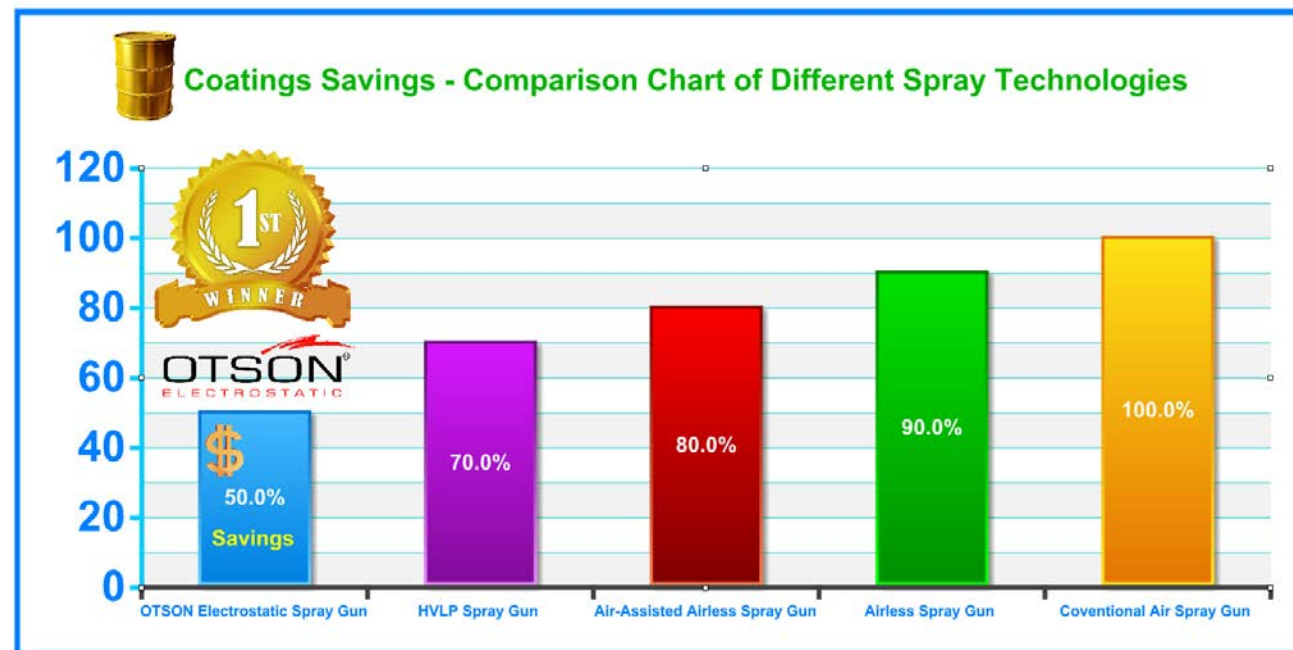


Additionally, the OTS-9000 Auto Electrostatic Spray Bell System is designed to reduce CO2 emissions and overspray, which can help to save cost and be more environmentally friendly, ultimately leading to cost savings for your customers.

The system includes a fully automated control panel that provides high production rates and reduces labor cost. The control panel gives operators total control flexibility and allows the operator to change process parameters, not only between batches, but also within the same part. The simplified user interface control panel is capable of recording ten different coating parameters which is beneficial to apply in various objects easily and efficiently.



The OTS-9000 Auto Electrostatic Spray Bell System is safe and compliant for use in various industrial settings, including potentially explosive atmospheres. It is certified by ATEX, the standard for equipment and protective systems in these environments. We provide customized solutions to meet our customers' needs, including integration of electrostatic high rotary atomizer technology and special nozzle structures for 2K and water-based paints. Our system increases production rates and cost savings for a high return on investment.



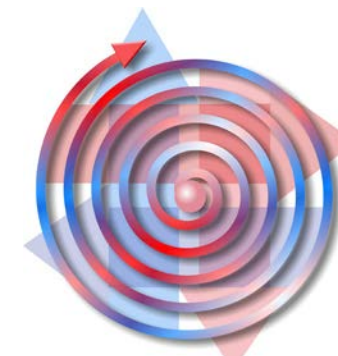
OTS-9000 Auto Liquid Electrostatic Spray System



The OTSON Auto Liquid Electrostatic Spray Bell, model number OTS-9000, comes equipped with all necessary standard equipment, including an air regulating valve, electrostatic power supply, electrostatic spray unit, and a choice of different cups to suit the customer's needs. When used in conjunction with a paint tank, gear pump, paint filter, paint stabilizing valve, air dryer, and air compressor, the OTS-9000 forms a complete set of liquid electrostatic spraying equipment that enables customers to carry out spray operations simply by pouring paint into the bucket. By utilizing the high compressed air to atomize paint as it passes through the special nozzle, the OTS-9000 generates a surrounding electrostatic effect, drawing any lost paints back to the workplace and achieving a transfer efficiency of up to 95%. With its advanced electrostatic coating technology, the OTS-9000 is an effective tool for achieving high-quality finishes.

Features

- Dual Coating- **Solvent and Waterborne Paint**
- Improve Coating Quality
- Reduce Air Pollutions
- Reduce Water Pollutions
- High Transfer Efficiency - **Spray Painting**
- High Atomized Bell Nozzle
- Easy Handle for Long Term Operation
- Long Life Operation
- Low VOC Emissions
- Low Failure Rate and Easy



The Spray Direction of High Atomized Nozzle



Special Design Bell Cup for all Spray Object



Innovative Liquid Electrostatic spray Paint Shop Solutions- industry 5.0

Innovative Liquid Electrostatic spray Paint Shop Solutions- industry 5.0

Innovative Liquid Electrostatic spray Paint Shop Solutions- industry 5.0

Different coatings thicknesses by OTSON Electrostatic Spray System

Classification of Electrostatic Spray Droplet / Particle Size

5 Micrometers	10 Micrometers	100 Micrometers	300 Micrometers	1000 Micrometers
Aerosol 5~10 Micrometers 				
Ultra -Fine mist 10 ~100 Micrometers	Fine mist 10 ~100 Micrometers	Fine drizzle 10 ~100 Millimeters	Light rain 0.3 ~1.0 Millimeters	Rain ~ Storms Over 1.0 Millimeters

5.0~ 300.0 Micrometers

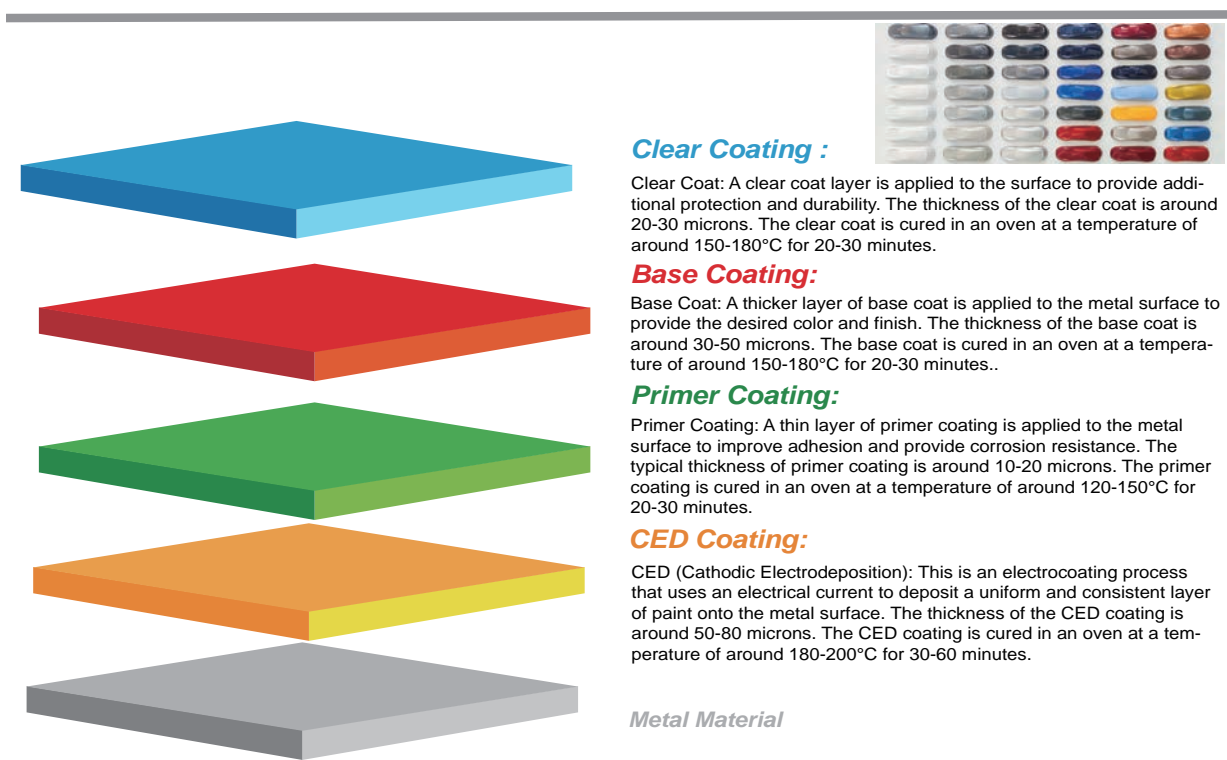
Waterbase Coatings

Solvent Coatings

Auto Electrostatic Spray Bell

The metal industry typically requires a multi-layer liquid coating system to provide protection and enhance the appearance of metal surfaces. The thickness of each layer depends on the specific requirements of the metal surface, but a typical sequence of layers for metal industry would include the following:

OTSON[®] ELECTROSTATIC Pretreatment and coating process of metal parts in the metal industry



- **Surface Preparation:** The metal surface is cleaned and treated to remove any dirt, oil, or other contaminants that may affect the adhesion of the coating. The surface may be sandblasted, degreased, or chemically cleaned
- **CED (Cathodic Electrodeposition):** This is an electrocoating process that uses an electrical current to deposit a uniform and consistent layer of paint onto the metal surface. The thickness of the CED coating is around 50-80 microns. Curing time and temperature: The CED coating is typically cured in an oven at a temperature of around 80-120°C for 15-30 minutes.
- **Primer Coating:** A thin layer of primer coating is applied to the metal surface to improve adhesion and provide corrosion resistance. The typical thickness of primer coating is around 10-20 microns. Curing time and temperature: The primer coating is typically cured in an oven at a temperature of around 80-120°C for 15-30 minutes.
- **Base Coat:** A thicker layer of base coat is applied to the metal surface to provide the desired color and finish. The thickness of the base coat is around 30-50 microns. Curing time and temperature: The base coat is typically cured in an oven at a temperature of around 80-120°C for 15-30 minutes.
- **Clear Coat:** A clear coat layer is applied to the surface to provide additional protection and durability. The thickness of the clear coat is around 20-30 microns. Curing time and temperature: The clear coat is typically cured in an oven at a temperature of around 80-120°C for 15-30 minutes.
- **Final Inspection:** The coated metal parts are inspected to ensure they meet quality standards and customer specifications.

These layers are applied using liquid electrostatic spray equipment, which is capable of atomizing the coating materials into fine particles for precise and efficient application. The thickness of each layer can be adjusted based on the specific requirements of the metal surface and the desired end result.

2K/3K Mixer and Color Change System- Disk Electrostatic Spray

Color change valves, also known as paint dispensers, are a valuable investment for any business in the painting industry. These devices are used in paint shops to mix and dispense paint quickly and accurately, reducing waste and cleanup time.

One of the key benefits of a color change valve is its ability to automatically switch between different paint colors, which can save time and increase efficiency. This feature is especially useful for businesses that work on multiple projects and need to switch between colors frequently.

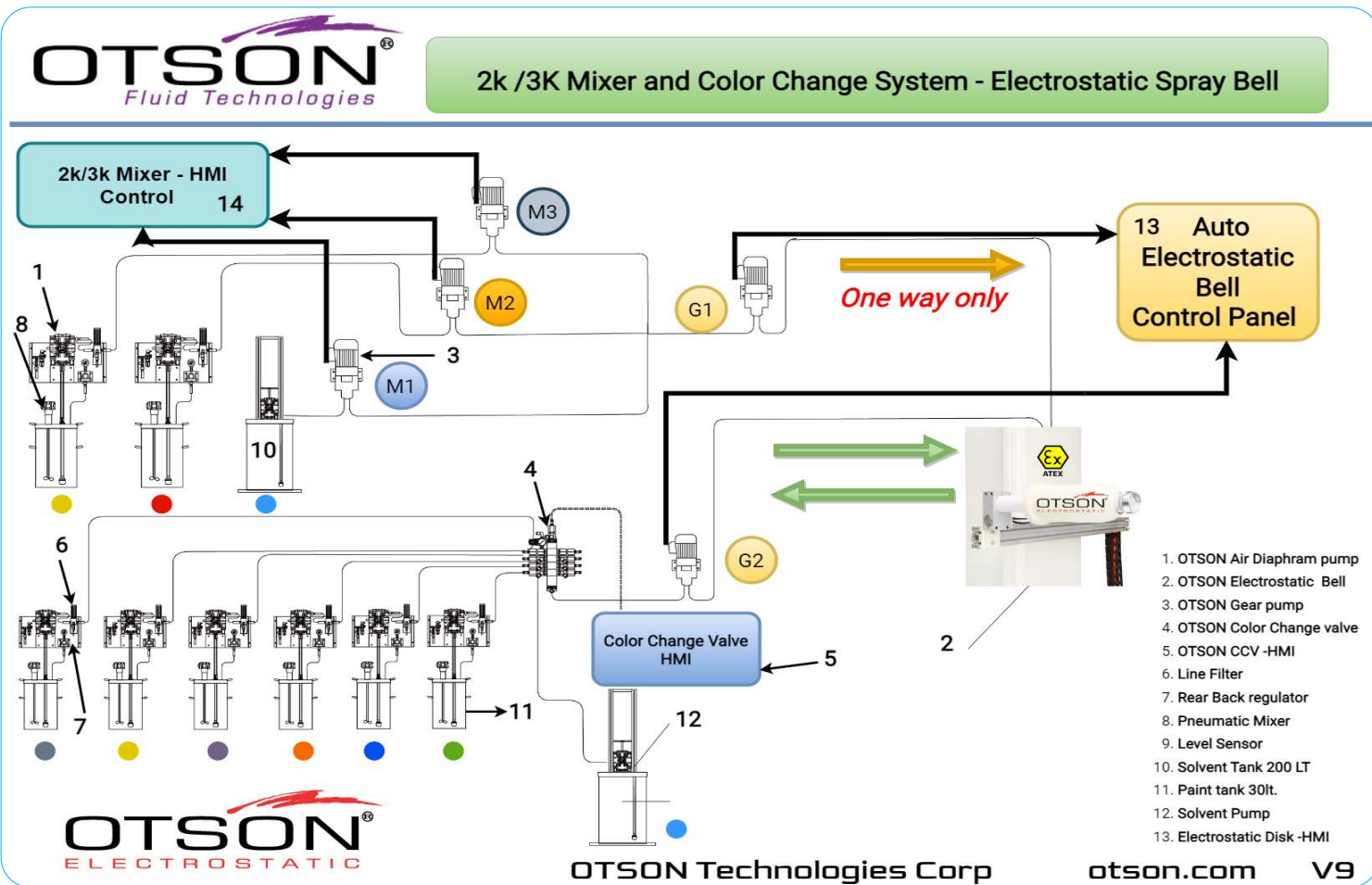
Another advantage of color change valves is their mixing capabilities. These devices can mix the paint with hardeners, reducers, or other additives as it is dispensed, ensuring that the paint is properly mixed and ready to use, which can help improve the quality of the paint job.

In terms of market view, the use of color change valves is prevalent in industrial paint application such as automotive, aerospace, and wood finishing industries. Many companies are investing in color change valves to improve their production efficiency and reduce cost.

Overall, color change valves are an essential component of any paint shop, providing accurate and efficient paint dispensing and color change capabilities. Investing in a high-quality color change valve can help businesses in the painting industry to increase productivity, improve the quality of their paint jobs and save money in the long run.

2K/3K WATERBASED

2K/3K SOLVENT



The 2K-3K Electronic Mixing & Dosing System is an advanced system designed for use in a liquid electrostatic spray system. It is used to control the mixing and dosing of two or three liquid components in a precise and accurate manner. The system uses electronic sensors and controls to measure and adjust the flow rate of each component, ensuring that the correct proportion of liquids are mixed and sprayed. The end result is a more uniform and efficient application of the sprayed liquid, resulting in improved product quality and increased



The 2K-3K Electronic Mixing & Dosing System typically comprises of the following components:

- **Metering Pumps:** These pumps are used to accurately control the flow rate of each component, ensuring that the correct proportion is mixed and sprayed.
- **Mixing Chamber:** The mixing chamber is where the two or three liquid components are combined and mixed together.
- **Control Unit:** The control unit is the heart of the system and is responsible for monitoring and adjusting the flow rate of each component. It may use electronic sensors, computer control and software to manage the mixing and dosing process.
- **Display Unit:** A display unit is used to show the operator the current status of the system, including the flow rate of each component, total amount of liquid mixed and any alarms or faults that may arise.

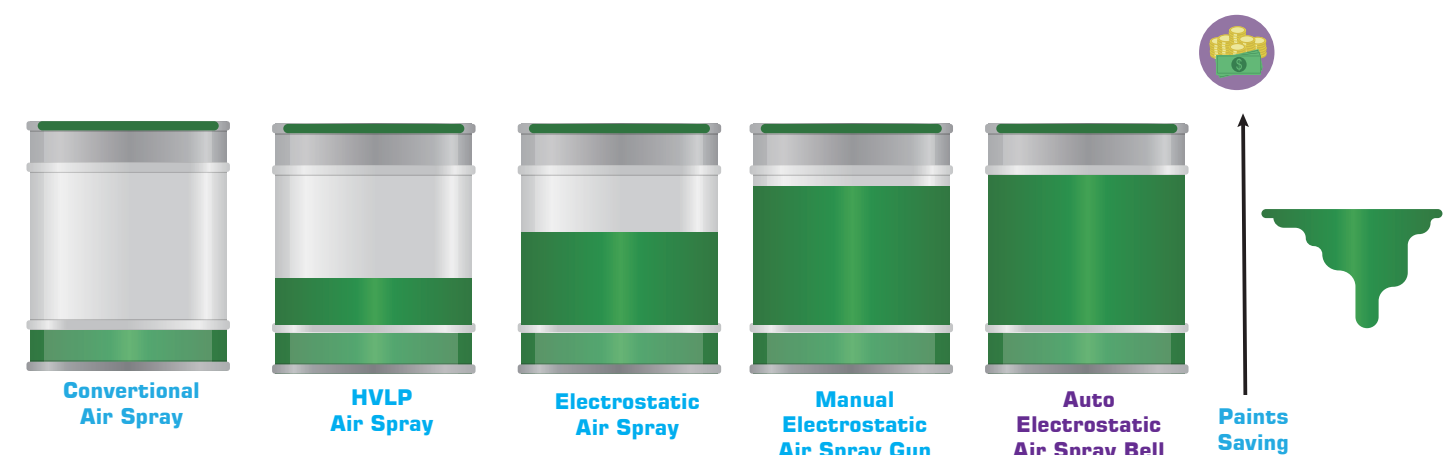
The system may also be equipped with additional features such as automatic cleaning, continuous monitoring, and alarms for low level and low pressure, to ensure the reliable and consistent operation of the mixing and dosing process.

Overall, the 2K-3K Electronic Mixing & Dosing System provides precise control over the mixing and dosing of two or three liquid components, which results in a more efficient, consistent and uniform application of the sprayed liquid.

Benefits of Electrostatic Spray Technology

- *Improve Finishing Quality*
- *Reduce Refinishing Work*
- *Time Savings*
- *Reduce Paint Wastage*
- *Material Savings*

Reduce Paints Costs



Return-on-Investment (ROI)

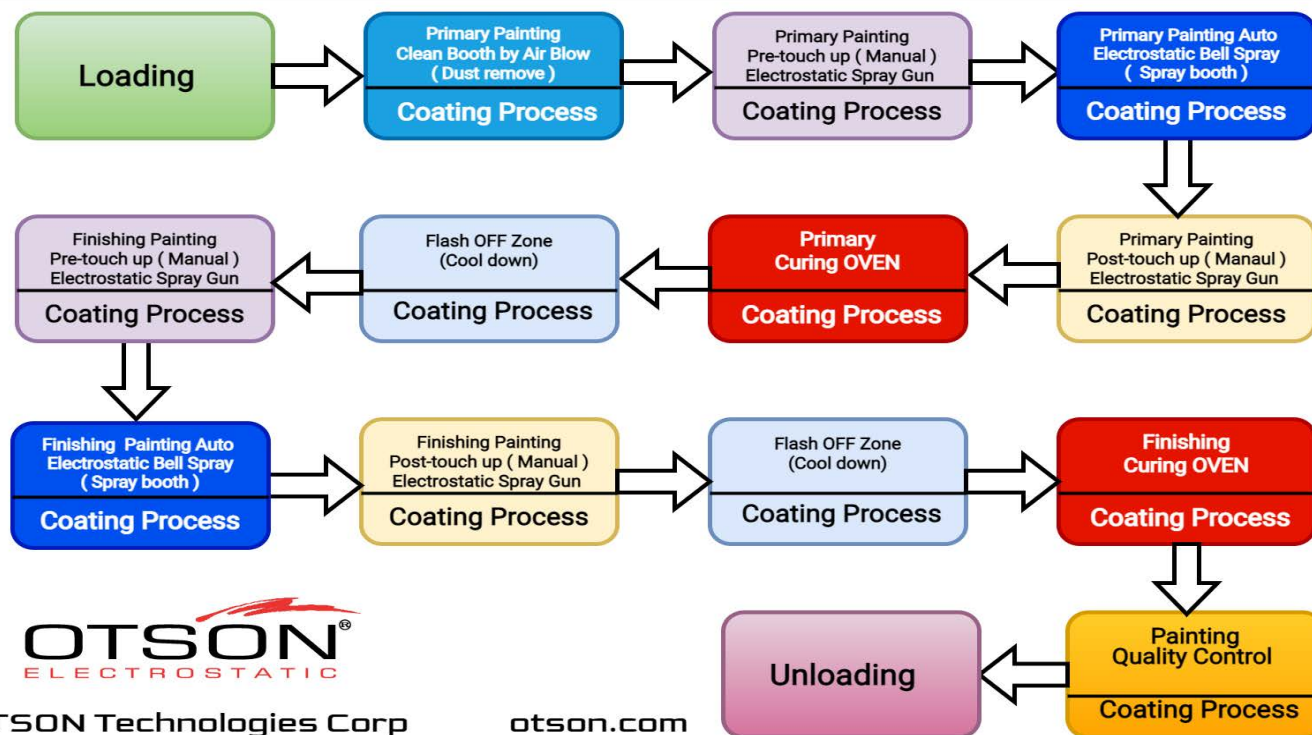
By replacing Conventional Air Spray gun with Auto Electrostatic Spray Bell System

	Typical	Calculate Your Own Application
Paint price per litre	USD 10	
	X	X
Litre Used per Day	100 litres	
	X	X
Business Daysper Year	220 days	
Electrostatic Transfer Efficiency	95%	
Annual Savings	USD 209,000.00	

The Process Steps of Auto Electrostatic Spray Bell Coating System



The Process Step of Bell Electrostatic Automatic Coating System

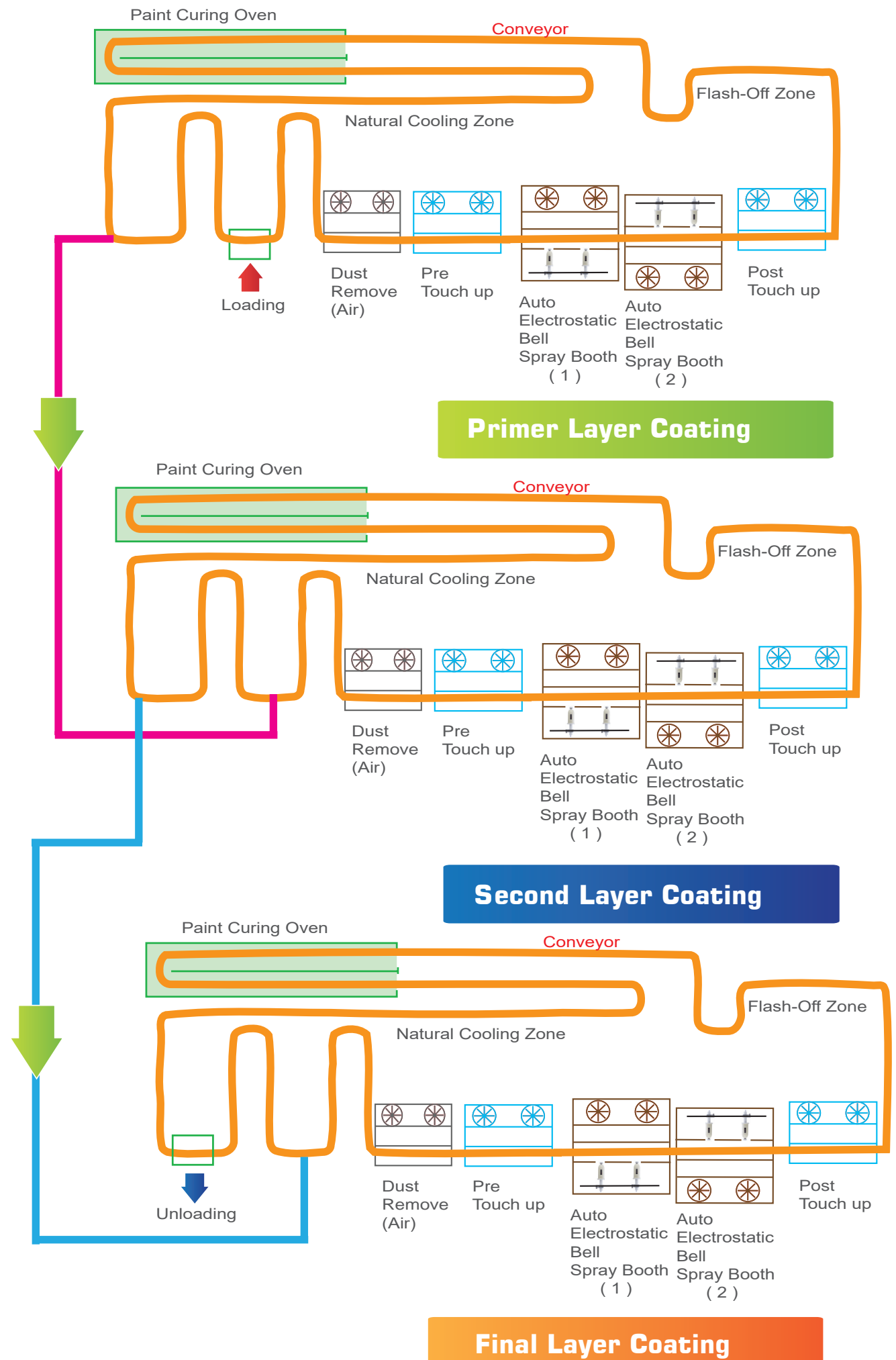


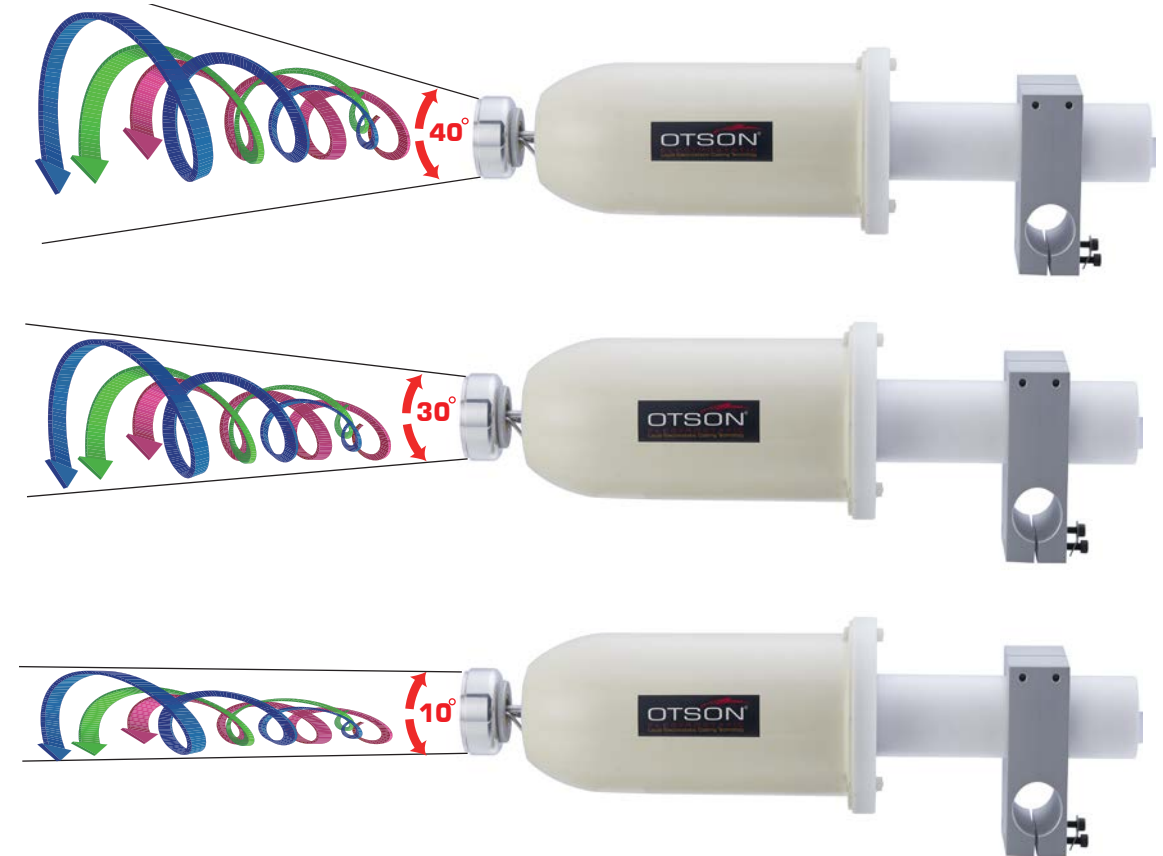
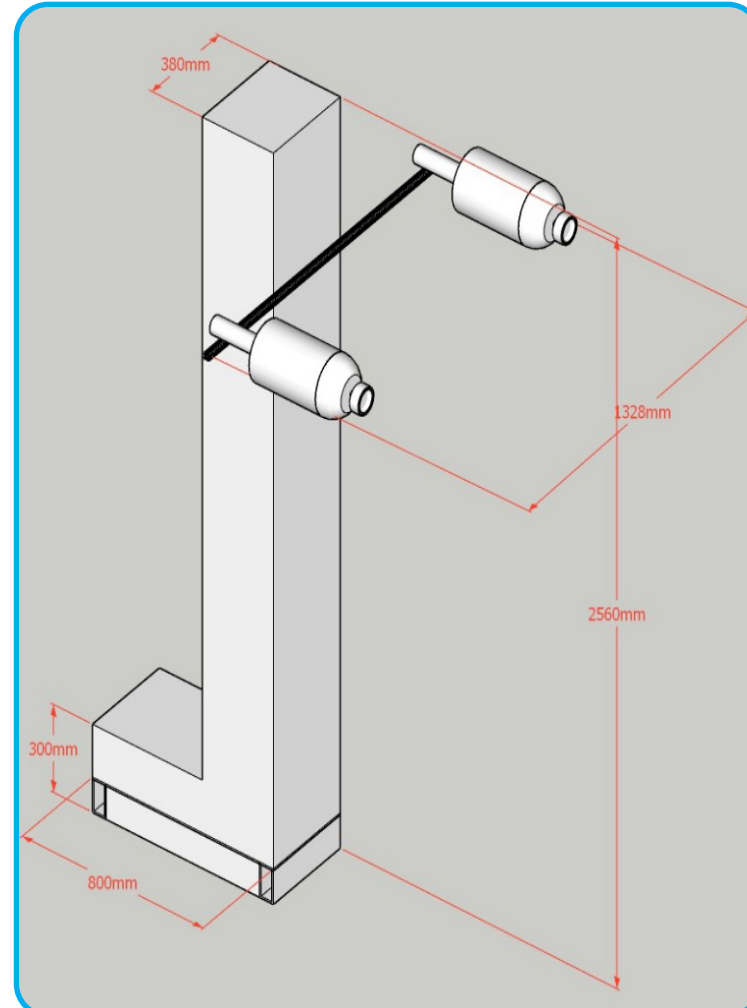
Innovative Liquid Electrostatic spray Paint Shop Solutions- industry 5.0

OTSON **OTS-9000**
Rotary Speed Control Atomization



Air Flow Pattern Control
Paint Flow
OTSON Liquid Electrostatic
OTS-9000 Auto Electrostatic Spray Bell



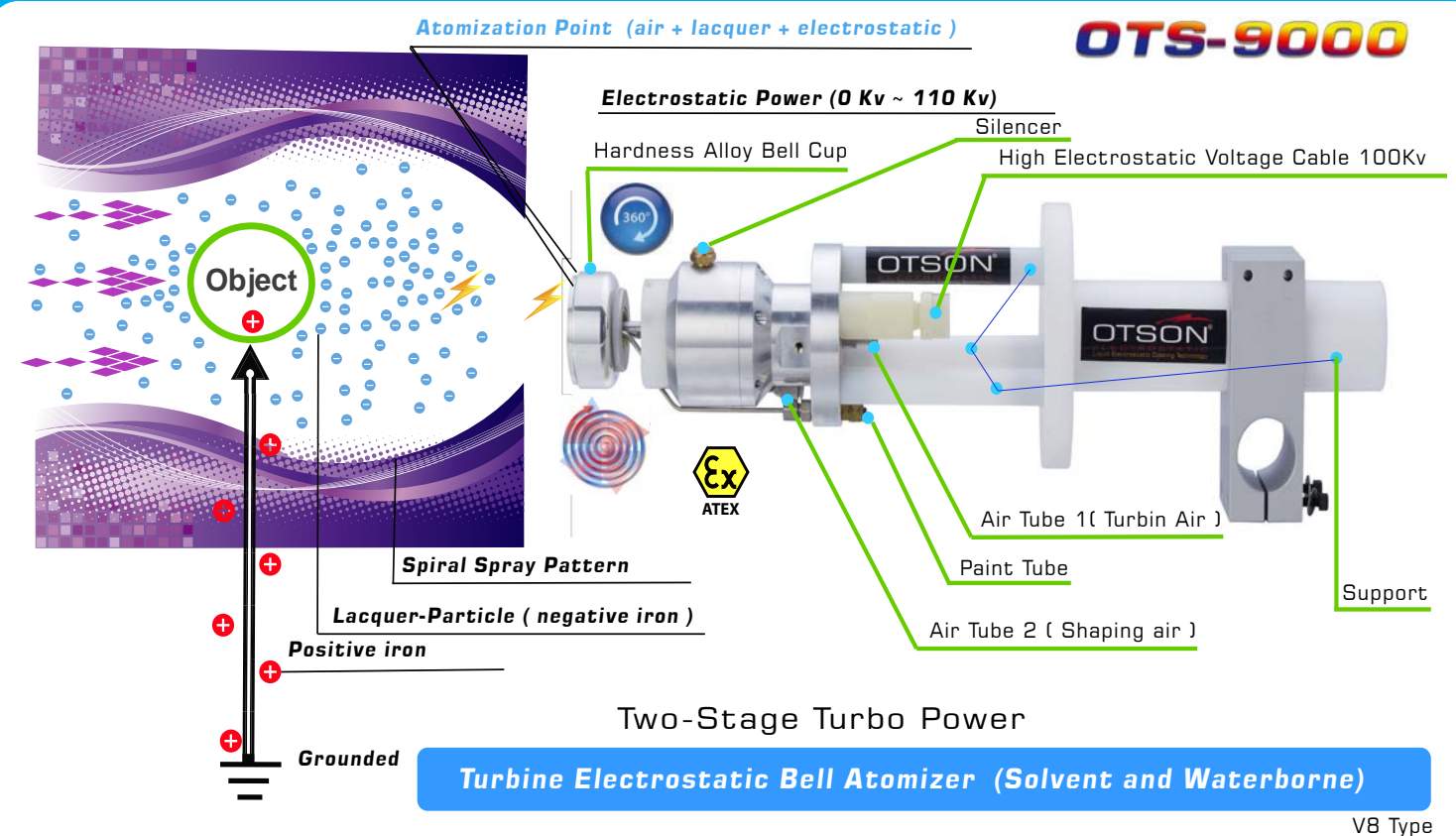
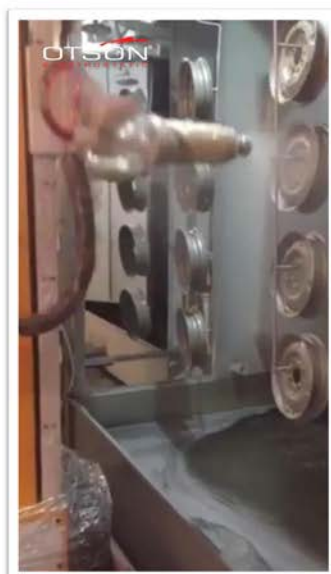


Electrostatic Spray Bell Angles

OTS-9000 Auto Electrostatic Spray Bell

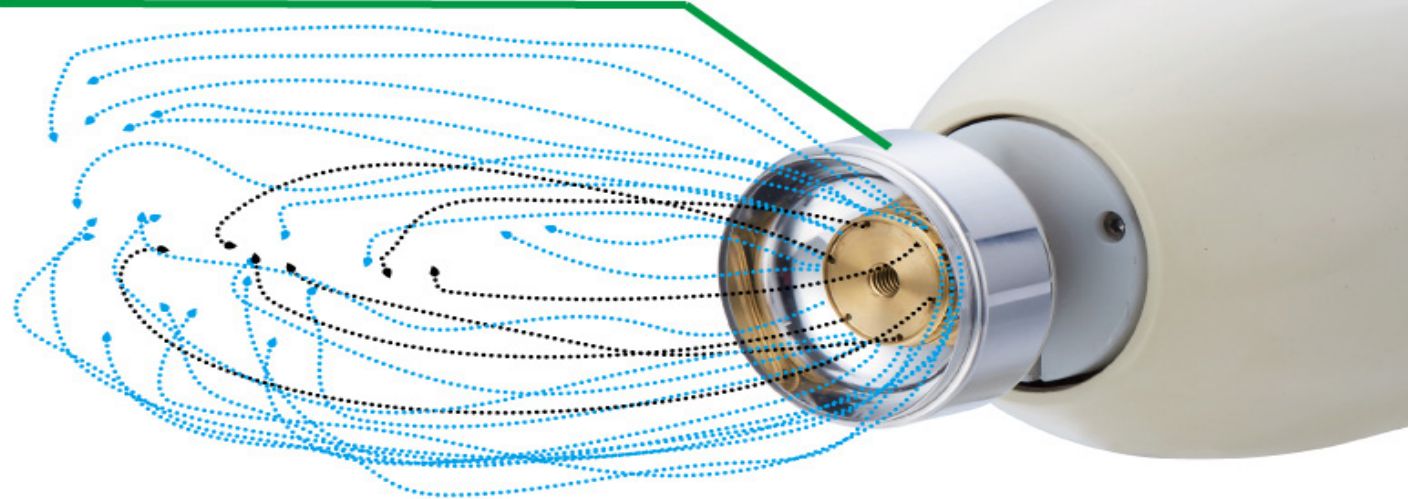


2K Solvent
2K Water Based



OTSON[®] ELECTROSTATIC **OTS-9000**

Rotary Speed Control (Atomization)



■ Paint Flow

■ Air Flow Pattern Control

OTS-9000 Auto Electrostatic Spray Bell



Specification

Liquid Electrostatic Spray Bell

Input Voltage	0~110KV DC(-)
Bell Length	250 mm
Bell Weight *(no nozzle , hv cable ,spraying tube and air tube)	900 g
Fluid and Air Pressure	0 ~ 7 kg/cm ² (6.86 bar) (0~100) psi
Operating Pressure	Air Supply
Coatings	Solvent-base & Waterborne Coatings



Electrostatic Power Supply

Out Voltage	0~110KV DC(-)
Out Current	50 microamperes
Input Voltage	110 V~240 V AC (50/60 Hz)
Intercepting current	20~150 microamperes
Weight	12 kg
Dimensions	300(L)x120(W)x350(H) m



Specification

Model Number	9000A
Spare atomizer, without cable or hose	4 kg
Material of Turbine Atomizer and Bell Cup	Alloy (no magnetic)
Life cycles (valves/bell /bearings/couplings) depend on air quality and Maintenance	1~5 years

Pneumatic supply

Nano-valve drive air pressure	8 bar mini (120psi) - 10 bar max. (150psi)
Magnetic turbine bearing air pressure	5 mini (75psi) - 7 bar max. (105psi) from 130 to 180 L/min
Shaping air pressure	6 bar (90psi) recommended on manifold
Micro air pressure	0.5 mini (7,5psi) at 1 bar maxi. (15psi) from 20 L/min to 40 L/min
Drive air consumption	10 NI/min.
Magnetic turbine bearing air consumption	125 NI/min.
Shaping air consumption (with respect to air shroud and bell being used)	From 100 to 600 NI/min.
Turbine rotation air consumption	From 100 to 700 NI/min. ⁽¹⁾
Safeguard air quantity	25 litres at 6 bar (90 psi)

(1): with respect to sprayed flow and rotation speed

Product supply

Standard product supply pressure	6 (90psi) to 8 bar (120psi)
Maximum product pressure	10 bar (150psi)
Paint flow (depending on paint type)	30 to 3000 cc/min. ⁽²⁾ maxi.
Viscosity scale (for minimum results)	8 to 30 seconds FORD #4 Cup

(2): with a product density < 1.1 gr/cm3 and/or of the combination bell and air shroud being used

Performances

Rotation speed	15 to 60,000 (6.0 bar) 90 psi (upon diameter of bell cup used)
Application speed	up to 900 mm/sec
Transfer Efficiency	85% ~98%

Color change

Paint consumption	25 cm ³ (paint circuit) & 25 cm ³ (pump circuit)
Paint feeding	OTSON GEAR PUMP (2 color change)
Rinsing product consumption	300 cm ³ (not included rinsing box)
Standard process time	10 sec (with REVERSE FLUSH)
Optimized process time	5 sec (with REVERSE FLUSH on circuit 1 & 2)

Same Color (head rinsing + bell cup)

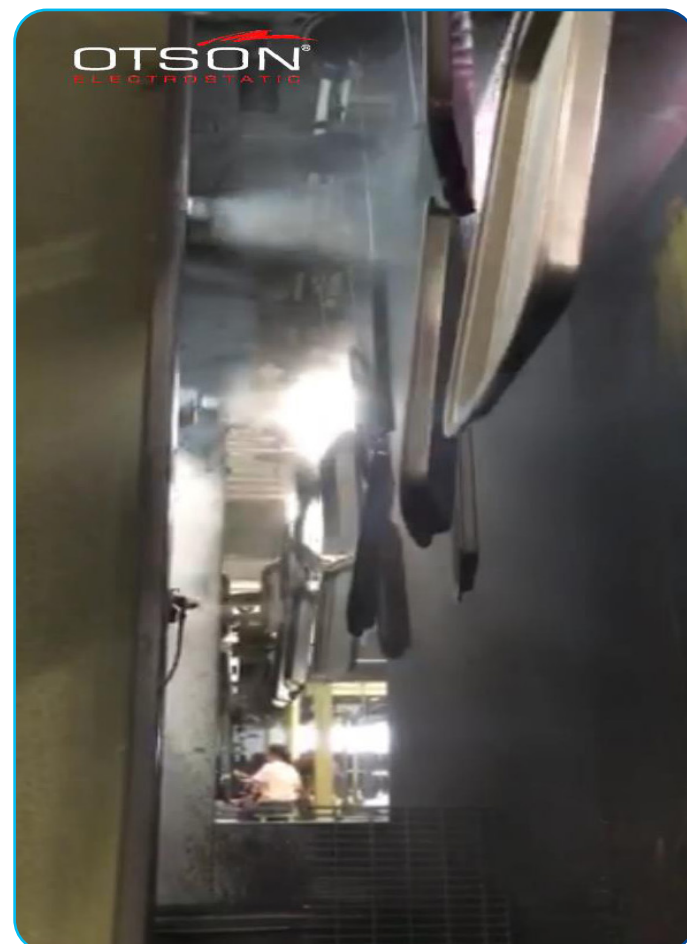
Time	6 sec.
Rinsing product consumption	50 cm ³

High Electrostatic Voltage

Voltage maxi.	110 kV
Current maxi.	50 µA
Bell Cup safety Distance from substrate	30cm

*The appearance of all products, detail, figure and specification are subject to change at any time without notice.

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Specification

OTS-8700 /8300 Microcomputer Control Panel (10" Man-Machine Interface)

- **Input Voltage:** AC 200V ~ 415V 50hz / 60hz (3 phase) ± 5%
 - **Power Consumption :** 2.5 KVA
 - **Dimension :** 420 (L) x 730 (w) x 1710 (H) mm
 - **Weight :** 110 kg
 - **Servo Motor Controlled Reciprocator.**
 - **Touch Panel Interface by using 10" Color Screen.**
 - **Memory Capacity up to 200 sets of Operation.**
 - **Color Change Control (2 colors) Interlocking**
 - **Door-in-Door Design to Achieve Efficient Anti-Dust Effect.**
- Coatings: Solvent-base & Waterborne Coatings



OTS-8100 / 8500 Microcomputer Control Panel (10" Man-Machine Interface)

- **Input Voltage:** AC 200V ~ 415V 50hz / 60hz (3 phase) ± 5%
 - **Power Consumption :** 2.5 KVA
 - **Dimension :** 420 (L) x 730 (w) x 1710 (H) mm
 - **Weight :** 110 kg
 - **Servo Motor controlled reciprocator.**
 - **Touch Panel interface by using 10" colour screen.**
 - **Memory capacity up to 200 sets of operation.**
 - **Door-in-Door design to achieve efficient anti-dust effect.**
- Coatings: Solvent-base Coatings



- **Stroke Length:** 1200mm~ 7000mm.
 - **Auto Gun support rod (horizontal Length):** 1000mm~ 2000mm.
 - **Single travel, multi-speed shifting.**
 - **Control Method:**
 - Speed : Max 36 m/min (adjustable)
 - Motor capacity : 1kw (explosion proof)
1. Frequency Converter for speed control.
 2. Man-machine interface control panel is controlled by servo motor for regulating the travel speed.



Specification

OTS-8000 & OTS-8100 Liquid Electrostatic Power Supply

Out Voltage	0~70 KV DC(-) -OTS-8000 0~100 KV DC(-)-OTS-8100
Out Current	50 microamperes
Intercepting Current	20~150 microamperes
Input Voltage	220V AC (50Hz)
Weight	12 kg
Dimensions	300(L)x120(W)x350(H) mm
Coatings	Solvent-base Coatings



OTS-8300 ,OTS-8500 ,OTS-8700 Liquid Electrostatic Power Supply

Out Voltage	0~110 KV DC(-)
Out Current	50 microamperes
Intercepting Current	20~150 microamperes
Input Voltage	220V AC (50Hz)
Weight	12 kg
Dimensions	300(L)x120(W)x350(H) mm
Coatings	Solvent-base & Waterborne Coatings



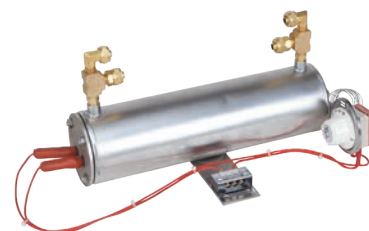
Gear Pump

Input Voltage : AC 220 V ~ 380 V ±10% 3 Phase
Horsepower : 1/4 HP
 Dimension : 130 (L) x 600 (w) x 30 (H) mm
Weight : 13 kg
 Output : 3cc or 6cc / rev 200 cc ~ 3000 cc / min (digital control)
Spray Hose : Double-layer Teflon paint hose
 Pump Material : Hardened Steel CMoWCrVCo HRC = over 63)
 Titanium plated for durable use and wearing resistance.



Air Heater

Dimension : 410 (L) x 170 (w) x 150 (H) mm
Weight : 5 kg
 Input Voltage : AC220V , 500W
 Temperature : 0 degree C ~ 120 degree C



Water Filter & Oil Filter

Dimension: 170 (L) x 340 (w) x 90 (H) mm
Weight : 3 kg
 Water Filter : 3650 l/s
 Oil Filter : 1900 l/s
 MAX Operation Pressure : 150psi



Specification

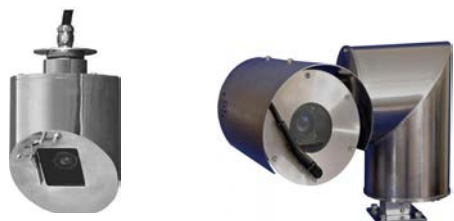
IOT (Internet of Things) Sensor System

- Air Flow
- Paint flow
- Paint Pressure
- Air Pressure
- Environment VOC Detect Sensor
- Monitor motor
- Smoke Sensor
- Air Temperature and humidity
- AI Dashboard System
- Power Consumption Monitor



Remote Digital Video Monitor System

- **Video Input:** 8 channels
- **Video Output:** HDMI, VGA
- **Compression Format:** H.265/H.264
- **Recording Resolution:** up to 8MP (4K)
- **Playback Resolution:** up to 8MP (4K)
- **Hard Drive Capacity:** up to 6TB (depending on the model)
- **Network Interface:** RJ45, 10M/100M/1000M Ethernet with PoE support
- **Remote Access:** Yes, via PC, smartphone or tablet
- **Audio Input/Output:** 1 channel input, 1 channel output
- **USB:** 2 USB ports (1 USB 2.0, 1 USB 3.0)
- **PoE Ports:** 8 ports with PoE support
- **Power Supply:** DC 48V/1.25A



X 8 CH X 8 CH



Specification

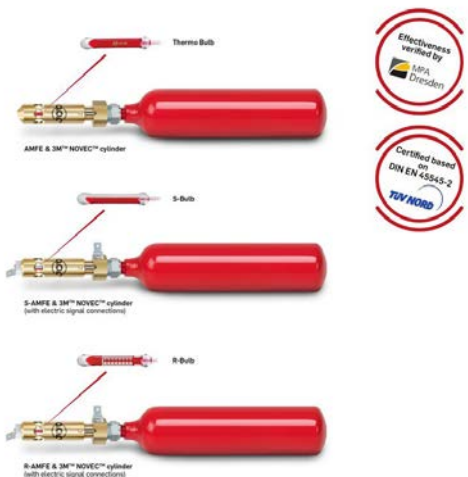
Safety Light Curtains

- Safety light curtain Type 4.
- Suitable for detection of operators.
- Consists of an emitter and receiver.
- In combination with a safety guard monitor for protection up to safety level PLe per EN ISO 13849-1 or up to SIL 3 per EN 62061.
- 14mm resolution for finger detection.
- Available in various protective field heights: 200, 400, 600, 800, 1000 and 1200mm.
- Detection range 0.5m to 6m.
- Can be connected to GLM1 safety controller.
- Gesealed tot IP65.
- Fitted with quick disconnecter.
- Supplied with mounting brackets as standard



Automatic Miniature Fire Extinguisher

- Dimensions (without cylinder):
ø 16 mm x 64 mm/0,63" x 2,52"
- Minimum installation depth: 20 mm/0,79" (w/o cylinders)
- Activation temperature: 57°C – 260°C/134,6° F - 500° F
- Extinguishing agents: 3MTM NOVECTM, CO2,
- Lifetime: 9 years + (for the cylinders)
- Maintenance free
- Lifetime: for release mechanism (see manual for details)

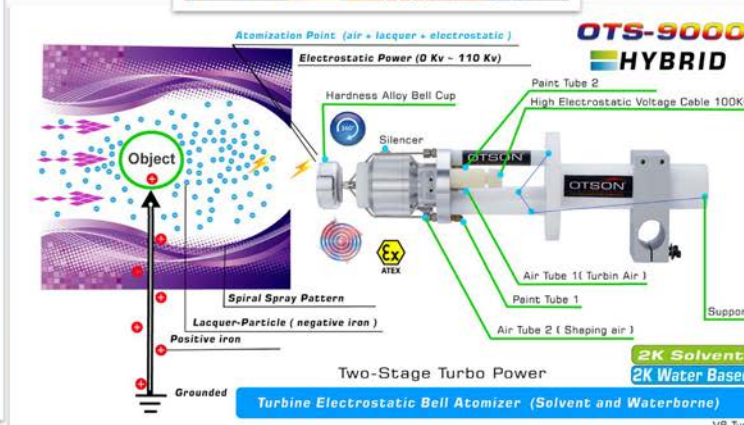


Application - Industries



- Small parts
- Bicycle
- Application
- Small parts
- Bicycle
- Computer Housing
- Stationery
- Wooden Furniture
- Hardware
- Lockers
- Freezers
- Iron Railing
- Display Cases
- Office Partitions
- Medical Equipment
- Rest room Partitions
- Roller Bars
- Metal Doors
- Decorative Lamps
- Electrical Home Appliances
- Car Accessories, Teflon Pot
- Sports Equipment
- Handcraft
- Files
- Desks

- Sports Equipment
- Handcraft Computer
- Housing
- Stationery
- Wooden Furniture
- Hardware
- Lockers
- Freezers
- Iron Railing
- Display Cases
- Refrigerators
- Heavy Machinery
- Office Equipment



iOTSON[®]

Paint Shop Technologies

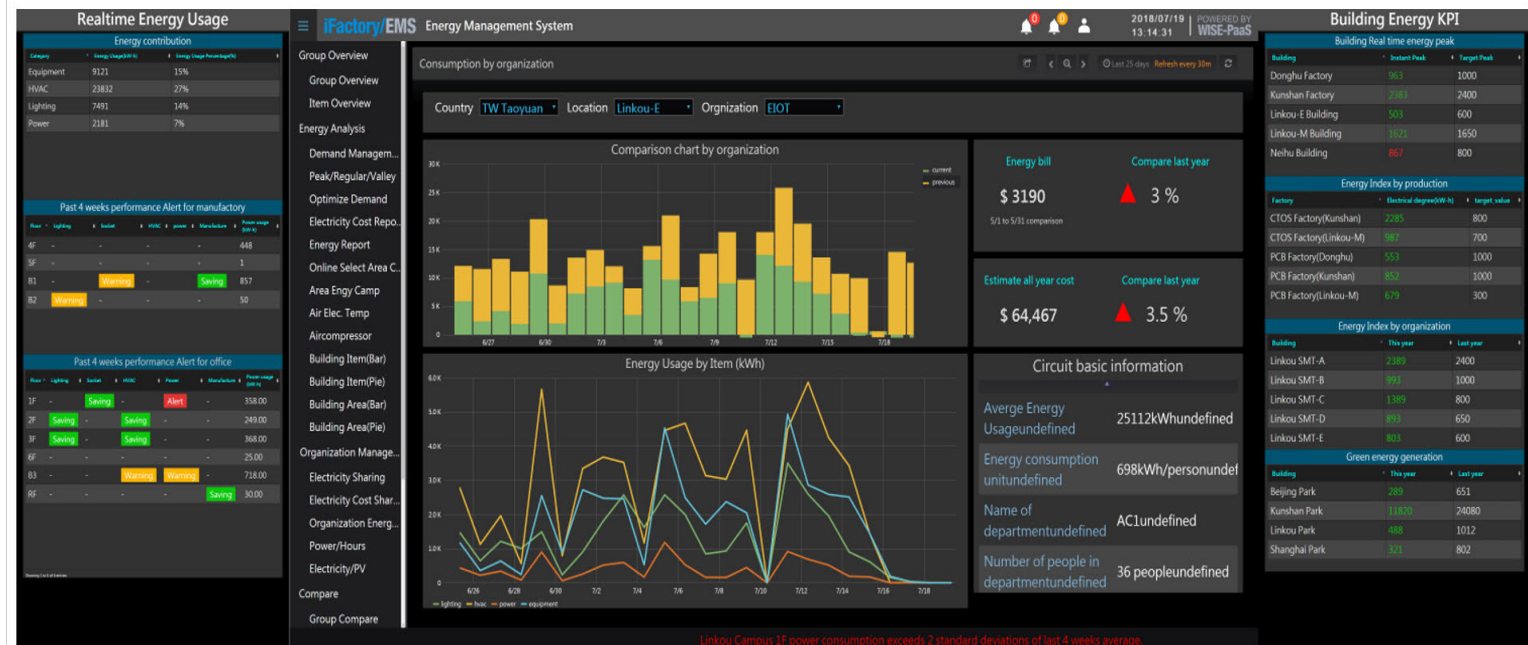
Dashboard of Electrostatic Spray Coating – Paint Shop

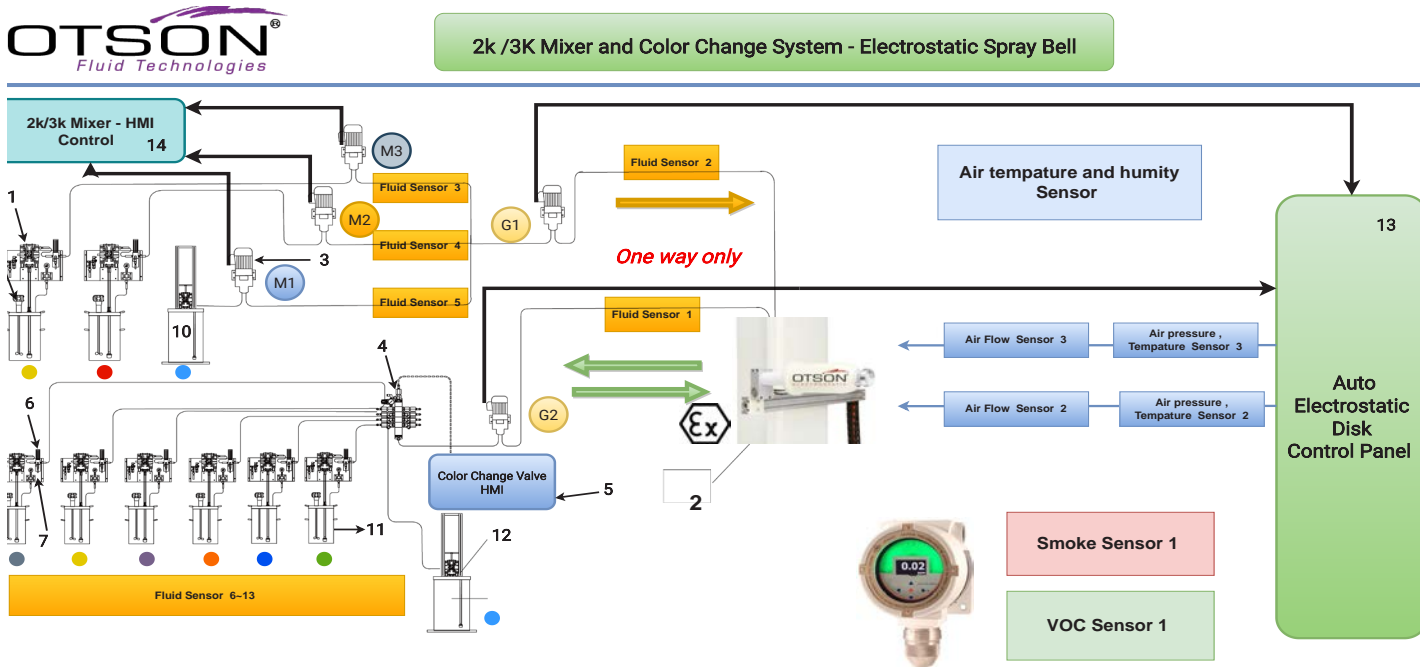


iOTSON[®]

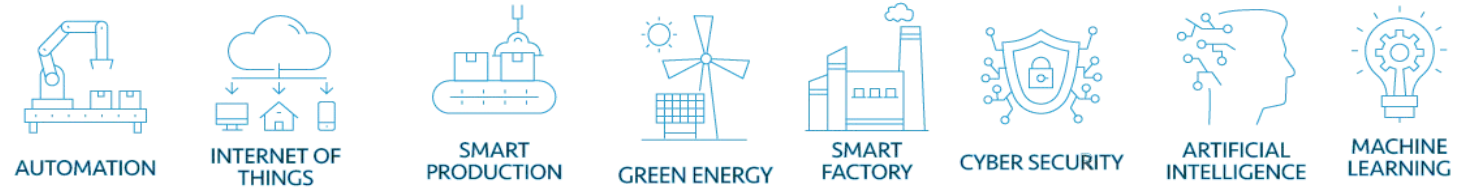
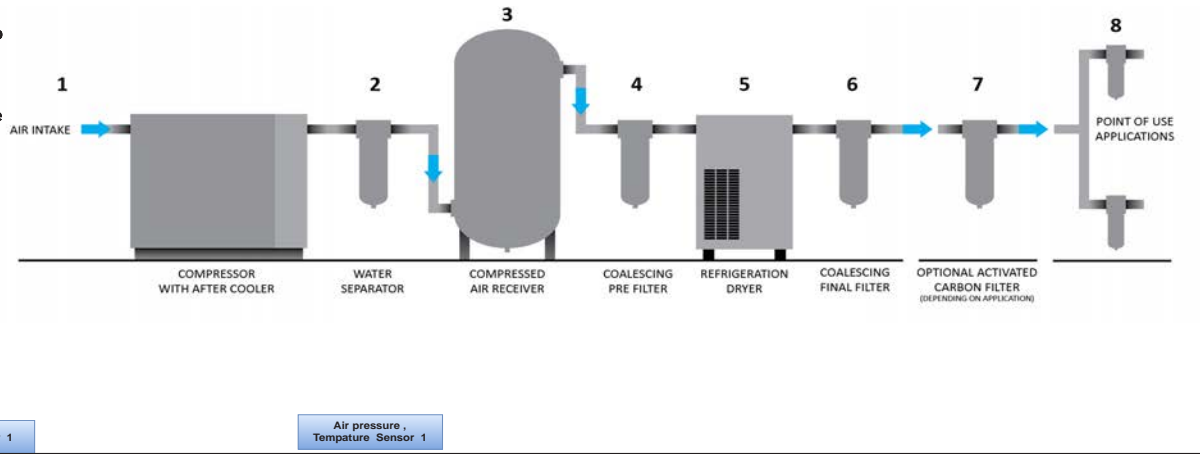
Paint Shop Technologies

Energy & Environment-Dashboard of Paint Shop

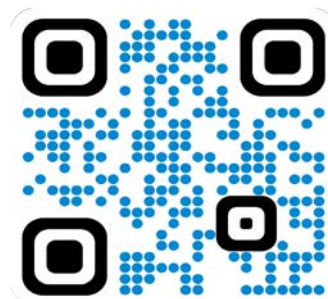
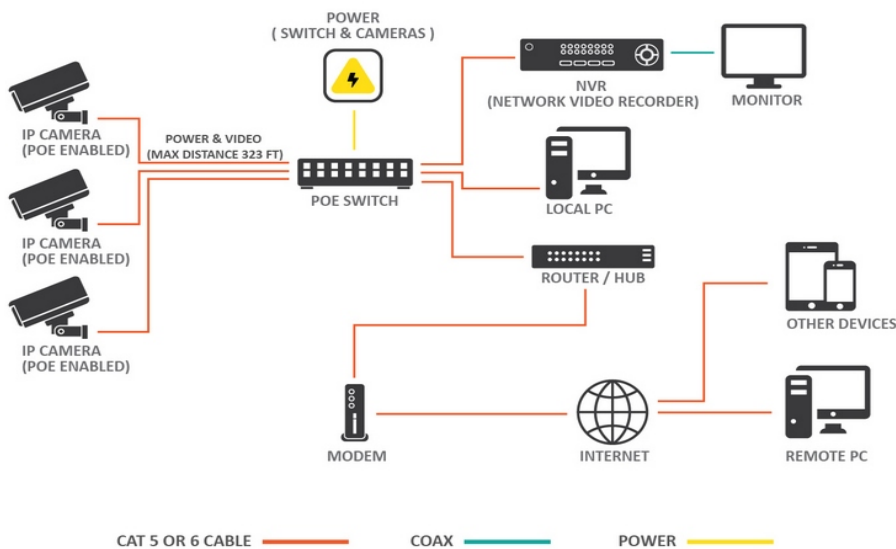
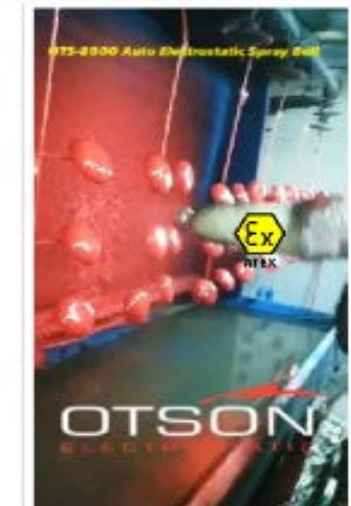
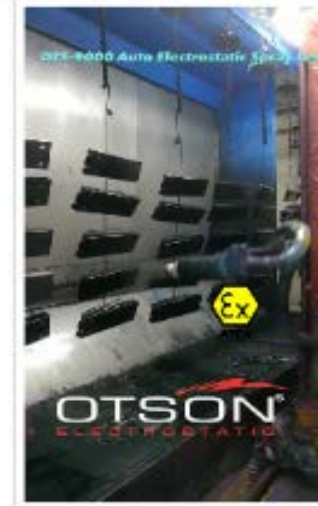




1. OTSON Air Diaphragm pump
2. OTSON Electrostatic Gun
3. OTSON Gear pump
4. OTSON Color Change valve
5. OTSON CCV -HMI
6. Line Filter
7. Rear Back regulator
8. Pneumatic Mixer
9. Level Sensor
10. Solvent Tank 200 LT
11. Paint tank 30lt.
12. Solvent Pump
13. Electrostatic Disk -HMI
14. 2K/3K Mixer-HMI Control



OTSON Innovative Liquid Electrostatic spray Paint Shop Solutions- Industry 5.0



OTSON Technologies Corp OTSON.COM



Model /Function	OTS-8700+G2	OTS-8500+G2	OTS-8300+G2	OTS-8100+G2	OTS-8000+G2
a. Microcomputer Control Subsystem					
Microcomputer Control Panel (HMI) x 1 set	10"	10"	10"	10"	
Memory Capacity for Storage Coating Parameters	199 sets	199 sets	199 sets	199 sets	
Air Flow Control x 1 set	Manual	Manual	Manual	Manual	Manual
Paints Flow Control (A) x 1 set	Auto / Manual	Auto / Manual	Auto / Manual	Auto / Manual	Manual
Paint Flow Control (B) x 1 set	Auto / Manual	Auto / Manual	Auto / Manual	Auto / Manual	Manual
Color Change Control (2 colors) x 1 set	Manual	Manual	Manual	Manual	Manual
Reciprocator Stoke 5 stages control x 1 set	Auto / Manual	Auto / Manual	Auto / Manual	Auto / Manual	Manual
Reciprocator Speed Control x 1 set	Auto / Manual	Auto / Manual	Auto / Manual	Auto / Manual	Manual
Atomizer Speed (RPM) Control x 1 set	Manual	Manual	Manual	Manual	Manual
Electrostatic Power Supply Control x 1 set	0~110KV	0~110KV	0~110KV	0~110KV	0~70KV
Electrostatic Power Display x 1 set	LED	LED	LED	LED	LED
Electrostatic Current Display x 1 set	LED	LED	LED	LED	LED
Electrostatic Spark Protection System x 1 set	YES	YES	YES	YES	YES
Paints,Coatings	Solvent-base & Waterborne	Solvent-base	Solvent-base & Waterborne	Solvent-base	Solvent-base
b.Spray Subsystem					
High KV Electrostatic Spray Gun x 3 sets	Yes	Yes	Yes	Yes	Yes
High Atomization Spray Nozzle x 3 sets	Round , Flat	Round , Flat	Round , Flat	Round , Flat	Round , Flat
H.V Cable x 3 sets	11m ~ 40m	11m ~ 40m	11m ~ 40m	11m ~ 40m	11m ~ 40m
Teflon Spraying Tube x 3 sets	11m ~ 40m	11m ~ 40m	11m ~ 40m	11m ~ 40m	11m ~ 40m
PU Air Tube x 6 sets	11m ~ 40m	11m ~ 40m	11m ~ 40m	11m ~ 40m	11m ~ 40m
c.High Voltage Electrostatic Power Subsystem					
Electrostatic Power Supply x 1 set	Max 110KV	Max 110KV	Max 100KV	Max 100KV	Max 70KV
d. Reciprocator Subsystem					
Reciprocator x 1 set (Stroke Length 1.6 Meters ~7.0 Meters)	1.6 M ~7.0 M	1.6 M ~7.0 M	1.6 M ~3.0 M	1.6 M ~3.0 M	1.6 M ~3.0 M
Safety Sensor x 1 set	Yes	Yes	Yes	Yes	Yes

Model /Function	OTS-8700+G2	OTS-8500+G2	OTS-8300+G2	OTS-8100+G2	OTS-8000+G2
e.Paint Supply Subsystem					
OTS-4000 (optional) Colour Change Valve +HMI	2~20 Colours (Auto Clean)	2~20 Colours (Auto Clean)	2 ~ 20 Colours (Manual Clean)	2~20 Colours (Manual Clean)	2 Colours
OTS-4200 (optional) 2K and 3K Mixer system +HMI	2K and 3K	2K and 3K	2K and 3K	2K and 3K	2K and 3K
Gear Pump + Motor (A) x 1 set (optional) 3cc / rev 200cc~1500 cc /mim	3cc / rev	3cc / rev	3cc / rev	3cc / rev	3cc / rev
Gear Pump + Motor (B) x 1 set (optional) 6cc / rev 200 cc ~ 3000 cc / min	6cc / rev	6cc / rev	6cc / rev	6cc / rev	6cc / rev
f . Air Supply Subsystem					
Air Heater -Air Temperature Control x 1 set	Manual	Manual	Manual	Manual	Manual
Air Filter (screening oil and water) x 1 set	Auto	Auto	Auto	Auto	Auto
g. Smart Monitor Sensor Subsystem (optional)					
Air Flow	Local / Remote Monitor	Local / Remote Monitor			
Paint flow	Local / Remote Monitor	Local / Remote Monitor			
Paint Pressure	Local / Remote Monitor	Local / Remote Monitor			
Air Pressure	Local / Remote Monitor	Local / Remote Monitor			
Environment VOC Detect Sensor	Local / Remote Monitor	Local / Remote Monitor			
Monitor motor	Local / Remote Monitor	Local / Remote Monitor			
Smoke Sensor	Local / Remote Monitor	Local / Remote Monitor			
Air Temperature and Humidity	Local / Remote Monitor	Local / Remote Monitor			
AI Dashboard System	Local / Remote Monitor	Local / Remote Monitor			
Power Consumption Monitor	Local / Remote Monitor	Local / Remote Monitor			
h. Safety Subsystem (optional)					
Safety Light Curtains Interlocking with disc system	Auto	Auto			
Automatic Miniature Fire Extinguisher (For Spray Gun and Control Panel system Only)	Auto	Auto			
I. Security System (optional)					
Remote Digital Video Monitor System (RDVRS)	Local / Remote Monitor	Local / Remote Monitor			
j. Small water-borne -Paint kitchen					
Special Isolation paint kitchen with 2 gear pump and air allegator	Yes		Yes		

Easy Paint Kitchen for Waterbase and Solvent Paints



Dimension: 76x43 x170 cm Weight : 80 Kg

Easy Paint Kitchen for Waterbase and Solvent Paints - Gear Pump

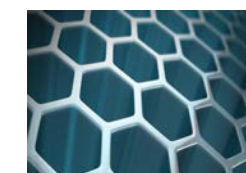
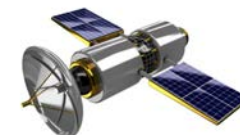


3cc ~6cc/rev
Gear Pump



Gear Pump
Motor

Application - Industry



Meeting the requirements
of each industry....



OTS - 9000

Auto Liquid Electrostatic Spray Bell

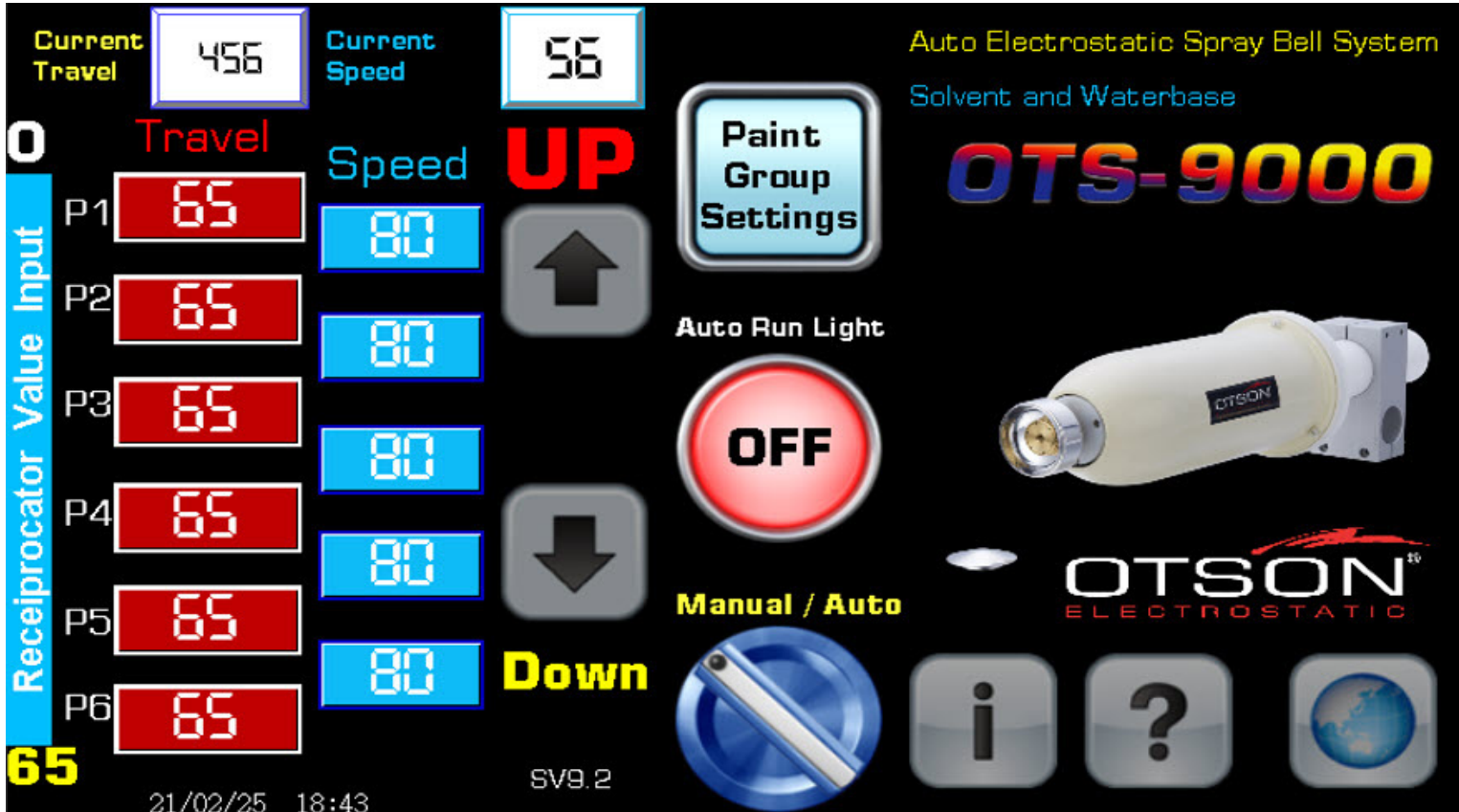


Application - Spray Range

.....With the widest industrial spray range



OTS - 9000
Auto Liquid Electrostatic Spray Bell



10" Touch Panel Industrial (HMI)



Electrostatic Current UMA

Electrostatic Voltage KV



Series 5000

DISK ELECTROSTATIC
AUTO COATING SYSTEM

MAX 60000RPM
(no loading spray disk)

HYBRID

2K/3K WATERBASED

2K/3K SOLVENT



OTS-9000

Auto Electrostatic Spray Bell System



OTS-3000⁺

MANUAL
LIQUID ELECTROSTATIC SPRAY GUN

HYBRID



- * New Design Model
- * New LED Panel
- * Adaptive Electrostatic Power
- * More Safety, Low Maintenance
- * High Transfer Efficiency
- * High Quality Finishing
- * Light Weight Gun



470g



Solvent

Waterborne

DUAL
Coating

H.E.T.
High Efficiency Technology

*The appearance of all products, detail, figure and specification are subject to change at any time without notice.

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